European Community Respiratory Health Survey II

(ECRHS II)

Final Report of Work Package 7 (WP7)

Assessment of Chemical Elements on $PM_{2.5}$ Collected in 21 European Cities of ECRHS II

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Abstract

The follow-up of a cohort of adults from 21 European centres of the former European Community Respiratory Health Survey (ECRHS I, 1989-1992) will examine the long-term effects of exposure to ambient air pollution on the incidence, course, and prognosis of respiratory diseases, in particular asthma and decline in lung function.

We measured $PM_{2.5}$ mass concentrations in 21 participating centres to estimate 'background' exposure in these cities, using a standardised protocol specifically developed for this study (Work Package 6). In Work Package 7 (WP7) the filter samples were analyzed for their elemental composition, using energy dispersive X-ray fluorescence spectrometry (ED-XRF). Elemental compostition can indicate sources of particulate matter, thus the the use of this information may supplement the mass concentration data (WP6). The purpose of this report is to describe the main results from WP7.

Measurements for 18 elements produced valid results. Data are presented as annual, seasonal (winter, summer), and weekdays and weekend means. Further, temporal correlations between elements within centres, as well as correlations of mean values across all centres are presented. The availability of two centres in Antwerp, 11.5 km apart, provides the opportunity for an assessment of spatial variability of the elements.

Most elements show a wide range of concentrations across Europe. However, patterns for some elements differ significantly from what we observed previously for PM2.5 mass concentration, indicating that elemental analysis captures useful additional aspects of air pollution among the ECRHS II centres.

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1 Introduction

The study participants of 24 European centres of the former European community respiratory health survey I (ECRHS I) – cross-sectional study (1989-92) (Burney et al. 1994) are currently under re-investigation (follow-up study) (European Community Respiratory Health Group 2002). The primary goal of the ECRHS II project (http://www.ecrhs.org) is the assessment of incidence, course, and prognosis of respiratory diseases, in particular asthma and change of pulmonary function among adults.

In order to assess the impact of fine particulate air pollution on respiratory health, in the ECHRS II centres, an annual average (84 days/12 months) of $PM_{2.5}$ was determined using a standardised procedure (Hazenkamp-von Arx 2003; Hazenkamp-von Arx et al. 2004). In addition, the elemental composition of the $PM_{2.5}$ samples has been analysed by energy-dispersive X-ray fluorescence spectrometry (ED-XRF), a non-destructive method. The method has been described in the WP7 method report (www.ecrhs.org). (Mathys 2002)

The elemental analysis of 1926 $PM_{2.5}$ samples collected in the framework of the ECRHS II study has been completed in summer 2002 and will be presented in this report. The report aims to describe the mean concentrations (annual, winter, summer, weekday and weekend) of the elements, and the correlation between the elements within and across the cities. First findings are described and some suggestions for further analyses are made.

The main rationale for the assessment of chemical elements on $PM_{2.5}$ is to better understand the contribution of different sources to ambient $PM_{2.5}$. $PM_{2.5}$ is not source specific but measures the total mass of fine particulate matter up to 2.5 micrometer in diameter suspended in the air. Given that PM from different sources may exert different health effects and require specific policies, a more source specific assessment of PM pollution offers the opportunity to broaden the epidemioligal investigations taken by the ECRHS II Air Pollution Working Group.

The next sections provide a short overview of the main chemical elements and their assignment to main groups of sources. As suggested in the results sources may differ significantly across cities. The list of sources may be incomplete and only 18 elements have been reliably assessed in ECRHS II.

Sulfur. Sulfur contained in particulate matter is mainly attributed to secondary particles formed in the atmosphere from the oxidation of – predominantly manmade – sulfur dioxide (SO_2). Sulfur is mostly reported to be present as sulfate (SO_4^{2-}). However other sulfur compounds can be expected on particulate matter. It is in general homogeneously distributed over wide areas and indicates background air pollution (Fan et al. 1995; Brook et al. 1997; Röösli et al. 2001). In Europe sulfur of primary and secondary origin is mainly due to combustion of coal and oil in large power plants as well as heating in wintertime. Local sources such as primary particles from traffic emissions (Diesel) may add to the background level.

Lead and bromine. Lead in the atmosphere is mainly derived from traffic. The combustion of leaded petrol ("anti-knock" agent in form of tetra alkyl lead) has dramatically decreased during the last 20 years because of the introduction of unleaded petrol. The lead ban in Europe was implemented in 2000, thus it may be questionable if Pb is still an important tracer for traffic related particles. However, increased lead concentrations may result from re-suspension of lead containing road dust, and therefore still serve as a proxy for traffic. Furthermore lead containing particles are produced by abrasion of brakes (Kohler 2000) or originate from lost and abraded wheel weights (Root 2000). These mechanically generated particles are mostly contained in the coarse fraction mode (> 1µm in aerodynamic diameter) of particles whereas primary combustion particles are more strongly related to the fine (< 2.5 µm in aerodynamic diameter)and particularly ultra fine mode (< 0.1 µm). Other sources for lead containing particles are incineration and metallurgic processes (U.S. Environmental Protection Agency 1990).

Bromine in the atmosphere also originates mostly from the emissions of motor vehicles, but also from other sources like fossil fuel combustion, incineration, seawater or crustal material (Sturges and Harrison 1986; Lee et al. 1994).

Sodium and chlorine. Sodium is usually assumed to be entirely seawater derived. The ejection and evaporation of tiny seawater droplets leads to mostly coarse sea salt particles. Some of these particles are small enough to have an appreciable atmospheric lifetime. Chlorine – the second part of sea salt – is also emitted by anthropogenic activities like coal combustion and the incineration of domestic and industrial waste (U.S. Environmental

Protection Agency 1990). In wintertime the use of salt for icy roads and the re-suspension of those particles by traffic may contribute considerably to the atmospheric concentration of sodium chloride.

Silicon, calcium, aluminum, iron and magnesium. These elements are all attributed to geogenic matter. Silicates are the most common minerals, and present in soils also. The average chemical composition of the present earth's solid crust shows that oxygen is the most abundant element (46%) followed by silicon (28%), aluminum (8.1%), iron (5%), calcium (3.6%), sodium (2.8%), potassium (2.6%) and magnesium (2.1%) (Davis et al. 1984; Potts 1992; Andrews et al. 1996; Gillette 1997; Press and Siever 1997). The mentioned elements are also main constituents in building materials and in fly-ash from the combustion of coal.

The crustal composition represents the geogenic source profile on a global scale and does not reflect the local variations on the earth's surface. An easy way to characterize the local geological characteristics is the use of a Si/Ca ratio, because these two constituents can vary considerably between European cities.

Potassium. Outdoor potassium is assumed to stem from wood or agricultural combustion in wintertime and from biological material like pollen and spores during spring and summer (Matthias-Maser and Jaenicke 1994). The main indoor source for potassium is cigarette smoking (Özkaynak et al. 1996). The combustion of wood in open fireplaces may contribute to the potassium indoor concentration.

Zinc, copper, nickel, selenium and arsenic. Zinc, copper, nickel and arsenic are primarily related to smelting processes, incineration of domestic and industrial waste and the combustion of wood (Zn), oil (Cu, Ni) or fuels (As) (U.S. Environmental Protection Agency 1990; Huffman et al. 2000). Furthermore Zn is associated with vehicular emissions since it is a trace element in lubricating oil. The atmospheric selenium content is almost entirely due to the combustion of fuels (Hopke et al. 1976; Pacyna et al. 1984).

The most important natural sources of these trace elements are windblown dust (predominantly in desert areas) and volcanoes. Taking into account both the absence of

desert areas and the low emissions of European volcanoes, it can be said that emissions of Zn, Cu, Ni, Se and As from natural sources are insignificant compared to those from anthropogenic sources (Nriagu 1979).

2 Objectives

According to the EU grant "European Community Respiratory Health Survey II (Project number: QLK4-CT-1999-01237)", Work Package 7 has the following objectives:

Objectives:

- To assess the chemical elements contained on the collected ambient $PM_{2.5}$ filters.
- To describe the distribution of chemical elements on $PM_{2.5}$ across Europe and over time
- To create a data set, containing for each study centre the $PM_{2.5}$ bound elemental analyses summary statistics over time

Deliverables:

Deliverable Number 6 Methodological report on ED-XRF applied to $PM_{2.5}$ Teflon filters; *(Mathys 2002)*

Deliverable Number 14 Data set containing all elements and mass measures from all centres and measurement periods

Deliverable Number 17 Short report on distribution of elements collected this way

Deliverable Number 18 Short report on assessment of quality of data on elements obtained in this way

Milestones and expected results

- Information from elemental analysis of $PM_{2.5}$ ready for incorporation in pan-European research database

This report contains deliverables 17 & 18.

3 Methods

The $PM_{2.5}$ sampling procedure is described in the WP6 report (Hazenkamp-von Arx 2003) and also published in Hazenkamp-von Arx et al. 2003. The method of the elemental analysis by ED-XRF is described in the WP7 report (Mathys 2002) and published in Mathys et al. 2001. Both reports can be downloaded from the ECRHS webpage www.ecrhs.org/reports.htm.

The relevant information about the definition of variables presented in this report as well as the assessment of the validity of the elemental analysis are presented in the following.

3.1 Monthly, Summer, Winter and Annual mean concentrations

Sampling was conducted over a 24 and 48 hour period on weekdays and weekends, respectively. The start-time was always midnight. Each month, six filter samples, representing seven days of measurement (= 168 hours), were collected. The seven days were distributed over a two-weeks measuring period. From these six samples a **monthly mean concentration** was calculated taking into account the different pump sampling times, (i.e. the monthly mean concentration is the **time-weighted** average concentration of the six measurements). In this way it was possible to use information from filters which had not been exposed for exactly 24 or 48 hours due to technical or logistic problems with the pump. Thus, some means are based on less than seven days' data and for these cases the effective sampled hours are calculated as a percentage of the planned hours (see Tab. 1.4). The value 100% indicates that values are based on 168 hours per month of sampling.

For the purpose of discussing seasonality, **'winter'** and **'summer'** mean concentrations are defined (see WP6 report (Hazenkamp-von Arx 2003)). The winter average of the four monthly mean concentrations (= 24 filters) from **November 2000 to February 2001** (In one centre, Albacete, readings obtained from November 2001 were taken as a proxy for November 00). The summer mean concentration is the average of the four monthly mean values (= 24 filters) from **May 2001 to August 2001**. The **annual** mean is calculated over the 12 monthly values (= 72 filters). The schedule represents approximately 23% of all possible measuring days (84/365). If more than 12 monthly mean concentrations were available (some centres had

extended the period of monitoring beyond the minimum 12 months), the 12 means with the closest match to the period October 2000 - September 2001 were chosen, see Tab. 1.4.

In order to discuss the difference between weekdays and weekends, mean concentrations were calculated of the 60 24 h-weekday filters (**weekday mean**) and of 12 48 h-weekend filters (**weekend mean**) of each centre.

3.2 Limit of detection (LoD)

For some elements the instrumental limit of detection (LoD) is higher than the effective load of the element. (Mathys 2002) If a concentration could not be measured due to too low concentrations, i.e. value is below instrumental LoD, half of the LoD concentration is taken for the calculations. Concentrations which are 0 after field blank correction are also considered as values below LoD. In Tab. 1.1 the mean LoDs for each element (column C) are listed. Since the filters were analysed in two different batches, the values are given for each batch separately and the difference between both LoDs (column I and J) are given (adapted from method report (Mathys 2002)).

When calculating a mean concentration, concentrations below LoD are taken into account, although large numbers of filters below LoD result in reduced precision of the mean estimates. However, for calculating correlation coefficients, concentrations below LoD are not used.

3.3 Field blank correction for exposed filters

During each month one field blank filter was collected in each centre. The exact procedure is described in the WP6 report (Hazenkamp-von Arx 2003). In total, 290 field blank filters were analysed by ED-XRF. As described in the method report, (Mathys 2002) the filters were analysed in two batches. A total of 163 field blank filters were analysed in the first batch and 127 in the second. Since the two batches have different mean LoDs (Limit of detections) for each element, the two batches were analysed separately. Tab. 1.1 shows the number and the percentage of field blank filters which have concentrations above LoD for each element. For 16 elements a significant number of blank filters of at least one batch showed concentrations above the LoD. For these elements a field blank correction was applied. Since there was no

difference between the centres, one common correction factor per element was chosen. The chosen correction factor is the mean concentration of all filters in one batch, replacing concentrations below LoD with 0.5 LoD (see Tab. 1.1). This approximation is based on the assumption that blank concentrations are normally distributed (Mathys 2002). The uncertainty of the correction factor can be estimated from Tab. 1.1 (columns D and E) where the minimal and the maximal correction value is given. The minimal value is calculated by fixing concentrations below LoD at 0, the maximal value by fixing concentrations below LoD at LoD. The lower the percentage of the concentrations above LoD, the larger is the uncertainty of the correction factor, and the higher is the probability that the "true" blank correction value tends towards the lower limit.

The exact correction value which was applied, i.e. subtracted from the concentrations of the 16 elements, can be seen in Tab. 1.2. Concentrations which became less than 0 after correction were fixed at 0. For the concentrations which were already below LoD, the correction was applied to 0.5 LoD.

Despite the specific correction factors, it remains possible that there is a systematic difference between filters analysed in different batches, especially for elements with many concentrations around LoD. Tab. 1.3 lists which filters were analysed in which batch (exact information is available in the database).

3.4 Supplementary note regarding overestimated sulphur levels

(added July 22 2005)

Measurements of sulphur were highly correlated with declared sulphur contents of standard materials (rPearson= 0.98); however, concentrations were systematically overestimated by ED-XRF. A correction factor of 0.42 (i.e. ED-XRF levels were 2.5 times higher than ICP) was derived from parallel ICP analyses of 12 filters. However, **no correction was applied** to ED-XRF sulphur measurements presented in this report. A note has been added to the affected tables and figures.

3.5 Number of available filters and filter concentrations

The tables 2 - 7 show the numbers and the percentages of filters with concentrations above LoD for each element before and after the application of field blank correction, listed for each centre. The numbers and percentages in tables 2.1 - 2.4 are based on the filters used for the annual mean calculations. Some elemental concentrations depend strongly on the season and the weekday. Thus, the numbers and percentages of the filters used for the winter and summer mean calculation are given in tables 3.1 - 3.4 and 4.1 - 4.4 respectively. In the tables 5.1 - 5.4 and 6.1 - 6.4 the numbers and percentages are given for filters used for the weekday mean and the weekend mean, respectively. Since some centres collected $PM_{2.5}$ samples during more than a year, for some centres more than 72 exposed filters are available, the tables 7.1 - 7.4 show the numbers and percentages of filters above LoD of all available filters.

In Tab. 8 in rows a) the number of centres which have at least 50% of the filters above LoD before the application of the blank correction are listed for the five temporal aggregation levels: *annual, summer, winter, weekday and weekend mean concentrations*. The numbers given in rows b) and c) reflect the same results, however after blank correction, for b) at least 50% above LoD and for c) at least 90% above LoD.

The concentrations of I (Iodine) were considered questionable due to methodological issues, as described in the WP7 report (Mathys 2002). Also after blank correction no reasonable pattern could be seen in correlation diagrams (summer versus winter means, weekday versus weekend means) at a first sight, thus we did not include Iodine in this report.

4 Results and discussion

4.1 Annual, winter, summer weekday and weekend mean concentrations

Tab. 9.1 shows the annual mean concentrations of the 24 elements for the 21 centres. In addition, the standard deviation (SD) and the 5th, 25th, 50th, 75th and 95th percentiles are given. The Figs. 1.1 - 1.21 show the corresponding boxplots of the elements, based on the filters used for the calculation of annual means. For the sake of completeness, the only 12 Cr concentrations above LoD observed in Galdakao are also given. Values were between 4.0 and 96 ng/m^3 (Median: 12.5 ng/m^3).

In the tables 9.2 - 9.5 the same statistics as in Tabs 9.1 are given for the winter, summer, weekday and weekend mean concentrations, respectively. The tables 9.6 - 9.10 are the same as 9.1 - 9.5 but include only the mean concentrations without additional statistics. All filters were used for the calculation, irrespective of the validity of the concentration, i.e. also concentrations below the LoD are included. The tables 10.1 - 10.5 show the five mean concentrations as percentage of the $PM_{2.5}$ mass for each element and the total identified mass. In the tables 11.1 and 11.2 the ratios of the winter/summer and weekday/weekend mean concentrations are given, respectively. In Fig. 11.3 the ratios of Si/Ca, Si/Al, and Si/Mg are given for all centres, stratifying between the seasons and the weekdays/weekends. The Figs. 2.1 - 2.21 show the five (annual, summer, winter, weekdays, weekends) mean concentrations for each element. In Figs. 3.1 - 3.24 the correlation diagrams of Winter (w) vs. Summer (s) mean concentrations and Weekday (wd) vs. Weekend ((mean)) mean concentrations, respectively, are given for each element. For comparison in Figs. 3.25 and 3.26 the same correlation diagrams are shown for BS and $PM_{2.5}$, respectively.

4.2 Within-city correlation of all elements

The tables 12.1 - 12.21 show the within-city Pearson correlation coefficients of all elements including filters of the entire year for each centre. Tables 13.1 - 13.21 and tables 14.1 - 14.21 list the Pearson coefficients for the within-city correlations between the elements of the winter filters, and summer filters, respectively. In the tables 15.1 - 15.21 and 16.1 - 16.21 the same coefficients are given for the weekdays and the weekend filters, respectively. The correlation

coefficients are calculated if at least six pairs of samples with values above LoD are available. The coefficients are time-weighed.

4.3 Across-city correlation of all elements

In the tables 17.1 - 17.5 the across-city Pearson correlation coefficients of all elements of the annual, winter, summer, weekday, and weekend mean concentrations are listed. No data from Verona is included in these comparisons as we had not sufficient numbers of valid filters (for a discussion of imputation of $PM_{2.5}$ annual means for Verona: see Report WP6).

Annual means from all elements were used, irrespective of the percent of values (filters) with results above LoD (see 4.4. below).

The tables 18.1 - 18.5 show the across-city Spearman correlation coefficients for the same comparisons. The Tab. 19 shows the across-city Spearman correlation coefficients between winter and summer and between weekday and weekend mean concentrations.

4.4 General validity of the elemental concentrations

In this paragraph, several aspects of the validity of the results are addressed. It must be emphasised that depending on the use and application of these data, the relevance of these aspects may change. Before each application, the following factors need to be considered:

The element, the centre, the day of the week, the season, the LoDs, blank correction factors, and in which batch the elemental analysis was done. We point out, that there remains a difference between filters analysed in different batches, although two different blank corrections were applied for the two batches. In particular, the difference between batches has to be considered when comparing summer with winter filters, mean concentrations of elements with a lot of concentrations around LoD elements, or elements with high blank correction factors with respect to the measured concentrations.

Mean concentrations

For nearly all of the centres mean concentrations for 16 elements (Al, Br, Cl, Cu, Fe, K, Mg, Mn, Na, P, Pb, S, Si, Ti, V, Zn) can be calculated with a large number of the concentrations

above LoD (as the >50% numbers of the rows b) in Tab. 8 show). For many centres this is true also for the two elements As and Ca. The elements Ga and Se are also found frequently in concentrations above LoD in many centres. While Ga appears to be more prevalent in “winter”, Se is more often found in “summer”.

In a few centres Co is apparent on more than 50% of the summer filters. Nevertheless, it has to be paid attention to the fact that most of the concentrations of Co as well as Bi, Cd and Ni, are in the same order of magnitude as the corresponding LoD (or are even below LoD, which is possible since the concentrations were higher than the LoD before blank correction).

For Cr only some hot spots may be identified where some filters show detectable Cr concentrations. For Sn, 19 centres show concentrations above LoD on 1 to 6 filters (of the “annual” filters). For Zr, 20 centres do so on 1 to 4 filters. This is approximately the same percentage as found for the blank filters. Therefore, these two elements cannot be used in general nor for the detection of hotspots.

In general, we observed a good correlation between weekday and weekend mean concentrations across the centres. From the Figs. 3.1 – 3.26 and Tab. 19 it becomes clear that 18 elements (Al, As, Br, Ca, Cl, Cu, Fe, K, Mg, Mn, Na, P, Pb, S, Si, Ti, V, Zn) show weekday vs. weekend Spearman correlation coefficients $r_s > 0.8$ across the centres. The corresponding diagrams give evidence that also centres with low concentrations can be used for the discussion of the ranking order for these 18 elements. In other words: there would not be an important misinterpretation of ranking orders or correlations due to LoDs or too low numbers of available filters. In addition, Se and Ga may be used with caution. Tab. 20 gives a summary of the validity comments.

4.5 General patterns of elemental concentrations

Correlation patterns and distribution of concentrations across centres differ greatly depending on the considered elements. Hence, most elements reflect a different aspect of particulate air pollution than does $PM_{2.5}$ mass concentration per se. Nonetheless, the mass-wise more relevant elements, i.e. sulphur (on average 15.8% of PM2.5 mass) often show high correlations with $PM_{2.5}$ total mass concentration (tables 12.1 – 12.20).

Further, increased winter concentrations, as compared to summer, are observed frequently. Such patterns can be explained by three main factors:

1. The concentrations are higher due to meteorological conditions (e.g. inversion in winter). In such a case $PM_{2.5}$ mass concentration is well correlated with the elemental concentration.
2. Season specific anthropogenic sources, such as domestic heating, or salting winter streets. These effects are not necessarily reflected in the PM2.5 total mass concentration.
3. During summer more of the volatile and semi-volatile compounds are evaporated than in winter, which e.g. may affect Cl or Br concentrations.

For most of the elements the weekday and weekend correlation is very high. Future analyses may compare weekday and weekend constituents of $PM_{2.5}$ in more detail.

In a comparison between two centres in Antwerp, 11.5 km apart, the traffic station Antwerp City shows the same pattern in the mean concentrations as Antwerp South, but with slightly higher concentrations. A few deviations do not reflect spatial differences in Antwerp but can be explained by the fact that the winter and weekend sampling did not happen the same days (e.g. in AC December filters were missing).

Generally, the three Swedish centres show similar patterns and similar concentrations, Gotenborg (GO) mostly slightly higher than Uppsala (UP), and Umea (UM) slightly lower than UP.

Often, the English centres Ipswich (IP) and Norwich (NO) show a similar pattern, with some differences mostly due to deviations in the sampling schedules.

4.6 Element-specific patterns

The following sections summarize for the most relevant elements the following aspects ultimately relevant in the use of these data for health effect analyses:

- Data validity,
- distribution across centres,
- seasonal differences,
- weekday/weekend comparisons,
- geographical specificities, and
- possible emission sources.

If validity is not specifically addressed the element is considered valid. These characterizations are based on univariate descriptive statistics. More elaborate statistical analyses may be conducted to address specific hypotheses within and across cities.

As described in WP6, the $PM_{2.5}$ data set in Verona was based on a limited number of filters. Imputation of an annual mean estimate from the other Italian centers was appropriate for total mass concentration. We did, however, not impute elemental content due the larger uncertainties in the relevance of local contributions. Therefore, Verona data are not included in these results.

4.6.1 Al

There is a difference between winter and summer concentrations in some centres. The four Spanish centres AL, BA, HU, OV show no seasonal differences, though GA, the fifth Spanish centre has clearly higher concentrations in summer (factor 2). PA and TU have similar concentrations in summer, but not during winter (TU higher). There is no consistent difference between weekday and weekend concentrations.

4.6.2 As

The ratio between the highest and lowest annual concentrations is 16 (TU/RE).

Many centres have higher As concentrations during winter (factor 2 or more) but a few centres do not show seasonal differences. However, no centre has higher summer concentrations.

There is no consistent difference between weekday and weekend concentrations.

4.6.3 Bi

Since the Bi concentrations are around the LoD, the interpretation may not be correct.

AC and AS do not show the same pattern, which could (but does not have to) be an indication for methodological uncertainties.

Many centres seem to have higher Bi concentrations during summer than during winter. There also seems to be a tendency for many centres to have higher Bi concentrations during the weekdays than during the weekends.

4.6.4 Br

The Italian centres TU and PA, as well as BA show a large variability of Br concentrations during the year. In particular, these three centres have much higher Br concentrations during winter than during summer (more than factor 4). But also most of the other centres tend to have higher winter Br concentrations, although differences are less pronounced. This is likely due to evaporation of Br compounds during summer. Nevertheless, the highest annual mean concentrations are obtained in warmer regions and the lowest in the coldest regions with a maximal ratio of ~18. There seems to be no difference between weekdays and weekends concentrations.

4.6.5 Ca

The ratio between the highest (OV) and lowest (UM) annual concentration is 13.

The boxplots in figure 1.5 show that the variability of the Ca concentrations in the Spanish centres is markedly stronger than in the other centres. Like in the other centres, however, the pattern between summer and winter is not the same in all Spanish centres. Some show

higher concentrations in winter, others in summer, and others do not show any seasonality. There is a difference between the English centres: NO has markedly higher concentrations in winter than in summer. The weekday concentrations seem to be higher than the weekend concentrations for all centres. In GN a high concentration weekday filter in May (GN045) strongly influences this difference.

4.6.6 Cd

Since the Cd concentrations are around the LoD, the interpretation of these data remain questionable. Many centres seem to have higher Cd concentrations during winter than during summer. There also seems to be a tendency towards higher Cd concentrations during the weekdays than during the weekends.

4.6.7 Cl

There is a large difference between winter and summer concentrations. The winter concentrations are by a factor 2 (GO) to 38 (ER) larger than in summer. The ranking order of the centres differs strongly between winter and summer mean concentrations. This is probably mainly due to Cl evaporation during the high temperature period. Street salting in winter may also play a role. There is no consistent difference between weekday and weekend concentrations.

4.6.8 Co

Since the Co concentrations are around the LoD, the statements may not be correct. In line with this caveat, AC and AS do not show the same pattern. Many centres seem to have higher Co concentrations during summer than during winter. There seems to be a tendency towards higher Co concentrations during weekdays than during weekends.

4.6.9 Cu

The centres HU, TU, BA, GA and GN have markedly higher concentrations than other centres (highest-lowest ratio is ~16). The concentrations in HU, BA and GN do not depend on the

season. Season plays a role in TU (higher in winter) and in GA (higher in summer), however. HU, BA and GN seem to have higher concentrations during weekdays than during weekends.

4.6.10 Fe

The ratio between highest and lowest annual mean concentration is 11 (TU/RE). In most of the centres, the Fe concentrations are quite variable during the year. There seems to be a tendency towards higher Fe concentrations during weekdays than during weekends.

4.6.11 Ga

Since many concentrations are below LoD, the statements may be not reliable.

The absolute differences between the centres seem to be small (factor ~3.4 at maximum). Many centres seem to have higher Ga concentrations during winter than during summer, others do not show any difference. There is no consistent difference between weekdays and weekend concentrations across the centres.

4.6.12 K

The ratio between the highest and lowest annual mean concentration is ~16 (TU/RE). In many centres, the winter K concentrations are higher than the summer concentrations (at least by a factor 2). The probable reason is burning of wood during winter. GA and OV are exceptions having higher concentrations in summer. The K concentrations are about the same during the weekdays and weekends. The summer and weekend concentrations of BA are misrepresented because the weekend filter in June (BA094) has very high K concentrations. Also a winter-weekday filter from IP in Nov (IP008) has very high concentrations and strongly influences the winter and the weekday concentrations.

4.6.13 Mg

In most of the centres, the Mg concentrations are quite variable during the year. The Spanish centres tend to have higher Mg concentrations during summer. This finding is in contrast to

the other centres which tend to have higher concentrations during winter. There is no consistent pattern between weekdays and weekend concentrations across centres. The high weekend mean concentration in BA is strongly influenced by one filter (BA094).

4.6.14 Mn

Most of the centres have a very narrow variability of Mn concentrations. Mn concentrations are higher during winter than during summer. GA is an exception having higher concentrations during summer and markedly higher concentrations than other centres (factor 2 to 46).There is a tendency towards higher Mn concentrations during the weekdays than during the weekends.

4.6.15 Na

Although the precision obtained from the repeated measurements was high, the accuracy of the Na concentrations is not very good since the calibration of Na was problematic (Mathys 2002). The absolute values are thus questionable, which may explain the high Na concentrations on the RE-filters with respect to the $PM_{2.5}$ mass. Another reason could be that RE is exceptional, having much lower S concentrations than the other centres, which could lead to the peak-background ratio in the ED-XRF spectrum being different. Nevertheless, we consider the ranking order and correlations across centres to be valid.

The Spanish centres tend to have higher Na concentrations during summer which is in contrast to the other centres which tend to have higher concentrations during winter. In most of the centres Na concentrations are similar during weekdays and weekends.

4.6.16 Ni

No clear pattern across the centres can be described for summer versus winter Ni concentrations. This could be due to the fact that the concentrations are around LoD. However, since across-city correlations (e.g. summer means) between Ni and other elements show reasonable correlation factors, it can not be excluded that the estimated differences

between winter and summer are real in many centres. In most of the centres, the Ni weekday concentrations are higher than the weekend concentrations.

4.6.17 P

The calibration routine gave the same problem as with Na, thus the absolute values may be questionable. Nevertheless, the ranking order and correlations are not concerned so far.

HU has markedly higher P mean concentrations (more than factor 3-15) and a larger concentration variability than the other centres. HU does not show a seasonal difference whereas many other centres tend to have higher winter concentrations. Most of the centres have only a weak tendency towards higher weekday concentrations, but HU has clearly higher concentrations during weekdays. GA seems to be different having higher summer and higher weekend concentrations.

4.6.18 Pb

The ratio between TU and RE is very large (~25 fold). Half of the centres have higher Pb concentrations during winter than during summer. The other centres do not show any seasonal difference except GA which has higher summer concentrations. There is no clear weekday-weekend pattern. It has to be noted, that an IP weekday filter in November (IP008) has a very high concentration.

The Pb mean concentrations are highly correlated with $PM_{2.5}$ (r_s >0.8) across the centres. But the correlations within the centres vary strongly. The low correlation between Pb concentrations in AC and AS, as seen in Fig., indicates that the spatial variability of Pb may be high, thus sources close by may affect the concentrations.

4.6.19 S

Sulphur levels are systematically overestimated by ED-XRF, as compared to ICP. Parallel measurements of 12 filters indicated that ED-XRF levels were 2.5 times higher than ICP levels. This should be considered when interpreting the presented, uncorrected data. (See supplementary note on p.15).

The variability and the annual mean concentration of S are markedly smaller in RE than in the other centres (factor ~12 smaller). In half of the centres, particularly in the Spanish centres, the S concentrations are higher during summer than during winter. The other centres do not show any difference or slightly tend to have higher winter concentrations. There is no clear weekday - weekend difference observed. The S winter and summer mean concentrations are highly correlated with $PM_{2.5}$ (r_s >0.8) across the centres. But the correlation within the centres varies, although more than half of the centres have high correlation coefficients (r_p > 0.8). During summer, S shows no high correlation with any nother element in any centre. But during winter S is highly correlated with As, Br, Cl and P in some centres. In general, S is considered an indicator of long range background pollution and therefore expected to be distributed homogeneously in space. This is confirmed also by Fig. 4 with the comparison of the S concentrations in AC and AS: the spatial variability of S seems to be low.

4.6.20 Se

The Antwerp centres show the highest annual concentrations of the centres, approx. 15 times higher than in Umea. Since there are many concentrations below LoD in the centres with low Se concentrations, the true range across centres may be even higher than 15. Many locations show higher Se concentrations during summer than during winter, though the levels are higher in winter in Antwerp. The weekday and weekend pattern across the cities is not clear since some concentrations are around the LoD and thus, at least the weekend mean concentrations are not robust.

4.6.21 Si

Most of the centres do not show seasonal differences of their Si concentrations (exceptions: AL, GA, GN, PS, TA). Most of the centres do not show any difference between weekdays and weekends, but if so with a tendency towards higher concentrations during the weekdays.

4.6.22 Ti

BA and HU have clearly the highest Ti mean concentrations. There is no clear trend for a seasonal pattern. Some centres have higher (HU by a factor 2) others lower summer (TU nearly a factor 2) mean concentrations and other centres do not show any difference. Most of the centres do not differ between weekdays and. Exceptions are HU (higher weekday concentrations by a factor 2) and BA (tendency towards higher weekend concentrations.)

4.6.23 V

The annual mean concentrations differ between GA and RE by a factor of ~24. There is no clear trend for a seasonal pattern across the centres. Some centres have higher (e.g. HU, GA, IP and NO by factors 2 to 3), others have lower summer (e.g. AC, AS, TA, TU by factors 1.5 to 2) mean concentrations and other centres do not show any difference. Most of the centres do not differ between weekdays and weekends. Exceptions are BA and probably AC, AL, and AS (higher weekday concentrations) and probably GA (tendency towards higher weekend concentrations.)

4.6.24 Zn

GN and GA have the highest annual mean concentrations with the very extreme factors of 84 and 68 fold, respectively, as compared to the lowest annual mean concentration (RE). The seasonal patterns are contrary. Whereas GA has higher summer Zn concentrations (by a factor 2), GN has higher winter concentrations (by a factor more than 2). Like GN, the other centres show markedly higher concentrations during winter. Most of the centres do not differ between weekdays and weekends at best. Again GA is an exception showing higher weekend concentrations.

4.6.25 Geogenic matter: Al, Ca, Fe, Mg, Si and Ti

Al, Ca, Fe, Mg, Si and Ti may be used as indicators of geogenic matter – including traffic related resuspension – though suitability may differ from centre to centre. Most of the centres show very high Pearson correlation coefficients ($r_p \geq 0.8$) between Al, Si, and Ti. In winter also

Ca correlates with these elements in many centres. As the ratios Si/Ca, Si/Al, and Si/Mg in Tab. 11.3 illustrate, the content of geogenic elements in the particles can vary depending on the season. As an example, in the Spanish centres the ratios Si/Al and Si/Mg do not depend on the season nor on the weekdays. In contrast, the Si/Ca ratios vary with the season. In particular, Ca seems to have higher concentrations during weekdays than weekends. In contrast to these elements, Fe shows in some centres clearly higher correlations with elements originating from anthropogenic sources (e.g. Pb, Br, As in TU and GA, respectively) than with the elements Al, Ca, Si, and Ti.

There could be several reasons why geogenic matter shows different seasonal patterns. Meteorological properties (i.e. wind direction) and long range air mass transportation often differ between summer and winter and can thus influence the composition of the particles. But elements originating from geogenic matter are not expected to show any difference between weekday and weekend concentrations. The fact that some of these elements do show such a difference could be explained by re-suspension of dust by cars or construction works, which are more pronounced during weekdays or/and other anthropogenic activities (e.g. combustion, industry). The heterogenous pattern observed for Fe may indicate non-geogenic sources to be of importance at least in some cities.

5 Further considerations and suggestions

5.1 Anthropogenic sources

BA, GA, HU, and TU have often markedly higher concentrations of elements originating from anthropogenic sources (e.g. traffic, industry, combustion) than other centres. Tab. 21 gives a rough summary of the high concentration centres. Also AC, AS, GN and PA have a few elements originating from anthropogenic sources with clearly higher concentrations than in other centres. This is not astonishing due to the fact that the centres TU, PA, BA, AC, AS and GN have also the highest annual mean $PM_{2.5}$ mass concentrations (TU 44.9 µg/m3, PA 35.3 µg/m3, BA 22.2 µg/m3, AC 23.3, AS 21, 2 µg/m3 and GN 19 µg/m3). Additionally, these cities are large and dense, with industry and/or a high traffic volume. However, HU (17.3 µg/m3) and GA (16.3 µg/m3) rank only 10^{th} and 13^{th}, respectively, with regard to the $PM_{2.5}$ mass concentrations, similar to cities like e.g. BS, ER, IP, NO or PS. HU is an industrial city (e.g. P

industry) (Querol 2002) and GA is located in the region of Bilbao, which is rich in industry (Viana M. 2003). These industrial activities do not seem to have a large influence on the $PM_{2.5}$ mass concentration itself, but seem to be reflected in the concentration levels of some elements.

5.2 Long range background pollution (sulphur)

The same centres as mentioned above, BA, GA, HU,TU, AC, AS, PA also show the highest sulphur annual mean concentrations (exception: GN), but the difference to the other centres are much less pronounced. S seems to reflect a broad background pollution reaching similar levels in large parts of Europe, while the most northern centres (RE, UM, UP, TA) show the lowest levels. In HU and GA regional emissions are likely to contribute significantly to S levels.

For proper comparisons between centres over whole Europe, it may be useful to compare simultaneously measured S concentrations (same months at least, if not days), and to differentiate between the seasons.

It has to be pointed out that due to the systematic overestimation of S levels by the ED-XRF method used, **these data cannot be compared to other studies**. Comparisons across ECRHS study centres, however, are considered valid. (See supplementary note on p.15).

5.3 Indicators of geogenic matter

Al, Si, Ti, Mg are the elements originating from geogenic matter, which can be considered to be reliably measured. In contrast, in some centres Ca is detected only with low concentrations near the LoD and is thus less reliable for some centres. Ca concentrations are markedly higher in the Spanish than in the other centres, which may reflect the composition of the crustal material. The comparison between AC and AS in Fig. 4 show also, that there are less Ca filter above LoD than e.g. for Al which shows a very low spatial variability. Ca seems to originate also partly from anthropogenic sources, i.e. construction works or re-suspension of dust by traffic, at least in some centres.

Further analyses may warrant evaluating which element or ratio of elements could be used as the best indicator of geogenic matter. The ratio between the lowest and the highest concentrations are markedly lower for all geogenic elements, as compared to the elements originating from human activities.

5.4 Questionable elements (Bi, Cd, Co, Ga, Ni, Se)

Admittedly, the elements Bi, Cd, Co, and Ni show some good correlations with other elements (e.g. Pb), but it is not clear, whether these concentrations are artefacts, i.e. background signals or side-peaks from other elements (e.g. Pb) signals. Another possible explanation could also be that in low polluted centres, these elements can be better detected because of less disturbing signals of other elements.

In Fig. 5 some correlation diagrams, chosen at random for some of the elements with only few filters showing concentrations above LoD (Bi, Co, Se, Ni) are given. They include all concentrations above LoD of these elements from all centres. The stratification by the two batches in the second and third Ga Ni diagram shows that the apparent two clusters observed in the first Ga Ni diagram including both batches is not explained by analyzing the filters in two batches.

5.5 Comparisons between Antwerp City and Antwerp South

For comparisons of AC and AS a similar procedure as described in the WP6 report (Hazenkamp-von Arx 2003) is recommended. At least, comparisons must be based only on values matched by date. Matching though will lead to the exclusion of two very high winter concentrations in January. The outlying nature of these January filters can be seen in Fig. 4. It shows 6 correlation diagrams using filters matched by date (some differences may remain in the sampling hours). For the calculation of the Pearson correlation coefficient given in the figure, the extreme value is excluded.

The procedure with matching days and matching sampling hours is also recommended for investigating the differences between IP and NO, the Spanish, or the Swedish centres.

5.6 Outliers

Outliers were not excluded a priori for any of the mean calculations. However, depending on the application, the exclusion of extreme values (also very low concentrations are candidates) has to be considered.

5.7 Weekday-weekend comparison

Weekday-weekend comparisons are based on the hypothesis that anthropogenic activities, i.e. commuter traffic, commercial traffic, or industrial activity, may vary significantly between weekdays and weekends, and that this difference may be reflected in the composition of particulate air pollution.

The presented weekday means and weekend means need to be interpreted with caution, as they can only serve as crude estimates of such differences. For a more profound analysis specific weekend values would need to be compared to the matching weekdays of the same period (month). Further, the weekend means suffer from larger variation, as they are only based on 12 filters (48h each), at most, as compared to 60 weekdays filters (24h each).

5.8 Traffic indicators

Although Pb was associated most strongly with traffic in earlier times, the introduction of the lead ban in gasoline raises some strong concerns whether Pb may still be used as a traffic indicator. Although banned from gasoline, Pb content of fine dust particles may still be associated with traffic due to abrasion of brakes, and re-suspension of lead containing dust along roadsides by traffic. However, these associations may strongly differ across centres, and industrial sources may have gained in relevance, relatively to traffic. The high correlation between annual mean concentrations of Pb and $PM_{2.5}$ indicates that Pb may be limited in its capability to capture an appreciably different aspect of pollution than does $PM_{2.5}$ mass concentration per se; nevertheless, centre specific analyses of the association between Pb, $PM_{2.5}$, and traffic are needed to clarify the relevance of Pb. We also measured reflectance on each $PM_{2.5}$ filter as well as NO_2. In ECRHS II, these indicators may be a more appropriate surrogate for traffic related PM than Pb.

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8 Tables

Tab. 1.1: Number of Field Blank Filters which show concentrations > LoD for all 28 elements and mean concentrations of the field blank filters.

	1. Batch							2. batch								
	A: # of field blank filters >LoD	B: # of field blank filters >LoD in %	C: mean LoD of all filters in ng/cm²	D: range of conc. in ng/cm² filters <LoD: 0 - 1 LoD**	E: range of conc. in ng/m³ filters <LoD: 0 - 1 LoD**	F: mean conc. in ng/cm² filters <LoD: 0.5 LoD	G: mean conc. in ng/m³ filters <LoD: 0.5 LoD**	A: # of field blank filters >LoD	B: # of field blank filters >LoD in %	C: mean LoD of all filters in ng/cm²	D: range of conc. in ng/cm² filters <LoD: 0 - 1 LoD**	E: range of conc. in ng/m³ filters <LoD: 0 - 1 LoD**	F: mean conc. in ng/cm² filters <LoD: 0.5 LoD	G: mean conc. in ng/m³ filters <LoD: 0.5 LoD**	H: LoD_1 - LoD_2 in ng/cm²	I: LoD_1 - LoD_2 in ng/m³
Al	61	37	19.3	16.9 - 28.8	8 - 14	22.84	10.8	13	10	20.1	3.51 - 21.4	1.7 - 10	12.43	5.9	-0.8	-0.4
As	16	10	3.5	0.46 - 3.47	0.2 - 1.6	1.96	0.9	3	2	4.5	0.12 - 4.12	0.05 - 2	2.12	1.0	-1.01	-0.48
Bi	15	9	0.4	0.03 - 0.46	0.02 - 0.2	0.24	0.12	81	64	0.3	0.68 - 0.78	0.32 - 0.37	0.73	0.35	0.112	0.053
Br	133	81.6	2.3	3.8 - 4.22	1.8 - 2	4.01	1.9	40	31.5	2.8	3.21 - 5.1	1.5 - 2.4	4.16	2.0	-0.49	-0.23
Ca	0	0	99.8	0 - 100	0 - 47	50	24	0	0	100	0 - 100	0 - 48	50	24	-0.2	-0.1
Cd	4	2	19.9	0.5 - 19.8	0.2 - 9.3	10.14	4.8	111	87	17.6	34.0 - 36.2	16 - 17	35.08	17	2.30	1.09
Cl	25	15	30	11.4 - 36.8	5.4 - 17	24.12	11.41	9	7	28.5	3.27 - 30.7	2 - 15	17	8.1	1.5	0.7
Co	31	19	4.5	1.08 - 4.44	0.5 - 2.1	2.76	1.3	51	40.2	4.9	4.81 - 7.63	2.3 - 3.6	6.22	3.0	-0.46	-0.22
Cr	0	0	2.1	0 - 2.3	0 - 1.1	1.15	0.54	0	0	1.9	0 - 1.77	0 - 0.8	0.89	0.42	0.23	0.11
Cu	133	81.6	7.3	11.9 - 13.2	5.6 - 6.2	12.52	5.9	101	79.5	8.1	16.4 - 18.1	7.8 - 8.6	17.24	8.2	-0.83	-0.39
Fe	162	99.4	7.1	74.2 - 74.3	35.06 - 35.08	74.23	35	60	47.2	8.7	18.6 - 23.1	9 - 11	20.85	9.9	-1.6	-0.8
Ga	159	97.5	0.9	2.32 - 2.34	1.09 - 1.11	2.33	1.1	33	26	1.0	0.43 - 1.17	0.2 - 0.6	0.8	0.38	-0.11	-0.05
I	70	42.9	60.6	58.6 - 93.0	28 - 44	75.8	36	60	47.2	60.3	58.29 - 89.98	28 - 43	74.14	35	0.31	0.15
K	46	28	28.3	22.7 - 43.0	11 - 20	32.84	15.6	114	90	28.4	126.29 - 129.17	60.0 - 61.4	127.73	60.7	0.1	0
Mg	2	1	58	3.93 - 55.0	1.9 - 26	29.46	13.9	0	0	58	0 - 55.39	0 - 26	27.69	13.2	-0.5	-0.2
Mn	55	33.7	2.0	0.96 - 2.29	0.45 - 1.1	1.63	0.76	59	46.5	2.1	1.49 - 2.6	0.7 - 1.2	2.04	0.97	-0.10	-0.05
Na	1	1	265	1.78 - 264.29	0.85 - 125	133.04	63	13	10	275	33.94 - 281.5	16 - 134	157.72	75	-10	-5
Ni	156	95.7	7.9	44.9 - 45.3	21.2 - 21.4	45.1	21.3	58	45.7	8.9	18.68 - 23.47	9 - 11	21.07	10	-0.95	-0.45
P	0	0	48.2	0 - 50	0 - 24	25	11.8	0	0	43	0 - 50	0 - 24	25	11.9	4.9	2.3
Pb	101	62	7.7	7.3 - 10.2	3.4 - 4.8	8.77	4.1	75	59.1	9.2	17.48 - 21.26	8.3 - 10	19.37	9.2	-1.6	-0.7
S	0	0	30	0 - 30	0 - 14.2	15	7.1	4	3	30	1.53 - 30.58	0.72 - 14.5	16.05	7.6	0	0
Se	12	7	6.4	0.6 - 6.45	0.3 - 3.1	3.53	1.7	46	36	7.7	9.17 - 14.01	4.4 - 6.7	11.59	5.5	-1.22	-0.58
Si	10	6	100	15.1 - 109	7.2 - 52	62.01	29	13	10	100	31.57 - 121.33	15 - 58	76.45	36	0	0
Sn	1	1	26.1	0.23 - 25.88	0.11 - 12	13.06	6.2	1	1	26.7	0.34 - 26.74	0.16 - 13	13.54	6.4	-0.63	-0.30
Ti	16	10	1.7	0.23 - 1.72	0.11 - 0.81	0.97	0.46	16	13	1.7	0.46 - 1.95	0.22 - 0.92	1.2	0.57	-0.038	-0.018
V	1	1	1.9	0.01 - 1.84	0.01 - 0.87	0.93	0.44	1	1	2.0	0.02 - 1.92	0.01 - 0.9	0.97	0.46	-0.08	-0.04
Zn	132	81	4.7	8.43 - 9.34	4.01 - 4.42	8.89	4.21	82	64.6	5.4	8.58 - 10.49	4.1 - 5.0	9.54	4.5	-0.67	-0.32
Zr	6	4	12.3	0.48 - 12.2	0.2 - 5.7	6.32	3.0	2	2	13.0	0.21 - 12.64	0.1 - 6	6.42	3.1	-0.63	-0.30

** Influence on a 24 hour filter, on a 48 filter the value would be half of this value.

Blank correction for Batch 1 and 2 for 16 Elements

	Batch 1 in ng/cm^2			Batch 2 in ng/cm^2		
	Correction factor	**Mean LoD***	**Minimal LoD***	**Correction factor**	**Mean LoD***	**Minimal LoD***
Al	**22.8**	19.3	18.0	**12.4**	20.1	19.0
Bi	**0.24**	0.4	0.2	**0.748**	0.3	0.2
Br	**4.014**	2.3	1.7	**4.16**	2.8	2.0
Cd	**0**	19.9	16.0	**35.083**	17.6	11.0
Co	**2.76**	4.5	2.9	**6.22**	4.9	3.5
Cu	**12.52**	7.3	6.2	**17.247**	8.1	7.2
Fe	**74.229**	7.1	6.8	**20.863**	8.7	6.4
Ga	**2.329**	0.9	0.8	**0.8**	1.0	0.8
I	**75.8**	60.6	50	**74.1**	60.3	41.0
K	**32.8**	28.3	24	**127.73**	28.4	25.0
Mn	**1.63**	2.0	1.7	**2.04**	2.1	1.9
Ni	**45.097**	7.9	7.2	**21.09**	8.9	7.9
Pb	**8.777**	7.7	5.6	**19.379**	9.2	6.9
Se	**3.5**	6.4	4.4	**11.6**	7.7	5.5
Ti	**0.97**	1.7	1.4	**1.2**	1.7	1.5
Zn	**8.89**	4.7	4.3	**9.544**	5.4	4.6

* Mean and minimal LoD is only mean and minimum of the filters with concentrations below LoD and not of all filters.

Tab. 1.2: Filters were analysed in two batches 1 and 2

	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
AC	1	2	2	2	2	2	2	2	2	2	1	
AL	1	2	2	2	2	2	2	2	2	2	2	1
AS	1	2	2	2	2	2	2	2	2	2	1	1
BA	1	1	1	2	2	2	2	1	1	1	1	1
BS	1	1	1	2	2	2	2	2	2	1	1	1
ER	1	1	1	2	2	2	2	2	1	1	1	1
GA	1		1	2	2	2	2	2	2	1	1	1
GN	1	1	1	2	2	2	2	2	2	2	1	1
GO	1	1	1	2	2	1	1	1	1	1	1	1
HU	1	1	1	2	2	2	2	2	2	1	1	1
IP	1	1		2	2	2	2	2	2	1	1	1
NO		1	1	2	2	2	2	2	2	1	1	1
OV	1	1,2	1	2	2	2	2	2	2	1	1	1
PA	1	1	1	2	2	2	2	2	2	1	1	1
PS	1	2	2	2	2	2	2	2	2	2	1	1
RE	1	1	1	2	2	2	2	2	2		1	1
TA	1	1	2	2	2	2	2	2	2	1	1	1
TU	1	1	1	2	2	2	2	2	1	1	1	1
UM	1	1	1	2	2	2	1	1	1		1	1
UP	1	2	1,2	2	2	1	1	1	1	1	1	1
VE	1	1,2	2	2	2	2	2		1	1	1	1

Tab. 1.3: Predetermined sampling schedule of the study. Header row shows start and end day of measuring period of each month. Sampled months in grey. Months used for calculation of annual means are framed. Numbers show percent of scheduled hours that were actually sampled.

	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
	12 - 25	10 - 23	7 - 20	11 - 24	9 - 22	6 - 19	4 - 17	8 - 21	5 - 18	5 - 18	16 - 29	7 - 20	11 - 24	9 - 22	13 - 26	10 - 23	15 - 28	12 - 25	10 - 23
Albacete							63.1%	100%	100%	100%	100%	100%	100%	100%[c]	100%	100%	100%	100%	
Antwerp City					[b]	57.1%[b,e]	[no,e]	81.9%	100%[a]	100%[a]	100%	100%	100%	97.8%[e]	100%[a]	96.5%[e]	95.3%[c,e]		
Antwerp South						100%	100%	59.2%[f]	85.7%[a,f]	100%[a]	57.1%[f]	91.8%[f]	100%	100%	88.2%[a,f]	100%	100%[c]		
Barcelona			85.7%	100%	100%	97.0%[a]	92.6%	96.8%	100%	100%	100%	100%	100%	100%[c]					
Basel					100%	100%	100%	85.7%	100%	71.4%	100%	100%	71.4%	85.7%	100%	100%			
Erfurt				100%	100%	99.4%	100%	85.7%	100%	100%	100%	100%	100%	100%	100%c				
Galdakao					71.4%	100%	71.4%	92.3%	[no]	100%	85.7%	100%	100%	100%	100%	100%			
Gothenburg	100%	85.6%	71.4%	100%	85.7%	85.7%	100%	100%	100%	100%	85.7%	71.4%							
Grenoble						100%[a]	100%	100%	100%	100%	100%	85.7%	95.9%	96.2%	91.3%[a]	100%	100%		
Huelva					100%	100%	100%	100%	100%	100%	100%	85.7%	100%	85.7%	100%	100%			
Ipswich					100%	100%	85.7%	100%	85.7%	[no]	71.4%	100%	100%	100%	100%	100%			
Norwich					85.7%	100%	85.7%	[no]	71.4%	85.7%	100%	100%	100%	95.6%	100%	100%			
Oviedo					82.3%	100%	85.7%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Paris						100%[a]	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Pavia					100%	100%	100%	90.6%	82.9%	100%	100%	100%	100%	100%	100%	100%			
Reykjavik					[d]	100%	100%	100%	85.7%	100%	100%	85.7%	100%	85.7%	100%	85.7%	[d]	[d]	[d]
Tartu					100%	100%	100%	100%	100%	100%	100%	100%	100%	85.7%	100%	100%			
Turin				100%	85.7%	100%	97.4%	100%	100%	100%	57.1%	100%	100%	100%	100%				
Umea	[c]	100%[c]	100%	100%	[no]	85.7%	100%	57.1%	85.7%	100%	100%	100%	100%[c]						
Uppsala	100%	100%	100%	100%	85.7%	100%	71.4%	100%	70.8%[b]	95.9%	100%	100%							
Verona				100%	85.7%	43%	29%	100%	[no]	[no]	[no]	[no]	100%[g]	71%	[no]				

[a]: sampling start one week later, [b]: sampling start two weeks later, [c]: sampling start one week earlier, [d]: other location, [no]: no data available,

[e]: For $PM_{2.5}$ concentrations presented in Tab. 2 and 3 (after correction): sampled hours equals to those of Antwerp South

[f]: For $PM_{2.5}$ concentrations presented in Tab. 2 and 3 (after correction): sampled hours equals to those of Antwerp City

[g]: All filters available, but exact dates and sampling times not clear. Remark: Small changes in the sampling schedule not mentioned

Tab. 2.1: Annual filters: Number of filters >LoD before field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr	available
AC	63	36	40	61	59	44	63	32	1	61	63	26	32	63	63	62	63	36	62	63	63	59	63	1	63	62	63	2	63
AL	70	14	40	67	69	52	70	43		60	65	26	29	70	68	69	69	30	64	70	70	42	70	1	69	61	67	1	70
AS	65	47	37	61	30	40	66	21		62	66	25	33	66	61	66	66	38	65	66	66	50	65		65	65	66	2	66
BA	71	66	22	70	71	26	71	13		71	71	54	26	71	70	71	71	60	69	71	71	35	71	2	71	70	71	2	71
BS	64	33	26	63	52	30	67	25		63	66	42	36	67	58	67	67	50	50	65	67	36	66	6	66	45	66	2	67
ER	69	41	18	68	41	25	68	22		69	70	46	39	70	57	68	71	51	61	71	71	34	71	2	69	22	71	1	71
GA	60	45	21	59	58	36	62	15	12	62	62	36	25	62	59	62	62	47	52	61	62	49	61	2	61	58	62		62
GN	71	45	28	64	62	40	70	18	3	70	71	42	39	71	62	71	71	48	63	71	71	26	71	3	71	58	71	3	71
GO	66	32	8	65	26	11	64	17		60	66	57	35	65	51	64	66	57	48	58	66	25	65	2	63	53	66	2	66
HU	70	53	34	69	70	30	70	26		70	70	42	37	70	70	69	70	48	61	69	70	43	70	2	70	68	69	3	70
IP	62	38	32	58	27	32	62	13		61	61	38	33	63	63	61	63	50	47	59	63	33	62	6	60	51	63	1	63
NO	61	34	26	59	46	29	62	17		58	60	37	27	62	62	58	62	44	54	62	62	28	62	2	60	50	59	2	62
OV	70	48	28	70	68	40	70	23	1	68	70	43	45	70	69	70	70	46	66	70	70	46	70	1	69	69	70	1	70
PA	72	62	20	71	61	30	72	13		71	71	47	43	72	70	72	72	57	70	72	72	49	72	2	72	70	72	3	72
PS	72	46	31	70	67	48	72	22		71	70	38	43	72	71	72	72	44	69	72	72	40	72	4	72	50	72	1	72
RE	56	10	16	44	26	29	62	27		55	56	34	34	55	51	43	62	45	8	37	62	14	51	1	48	3	58	1	62
TA	69	30	25	63	44	37	70	31		64	65	41	35	71	58	68	71	47	62	67	71	29	68	1	62	41	71	2	71
TU	68	61	16	68	67	27	68	16	4	68	68	50	38	68	68	68	68	54	67	68	68	41	68	2	68	63	68	4	68
UM	60	11	18	53	3	20	49	16		53	61	46	33	57	31	52	58	49	25	52	62	15	52		45	19	59	2	62
UP	67	25	11	63	21	17	60	14		68	64	56	32	65	53	66	68	56	47	62	68	15	67	1	64	38	68	1	68
VE	28	26	6	28	28	7	28	4		28	28	25	12	28	27	28	28	24	28	28	28	16	28	1	28	19	28	2	28

Tab. 2.2: Annual filters: Number of filters >LoD in % before field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	57	63	97	94	70	100	51	2	97	100	41	51	100	100	98	100	57	98	100	100	94	100	2	100	98	100	3
AL	100	20	57	96	99	74	100	61	0	86	93	37	41	100	97	99	99	43	91	100	100	60	100	1	99	87	96	1
AS	98	71	56	92	45	61	100	32	0	94	100	38	50	100	92	100	100	58	98	100	100	76	98	0	98	98	100	3
BA	100	93	31	99	100	37	100	18	0	100	100	76	37	100	99	100	100	85	97	100	100	49	100	3	100	99	100	3
BS	96	49	39	94	78	45	100	37	0	94	99	63	54	100	87	100	100	75	75	97	100	54	99	9	99	67	99	3
ER	97	58	25	96	58	35	96	31	0	97	99	65	55	99	80	96	100	72	86	100	100	48	100	3	97	31	100	1
GA	97	73	34	95	94	58	100	24	19	100	100	58	40	100	95	100	100	76	84	98	100	79	98	3	98	94	100	0
GN	100	63	39	90	87	56	99	25	4	99	100	59	55	100	87	100	100	68	89	100	100	37	100	4	100	82	100	4
GO	100	48	12	98	39	17	97	26	0	91	100	86	53	98	77	97	100	86	73	88	100	38	98	3	95	80	100	3
HU	100	76	49	99	100	43	100	37	0	100	100	60	53	100	100	99	100	69	87	99	100	61	100	3	100	97	99	4
IP	98	60	51	92	43	51	98	21	0	97	97	60	52	100	100	97	100	79	75	94	100	52	98	10	95	81	100	2
NO	98	55	42	95	74	47	100	27	0	94	97	60	44	100	100	94	100	71	87	100	100	45	100	3	97	81	95	3
OV	100	69	40	100	97	57	100	33	1	97	100	61	64	100	99	100	100	66	94	100	100	66	100	1	99	99	100	1
PA	100	86	28	99	85	42	100	18	0	99	99	65	60	100	97	100	100	79	97	100	100	68	100	3	100	97	100	4
PS	100	64	43	97	93	67	100	31	0	99	97	53	60	100	99	100	100	61	96	100	100	56	100	6	100	69	100	1
RE	90	16	26	71	42	47	100	44	0	89	90	55	55	89	82	69	100	73	13	60	100	23	82	2	77	5	94	2
TA	97	42	35	89	62	52	99	44	0	90	92	58	49	100	82	96	100	66	87	94	100	41	96	1	87	58	100	3
TU	100	90	24	100	99	40	100	24	6	100	100	74	56	100	100	100	100	79	99	100	100	60	100	3	100	93	100	6
UM	97	18	29	85	5	32	79	26	0	85	98	74	53	92	50	84	94	79	40	84	100	24	84	0	73	31	95	3
UP	99	37	16	93	31	25	88	21	0	100	94	82	47	96	78	97	100	82	69	91	100	22	99	1	94	56	100	1
VE	100	93	21	100	100	25	100	14	0	100	100	89	43	100	96	100	100	86	100	100	100	57	100	4	100	68	100	7

Tab. 2.3: Annual filters: Number of filters >LoD after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	63	36	24	61	59	25	63	29	1	52	63	23	30	63	63	62	63	23	62	61	63	55	63	1	63	62	63	2
AL	70	14	25	64	69	22	70	38		43	65	20	27	70	68	69	69	17	64	64	70	33	70	1	69	61	65	1
AS	65	47	25	60	30	26	66	18		54	66	22	30	66	61	66	66	17	65	61	66	45	65		65	65	66	2
BA	71	66	12	70	71	18	71	10		71	71	46	25	71	70	71	71	34	69	70	71	32	71	2	71	70	71	2
BS	64	33	16	62	52	17	67	23		61	66	33	36	67	58	67	67	21	50	59	67	29	66	6	66	45	66	2
ER	69	41	9	64	41	14	68	18		59	70	34	36	70	57	68	71	19	61	63	71	30	71	2	69	22	71	1
GA	60	45	13	55	58	18	62	12	12	59	62	25	22	61	59	62	62	29	52	60	62	45	61	2	61	58	62	
GN	71	45	15	61	62	27	70	16	3	66	71	30	35	71	62	71	71	22	63	66	71	21	71	3	71	58	71	3
GO	66	32	4	64	26	6	64	16		53	66	37	33	65	51	64	66	29	48	54	66	21	65	2	63	53	66	2
HU	70	53	23	69	70	15	70	24		70	70	33	35	70	70	69	70	23	61	65	70	39	70	2	70	68	69	3
IP	62	38	22	54	27	21	62	13		47	61	27	29	63	63	61	63	25	47	52	63	31	62	6	60	51	61	1
NO	61	34	12	56	46	16	62	13		44	59	24	25	62	62	58	62	27	54	53	62	26	62	2	60	50	59	2
OV	70	48	16	69	68	20	70	23	1	64	70	32	41	70	69	70	70	28	66	69	70	40	70	1	69	69	70	1
PA	72	62	14	70	61	18	72	11		70	71	37	39	72	70	72	72	31	70	72	72	44	72	2	72	70	72	3
PS	72	46	17	66	67	27	72	18		69	70	32	37	72	71	72	72	22	69	68	72	30	72	4	72	50	72	1
RE	56	10	7	36	26	15	62	23		40	50	22	30	50	51	43	62	24	8	24	62	12	51	1	48	3	50	1
TA	69	30	13	58	44	25	70	27		50	64	32	33	71	58	68	71	20	62	56	71	25	68	1	62	41	71	2
TU	68	61	11	68	67	17	68	14	4	67	68	47	35	68	68	68	68	36	67	68	68	36	68	2	68	63	68	4
UM	60	11	14	50	3	10	49	15		35	58	26	32	56	31	52	58	16	25	44	62	11	52		45	19	56	2
UP	67	25	8	61	21	13	60	11		62	64	37	30	64	53	66	68	18	47	55	68	14	67	1	64	38	68	1
VE	28	26	5	28	28	6	28	4		28	28	22	12	28	27	28	28	7	28	28	28	16	28	1	28	19	28	2

Tab. 2.4: Annual filters: Number of filters >LoD in % after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	57	38	97	94	40	100	46	2	83	100	37	48	100	100	98	100	37	98	97	100	87	100	2	100	98	100	3
AL	100	20	36	91	99	31	100	54	0	61	93	29	39	100	97	99	99	24	91	91	100	47	100	1	99	87	93	1
AS	98	71	38	91	45	39	100	27	0	82	100	33	45	100	92	100	100	26	98	92	100	68	98	0	98	98	100	3
BA	100	93	17	99	100	25	100	14	0	100	100	65	35	100	99	100	100	48	97	99	100	45	100	3	100	99	100	3
BS	96	49	24	93	78	25	100	34	0	91	99	49	54	100	87	100	100	31	75	88	100	43	99	9	99	67	99	3
ER	97	58	13	90	58	20	96	25	0	83	99	48	51	99	80	96	100	27	86	89	100	42	100	3	97	31	100	1
GA	97	73	21	89	94	29	100	19	19	95	100	40	35	98	95	100	100	47	84	97	100	73	98	3	98	94	100	0
GN	100	63	21	86	87	38	99	23	4	93	100	42	49	100	87	100	100	31	89	93	100	30	100	4	100	82	100	4
GO	100	48	6	97	39	9	97	24	0	80	100	56	50	98	77	97	100	44	73	82	100	32	98	3	95	80	100	3
HU	100	76	33	99	100	21	100	34	0	100	100	47	50	100	100	99	100	33	87	93	100	56	100	3	100	97	99	4
IP	98	60	35	86	43	33	98	21	0	75	97	43	46	100	100	97	100	40	75	83	100	49	98	10	95	81	97	2
NO	98	55	19	90	74	26	100	21	0	71	95	39	40	100	100	94	100	44	87	85	100	42	100	3	97	81	95	3
OV	100	69	23	99	97	29	100	33	1	91	100	46	59	100	99	100	100	40	94	99	100	57	100	1	99	99	100	1
PA	100	86	19	97	85	25	100	15	0	97	99	51	54	100	97	100	100	43	97	100	100	61	100	3	100	97	100	4
PS	100	64	24	92	93	38	100	25	0	96	97	44	51	100	99	100	100	31	96	94	100	42	100	6	100	69	100	1
RE	90	16	11	58	42	24	100	37	0	65	81	35	48	81	82	69	100	39	13	39	100	19	82	2	77	5	81	2
TA	97	42	18	82	62	35	99	38	0	70	90	45	46	100	82	96	100	28	87	79	100	35	96	1	87	58	100	3
TU	100	90	16	100	99	25	100	21	6	99	100	69	51	100	100	100	100	53	99	100	100	53	100	3	100	93	100	6
UM	97	18	23	81	5	16	79	24	0	56	94	42	52	90	50	84	94	26	40	71	100	18	84	0	73	31	90	3
UP	99	37	12	90	31	19	88	16	0	91	94	54	44	94	78	97	100	26	69	81	100	21	99	1	94	56	100	1
VE	100	93	18	100	100	21	100	14	0	100	100	79	43	100	96	100	100	25	100	100	100	57	100	4	100	68	100	7

Tab. 3.1: Winter filters: Number of filters >LoD before field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr	total available filters
AC	16	13	3	16	16	6	16	3	1	16	16	13	8	16	16	16	16	12	16	16	16	15	16		16	16	16	1	16
AL	22	9	6	20	21	12	22	9		22	19	14	11	22	20	21	21	14	19	22	22	6	22		21	19	22		22
AS	22	20	9	22	11	3	22	7		21	22	18	11	22	20	22	22	20	22	22	22	16	22		22	21	22	1	22
BA	24	24	3	24	24	1	24	1		24	24	24	12	24	23	24	24	24	24	24	24	12	24	1	24	24	24	1	24
BS	22	18	1	23	18		23	3		22	23	23	15	23	19	23	23	23	17	22	23	5	23	3	22	14	23		23
ER	24	17	2	24	15	1	24	5		23	24	23	13	24	19	24	24	22	20	24	24	7	24	1	24	5	24		24
GA	15	13	1	17	13	1	17	1	2	17	17	17	6	17	14	17	17	15	12	16	17	8	16	1	16	14	17		17
GN	24	17	5	24	22	2	24	3	3	23	24	23	14	24	23	24	24	24	20	24	24	5	24		24	18	24	3	24
GO	23	12	1	23	10	3	23	6		20	23	23	14	23	16	22	23	22	21	21	23	8	22	1	22	19	23		23
HU	24	23	5	24	24		24	2		24	24	24	14	24	24	24	24	23	21	24	24	12	24		24	24	24	2	24
IP	22	17	5	22	12	1	22	6		22	22	21	12	22	22	22	22	22	17	22	22	9	21	2	21	18	22	1	22
NO	16	11	2	16	14	1	16	5		15	16	16	8	16	16	16	16	16	15	16	16	4	16	2	15	13	16		16
OV	23	19	2	23	23	7	23	3		22	23	19	13	23	23	23	23	20	21	23	23	12	23	1	22	22	23	1	23
PA	24	24	2	24	18		24	1		24	24	24	15	24	24	24	24	24	24	24	24	15	24	1	24	24	24	2	24
PS	24	18	6	24	24	6	24	4		24	24	19	9	24	23	24	24	20	22	24	24	10	24	3	24	16	24	1	24
RE	19	4		21	12	1	23	8		22	23	23	12	17	19	18	23	22	2	13	23	4	17		17		22		23
TA	23	13		23	8		24	3		23	24	24	9	24	16	24	24	24	21	22	24	8	22	1	16	16	24	2	24
TU	24	24	4	24	23	1	24	4	2	24	24	24	14	24	24	24	24	24	24	24	24	16	24		24	24	24	3	24
UM	19	6	2	19	1		20	1		18	20	19	7	19	10	17	19	19	9	16	20	2	14		14	4	20		20
UP	20	15	1	20	4	3	21	6		21	21	19	12	21	17	21	21	17	16	17	21	4	21		19	11	21		21
VE	11	11	2	11	11		11			11	11	11	5	11	11	11	11	11	11	11	11	5	11		11	8	11	2	11

Tab. 3.2: Winter filters: Number of filters >LoD in % before field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	81	19	100	100	38	100	19	6	100	100	81	50	100	100	100	100	75	100	100	100	94	100	0	100	100	100	6
AL	100	41	27	91	95	55	100	41	0	100	86	64	50	100	91	95	95	64	86	100	100	27	100	0	95	86	100	0
AS	100	91	41	100	50	14	100	32	0	95	100	82	50	100	91	100	100	91	100	100	100	73	100	0	100	95	100	5
BA	100	100	13	100	100	4	100	4	0	100	100	100	50	100	96	100	100	100	100	100	100	50	100	4	100	100	100	4
BS	96	78	4	100	78	0	100	13	0	96	100	100	65	100	83	100	100	100	74	96	100	22	100	13	96	61	100	0
ER	100	71	8	100	63	4	100	21	0	96	100	96	54	100	79	100	100	92	83	100	100	29	100	4	100	21	100	0
GA	88	76	6	100	76	6	100	6	12	100	100	100	35	100	82	100	100	88	71	94	100	47	94	6	94	82	100	0
GN	100	71	21	100	92	8	100	13	13	96	100	96	58	100	96	100	100	100	83	100	100	21	100	0	100	75	100	13
GO	100	52	4	100	43	13	100	26	0	87	100	100	61	100	70	96	100	96	91	91	100	35	96	4	96	83	100	0
HU	100	96	21	100	100	0	100	8	0	100	100	100	58	100	100	100	100	96	88	100	100	50	100	0	100	100	100	8
IP	100	77	23	100	55	5	100	27	0	100	100	95	55	100	100	100	100	100	77	100	100	41	95	9	95	82	100	5
NO	100	69	13	100	88	6	100	31	0	94	100	100	50	100	100	100	100	100	94	100	100	25	100	13	94	81	100	0
OV	100	83	9	100	100	30	100	13	0	96	100	83	57	100	100	100	100	87	91	100	100	52	100	4	96	96	100	4
PA	100	100	8	100	75	0	100	4	0	100	100	100	63	100	100	100	100	100	100	100	100	63	100	4	100	100	100	8
PS	100	75	25	100	100	25	100	17	0	100	100	79	38	100	96	100	100	83	92	100	100	42	100	13	100	67	100	4
RE	83	17	0	91	52	4	100	35	0	96	100	100	52	74	83	78	100	96	9	57	100	17	74	0	74	0	96	0
TA	96	54	0	96	33	0	100	13	0	96	100	100	38	100	67	100	100	100	88	92	100	33	92	4	67	67	100	8
TU	100	100	17	100	96	4	100	17	8	100	100	100	58	100	100	100	100	100	100	100	100	67	100	0	100	100	100	13
UM	95	30	10	95	5	0	100	5	0	90	100	95	35	95	50	85	95	95	45	80	100	10	70	0	70	20	100	0
UP	95	71	5	95	19	14	100	29	0	100	100	90	57	100	81	100	100	81	76	81	100	19	100	0	90	52	100	0
VE	100	100	18	100	100	0	100	0	0	100	100	100	45	100	100	100	100	100	100	100	100	45	100	0	100	73	100	18

Tab. 3.3: Winter filters: Number of filters >LoD after field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	16	13	2	16	16	2	16	2	1	16	16	10	8	16	16	16	16	6	16	16	16	14	16		16	16	16	1
AL	22	9	3	19	21	4	22	8		16	19	8	9	22	20	21	21	6	19	20	22	4	22		21	19	21	
AS	22	20	8	22	11	1	22	6		19	22	15	10	22	20	22	22	7	22	22	22	16	22		22	21	22	1
BA	24	24	3	24	24	1	24	1		24	24	20	12	24	23	24	24	15	24	24	24	12	24	1	24	24	24	1
BS	22	18	1	23	18		23	3		22	23	16	15	23	19	23	23	7	17	21	23	5	23	3	22	14	23	
ER	24	17	2	24	15	1	24	5		20	24	15	13	24	19	24	24	6	20	24	24	7	24	1	24	5	24	
GA	15	13	1	17	13	1	17	1	2	16	17	10	6	17	14	17	17	6	12	16	17	8	16	1	16	14	17	
GN	24	17	5	24	22	2	24	3	3	22	24	14	12	24	23	24	24	7	20	24	24	5	24		24	18	24	3
GO	23	12	1	23	10	3	23	6		20	23	14	13	23	16	22	23	10	21	21	23	8	22	1	22	19	23	
HU	24	23	5	24	24		24	2		24	24	17	13	24	24	24	24	8	21	24	24	12	24		24	24	24	2
IP	22	17	5	22	12	1	22	6		18	22	13	12	22	22	22	22	9	17	22	22	9	21	2	21	18	22	1
NO	16	11	2	16	14	1	16	5		15	16	11	8	16	16	16	16	7	15	16	16	4	16	2	15	13	16	
OV	23	19	2	23	23	3	23	3		20	23	13	11	23	23	23	23	11	21	23	23	10	23	1	22	22	23	1
PA	24	24	2	24	18		24	1		24	24	17	13	24	24	24	24	11	24	24	24	15	24	1	24	24	24	2
PS	24	18	4	24	24	6	24	4		24	24	14	8	24	23	24	24	9	22	24	24	9	24	3	24	16	24	1
RE	19	4		21	12	1	23	8		16	20	12	10	16	19	18	23	13	2	13	23	4	17		17		19	
TA	23	13		23	8		24	3		18	23	15	8	24	16	24	24	9	21	21	24	8	22	1	16	16	24	2
TU	24	24	4	24	23	1	24	4	2	24	24	23	14	24	24	24	24	20	24	24	24	16	24		24	24	24	3
UM	19	6	2	18	1		20	1		14	19	12	7	19	10	17	19	6	9	16	20	2	14		14	4	20	
UP	20	15	1	20	4	2	21	6		21	21	15	11	21	17	21	21	7	16	17	21	4	21		19	11	21	
VE	11	11	2	11	11		11			11	11	10	5	11	11	11	11	1	11	11	11	5	11		11	8	11	2

Tab. 3.4: Winter filters: Number of filters >LoD in % after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	81	13	100	100	13	100	13	6	100	100	63	50	100	100	100	100	38	100	100	100	88	100	0	100	100	100	6
AL	100	41	14	86	95	18	100	36	0	73	86	36	41	100	91	95	95	27	86	91	100	18	100	0	95	86	95	0
AS	100	91	36	100	50	5	100	27	0	86	100	68	45	100	91	100	100	32	100	100	100	73	100	0	100	95	100	5
BA	100	100	13	100	100	4	100	4	0	100	100	83	50	100	96	100	100	63	100	100	100	50	100	4	100	100	100	4
BS	96	78	4	100	78	0	100	13	0	96	100	70	65	100	83	100	100	30	74	91	100	22	100	13	96	61	100	0
ER	100	71	8	100	63	4	100	21	0	83	100	63	54	100	79	100	100	25	83	100	100	29	100	4	100	21	100	0
GA	88	76	6	100	76	6	100	6	12	94	100	59	35	100	82	100	100	35	71	94	100	47	94	6	94	82	100	0
GN	100	71	21	100	92	8	100	13	13	92	100	58	50	100	96	100	100	29	83	100	100	21	100	0	100	75	100	13
GO	100	52	4	100	43	13	100	26	0	87	100	61	57	100	70	96	100	43	91	91	100	35	96	4	96	83	100	0
HU	100	96	21	100	100	0	100	8	0	100	100	71	54	100	100	100	100	33	88	100	100	50	100	0	100	100	100	8
IP	100	77	23	100	55	5	100	27	0	82	100	59	55	100	100	100	100	41	77	100	100	41	95	9	95	82	100	5
NO	100	69	13	100	88	6	100	31	0	94	100	69	50	100	100	100	100	44	94	100	100	25	100	13	94	81	100	0
OV	100	83	9	100	100	13	100	13	0	87	100	57	48	100	100	100	100	48	91	100	100	43	100	4	96	96	100	4
PA	100	100	8	100	75	0	100	4	0	100	100	71	54	100	100	100	100	46	100	100	100	63	100	4	100	100	100	8
PS	100	75	17	100	100	25	100	17	0	100	100	58	33	100	96	100	100	38	92	100	100	38	100	13	100	67	100	4
RE	83	17	0	91	52	4	100	35	0	70	87	52	43	70	83	78	100	57	9	57	100	17	74	0	74	0	83	0
TA	96	54	0	96	33	0	100	13	0	75	96	63	33	100	67	100	100	38	88	88	100	33	92	4	67	67	100	8
TU	100	100	17	100	96	4	100	17	8	100	100	96	58	100	100	100	100	83	100	100	100	67	100	0	100	100	100	13
UM	95	30	10	90	5	0	100	5	0	70	95	60	35	95	50	85	95	30	45	80	100	10	70	0	70	20	100	0
UP	95	71	5	95	19	10	100	29	0	100	100	71	52	100	81	100	100	33	76	81	100	19	100	0	90	52	100	0
VE	100	100	18	100	100	0	100	0	0	100	100	91	45	100	100	100	100	9	100	100	100	45	100	0	100	73	100	18

Tab. 4.1: Summer filters: Number of filters >LoD before field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr	total available filters
AC	23	7	18	22	22	20	23	18		21	23	8	11	23	23	23	23	12	23	23	23	21	23	1	23	23	23	1	23
AL	24	1	19	24	24	19	24	20		16	23	4	11	24	24	24	24	6	23	24	24	20	24	1	24	21	21	1	24
AS	22	16	12	18	10	20	23	5		20	23	3	11	23	20	23	23	9	22	23	23	16	23		23	23	23		23
BA	23	19	14	22	23	17	23	8		23	23	11	5	23	23	23	23	17	23	23	23	14	23		23	22	23	1	23
BS	21	8	14	19	18	18	21	10		21	21	4	10	21	20	21	21	9	18	21	21	16	21	1	21	17	21		21
ER	22	7	10	21	13	18	21	10		22	22	3	13	23	21	21	23	9	22	23	23	12	23		22	11	23		23
GA	24	18	12	22	24	23	24	9	5	24	24	7	10	24	24	24	24	17	20	24	24	22	24	1	24	23	24		24
GN	23	13	14	19	19	21	22	6		23	23	9	12	23	21	23	23	12	23	23	23	12	23	3	23	19	23		23
GO	21	8	3	21	11	5	20	5		20	21	16	13	20	19	21	21	18	12	18	21	9	21		21	18	21	1	21
HU	22	11	18	22	22	19	22	14		22	22	5	13	22	22	21	22	9	20	22	22	18	22		22	22	21	1	22
IP	23	11	17	21	9	22	23	2		23	22	4	14	24	24	22	24	14	19	22	24	14	24	1	23	19	24		24
NO	23	7	16	21	15	17	24	11		23	24	8	11	24	24	22	24	13	21	24	24	15	24		24	21	23	1	24
OV	24	10	20	24	24	21	24	13		24	24	9	17	24	24	24	24	10	24	24	24	22	24		24	24	24		24
PA	24	18	10	23	22	18	24	6		23	24	5	13	24	23	24	24	12	22	24	24	15	24	1	24	24	24		24
PS	24	16	8	22	24	23	24	2		24	23	12	20	24	24	24	24	11	24	24	24	10	24		24	17	24		24
RE	21	1	12	13	8	18	22	16		16	18	3	15	22	19	13	22	10	3	17	22	7	20	1	17	1	20		22
TA	22	6	10	17	18	20	22	15		21	22	4	13	23	20	21	23	10	17	21	23	6	22		23	9	23		23
TU	24	17	11	24	24	22	24	10	1	24	24	9	12	24	24	24	24	14	23	24	24	14	24	2	24	20	24	1	24
UM	23	2	8	17	1	12	15	8		20	23	13	15	21	10	17	22	15	8	18	24	8	20		15	7	21		24
UP	24	3	5	22	6	6	17	2		24	20	18	12	21	18	22	24	18	14	22	24	6	23	1	22	12	24	1	24
VE	5	3	3	5	5	4	5	3		5	5	2	2	5	4	5	5	2	5	5	5	4	5		5	4	5		5

Tab. 4.2: Summer filters: Number of filters >LoD in % before field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	30	78	96	96	87	100	78	0	91	100	35	48	100	100	100	100	52	100	100	100	91	100	4	100	100	100	4
AL	100	4	79	100	100	79	100	83	0	67	96	17	46	100	100	100	100	25	96	100	100	83	100	4	100	88	88	4
AS	96	70	52	78	43	87	100	22	0	87	100	13	48	100	87	100	100	39	96	100	100	70	100	0	100	100	100	0
BA	100	83	61	96	100	74	100	35	0	100	100	48	22	100	100	100	100	74	100	100	100	61	100	0	100	96	100	4
BS	100	38	67	90	86	86	100	48	0	100	100	19	48	100	95	100	100	43	86	100	100	76	100	5	100	81	100	0
ER	96	30	43	91	57	78	91	43	0	96	96	13	57	100	91	91	100	39	96	100	100	52	100	0	96	48	100	0
GA	100	75	50	92	100	96	100	38	21	100	100	29	42	100	100	100	100	71	83	100	100	92	100	4	100	96	100	0
GN	100	57	61	83	83	91	96	26	0	100	100	39	52	100	91	100	100	52	100	100	100	52	100	13	100	83	100	0
GO	100	38	14	100	52	24	95	24	0	95	100	76	62	95	90	100	100	86	57	86	100	43	100	0	100	86	100	5
HU	100	50	82	100	100	86	100	64	0	100	100	23	59	100	100	95	100	41	91	100	100	82	100	0	100	100	95	5
IP	96	46	71	88	38	92	96	8	0	96	92	17	58	100	100	92	100	58	79	92	100	58	100	4	96	79	100	0
NO	96	29	67	88	63	71	100	46	0	96	100	33	46	100	100	92	100	54	88	100	100	63	100	0	100	88	96	4
OV	100	42	83	100	100	88	100	54	0	100	100	38	71	100	100	100	100	42	100	100	100	92	100	0	100	100	100	0
PA	100	75	42	96	92	75	100	25	0	96	100	21	54	100	96	100	100	50	92	100	100	63	100	4	100	100	100	0
PS	100	67	33	92	100	96	100	8	0	100	96	50	83	100	100	100	100	46	100	100	100	42	100	0	100	71	100	0
RE	95	5	55	59	36	82	100	73	0	73	82	14	68	100	86	59	100	45	14	77	100	32	91	5	77	5	91	0
TA	96	26	43	74	78	87	96	65	0	91	96	17	57	100	87	91	100	43	74	91	100	26	96	0	100	39	100	0
TU	100	71	46	100	100	92	100	42	4	100	100	38	50	100	100	100	100	58	96	100	100	58	100	8	100	83	100	4
UM	96	8	33	71	4	50	63	33	0	83	96	54	63	88	42	71	92	63	33	75	100	33	83	0	63	29	88	0
UP	100	13	21	92	25	25	71	8	0	100	83	75	50	88	75	92	100	75	58	92	100	25	96	4	92	50	100	4
VE	100	60	60	100	100	80	100	60	0	100	100	40	40	100	80	100	100	40	100	100	100	80	100	0	100	80	100	0

Tab. 4.3: Summer filters: Number of filters >LoD after field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	23	7	15	22	22	12	23	17		18	23	8	10	23	23	23	23	8	23	21	23	19	23	1	23	23	23	1
AL	24	1	13	23	24	7	24	17		11	23	4	11	24	24	24	24	5	23	23	24	15	24	1	24	21	20	1
AS	22	16	5	18	10	14	23	3		17	23	3	11	23	20	23	23	5	22	18	23	12	23		23	23	23	
BA	23	19	6	22	23	13	23	5		23	23	11	4	23	23	23	23	12	23	22	23	12	23		23	22	23	1
BS	21	8	7	18	18	11	21	8		21	21	4	10	21	20	21	21	5	18	17	21	12	21	1	21	17	21	
ER	22	7	3	19	13	7	21	8		17	22	3	11	23	21	21	23	5	22	15	23	8	23		22	11	23	
GA	24	18	7	18	24	12	24	6	5	22	24	7	8	23	24	24	24	11	20	23	24	18	24	1	24	23	24	
GN	23	13	7	17	19	17	22	5		22	23	9	12	23	21	23	23	11	23	19	23	11	23	3	23	19	23	
GO	21	8	3	20	11	2	20	5		16	21	10	13	20	19	21	21	9	12	18	21	9	21		21	18	21	1
HU	22	11	12	22	22	11	22	13		22	22	5	12	22	22	21	22	7	20	19	22	16	22		22	22	21	1
IP	23	11	10	17	9	15	23	2		15	22	4	11	24	24	22	24	7	19	17	24	13	24	1	23	19	23	
NO	23	7	8	18	15	9	24	7		14	24	7	9	24	24	22	24	12	21	17	24	15	24		24	21	23	1
OV	24	10	11	24	24	12	24	13		22	24	9	15	24	24	24	24	10	24	23	24	21	24		24	24	24	
PA	24	18	5	22	22	10	24	4		22	24	5	13	24	23	24	24	7	22	24	24	13	24	1	24	24	24	
PS	24	16	4	19	24	12	24	2		24	23	11	20	24	24	24	24	7	24	22	24	8	24		24	17	24	
RE	21	1	5	8	8	10	22	12		9	16	3	14	19	19	13	22	5	3	6	22	6	20	1	17	1	16	
TA	22	6	3	12	18	12	22	11		14	22	4	12	23	20	21	23	5	17	13	23	3	22		23	9	23	
TU	24	17	7	24	24	13	24	8	1	24	24	9	10	24	24	24	24	9	23	24	24	10	24	2	24	20	24	1
UM	23	2	5	16	1	5	15	7		7	22	6	15	20	10	17	22	3	8	11	24	5	20		15	7	19	
UP	24	3	4	20	6	5	17	2		23	20	11	11	20	18	22	24	5	14	17	24	6	23	1	22	12	24	1
VE	5	3	2	5	5	3	5	3		5	5	2	2	5	4	5	5	2	5	5	5	4	5		5	4	5	

Tab. 4.4: Summer filters: Number of filters >LoD in % after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	30	65	96	96	52	100	74	0	78	100	35	43	100	100	100	100	35	100	91	100	83	100	4	100	100	100	4
AL	100	4	54	96	100	29	100	71	0	46	96	17	46	100	100	100	100	21	96	96	100	63	100	4	100	88	83	4
AS	96	70	22	78	43	61	100	13	0	74	100	13	48	100	87	100	100	22	96	78	100	52	100	0	100	100	100	0
BA	100	83	26	96	100	57	100	22	0	100	100	48	17	100	100	100	100	52	100	96	100	52	100	0	100	96	100	4
BS	100	38	33	86	86	52	100	38	0	100	100	19	48	100	95	100	100	24	86	81	100	57	100	5	100	81	100	0
ER	96	30	13	83	57	30	91	35	0	74	96	13	48	100	91	91	100	22	96	65	100	35	100	0	96	48	100	0
GA	100	75	29	75	100	50	100	25	21	92	100	29	33	96	100	100	100	46	83	96	100	75	100	4	100	96	100	0
GN	100	57	30	74	83	74	96	22	0	96	100	39	52	100	91	100	100	48	100	83	100	48	100	13	100	83	100	0
GO	100	38	14	95	52	10	95	24	0	76	100	48	62	95	90	100	100	43	57	86	100	43	100	0	100	86	100	5
HU	100	50	55	100	100	50	100	59	0	100	100	23	55	100	100	95	100	32	91	86	100	73	100	0	100	100	95	5
IP	96	46	42	71	38	63	96	8	0	63	92	17	46	100	100	92	100	29	79	71	100	54	100	4	96	79	96	0
NO	96	29	33	75	63	38	100	29	0	58	100	29	38	100	100	92	100	50	88	71	100	63	100	0	100	88	96	4
OV	100	42	46	100	100	50	100	54	0	92	100	38	63	100	100	100	100	42	100	96	100	88	100	0	100	100	100	0
PA	100	75	21	92	92	42	100	17	0	92	100	21	54	100	96	100	100	29	92	100	100	54	100	4	100	100	100	0
PS	100	67	17	79	100	50	100	8	0	100	96	46	83	100	100	100	100	29	100	92	100	33	100	0	100	71	100	0
RE	95	5	23	36	36	45	100	55	0	41	73	14	64	86	86	59	100	23	14	27	100	27	91	5	77	5	73	0
TA	96	26	13	52	78	52	96	48	0	61	96	17	52	100	87	91	100	22	74	57	100	13	96	0	100	39	100	0
TU	100	71	29	100	100	54	100	33	4	100	100	38	42	100	100	100	100	38	96	100	100	42	100	8	100	83	100	4
UM	96	8	21	67	4	21	63	29	0	29	92	25	63	83	42	71	92	13	33	46	100	21	83	0	63	29	79	0
UP	100	13	17	83	25	21	71	8	0	96	83	46	46	83	75	92	100	21	58	71	100	25	96	4	92	50	100	4
VE	100	60	40	100	100	60	100	60	0	100	100	40	40	100	80	100	100	40	100	100	100	80	100	0	100	80	100	0

Tab. 5.1: Weekday filters: Number of filters >LoD before field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr	available
AC	53	28	33	51	49	36	53	24	1	51	53	21	29	53	53	52	53	29	52	53	53	49	53	1	53	52	53	1	53
AL	58	10	33	55	57	43	58	36		48	54	22	25	58	56	57	57	26	52	58	58	36	58	1	57	50	55	1	58
AS	54	39	31	50	24	33	55	17		51	55	23	28	55	50	55	55	36	54	55	55	39	54		54	54	55	2	55
BA	59	54	19	58	59	21	59	12		59	59	45	21	59	58	59	59	51	57	59	59	27	59	2	59	59	59	2	59
BS	53	26	21	52	43	26	56	21		52	55	36	32	56	47	56	56	41	39	54	56	29	55	5	55	35	55		56
ER	57	31	16	56	32	21	56	19		57	58	38	32	58	45	56	59	43	49	59	59	27	59	1	57	12	59	1	59
GA	50	35	15	49	48	28	52	11	11	52	52	31	21	52	49	52	52	37	42	51	52	39	51	1	51	48	52		52
GN	59	35	24	52	51	33	58	16	2	58	59	36	30	59	50	59	59	40	51	59	59	22	59	2	59	46	59	3	59
GO	56	27	7	55	22	9	54	14		50	56	48	28	55	42	54	56	47	38	48	56	20	55	1	53	43	56	2	56
HU	58	41	29	57	58	24	58	21		58	58	34	30	58	58	57	58	39	49	57	58	34	58	1	58	56	57	3	58
IP	51	29	29	47	20	28	51	12		51	50	29	28	52	52	50	52	40	38	48	52	26	51	4	49	40	52	1	52
NO	51	27	23	50	37	24	52	14		48	50	32	21	52	52	48	52	37	44	52	52	22	52	2	50	40	49	1	52
OV	57	37	23	57	56	34	57	21	1	56	57	32	36	57	57	57	57	35	53	57	57	37	57	1	56	56	57	1	57
PA	60	52	13	59	49	24	60	9		59	59	40	35	60	58	60	60	47	58	60	60	38	60	1	60	58	60	2	60
PS	60	37	27	58	55	40	60	17		59	59	30	34	60	59	60	60	38	57	60	60	30	60	3	60	39	60	1	60
RE	45	8	12	34	19	24	51	22		44	46	28	29	44	40	34	51	38	3	29	51	11	42	1	38	2	47	1	51
TA	57	22	20	52	34	30	58	26		52	54	35	29	59	46	56	59	39	52	56	59	22	56	1	51	32	59	2	59
TU	57	51	12	57	56	21	57	14	3	57	57	41	31	57	57	57	57	44	56	57	57	31	57	1	57	52	57	3	57
UM	50	8	14	44	2	17	41	14		44	51	39	27	47	26	43	48	40	18	43	52	12	43		36	11	49	2	52
UP	56	19	7	52	14	14	49	12		57	54	47	27	54	42	55	57	48	37	51	57	8	56		54	29	57	1	57
VE	25	23	5	25	25	7	25	4		25	25	22	10	25	24	25	25	21	25	25	25	14	25	1	25	16	25	1	25

Tab. 5.2: Weekday filters: Number of filters >LoD in % before field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	53	62	96	92	68	100	45	2	96	100	40	55	100	100	98	100	55	98	100	100	92	100	2	100	98	100	2
AL	100	17	57	95	98	74	100	62	0	83	93	38	43	100	97	98	98	45	90	100	100	62	100	2	98	86	95	2
AS	98	71	56	91	44	60	100	31	0	93	100	42	51	100	91	100	100	65	98	100	100	71	98	0	98	98	100	4
BA	100	92	32	98	100	36	100	20	0	100	100	76	36	100	98	100	100	86	97	100	100	46	100	3	100	100	100	3
BS	95	46	38	93	77	46	100	38	0	93	98	64	57	100	84	100	100	73	70	96	100	52	98	9	98	63	98	0
ER	97	53	27	95	54	36	95	32	0	97	98	64	54	98	76	95	100	73	83	100	100	46	100	2	97	20	100	2
GA	96	67	29	94	92	54	100	21	21	100	100	60	40	100	94	100	100	71	81	98	100	75	98	2	98	92	100	0
GN	100	59	41	88	86	56	98	27	3	98	100	61	51	100	85	100	100	68	86	100	100	37	100	3	100	78	100	5
GO	100	48	13	98	39	16	96	25	0	89	100	86	50	98	75	96	100	84	68	86	100	36	98	2	95	77	100	4
HU	100	71	50	98	100	41	100	36	0	100	100	59	52	100	100	98	100	67	84	98	100	59	100	2	100	97	98	5
IP	98	56	56	90	38	54	98	23	0	98	96	56	54	100	100	96	100	77	73	92	100	50	98	8	94	77	100	2
NO	98	52	44	96	71	46	100	27	0	92	96	62	40	100	100	92	100	71	85	100	100	42	100	4	96	77	94	2
OV	100	65	40	100	98	60	100	37	2	98	100	56	63	100	100	100	100	61	93	100	100	65	100	2	98	98	100	2
PA	100	87	22	98	82	40	100	15	0	98	98	67	58	100	97	100	100	78	97	100	100	63	100	2	100	97	100	3
PS	100	62	45	97	92	67	100	28	0	98	98	50	57	100	98	100	100	63	95	100	100	50	100	5	100	65	100	2
RE	88	16	24	67	37	47	100	43	0	86	90	55	57	86	78	67	100	75	6	57	100	22	82	2	75	4	92	2
TA	97	37	34	88	58	51	98	44	0	88	92	59	49	100	78	95	100	66	88	95	100	37	95	2	86	54	100	3
TU	100	89	21	100	98	37	100	25	5	100	100	72	54	100	100	100	100	77	98	100	100	54	100	2	100	91	100	5
UM	96	15	27	85	4	33	79	27	0	85	98	75	52	90	50	83	92	77	35	83	100	23	83	0	69	21	94	4
UP	98	33	12	91	25	25	86	21	0	100	95	82	47	95	74	96	100	84	65	89	100	14	98	0	95	51	100	2
VE	100	92	20	100	100	28	100	16	0	100	100	88	40	100	96	100	100	84	100	100	100	56	100	4	100	64	100	4

Tab. 5.3: Weekday filters: Number of filters >LoD after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	53	28	19	51	49	20	53	22	1	42	53	18	27	53	53	52	53	20	52	51	53	45	53	1	53	52	53	1
AL	58	10	22	52	57	19	58	32		34	54	18	23	58	56	57	57	15	52	52	58	29	58	1	57	50	53	1
AS	54	39	20	49	24	20	55	15		46	55	21	26	55	50	55	55	16	54	50	55	34	54		54	54	55	2
BA	59	54	10	58	59	15	59	9		59	59	39	20	59	58	59	59	30	57	58	59	24	59	2	59	59	59	2
BS	53	26	13	51	43	14	56	19		50	55	28	32	56	47	56	56	19	39	48	56	23	55	5	55	35	55	
ER	57	31	8	52	32	11	56	16		48	58	28	29	58	45	56	59	17	49	51	59	23	59	1	57	12	59	1
GA	50	35	10	45	48	13	52	8	11	49	52	21	18	51	49	52	52	20	42	50	52	35	51	1	51	48	52	
GN	59	35	12	49	51	23	58	14	2	55	59	25	27	59	50	59	59	19	51	54	59	18	59	2	59	46	59	3
GO	56	27	3	54	22	5	54	14		44	56	31	27	55	42	54	56	25	38	45	56	17	55	1	53	43	56	2
HU	58	41	19	57	58	12	58	20		58	58	26	28	58	58	57	58	19	49	53	58	30	58	1	58	56	57	3
IP	51	29	20	43	20	19	51	12		37	50	18	24	52	52	50	52	16	38	41	52	24	51	4	49	40	50	1
NO	51	27	10	47	37	14	52	11		35	49	22	20	52	52	48	52	24	44	43	52	20	52	2	50	40	49	1
OV	57	37	13	56	56	16	57	21	1	52	57	23	33	57	57	57	57	20	53	56	57	32	57	1	56	56	57	1
PA	60	52	7	58	49	14	60	8		58	59	30	32	60	58	60	60	25	58	60	60	33	60	1	60	58	60	2
PS	60	37	15	54	55	25	60	14		58	59	24	28	60	59	60	60	19	57	57	60	20	60	3	60	39	60	1
RE	45	8	5	28	19	12	51	19		33	41	17	26	39	40	34	51	19	3	19	51	9	42	1	38	2	39	1
TA	57	22	12	47	34	19	58	22		38	53	26	27	59	46	56	59	16	52	45	59	19	56	1	51	32	59	2
TU	57	51	9	57	56	12	57	12	3	56	57	38	29	57	57	57	57	28	56	57	57	27	57	1	57	52	57	3
UM	50	8	11	41	2	9	41	14		28	48	22	26	46	26	43	48	12	18	36	52	10	43		36	11	46	2
UP	56	19	4	50	14	10	49	10		51	54	30	26	53	42	55	57	16	37	44	57	7	56		54	29	57	1
VE	25	23	4	25	25	6	25	4		25	25	19	10	25	24	25	25	5	25	25	25	14	25	1	25	16	25	1

Tab. 5.4: Weekday filters: Number of filters >LoD in % after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	53	36	96	92	38	100	42	2	79	100	34	51	100	100	98	100	38	98	96	100	85	100	2	100	98	100	2
AL	100	17	38	90	98	33	100	55	0	59	93	31	40	100	97	98	98	26	90	90	100	50	100	2	98	86	91	2
AS	98	71	36	89	44	36	100	27	0	84	100	38	47	100	91	100	100	29	98	91	100	62	98	0	98	98	100	4
BA	100	92	17	98	100	25	100	15	0	100	100	66	34	100	98	100	100	51	97	98	100	41	100	3	100	100	100	3
BS	95	46	23	91	77	25	100	34	0	89	98	50	57	100	84	100	100	34	70	86	100	41	98	9	98	63	98	0
ER	97	53	14	88	54	19	95	27	0	81	98	47	49	98	76	95	100	29	83	86	100	39	100	2	97	20	100	2
GA	96	67	19	87	92	25	100	15	21	94	100	40	35	98	94	100	100	38	81	96	100	67	98	2	98	92	100	0
GN	100	59	20	83	86	39	98	24	3	93	100	42	46	100	85	100	100	32	86	92	100	31	100	3	100	78	100	5
GO	100	48	5	96	39	9	96	25	0	79	100	55	48	98	75	96	100	45	68	80	100	30	98	2	95	77	100	4
HU	100	71	33	98	100	21	100	34	0	100	100	45	48	100	100	98	100	33	84	91	100	52	100	2	100	97	98	5
IP	98	56	38	83	38	37	98	23	0	71	96	35	46	100	100	96	100	31	73	79	100	46	98	8	94	77	96	2
NO	98	52	19	90	71	27	100	21	0	67	94	42	38	100	100	92	100	46	85	83	100	38	100	4	96	77	94	2
OV	100	65	23	98	98	28	100	37	2	91	100	40	58	100	100	100	100	35	93	98	100	56	100	2	98	98	100	2
PA	100	87	12	97	82	23	100	13	0	97	98	50	53	100	97	100	100	42	97	100	100	55	100	2	100	97	100	3
PS	100	62	25	90	92	42	100	23	0	97	98	40	47	100	98	100	100	32	95	95	100	33	100	5	100	65	100	2
RE	88	16	10	55	37	24	100	37	0	65	80	33	51	76	78	67	100	37	6	37	100	18	82	2	75	4	76	2
TA	97	37	20	80	58	32	98	37	0	64	90	44	46	100	78	95	100	27	88	76	100	32	95	2	86	54	100	3
TU	100	89	16	100	98	21	100	21	5	98	100	67	51	100	100	100	100	49	98	100	100	47	100	2	100	91	100	5
UM	96	15	21	79	4	17	79	27	0	54	92	42	50	88	50	83	92	23	35	69	100	19	83	0	69	21	88	4
UP	98	33	7	88	25	18	86	18	0	89	95	53	46	93	74	96	100	28	65	77	100	12	98	0	95	51	100	2
VE	100	92	16	100	100	24	100	16	0	100	100	76	40	100	96	100	100	20	100	100	100	56	100	4	100	64	100	4

Tab. 6.1: Weekend filters: Number of filters >LoD before field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr	available
AC	10	8	7	10	10	8	10	8		10	10	5	3	10	10	10	10	7	10	10	10	10	10		10	10	10	1	10
AL	12	4	7	12	12	9	12	7		12	11	4	4	12	12	12	12	4	12	12	12	6	12		12	11	12		12
AS	11	8	6	11	6	7	11	4		11	11	2	5	11	11	11	11	2	11	11	11	11	11		11	11	11		11
BA	12	12	3	12	12	5	12	1		12	12	9	5	12	12	12	12	9	12	12	12	8	12		12	11	12		12
BS	11	7	5	11	9	4	11	4		11	11	6	4	11	11	11	11	9	11	11	11	7	11	1	11	10	11	2	11
ER	12	10	2	12	9	4	12	3		12	12	8	7	12	12	12	12	8	12	12	12	7	12	1	12	10	12		12
GA	10	10	6	10	10	8	10	4	1	10	10	5	4	10	10	10	10	10	10	10	10	10	10	1	10	10	10		10
GN	12	10	4	12	11	7	12	2	1	12	12	6	9	12	12	12	12	8	12	12	12	4	12	1	12	12	12		12
GO	10	5	1	10	4	2	10	3		10	10	9	7	10	9	10	10	10	10	10	10	5	10	1	10	10	10		10
HU	12	12	5	12	12	6	12	5		12	12	8	7	12	12	12	12	9	12	12	12	9	12	1	12	12	12		12
IP	11	9	3	11	7	4	11	1		10	11	9	5	11	11	11	11	10	9	11	11	7	11	2	11	11	11		11
NO	10	7	3	9	9	5	10	3		10	10	5	6	10	10	10	10	7	10	10	10	6	10		10	10	10	1	10
OV	13	11	5	13	12	6	13	2		12	13	11	9	13	12	13	13	11	13	13	13	9	13		13	13	13		13
PA	12	10	7	12	12	6	12	4		12	12	7	8	12	12	12	12	10	12	12	12	11	12	1	12	12	12	1	12
PS	12	9	4	12	12	8	12	5		12	11	8	9	12	12	12	12	6	12	12	12	10	12	1	12	11	12		12
RE	11	2	4	10	7	5	11	5		11	10	6	5	11	11	9	11	7	5	8	11	3	9		10	1	11		11
TA	12	8	5	11	10	7	12	5		12	11	6	6	12	12	12	12	8	10	11	12	7	12		11	9	12		12
TU	11	10	4	11	11	6	11	2	1	11	11	9	7	11	11	11	11	10	11	11	11	10	11	1	11	11	11	1	11
UM	10	3	4	9	1	3	8	2		9	10	7	6	10	5	9	10	9	7	9	10	3	9		9	8	10		10
UP	11	6	4	11	7	3	11	2		11	10	9	5	11	11	11	11	8	10	11	11	7	11	1	10	9	11		11
VE	3	3	1	3	3		3			3	3	3	2	3	3	3	3	3	3	3	3	2	3		3	3	3	1	3

Tab. 6.2: Weekend filters: Number of filters >LoD in % before field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	80	70	100	100	80	100	80	0	100	100	50	30	100	100	100	100	70	100	100	100	100	100	0	100	100	100	10
AL	100	33	58	100	100	75	100	58	0	100	92	33	33	100	100	100	100	33	100	100	100	50	100	0	100	92	100	0
AS	100	73	55	100	55	64	100	36	0	100	100	18	45	100	100	100	100	18	100	100	100	100	100	0	100	100	100	0
BA	100	100	25	100	100	42	100	8	0	100	100	75	42	100	100	100	100	75	100	100	100	67	100	0	100	92	100	0
BS	100	64	45	100	82	36	100	36	0	100	100	55	36	100	100	100	100	82	100	100	100	64	100	9	100	91	100	18
ER	100	83	17	100	75	33	100	25	0	100	100	67	58	100	100	100	100	67	100	100	100	58	100	8	100	83	100	0
GA	100	100	60	100	100	80	100	40	10	100	100	50	40	100	100	100	100	100	100	100	100	100	100	10	100	100	100	0
GN	100	83	33	100	92	58	100	17	8	100	100	50	75	100	100	100	100	67	100	100	100	33	100	8	100	100	100	0
GO	100	50	10	100	40	20	100	30	0	100	100	90	70	100	90	100	100	100	100	100	100	50	100	10	100	100	100	0
HU	100	100	42	100	100	50	100	42	0	100	100	67	58	100	100	100	100	75	100	100	100	75	100	8	100	100	100	0
IP	100	82	27	100	64	36	100	9	0	91	100	82	45	100	100	100	100	91	82	100	100	64	100	18	100	100	100	0
NO	100	70	30	90	90	50	100	30	0	100	100	50	60	100	100	100	100	70	100	100	100	60	100	0	100	100	100	10
OV	100	85	38	100	92	46	100	15	0	92	100	85	69	100	92	100	100	85	100	100	100	69	100	0	100	100	100	0
PA	100	83	58	100	100	50	100	33	0	100	100	58	67	100	100	100	100	83	100	100	100	92	100	8	100	100	100	8
PS	100	75	33	100	100	67	100	42	0	100	92	67	75	100	100	100	100	50	100	100	100	83	100	8	100	92	100	0
RE	100	18	36	91	64	45	100	45	0	100	91	55	45	100	100	82	100	64	45	73	100	27	82	0	91	9	100	0
TA	100	67	42	92	83	58	100	42	0	100	92	50	50	100	100	100	100	67	83	92	100	58	100	0	92	75	100	0
TU	100	91	36	100	100	55	100	18	9	100	100	82	64	100	100	100	100	91	100	100	100	91	100	9	100	100	100	9
UM	100	30	40	90	10	30	80	20	0	90	100	70	60	100	50	90	100	90	70	90	100	30	90	0	90	80	100	0
UP	100	55	36	100	64	27	100	18	0	100	91	82	45	100	100	100	100	73	91	100	100	64	100	9	91	82	100	0
VE	100	100	33	100	100	0	100	0	0	100	100	100	67	100	100	100	100	100	100	100	100	67	100	0	100	100	100	33

Tab. 6.3: Weekend filters: Number of filters >LoD after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	10	8	5	10	10	5	10	7		10	10	5	3	10	10	10	10	3	10	10	10	10	10		10	10	10	1
AL	12	4	3	12	12	3	12	6		9	11	2	4	12	12	12	12	2	12	12	12	4	12		12	11	12	
AS	11	8	5	11	6	6	11	3		8	11	1	4	11	11	11	11	1	11	11	11	11	11		11	11	11	
BA	12	12	2	12	12	3	12	1		12	12	7	5	12	12	12	12	4	12	12	12	8	12		12	11	12	
BS	11	7	3	11	9	3	11	4		11	11	5	4	11	11	11	11	2	11	11	11	6	11	1	11	10	11	2
ER	12	10	1	12	9	3	12	2		11	12	6	7	12	12	12	12	2	12	12	12	7	12	1	12	10	12	
GA	10	10	3	10	10	5	10	4	1	10	10	4	4	10	10	10	10	9	10	10	10	10	10	1	10	10	10	
GN	12	10	3	12	11	4	12	2	1	11	12	5	8	12	12	12	12	3	12	12	12	3	12	1	12	12	12	
GO	10	5	1	10	4	1	10	2		9	10	6	6	10	9	10	10	4	10	9	10	4	10	1	10	10	10	
HU	12	12	4	12	12	3	12	4		12	12	7	7	12	12	12	12	4	12	12	12	9	12	1	12	12	12	
IP	11	9	2	11	7	2	11	1		10	11	9	5	11	11	11	11	9	9	11	11	7	11	2	11	11	11	
NO	10	7	2	9	9	2	10	2		9	10	2	5	10	10	10	10	3	10	10	10	6	10		10	10	10	1
OV	13	11	3	13	12	4	13	2		12	13	9	8	13	12	13	13	8	13	13	13	8	13		13	13	13	
PA	12	10	7	12	12	4	12	3		12	12	7	7	12	12	12	12	6	12	12	12	11	12	1	12	12	12	1
PS	12	9	2	12	12	2	12	4		11	11	8	9	12	12	12	12	3	12	11	12	10	12	1	12	11	12	
RE	11	2	2	8	7	3	11	4		7	9	5	4	11	11	9	11	5	5	5	11	3	9		10	1	11	
TA	12	8	1	11	10	6	12	5		12	11	6	6	12	12	12	12	4	10	11	12	6	12		11	9	12	
TU	11	10	2	11	11	5	11	2	1	11	11	9	6	11	11	11	11	8	11	11	11	9	11	1	11	11	11	1
UM	10	3	3	9	1	1	8	1		7	10	4	6	10	5	9	10	4	7	8	10	1	9		9	8	10	
UP	11	6	4	11	7	3	11	1		11	10	7	4	11	11	11	11	2	10	11	11	7	11	1	10	9	11	
VE	3	3	1	3	3		3			3	3	3	2	3	3	3	3	2	3	3	3	2	3		3	3	3	1

Tab. 6.4: Weekend filters: Number of filters >LoD in % after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	80	50	100	100	50	100	70	0	100	100	50	30	100	100	100	100	30	100	100	100	100	100	0	100	100	100	10
AL	100	33	25	100	100	25	100	50	0	75	92	17	33	100	100	100	100	17	100	100	100	33	100	0	100	92	100	0
AS	100	73	45	100	55	55	100	27	0	73	100	9	36	100	100	100	100	9	100	100	100	100	100	0	100	100	100	0
BA	100	100	17	100	100	25	100	8	0	100	100	58	42	100	100	100	100	33	100	100	100	67	100	0	100	92	100	0
BS	100	64	27	100	82	27	100	36	0	100	100	45	36	100	100	100	100	18	100	100	100	55	100	9	100	91	100	18
ER	100	83	8	100	75	25	100	17	0	92	100	50	58	100	100	100	100	17	100	100	100	58	100	8	100	83	100	0
GA	100	100	30	100	100	50	100	40	10	100	100	40	40	100	100	100	100	90	100	100	100	100	100	10	100	100	100	0
GN	100	83	25	100	92	33	100	17	8	92	100	42	67	100	100	100	100	25	100	100	100	25	100	8	100	100	100	0
GO	100	50	10	100	40	10	100	20	0	90	100	60	60	100	90	100	100	40	100	90	100	40	100	10	100	100	100	0
HU	100	100	33	100	100	25	100	33	0	100	100	58	58	100	100	100	100	33	100	100	100	75	100	8	100	100	100	0
IP	100	82	18	100	64	18	100	9	0	91	100	82	45	100	100	100	100	82	82	100	100	64	100	18	100	100	100	0
NO	100	70	20	90	90	20	100	20	0	90	100	20	50	100	100	100	100	30	100	100	100	60	100	0	100	100	100	10
OV	100	85	23	100	92	31	100	15	0	92	100	69	62	100	92	100	100	62	100	100	100	62	100	0	100	100	100	0
PA	100	83	58	100	100	33	100	25	0	100	100	58	58	100	100	100	100	50	100	100	100	92	100	8	100	100	100	8
PS	100	75	17	100	100	17	100	33	0	92	92	67	75	100	100	100	100	25	100	92	100	83	100	8	100	92	100	0
RE	100	18	18	73	64	27	100	36	0	64	82	45	36	100	100	82	100	45	45	45	100	27	82	0	91	9	100	0
TA	100	67	8	92	83	50	100	42	0	100	92	50	50	100	100	100	100	33	83	92	100	50	100	0	92	75	100	0
TU	100	91	18	100	100	45	100	18	9	100	100	82	55	100	100	100	100	73	100	100	100	82	100	9	100	100	100	9
UM	100	30	30	90	10	10	80	10	0	70	100	40	60	100	50	90	100	40	70	80	100	10	90	0	90	80	100	0
UP	100	55	36	100	64	27	100	9	0	100	91	64	36	100	100	100	100	18	91	100	100	64	100	9	91	82	100	0
VE	100	100	33	100	100	0	100	0	0	100	100	100	67	100	100	100	100	67	100	100	100	67	100	0	100	100	100	33

Tab. 7.1: All available filters: Number of filters >LoD before field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr	all available filters
AC	71	43	41	68	67	47	71	36	1	68	70	32	36	71	71	70	71	43	70	71	71	67	71	2	71	70	71	4	71
AL	76	19	40	73	75	52	76	45		66	71	32	30	76	74	75	75	36	70	76	76	44	76	1	75	67	73	1	76
AS	66	47	38	62	31	40	67	22		63	67	26	34	67	62	67	67	39	65	67	67	51	66		66	66	67	2	67
BA	88	78	30	87	88	30	88	18	1	87	88	67	34	88	87	88	88	75	86	88	88	49	88	3	88	87	88	4	88
BS	64	33	26	63	52	30	67	25		63	66	42	36	67	58	67	67	50	50	65	67	36	66	6	66	45	66	2	67
ER	75	44	18	74	45	25	72	22		75	76	52	41	76	61	74	77	57	67	76	77	34	77	2	75	26	77	1	77
GA	83	64	27	82	80	38	85	20	16	84	85	59	38	85	82	85	85	70	75	84	85	67	84	4	84	81	85	2	85
GN	71	45	28	64	62	40	70	18	3	70	71	42	39	71	62	71	71	48	63	71	71	26	71	3	71	58	71	3	71
GO	66	32	8	65	26	11	64	17		60	66	57	35	65	51	64	66	57	48	58	66	25	65	2	63	53	66	2	66
HU	94	75	39	93	94	31	94	28		93	94	66	48	94	94	93	94	72	84	93	94	58	94	2	94	91	93	3	94
IP	62	38	32	58	27	32	62	13		61	61	38	33	63	63	61	63	50	47	59	63	33	62	6	60	51	63	1	63
NO	90	53	38	86	71	46	91	24		84	89	53	45	91	89	87	91	63	83	88	91	46	91	3	89	76	88	3	91
OV	88	63	28	88	86	43	88	24	1	85	88	59	54	88	87	88	88	62	84	88	88	58	88	1	87	87	88	1	88
PA	78	68	20	77	67	30	78	14		77	77	53	47	78	76	78	78	62	75	78	78	52	78	2	78	76	78	3	78
PS	72	46	31	70	67	48	72	22		71	70	38	43	72	71	72	72	44	69	72	72	40	72	4	72	50	72	1	72
RE	59	11	17	46	28	30	65	27		57	59	35	35	58	54	46	65	45	9	37	65	14	54	1	51	4	61	1	65
TA	69	30	25	63	44	37	70	31		64	65	41	35	71	58	68	71	47	62	67	71	29	68	1	62	41	71	2	71
TU	68	61	16	68	67	27	68	16	4	68	68	50	38	68	68	68	68	54	67	68	68	41	68	2	68	63	68	4	68
UM	67	14	20	60	4	21	55	17		60	68	53	39	61	35	58	65	56	26	56	69	16	59	1	52	20	66	2	69
UP	67	25	11	63	21	17	60	14		68	64	56	32	65	53	66	68	56	47	62	68	15	67	1	64	38	68	1	68
VE	29	27	7	29	29	7	29	4		29	29	26	12	29	28	29	29	25	28	29	29	16	29	1	29	19	29	2	29

Tab. 7.2: All available filters: Number of filters >LoD in % before field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	61	58	96	94	66	100	51	1	96	99	45	51	100	100	99	100	61	99	100	100	94	100	3	100	99	100	6
AL	100	25	53	96	99	68	100	59	0	87	93	42	39	100	97	99	99	47	92	100	100	58	100	1	99	88	96	1
AS	99	70	57	93	46	60	100	33	0	94	100	39	51	100	93	100	100	58	97	100	100	76	99	0	99	99	100	3
BA	100	89	34	99	100	34	100	20	1	99	100	76	39	100	99	100	100	85	98	100	100	56	100	3	100	99	100	5
BS	96	49	39	94	78	45	100	37	0	94	99	63	54	100	87	100	100	75	75	97	100	54	99	9	99	67	99	3
ER	97	57	23	96	58	32	94	29	0	97	99	68	53	99	79	96	100	74	87	99	100	44	100	3	97	34	100	1
GA	98	75	32	96	94	45	100	24	19	99	100	69	45	100	96	100	100	82	88	99	100	79	99	5	99	95	100	2
GN	100	63	39	90	87	56	99	25	4	99	100	59	55	100	87	100	100	68	89	100	100	37	100	4	100	82	100	4
GO	100	48	12	98	39	17	97	26	0	91	100	86	53	98	77	97	100	86	73	88	100	38	98	3	95	80	100	3
HU	100	80	41	99	100	33	100	30	0	99	100	70	51	100	100	99	100	77	89	99	100	62	100	2	100	97	99	3
IP	98	60	51	92	43	51	98	21	0	97	97	60	52	100	100	97	100	79	75	94	100	52	98	10	95	81	100	2
NO	99	58	42	95	78	51	100	26	0	92	98	58	49	100	98	96	100	69	91	97	100	51	100	3	98	84	97	3
OV	100	72	32	100	98	49	100	27	1	97	100	67	61	100	99	100	100	70	95	100	100	66	100	1	99	99	100	1
PA	100	87	26	99	86	38	100	18	0	99	99	68	60	100	97	100	100	79	96	100	100	67	100	3	100	97	100	4
PS	100	64	43	97	93	67	100	31	0	99	97	53	60	100	99	100	100	61	96	100	100	56	100	6	100	69	100	1
RE	91	17	26	71	43	46	100	42	0	88	91	54	54	89	83	71	100	69	14	57	100	22	83	2	78	6	94	2
TA	97	42	35	89	62	52	99	44	0	90	92	58	49	100	82	96	100	66	87	94	100	41	96	1	87	58	100	3
TU	100	90	24	100	99	40	100	24	6	100	100	74	56	100	100	100	100	79	99	100	100	60	100	3	100	93	100	6
UM	97	20	29	87	6	30	80	25	0	87	99	77	57	88	51	84	94	81	38	81	100	23	86	1	75	29	96	3
UP	99	37	16	93	31	25	88	21	0	100	94	82	47	96	78	97	100	82	69	91	100	22	99	1	94	56	100	1
VE	100	93	24	100	100	24	100	14	0	100	100	90	41	100	97	100	100	86	97	100	100	55	100	3	100	66	100	7

Tab. 7.3: All available filters: Number of filters >LoD after field blank correction.

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr	all available filters
AC	71	43	25	68	67	27	71	33	1	59	70	27	34	71	71	70	71	27	70	69	71	62	71	2	71	70	71	4	71
AL	76	19	25	70	75	22	76	40		48	71	24	28	76	74	75	75	20	70	70	76	35	76	1	75	67	71	1	76
AS	66	47	26	61	31	26	67	18		55	67	23	30	67	62	67	67	18	65	62	67	46	66		66	66	67	2	67
BA	88	78	19	87	88	21	88	15	1	87	88	56	32	88	87	88	88	41	86	87	88	46	88	3	88	87	88	4	88
BS	64	33	16	62	52	17	67	23		61	66	33	36	67	58	67	67	21	50	59	67	29	66	6	66	45	66	2	67
ER	75	44	9	70	45	14	72	18		65	76	37	38	76	61	74	77	21	67	68	77	30	77	2	75	26	77	1	77
GA	83	64	19	78	80	20	85	17	16	80	85	39	35	84	82	85	85	39	75	83	85	63	84	4	84	81	85	2	85
GN	71	45	15	61	62	27	70	16	3	66	71	30	35	71	62	71	71	22	63	66	71	21	71	3	71	58	71	3	71
GO	66	32	4	64	26	6	64	16		53	66	37	33	65	51	64	66	29	48	54	66	21	65	2	63	53	66	2	66
HU	94	75	28	93	94	16	94	26		93	94	49	46	94	94	93	94	31	84	89	94	54	94	2	94	91	93	3	94
IP	62	38	22	54	27	21	62	13		47	61	27	29	63	63	61	63	25	47	52	63	31	62	6	60	51	61	1	63
NO	90	53	19	82	71	28	91	20		68	88	34	42	91	89	87	91	40	83	79	91	40	91	3	89	76	88	3	91
OV	88	63	16	87	86	23	88	24	1	81	88	44	50	88	87	88	88	35	84	87	88	51	88	1	87	87	88	1	88
PA	78	68	14	76	67	18	78	12		76	77	41	43	78	76	78	78	33	75	78	78	47	78	2	78	76	78	3	78
PS	72	46	17	66	67	27	72	18		69	70	32	37	72	71	72	72	22	69	68	72	30	72	4	72	50	72	1	72
RE	59	11	7	37	28	15	65	23		41	53	23	31	53	54	46	65	24	9	24	65	12	54	1	51	4	53	1	65
TA	69	30	13	58	44	25	70	27		50	64	32	33	71	58	68	71	20	62	56	71	25	68	1	62	41	71	2	71
TU	68	61	11	68	67	17	68	14	4	67	68	47	35	68	68	68	68	36	67	68	68	36	68	2	68	63	68	4	68
UM	67	14	15	56	4	10	55	16		41	64	28	37	59	35	58	65	18	26	47	69	12	59	1	52	20	62	2	69
UP	67	25	8	61	21	13	60	11		62	64	37	30	64	53	66	68	18	47	55	68	14	67	1	64	38	68	1	68
VE	29	27	6	29	29	6	29	4		29	29	22	12	29	28	29	29	7	28	29	29	16	29	1	29	19	29	2	29

Tab. 7.4: All available filters: Number of filters >LoD in % after field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
AC	100	61	35	96	94	38	100	46	1	83	99	38	48	100	100	99	100	38	99	97	100	87	100	3	100	99	100	6
AL	100	25	33	92	99	29	100	53	0	63	93	32	37	100	97	99	99	26	92	92	100	46	100	1	99	88	93	1
AS	99	70	39	91	46	39	100	27	0	82	100	34	45	100	93	100	100	27	97	93	100	69	99	0	99	99	100	3
BA	100	89	22	99	100	24	100	17	1	99	100	64	36	100	99	100	100	47	98	99	100	52	100	3	100	99	100	5
BS	96	49	24	93	78	25	100	34	0	91	99	49	54	100	87	100	100	31	75	88	100	43	99	9	99	67	99	3
ER	97	57	12	91	58	18	94	23	0	84	99	48	49	99	79	96	100	27	87	88	100	39	100	3	97	34	100	1
GA	98	75	22	92	94	24	100	20	19	94	100	46	41	99	96	100	100	46	88	98	100	74	99	5	99	95	100	2
GN	100	63	21	86	87	38	99	23	4	93	100	42	49	100	87	100	100	31	89	93	100	30	100	4	100	82	100	4
GO	100	48	6	97	39	9	97	24	0	80	100	56	50	98	77	97	100	44	73	82	100	32	98	3	95	80	100	3
HU	100	80	30	99	100	17	100	28	0	99	100	52	49	100	100	99	100	33	89	95	100	57	100	2	100	97	99	3
IP	98	60	35	86	43	33	98	21	0	75	97	43	46	100	100	97	100	40	75	83	100	49	98	10	95	81	97	2
NO	99	58	21	90	78	31	100	22	0	75	97	37	46	100	98	96	100	44	91	87	100	44	100	3	98	84	97	3
OV	100	72	18	99	98	26	100	27	1	92	100	50	57	100	99	100	100	40	95	99	100	58	100	1	99	99	100	1
PA	100	87	18	97	86	23	100	15	0	97	99	53	55	100	97	100	100	42	96	100	100	60	100	3	100	97	100	4
PS	100	64	24	92	93	38	100	25	0	96	97	44	51	100	99	100	100	31	96	94	100	42	100	6	100	69	100	1
RE	91	17	11	57	43	23	100	35	0	63	82	35	48	82	83	71	100	37	14	37	100	18	83	2	78	6	82	2
TA	97	42	18	82	62	35	99	38	0	70	90	45	46	100	82	96	100	28	87	79	100	35	96	1	87	58	100	3
TU	100	90	16	100	99	25	100	21	6	99	100	69	51	100	100	100	100	53	99	100	100	53	100	3	100	93	100	6
UM	97	20	22	81	6	14	80	23	0	59	93	41	54	86	51	84	94	26	38	68	100	17	86	1	75	29	90	3
UP	99	37	12	90	31	19	88	16	0	91	94	54	44	94	78	97	100	26	69	81	100	21	99	1	94	56	100	1
VE	100	93	21	100	100	21	100	14	0	100	100	76	41	100	97	100	100	24	97	100	100	55	100	3	100	66	100	7

Tab. 8: Number of centres which have a) at least 50% of the filters >LoD before the field blank correction, b) at least 50% of the filters >LoD after the field blank correction and c) at least 90% of the filter with concentrations >LoD after the field blank correction.

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cr	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Sn	Ti	V	Zn	Zr
a) annual	21	14	4	21	15	9	21	2	0	21	21	18	14	21	21	21	21	20	19	21	21	12	21	0	21	18	21	0
b) ≥50% >LoD	21	14	0	21	15	0	21	1	0	21	21	6	9	21	21	21	21	1	19	20	21	8	21	0	21	18	21	0
c) ≥90% >LoD	21	3	0	15	9	0	19	0	0	11	20	0	0	20	13	19	21	0	9	12	21	0	19	0	18	8	20	0
a) winter	21	18	0	21	17	1	21	0	0	21	21	21	16	21	21	21	21	21	19	21	21	7	21	0	21	18	21	0
b) ≥50%>LoD	21	18	0	21	17	0	21	0	0	21	21	20	12	21	21	21	21	3	19	21	21	6	21	0	21	18	21	0
c) ≥90%>LoD	19	6	0	20	9	0	21	0	0	12	19	2	0	20	13	19	21	0	10	17	21	0	19	0	18	7	20	0
a) summer	21	9	13	21	16	19	21	7	0	21	21	4	13	21	20	21	21	11	19	21	21	15	21	0	21	17	21	0
b) ≥50% >LoD	21	9	3	20	16	13	21	6	0	18	21	0	9	21	20	21	21	2	19	19	21	12	21	0	21	17	21	0
c) ≥90% >LoD	21	0	0	9	10	0	19	0	0	11	19	0	0	18	15	19	21	0	12	9	21	0	20	0	19	7	18	0
a) weekdays	21	14	5	21	15	9	21	1	0	21	21	18	14	21	21	21	21	20	19	21	21	12	21	0	21	18	21	0
b) ≥50% >LoD	21	14	0	21	15	0	21	1	0	21	21	7	7	21	21	21	21	1	19	20	21	8	21	0	21	18	21	0
c) ≥90% >LoD	20	2	0	12	9	0	19	0	0	9	19	0	0	19	13	19	21	0	9	12	21	0	19	0	18	8	19	0
a) weekends	21	18	5	21	19	11	21	2	0	21	21	19	12	21	21	21	21	19	20	21	21	18	21	0	21	20	21	0
b) ≥50% >LoD	21	18	2	21	19	4	21	2	0	21	21	13	12	21	21	21	21	6	20	20	21	16	21	0	21	20	21	0
c) ≥90% >LoD	21	5	0	20	12	0	12	0	0	17	20	1	0	21	20	20	21	1	17	19	21	4	20	0	21	16	21	0

Tab. 9.1: Annual Mean Elemental Concentrations of all elements with standard deviation and percentiles.

	Aluminium [ng/m^3]							Arsenic [ng/m^3]							Bismuth [ng/m^3]							Bromine [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**177**	136	67	91	142	208	429	**7.4**	13.5	1.0	1.1	3.3	8.5	26.4	**0.14**	0.37	0	0	0	0.07	1.02	**5.1**	6.7	0.02	2.0	3.6	6.2	12.8
AL	**344**	396	64	132	214	411	1105	**1.6**	1.3	0.5	1.0	1.1	1.3	5.0	**0.11**	0.30	0	0	0	0.12	0.64	**3.9**	2.9	0	2.0	3.4	5.3	10.5
AS	**128**	100	36	74	99	151	316	**6.3**	9.1	1.0	1.4	4.1	8.1	18.8	**0.14**	0.34	0	0	0	0.11	1.17	**4.7**	6.1	0	1.6	3.6	6.2	11.9
BA	**389**	314	122	220	300	459	660	**12.5**	10.2	1.7	5.6	9.2	18.5	30.9	**0.06**	0.24	0	0	0	0	0.27	**12.1**	11.3	1.5	4.5	7.3	18.9	32.9
BS	**151**	144	22	61	123	230	379	**3.6**	4.0	0.7	1.0	1.3	5.5	12.4	**0.10**	0.28	0	0	0	0.03	0.60	**5.3**	5.4	0	2.3	4.2	6.9	11.7
ER	**148**	117	21	65	130	229	341	**4.5**	5.2	0.8	1.0	2.3	6.1	16.6	**0.08**	0.25	0	0	0	0	0.41	**2.2**	2.0	0	0.8	1.7	3.0	6.5
GA	**197**	141	31	106	157	242	497	**8.6**	7.7	1.0	1.6	5.5	11.9	20.6	**0.11**	0.33	0	0	0	0	1.21	**3.8**	2.9	0	1.5	3.2	5.4	9.4
GN	**257**	401	21	79	131	265	1279	**5.8**	7.2	0.8	1.1	3.3	7.4	19.8	**0.08**	0.24	0	0	0	0	0.65	**3.4**	3.4	0	0.5	2.7	4.5	9.8
GO	**97**	85	31	50	77	124	215	**2.0**	1.9	0.5	0.8	1.2	2.8	6.3	**0.06**	0.20	0	0	0	0	0.36	**2.2**	1.7	0.2	1.4	2.0	2.7	5.6
HU	**444**	437	153	252	376	527	873	**12.2**	22.7	0.9	1.6	5.7	13.5	39.9	**0.13**	0.27	0	0	0	0.12	0.83	**4.9**	3.0	0.4	2.8	4.4	6.3	10.7
IP	**115**	219	37	55	73	123	239	**6.4**	15.1	0.8	1.1	2.5	6.0	25.5	**0.15**	0.41	0	0	0	0.22	0.98	**4.7**	5.6	0	0.5	3.6	5.6	15.6
NO	**108**	70	31	59	87	150	235	**4.3**	6.2	0.7	1.0	1.9	4.6	11.2	**0.08**	0.23	0	0	0	0	0.55	**3.9**	3.4	0	1.5	2.9	5.2	9.8
OV	**467**	254	146	282	448	609	941	**6.2**	5.5	0.9	1.2	5.8	8.9	18.3	**0.10**	0.31	0	0	0	0.04	0.79	**7.1**	4.8	0.4	3.2	5.4	9.8	16.3
PA	**228**	178	89	138	180	262	462	**9.2**	6.7	1.1	4.2	8.2	12.3	22.9	**0.07**	0.22	0	0	0	0	0.50	**11.1**	8.2	0.4	3.7	10.0	17.7	24.9
PS	**141**	134	35	66	94	167	396	**3.7**	3.5	0.9	1.1	2.7	5.4	11.5	**0.07**	0.22	0	0	0	0.01	0.55	**4.1**	4.2	0	1.0	3.3	6.2	10.4
RE	**111**	140	0	22	61	133	422	**0.9**	0.5	0.4	0.7	0.9	1.0	2.0	**0.10**	0.29	0	0	0	0	0.41	**1.2**	1.9	0	0	0.5	1.3	6.0
TA	**156**	343	27	47	82	172	472	**2.5**	2.4	0.5	1.0	1.1	3.4	8.1	**0.07**	0.22	0	0	0	0	0.55	**2.2**	2.3	0	0.4	1.6	3.4	7.8
TU	**380**	210	142	252	351	456	885	**14.4**	8.4	1.3	8.1	13.6	22.1	27.7	**0.06**	0.22	0	0	0	0	0.36	**21.3**	16.1	3.4	6.6	17.4	33.9	49.9
UM	**70**	69	11	29	53	100	215	**1.1**	0.8	0.5	0.8	0.9	1.0	3.2	**0.05**	0.17	0	0	0	0.01	0.36	**1.2**	1.2	0	0.3	1.0	1.8	3.7
UP	**103**	73	23	50	80	130	287	**1.8**	1.6	0.6	0.8	1.0	2.2	5.3	**0.07**	0.24	0	0	0	0	0.36	**1.7**	1.7	0	0.5	1.3	1.9	4.5
VE	**336**	202	116	191	323	437	833	**19.4**	9.6	1.7	11.9	17.9	26.2	33.5	**0.06**	0.24	0	0	0	0	0.36	**22.9**	14.9	2.0	14.4	20.7	29.7	39.4

...continued

	Calcium [ng/m^3]							Cadmium [ng/m^3]							Chlorine [ng/m^3]							Cobalt [ng/m^3]						
centre	mean	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**
AC	87	51	24	62	85	112	147	**2.9**	3.8	0	0	0.9	5.0	9.5	**1113**	2064	50	102	361	1401	3739	**1.93**	4.02	0	0	0	2.0	11.6
AL	277	207	64	144	218	347	832	**1.8**	2.9	0	0	0	4.3	8.5	**280**	426	19	30	58	227	1304	**2.03**	4.40	0	0	0.52	2.4	16.0
AS	46	40	12	24	27	61	97	**3.0**	3.4	0	0	2.8	4.8	10.5	**892**	1379	45	86	333	1027	3704	**1.11**	2.96	0	0	0	0.28	7.9
BA	226	105	94	153	217	318	437	**3.7**	2.6	0	2.3	4.8	5.0	9.0	**831**	1289	31	106	222	1098	3075	**0.48**	2.24	0	0	0	0	3.7
BS	60	36	24	27	56	87	129	**3.6**	3.2	0	0	4.5	5.0	10.5	**472**	607	19	40	164	707	1655	**0.94**	2.30	0	0	0	0.73	5.5
ER	52	43	24	24	44	74	147	**3.1**	2.7	0	0.4	4.2	4.8	6.6	**329**	691	5	18	69	279	1828	**0.56**	2.28	0	0	0	0.09	2.9
GA	199	148	24	92	180	263	464	**3.3**	3.1	0	0	4.3	5.2	10.4	**411**	489	44	101	217	565	1109	**0.67**	2.47	0	0	0	0.02	4.6
GN	139	386	24	55	74	116	359	**3.7**	3.4	0	0.01	4.5	5.2	10.9	**667**	1427	22	65	162	687	3663	**0.58**	1.63	0	0	0	0	5.5
GO	38	28	12	24	24	57	97	**3.8**	2.1	0	4.0	4.6	5.0	5.7	**547**	978	12	42	219	678	3001	**0.46**	1.31	0	0	0	0.02	1.5
HU	168	100	69	104	146	220	377	**3.4**	3.1	0	0	4.4	5.0	9.9	**806**	1369	37	71	266	1213	4588	**1.16**	2.68	0	0	0	1.0	5.7
IP	37	25	12	24	24	56	78	**3.0**	2.6	0	0.5	4.0	4.8	7.1	**1147**	1855	23	89	578	1335	3308	**0.58**	2.61	0	0	0	0	3.5
NO	92	156	24	28	58	76	481	**2.6**	2.6	0	0	2.4	4.8	7.1	**1027**	1118	31	127	612	1312	3092	**0.63**	2.01	0	0	0	0	2.8
OV	281	199	57	169	247	371	629	**2.7**	2.8	0	0	2.7	4.8	7.5	**562**	591	35	115	265	998	1564	**1.23**	3.66	0	0	0	0.54	8.3
PA	85	56	24	49	75	96	216	**3.7**	3.5	0	0.2	4.5	5.0	10.9	**963**	1576	16	45	305	1260	4716	**0.33**	1.17	0	0	0	0	1.9
PS	79	43	24	56	73	101	180	**2.6**	3.8	0	0	1.9	4.8	9.8	**668**	929	22	90	281	988	2511	**0.87**	2.63	0	0	0	0.26	5.7
RE	41	33	12	24	24	56	128	**3.2**	2.8	0	0	4.3	4.8	8.0	**936**	1274	31	109	431	1082	3162	**0.95**	2.74	0	0	0	0.85	3.9
TA	85	117	24	24	50	108	312	**2.9**	2.5	0	0.8	4.0	4.8	7.1	**289**	353	9	28	138	375	1205	**0.72**	1.83	0	0	0	0.75	4.7
TU	116	56	57	75	106	143	244	**3.5**	2.7	0	1.4	4.6	5.0	7.6	**1322**	1794	29	81	584	2303	5876	**0.90**	2.63	0	0	0	0.07	9.1
UM	22	6	12	24	24	24	24	**3.8**	2.7	0	2.4	4.5	5.0	9.0	**160**	327	5	9	27	75	506	**0.45**	1.52	0	0	0	0	2.8
UP	34	23	12	24	24	34	80	**4.0**	2.1	0	2.9	4.8	5.0	8.0	**225**	528	7	28	80	219	784	**0.45**	1.76	0	0	0	0	1.6
VE	257	135	68	134	277	331	431	**4.4**	2.6	0	3.4	4.8	5.2	10.0	**1099**	1139	19	128	601	1910	3348	**0.85**	3.37	0	0	0	0.04	4.1

...continued

	Copper [ng/m^3]							Iron [ng/m^3]							Gallium [ng/m^3]							Potassium [ng/m^3]						
centre	mean	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**
AC	**9.7**	11.8	0	1.8	7.1	12.8	30.1	**127**	97	35	65	100	166	276	**0.17**	0.41	0	0	0	0.14	1.00	**182**	207	38	82	130	214	355
AL	**4.6**	8.3	0	0	1.2	4.4	25.4	**49**	47	0	20	38	67	135	**0.16**	0.45	0	0	0	0.19	1.19	**350**	199	103	208	282	411	782
AS	**6.3**	12.4	0	0.4	3.9	7.5	25.9	**66**	51	19	33	58	85	152	**0.14**	0.37	0	0	0	0.14	1.00	**182**	190	52	94	140	203	325
BA	**21.3**	20.3	3.8	8.8	15.0	32.8	65.4	**145**	79	61	97	132	176	334	**0.25**	0.33	0	0	0.17	0.41	0.84	**430**	880	83	144	223	344	598
BS	**6.5**	5.1	0	3.2	5.3	9.1	18.2	**78**	43	27	54	70	100	158	**0.16**	0.25	0	0	0	0.24	0.60	**255**	204	46	117	178	331	629
ER	**5.0**	5.1	0	0.5	3.9	8.8	13.4	**72**	57	8	29	61	113	186	**0.14**	0.24	0	0	0	0.22	0.60	**157**	148	21	73	121	183	398
GA	**17.9**	17.0	0.7	6.5	12.3	21.0	54.7	**166**	117	39	101	137	210	464	**0.17**	0.32	0	0	0	0.22	1.00	**191**	126	58	103	166	235	403
GN	**16.7**	22.1	0	5.9	13.8	19.6	48.3	**125**	121	28	59	95	172	338	**0.14**	0.24	0	0	0	0.19	0.71	**326**	279	49	168	249	384	865
GO	**4.1**	5.0	0	1.0	3.0	5.9	14.9	**52**	50	9	24	38	67	155	**0.12**	0.19	0	0	0.03	0.22	0.56	**112**	97	12	52	92	143	350
HU	**26.6**	43.1	1.1	4.9	14.1	31.4	103	**76**	57	24	51	70	101	153	**0.18**	0.40	0	0	0	0.27	0.79	**297**	293	49	111	179	429	1013
IP	**4.6**	11.0	0	0	2.0	5.3	17.7	**41**	44	5	17	33	53	107	**0.16**	0.39	0	0	0	0.13	0.70	**201**	529	35	67	113	225	369
NO	**3.2**	4.6	0	0	1.2	4.6	11.4	**42**	27	8	25	35	62	99	**0.10**	0.21	0	0	0	0.14	0.46	**116**	67	27	64	93	159	229
OV	**9.0**	8.0	0	3.6	7.8	12.6	26.9	**138**	117	22	68	106	196	346	**0.18**	0.36	0	0	0	0.19	0.94	**232**	128	62	127	197	325	463
PA	**9.4**	5.7	0.7	4.9	8.6	12.5	19.8	**124**	56	54	89	115	143	244	**0.19**	0.26	0	0	0.03	0.32	0.81	**364**	269	92	159	243	510	867
PS	**10.0**	8.5	0.9	5.1	7.7	12.8	30.4	**98**	57	27	68	89	119	224	**0.17**	0.33	0	0	0	0.23	0.57	**180**	143	65	95	132	216	453
RE	**1.7**	3.0	0	0	1.0	2.2	5.6	**23**	30	0	4	15	33	97	**0.09**	0.21	0	0	0	0.13	0.48	**29**	27	0	8	23	46	84
TA	**2.7**	3.6	0	0	1.7	3.7	11.5	**32**	52	0	8	23	40	95	**0.12**	0.21	0	0	0	0.19	0.51	**386**	282	62	174	307	570	921
TU	**23.1**	14.6	7.0	12.2	20.4	29.8	47.1	**262**	141	116	160	230	332	573	**0.32**	0.32	0	0	0.30	0.47	1.08	**471**	373	116	211	335	679	1319
UM	**2.4**	4.0	0	0	1.1	3.4	9.2	**25**	21	0	10	19	35	74	**0.11**	0.26	0	0	0	0.18	0.46	**63**	48	0	32	56	86	141
UP	**4.5**	5.3	0	1.5	3.1	5.4	10.9	**54**	41	0	26	46	66	138	**0.14**	0.23	0	0	0.07	0.18	0.56	**116**	100	0	47	83	128	330
VE	**22.1**	10.6	3.3	13.6	21.7	27.7	36.2	**302**	141	74	185	298	389	473	**0.29**	0.30	0	0.06	0.30	0.41	1.09	**411**	289	80	197	323	556	1001

...continued

	Magnesium [ng/m^3]							Manganese [ng/m^3]							Sodium [ng/m^3]							Nickel [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**365**	228	168	224	299	457	673	**6.9**	5.9	1.5	3.3	6.1	8.6	14.9	**2635**	1796	1054	1499	2185	3197	5714	**5.3**	14.8	0	0	0	3.8	51.0
AL	**318**	211	57	175	256	404	773	**2.0**	1.3	0.5	1.1	1.8	3.0	4.8	**1338**	826	508	826	1159	1762	2935	**5.5**	15.9	0	0	0	0	51.5
AS	**260**	179	21	165	220	313	564	**5.1**	4.1	0.6	2.4	4.8	6.9	10.9	**1998**	1371	1012	1178	1556	2489	4598	**3.2**	9.3	0	0	0	1.1	27.8
BA	**438**	346	140	262	378	452	665	**10.4**	10.7	2.5	4.7	8.1	13.8	27.2	**2700**	1243	1121	1746	2565	3282	5244	**6.4**	13.6	0	0	0	6.0	47.1
BS	**162**	90	15	104	160	216	275	**3.3**	2.1	0.6	1.7	3.3	3.9	7.6	**1299**	697	470	869	1192	1541	2422	**3.7**	9.9	0	0	0	3.2	16.2
ER	**156**	109	16	59	134	219	367	**3.1**	2.2	0.6	1.5	2.8	4.5	6.9	**1111**	694	418	674	850	1311	2703	**4.0**	11.6	0	0	0	2.1	42.0
GA	**338**	169	105	222	331	424	567	**23.0**	19.8	2.5	9.0	17.4	32.0	57.7	**2868**	1525	874	2052	2543	3315	5975	**7.0**	16.9	0	0	0	8.1	43.8
GN	**196**	175	17	102	161	249	551	**10.7**	14.3	1.1	3.6	6.7	14.3	36.8	**2108**	1665	841	1173	1743	2565	4441	**5.1**	13.9	0	0	0	2.2	46.7
GO	**280**	420	15	85	196	369	937	**2.7**	2.5	0.6	1.2	2.0	3.8	7.4	**2004**	2244	375	784	1413	2437	7187	**5.7**	14.0	0	0	0	4.9	45.1
HU	**582**	324	212	352	547	793	1358	**2.9**	2.5	0.8	1.6	2.4	3.8	7.2	**4023**	2176	1700	2418	3543	5595	8403	**6.8**	17.8	0	0	0	4.4	52.6
IP	**361**	315	120	214	287	392	751	**3.3**	3.8	0.1	1.0	2.6	5.3	11.4	**2544**	1691	997	1472	2076	3382	5705	**5.7**	12.1	0	0	0	4.4	27.9
NO	**363**	219	121	212	304	488	840	**2.6**	2.5	0	0.9	1.8	3.6	6.6	**2701**	1798	1031	1636	2064	3482	6522	**5.8**	12.5	0	0	0	4.3	41.3
OV	**349**	148	123	244	334	472	598	**6.4**	8.2	1.1	2.4	4.9	9.7	14.3	**2046**	1006	649	1453	1781	2655	3895	**6.5**	14.5	0	0	0	5.5	46.7
PA	**280**	173	95	152	220	389	643	**9.9**	12.2	1.9	3.7	5.6	10.1	47.2	**1419**	971	456	836	1090	1651	3401	**7.9**	15.9	0	0	0	7.3	53.1
PS	**293**	181	96	178	257	351	760	**4.4**	5.0	1.3	2.0	3.2	5.1	12.6	**2377**	1512	1021	1468	1993	2783	6512	**6.3**	14.9	0	0	0	3.9	45.7
RE	**257**	278	14	66	176	315	678	**0.5**	0.7	0	0	0.3	0.7	2.0	**1929**	1862	351	632	1366	2261	4826	**5.5**	13.0	0	0	0	3.8	43.5
TA	**157**	159	16	62	136	205	399	**2.8**	3.2	0.3	1.1	1.7	3.7	11.1	**984**	646	351	589	845	1154	2256	**5.5**	18.0	0	0	0	1.4	47.0
TU	**457**	234	207	281	426	616	900	**13.3**	10.8	2.6	6.6	11.1	19.7	39.5	**1857**	958	717	1185	1655	2674	3662	**9.0**	16.4	0	0	1.5	12.5	53.4
UM	**97**	115	9	14	26	144	333	**1.2**	1.0	0	0.6	1.0	1.8	3.0	**880**	883	71	318	584	921	2399	**3.8**	12.6	0	0	0	1.7	23.0
UP	**159**	158	14	70	138	180	445	**1.9**	1.6	0.3	0.8	1.4	2.2	5.6	**1164**	1228	294	530	779	1351	3026	**4.0**	11.2	0	0	0	2.1	43.3
VE	**372**	232	136	215	348	506	622	**30.7**	20.5	3.1	13.2	20.3	31.5	68.7	**1944**	1323	722	1040	1774	2453	3444	**4.2**	13.5	0	0	0	0.0	48.3

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	Phosphorus [ng/m^3]							Lead [ng/m^3]							Sulfur [ng/m^3] *							Selenium [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**35.4**	36.0	10.9	16.5	28.5	43.3	85.3	**28.6**	32.0	1.6	12.2	22.2	34	70	**3487**	2201	1353	2130	3024	4268	7016	**11.9**	21.4	0	2.4	6.6	14.7	27.9
AL	**15.8**	7.3	5.7	10.6	14.5	21.2	28.6	**11.3**	12.5	0	3.1	7.4	14	46	**2401**	1292	871	1283	2190	3181	5576	**2.9**	6.4	0	0	0	3.8	18.1
AS	**27.2**	31.5	6.7	12.8	19.9	33.2	65.0	**25.8**	30.0	0	10.2	16.8	38	75	**3461**	1956	1202	2002	3073	4477	6636	**8.2**	12.1	0	0	5.6	10.4	29.8
BA	**32.0**	22.3	11.9	17.2	25.7	40.4	79.7	**52.7**	42.3	10.9	22.7	36.9	75	146	**3305**	1648	1131	2080	2796	4284	6664	**2.1**	4.4	0	0	0.02	3.0	6.7
BS	**20.8**	11.1	5.9	11.9	19.1	27.5	46.3	**13.5**	11.0	0	4.0	12.1	18	35	**2474**	1492	565	1002	2156	3386	4702	**2.3**	4.9	0	0	0	1.7	13.4
ER	**15.5**	9.8	5.3	9.6	12.9	18.5	35.6	**14.8**	18.6	0	4.0	8.8	19	48	**2725**	1887	570	1352	1783	3693	6541	**1.8**	4.0	0	0	0.01	1.9	9.5
GA	**35.6**	29.7	5.2	14.0	27.0	45.3	104	**39.0**	29.8	7.2	14.7	29.3	55	80	**3773**	3297	712	1629	2938	4569	11000	**6.5**	8.6	0	0.05	2.9	9.4	25.3
GN	**28.3**	18.7	9.0	17.2	25.6	35.8	73.2	**23.2**	25.2	0	5.0	16.7	35	62	**2114**	1171	650	1264	1810	2589	5030	**1.8**	5.0	0	0	0	1.4	11.2
GO	**14.0**	7.6	2.1	11.0	12.1	17.0	33.6	**5.3**	6.4	0	0.6	3.1	7.1	18	**2161**	1856	429	885	1729	2708	6089	**1.2**	2.7	0	0	0	1.4	5.6
HU	**125**	175	2.6	14.3	71.0	186	515	**26.9**	36.1	0	7.5	19.6	33	97	**3709**	3095	931	1480	2547	5011	9101	**6.4**	12.0	0	0	1.3	9.1	32.8
IP	**18.1**	16.9	1.3	8.5	11.9	20.4	53.8	**18.8**	56.7	0	3.8	9.4	25	46	**2378**	1823	634	922	1759	3303	6474	**2.6**	5.1	0	0	0.05	3.9	13.1
NO	**16.1**	11.7	2.4	9.1	11.9	18.5	36.3	**13.6**	22.8	0	2.3	6.5	17	45	**2327**	1651	667	1081	1860	3080	5700	**2.3**	4.7	0	0	0	2.6	10.2
OV	**19.5**	9.8	7.4	11.9	17.6	25.5	40.0	**22.9**	16.4	5.7	12.4	18.6	27	60	**2812**	2228	775	1472	2270	3355	7795	**3.0**	5.8	0	0	1.2	3.9	21.1
PA	**26.4**	13.5	11.1	16.9	24.5	32.1	55.3	**37.4**	25.0	4.9	17.4	34.6	52	92	**4244**	2191	1173	2607	3816	5547	8341	**3.3**	4.7	0	0	1.8	3.8	12.4
PS	**25.5**	13.5	9.8	16.2	21.6	34.5	53.9	**15.7**	15.0	0	5.4	12.5	23	45	**2573**	1590	665	1367	2098	3292	5030	**2.7**	5.5	0	0	0	3.3	18.8
RE	**8.1**	4.2	1.3	5.9	11.9	11.9	11.9	**2.6**	7.9	0	0	0	1.2	10	**370**	327	56	144	275	453	847	**1.7**	5.4	0	0	0	0	7.6
TA	**16.6**	15.2	6.6	10.5	12.7	21.2	33.1	**8.6**	9.2	0	1.3	7.0	13	28	**2124**	1321	631	1266	1916	2550	4393	**1.7**	4.5	0	0	0	1.8	11.6
TU	**37.7**	19.3	15.5	22.9	35.1	50.9	77.3	**63.8**	37.1	15.9	30.5	61.9	88	127	**4351**	2375	1479	2403	4209	6341	8730	**2.7**	4.4	0	0	0.3	3.9	10.5
UM	**9.0**	3.6	1.2	7.5	11.9	11.9	11.9	**3.0**	5.5	0	0	1.7	3.4	13	**988**	833	154	436	723	1394	2599	**0.8**	2.9	0	0	0	0.02	4.4
UP	**11.6**	5.2	4.7	8.9	11.9	12.4	20.9	**5.0**	9.4	0	0.4	2.2	4.0	13	**1791**	1198	268	716	1456	2270	3865	**1.3**	3.9	0	0	0	0	6.9
VE	**43.0**	20.2	19.7	28.9	39.7	56.7	83.0	**80.1**	42.0	16.4	54.2	78	99	128	**4798**	3107	1249	2305	4422	6002	12000	**2.8**	5.6	0	0	1.5	3.1	10.9

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

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	Silicon [ng/m^3]							Titanium [ng/m^3]							Vanadium [ng/m^3]							Zinc [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**363**	265	114	179	292	443	874	**5.3**	3.9	1.9	2.9	4.3	6.8	13.1	**6.8**	8.6	1.3	2.7	5.2	8.4	20.7	**52.4**	70	5.6	18	33	62	152
AL	**730**	816	117	253	469	930	2191	**5.6**	5.9	0.9	2.5	3.6	7.6	15.7	**2.7**	2.0	0.5	1.4	2.3	3.6	7.3	**12.2**	19	0	5.9	8.6	15	30
AS	**263**	251	74	129	171	313	928	**3.6**	3.2	1.1	1.6	2.7	3.9	9.3	**5.7**	6.6	1.2	2.4	3.7	6.9	17.1	**45.4**	64	10	20	37	52	83
BA	**686**	423	282	402	581	987	1314	**19.0**	21.3	4.4	7.8	12.3	23.2	47.2	**9.0**	6.7	1.5	4.4	8.4	12.1	20.9	**80.5**	61	17	37	73	116	214
BS	**299**	201	73	173	266	361	634	**3.1**	1.9	0.5	1.8	3.1	4.1	7.6	**1.6**	1.0	0.4	0.5	1.6	2.2	3.4	**32.9**	24	3.8	14	30	47	82
ER	**313**	260	72	121	269	434	671	**2.8**	2.3	0.3	1.1	2.6	4.1	7.3	**0.8**	0.6	0.4	0.5	0.5	0.9	2.1	**38.5**	48	4.3	14	21	41	140
GA	**453**	308	96	256	378	549	1141	**4.0**	3.0	0.8	2.1	3.2	5.0	9.7	**9.6**	9.8	0.5	3.4	6.4	10.7	28.2	**150**	135	22	56	99	173	417
GN	**1404**	1683	168	389	836	1629	4203	**5.5**	6.7	1.0	2.4	3.8	5.5	19.0	**3.3**	2.7	0.5	1.4	2.8	4.7	9.1	**185**	238	20	63	125	232	562
GO	**216**	203	42	92	151	264	592	**2.3**	2.4	0.3	1.0	1.5	2.8	5.8	**3.9**	3.6	0.4	1.0	3.4	6.1	11.4	**15.8**	14.1	3.0	7.2	12	21	44
HU	**1259**	1122	351	550	1058	1543	3135	**17.1**	46.9	2.6	4.8	8.2	12.9	38.8	**6.7**	5.5	1.0	2.5	4.4	9.9	18.7	**40.9**	69	1.3	8.7	24	49	143
IP	**165**	108	68	95	142	198	419	**4.5**	13.0	0.3	1.1	2.3	5.1	9.5	**5.6**	7.2	0.5	1.2	2.1	8.7	21.8	**22.4**	34	1.3	8.6	14	26	60
NO	**204**	168	74	120	148	249	563	**2.6**	2.4	0.5	1.0	1.8	3.5	7.2	**4.5**	5.2	0.5	1.1	2.7	5.6	15.5	**15.0**	13.2	0.5	6.9	11	19	35
OV	**781**	460	205	468	679	1010	1719	**7.4**	4.3	1.5	4.3	6.8	9.9	15.2	**5.5**	3.3	2.0	2.9	4.6	7.6	12.8	**31.1**	24	6.6	15	27	42	86
PA	**539**	396	183	305	486	649	1042	**8.2**	8.7	1.6	3.5	5.1	10.0	23.8	**4.2**	2.5	0.9	2.2	3.8	5.4	9.1	**47.0**	48	11	19	32	49	147
PS	**321**	297	98	168	231	391	1016	**3.9**	2.9	1.3	2.0	2.8	4.8	9.7	**2.2**	1.7	0.5	0.5	2.0	3.0	4.9	**40.1**	39	7.7	19	30	48	124
RE	**245**	292	24	50	125	358	840	**3.0**	4.6	0	0.2	0.8	4.4	15.6	**0.4**	0.3	0.2	0.4	0.5	0.5	0.5	**2.2**	2.3	0	0.5	1.8	3.5	6.5
TA	**367**	822	31	101	211	412	1194	**2.7**	5.7	0	1.0	1.6	2.6	8.2	**1.3**	0.9	0.4	0.5	1.0	1.9	2.9	**32.6**	22	5.6	13	30	50	77
TU	**744**	431	321	477	665	897	1591	**8.5**	4.8	3.4	5.4	7.7	10.4	18.3	**3.6**	2.3	0.5	1.9	3.3	5.4	8.1	**70.1**	55	19	34	58	106	172
UM	**172**	198	24	62	109	249	563	**1.6**	1.9	0	0	0.9	2.4	5.1	**0.9**	1.0	0.4	0.5	0.5	0.8	3.1	**6.2**	5.9	0	2.3	4.9	8.9	17
UP	**247**	191	48	121	163	345	688	**2.0**	1.4	0	0.9	1.7	2.6	4.9	**1.4**	1.2	0.4	0.5	1.0	1.9	4.0	**14.9**	12.7	2.7	6.3	11	19	40
VE	**759**	1162	191	303	550	802	1817	**8.7**	4.8	2.7	4.4	9.4	10.9	19.2	**1.9**	1.8	0.5	0.5	1.6	2.8	6.6	**135**	86	15	51	100	208	268

Tab. 9.2: Winter Mean Elemental Concentrations of all elements with standard deviation and percentiles.

	Aluminium [ng/m^3]							Arsenic [ng/m^3]							Bismuth [ng/m^3]							Bromine [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**216**	180	61	133	182	267	809	**15.0**	23.1	1.0	3.7	7.8	17	76	**0.05**	0.26	0	0	0	0	1.02	**9.6**	10.8	2.7	4.8	7.7	11.1	45.0
AL	**206**	213	64	77	122	142	677	**(2.5)**	1.7	0.71	1.0	1.2	3.3	5.6	**0.03**	0.08	0	0	0	0	0.12	**3.8**	2.2	0	2.5	3.5	5.1	6.1
AS	**133**	121	60	77	93	159	277	**10.0**	14.0	1.5	3.7	5.3	10.8	27	**0.12**	0.35	0	0	0	0.04	0.74	**7.1**	9.0	1.7	2.7	5.2	10.2	15.0
BA	**379**	215	189	248	308	527	660	**18.3**	8.7	8.3	10.4	19	23	33	**0.04**	0.10	0	0	0	0	0.27	**22.5**	11.8	8.5	13.2	21.2	31.8	40.5
BS	**197**	190	41	77	161	272	542	**6.7**	5.0	0.74	2.3	6.2	9.4	16	**0.00**	0.02	0	0	0	0	0.00	**7.6**	7.5	1.2	3.5	5.4	10.5	17.3
ER	**150**	113	25	63	117	245	353	**6.5**	7.1	0.81	0.94	4.3	9.5	21	**0.02**	0.08	0	0	0	0	0.12	**2.7**	2.1	0.4	1.4	2.2	3.0	6.5
GA	**119**	97	0	69	138	154	418	**7.2**	7.3	0.86	2.0	4.3	9.5	25	**0.00**	0.01	0	0	0	0	0.04	**4.1**	2.9	0.2	2.0	3.6	6.2	9.9
GN	**322**	458	51	102	167	389	1279	**9.4**	9.9	0.86	1.1	6.9	16	34	**0.04**	0.10	0	0	0	0.03	0.36	**5.3**	3.9	0.5	3.6	4.2	5.8	14.1
GO	**84**	50	31	62	78	103	212	**2.2**	2.1	0.46	0.83	1.9	3.6	6.3	**0.03**	0.10	0	0	0	0	0.36	**2.6**	1.7	0.7	1.8	2.3	3.2	4.7
HU	**469**	653	115	237	291	619	710	**16.5**	33.2	1.9	4.4	8.8	14.4	71	**0.08**	0.25	0	0	0	0.01	0.41	**5.5**	2.5	2.4	3.4	6.0	6.7	10.1
IP	**162**	363	38	53	70	115	275	**11.0**	24.1	0.78	2.3	4.7	11.7	30	**0.08**	0.19	0	0	0	0.03	0.36	**8.4**	7.5	1.6	3.6	5.1	10.2	19.3
NO	**134**	88	31	78	96	165	354	**6.3**	8.4	0.67	0.89	3.9	9.7	34	**0.03**	0.09	0	0	0	0	0.36	**6.4**	4.4	1.6	2.8	4.2	7.4	18.3
OV	**483**	193	94	383	493	637	733	**9.0**	6.2	0.90	5.3	8.8	11.9	20	**0.05**	0.12	0	0	0	0	0.36	**10.5**	5.5	2.8	6.2	9.6	12.4	16.9
PA	**226**	115	89	135	178	312	456	**16.1**	6.3	8.2	9.7	15	20	29	**0.02**	0.07	0	0	0	0	0.07	**19.6**	5.5	11	15.4	19.7	22.6	29.8
PS	**112**	71	48	68	105	130	301	**4.1**	3.9	0.88	1.2	3.1	5.5	11.1	**0.02**	0.08	0	0	0	0	0.08	**6.3**	5.4	1.5	3.3	4.5	7.6	19.7
RE	**155**	194	0	15	68	326	539	**(0.8)**	0.5	0.38	0.62	0.81	0.9	2.0	**0.04**	0.11	0	0	0	0	0.36	**1.5**	1.4	0	0.47	1.1	1.5	4.4
TA	**68**	49	10	36	58	89	134	**3.2**	2.9	0.62	0.91	2.1	4.6	8.4	**0.03**	0.10	0	0	0	0	0.36	**2.3**	1.4	0.5	1.4	2.1	3.4	4.5
TU	**449**	188	185	350	403	569	784	**21.7**	6.1	9.6	18.8	23	27	31	**0.01**	0.05	0	0	0	0	0.04	**38.0**	12.0	24	31.7	35.1	40.9	62.4
UM	**50**	39	6	28	43	54	139	**(1.4)**	1.0	0.37	0.81	0.88	2.0	3.5	**0.02**	0.04	0	0	0	0	0.10	**1.1**	0.8	0	0.4	1.0	1.8	2.6
UP	**78**	42	23	50	76	91	151	**2.5**	1.9	0.62	1.4	2.2	3.0	5.3	**0.12**	0.31	0	0	0	0	0.36	**2.1**	2.0	0.3	1.3	1.6	2.4	4.3
VE	**381**	187	135	311	361	449	833	**24.7**	8.7	10.5	16.2	27	32	36	**0.01**	0.03	0	0	0	0	0.08	**27.8**	7.9	13	24.2	29.5	34.8	39.4

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	Calcium [ng/m^3]							Cadmium [ng/m^3]							Chlorine [ng/m^3]							Cobalt [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**113**	73	36	77	110	133	361	**3.7**	2.4	0	0.7	4.8	5.2	6.6	**2725**	3210	357	753	2732	3685	13000	**0.81**	2.5	0	0	0	0	10
AL	**205**	169	63	98	149	206	437	**2.7**	3.3	0	0	2.3	4.7	9.0	**678**	586	65	187	340	715	1856	**0.48**	0.8	0	0	0	0.89	2.3
AS	**51**	50	24	24	37	62	135	**3.7**	3.0	0	2.0	4.8	5.2	10.5	**1774**	1965	147	321	1102	3040	4217	**1.16**	3.3	0	0	0	0.96	6.9
BA	**249**	124	104	173	242	363	462	**4.4**	1.4	2.4	4.3	4.9	5.2	6.7	**1704**	1701	202	693	1326	2452	5648	**0.03**	0.1	0	0	0	0	0.04
BS	**66**	45	12	27	78	108	152	**4.1**	0.9	2.5	4.5	4.8	5.0	5.2	**1044**	653	109	399	1197	1454	1918	**0.17**	0.4	0	0	0	0	1.2
ER	**63**	55	24	24	52	101	167	**4.4**	1.7	2.3	4.5	4.6	4.8	5.0	**782**	1052	17	88	291	996	3601	**0.19**	0.4	0	0	0	0	1.1
GA	**141**	128	24	76	113	197	533	**4.9**	1.3	2.3	4.8	5.0	5.2	9.3	**507**	412	51	153	359	844	1335	**0.08**	0.3	0	0	0	0	1.1
GN	**121**	115	24	61	92	144	388	**4.5**	0.8	2.5	4.5	4.8	5.0	5.2	**1714**	2064	107	638	1144	1883	5795	**0.18**	0.6	0	0	0	0	1.5
GO	**(40)**	31	12	24	24	58	97	**4.6**	1.7	2.4	4.5	4.8	5.2	9.0	**891**	1062	33	163	579	1217	3010	**0.35**	0.5	0	0	0	0.94	1.4
HU	**186**	128	65	107	159	257	432	**4.1**	1.0	2.4	4.2	4.8	5.0	5.2	**1419**	1830	152	466	795	1956	5866	**0.07**	0.3	0	0	0	0	0.64
IP	**41**	32	12	24	29	56	122	**4.3**	1.9	2.3	4.3	4.8	5.0	5.2	**2418**	2566	381	1011	1832	3087	6816	**0.27**	0.6	0	0	0	0.64	1.4
NO	**209**	276	24	50	72	335	909	**4.3**	1.5	2.1	4.3	4.5	4.8	9.4	**1811**	1075	273	796	1329	2317	3850	**0.33**	0.7	0	0	0	0.55	2.6
OV	**387**	266	97	205	342	510	989	**3.6**	2.8	0	2.4	4.5	5.0	7.2	**996**	612	115	466	1006	1329	1742	**0.18**	0.6	0	0	0	0	1.7
PA	**99**	80	24	33	69	135	242	**4.3**	1.0	2.3	4.3	4.5	5.0	5.5	**2175**	1997	494	1045	1546	2612	5709	**0.08**	0.4	0	0	0	0	0
PS	**76**	49	35	54	69	89	210	**4.4**	2.4	1.9	4.2	4.8	5.1	9.8	**1309**	1147	322	484	988	1595	3904	**0.78**	3.6	0	0	0	0	1.7
RE	**56**	46	12	24	28	100	138	**4.1**	1.8	1.9	4.0	4.5	5.0	5.2	**1515**	1758	90	237	834	2191	3605	**0.32**	0.5	0	0	0	0.78	1.4
TA	**(30)**	16	12	24	24	35	61	**4.0**	0.9	2.4	4.2	4.8	4.8	5.0	**538**	410	77	181	363	692	1341	**0.14**	0.4	0	0	0	0	1.0
TU	**137**	58	69	95	130	179	244	**4.3**	0.8	2.6	4.5	4.8	5.0	5.2	**3015**	1893	607	1683	2781	4165	6346	**0.29**	0.7	0	0	0.01	0.07	1.9
UM	**(22)**	4	12	24	24	24	25	**4.3**	0.9	2.4	4.5	4.8	5.0	5.2	**332**	529	14	34	59	168	1765	**0.03**	0.2	0	0	0	0	0.37
UP	**(26)**	9	24	24	24	24	50	**3.6**	1.9	0	3.8	4.8	5.0	5.5	**346**	434	38	92	234	420	784	**0.84**	2.2	0	0	0	0.65	1.6
VE	**319**	151	78	280	337	387	665	**4.6**	0.9	2.0	4.8	4.8	5.0	5.2	**1859**	1110	542	940	2165	2465	4174	**0.01**	0.0	0	0	0	0.04	0.07

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	Copper [ng/m^3]							Iron [ng/m^3]							Gallium [ng/m^3]							Potassium [ng/m^3]						
centre	mean	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**
AC	**14.5**	17	3.1	6.4	8.3	21	67	**187**	132	70	106	169	236	628	**0.20**	0.44	0.0	0.0	0.03	0.33	1.57	**319**	345	112	158	208	328	1442
AL	**6.7**	10.5	0	0	2.6	4.6	23	**33**	30	0	6	27	48	85	**(0.11)**	0.19	0.0	0.0	0	0.27	0.46	**546**	227	235	285	452	669	894
AS	**9.8**	19	0	2.9	4.3	9.3	29	**82**	68	29	42	67	103	181	**0.23**	0.43	0.0	0.0	0.15	0.27	0.97	**260**	300	77	112	167	256	818
BA	**26.8**	25	6.5	10.0	19	39	74	**190**	100	87	112	167	290	344	**0.32**	0.27	0.0	0.13	0.27	0.45	0.84	**401**	149	193	279	355	518	637
BS	**6.6**	4.3	2.0	4.3	5.4	9.3	15	**85**	56	27	54	87	117	207	**0.15**	0.16	0.0	0.0	0.13	0.27	0.46	**397**	256	70	192	361	582	946
ER	**4.9**	5.6	0	0.55	2.4	8.1	13.8	**80**	71	8	29	64	143	221	**0.16**	0.22	0.0	0.0	0.07	0.24	0.60	**219**	215	31	104	144	254	793
GA	**10.6**	8.1	0	3.6	11.3	20	22	**127**	120	13	42	102	174	478	**0.12**	0.12	0.0	0.0	0.08	0.21	0.37	**136**	78	40	76	114	168	318
GN	**19.9**	21	0	6.6	17	25	64	**176**	158	31	94	154	235	485	**0.17**	0.27	0.0	0.0	0.09	0.29	0.51	**512**	371	65	247	401	720	1302
GO	**5.1**	6.6	0	1.3	3.4	6.9	22	**56**	67	6	18	40	63	197	**0.12**	0.17	0.0	0.0	0.03	0.22	0.46	**113**	53	40	68	110	151	211
HU	**30.7**	57	2.1	9.3	16	35	130	**85**	80	27	51	65	110	153	**0.20**	0.23	0.0	0.0	0.18	0.37	0.60	**393**	369	31	130	216	527	1013
IP	**5.9**	17	0	0.51	1.5	5.1	18	**50**	64	12	17	31	64	129	**0.20**	0.46	0.0	0.0	0.08	0.23	0.65	**335**	878	35	64	128	310	609
NO	**3.5**	2.4	0	1.2	2.6	4.8	8.1	**51**	26	25	31	41	64	112	**0.12**	0.17	0.0	0.0	0.04	0.27	0.46	**160**	65	46	113	161	205	272
OV	**7.5**	8.7	0	1.1	6.4	10.5	19	**117**	102	21	71	101	132	246	**0.17**	0.29	0.0	0.0	0.03	0.18	0.75	**206**	104	47	131	175	258	373
PA	**11.4**	5.1	3.4	7.7	10.2	15	18	**167**	66	73	119	146	222	272	**0.25**	0.21	0.0	0.0	0.18	0.37	0.65	**655**	248	300	451	665	815	993
PS	**11.5**	10.8	1.5	4.9	8.2	15	32	**97**	64	51	68	80	104	263	**0.22**	0.48	0.0	0.0	0.10	0.24	0.75	**221**	199	86	109	162	242	644
RE	**1.5**	1.7	0	0	1.6	2.1	5.5	**30**	38	0	4	19	79	98	**0.10**	0.11	0.0	0.0	0.04	0.18	0.27	**30**	29	0	0	26	52	71
TA	**2.8**	3.1	0	0.39	2.3	3.7	8.4	**19**	20	3	8	15	31	45	**0.14**	0.16	0.0	0.0	0.09	0.25	0.41	**433**	242	128	222	430	591	885
TU	**29.6**	10.0	14.0	23	29	34	47	**379**	150	137	296	365	482	638	**0.45**	0.25	0.18	0.32	0.39	0.53	1.08	**876**	353	429	619	807	1111	1431
UM	**2.5**	2.5	0	0	2.7	3.5	7.8	**21**	17	1	10	18	29	57	**0.10**	0.13	0.0	0.0	0.03	0.15	0.39	**71**	46	10	42	73	103	167
UP	**5.5**	5.5	1.6	3.0	4.0	6.1	10.0	**50**	27	23	33	47	70	100	**0.22**	0.25	0.0	0.0	0.18	0.41	0.56	**139**	87	43	65	115	193	253
VE	**26.0**	8.1	9.9	21	28	31	36	**358**	106	146	314	388	422	473	**0.32**	0.16	0.0	0.27	0.37	0.51	0.56	**554**	294	164	444	567	890	1088

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	Magnesium [ng/m^3]							Manganese [ng/m^3]							Sodium [ng/m^3]							Nickel [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**460**	335	95	275	433	639	1258	**11.5**	9.0	3.3	5.4	10.6	14.8	39	**3385**	2298	879	1990	2992	4519	9752	**(7.6)**	20.3	0	0	0	7.2	68
AL	**190**	160	34	114	155	192	387	**1.6**	1.2	0.2	1.0	1.3	2.4	3.1	**883**	445	347	556	758	1154	1677	**(4.5)**	15.5	0	0	0	0.2	51
AS	**305**	229	20	123	246	422	677	**7.2**	5.6	1.6	3.8	7.0	10.2	13.6	**2465**	1576	1016	1335	1978	3182	5695	**(3.5)**	5.9	0	0	0	5.8	15
BA	**384**	213	125	276	375	443	708	**17.4**	14.3	7.7	10.2	13.9	21	44	**2629**	1214	1121	1775	2855	3285	5244	**8.8**	13.7	0	0	3.5	8.1	46
BS	**192**	114	14	146	200	268	285	**4.2**	2.5	0.7	2.4	3.9	5.6	9.6	**1577**	935	565	1007	1420	2042	3501	**(1.5)**	3.1	0	0	0	2.6	9.5
ER	**208**	135	16	109	215	310	429	**3.7**	2.9	1.0	1.7	2.8	6.0	9.4	**1566**	962	503	691	1389	2263	3389	**(2.3)**	8.6	0	0	0	1.1	9.3
GA	**197**	123	15	123	201	314	369	**16.1**	17.6	1.7	5.6	11.0	16	58	**1774**	875	589	1102	1855	2503	3315	**(2.1)**	3.2	0	0	0	4.0	9.6
GN	**266**	226	134	159	184	345	731	**16.3**	20.5	3.1	5.1	9.8	22	47	**3164**	2386	841	1886	2862	3795	6773	**(4.7)**	14.6	0	0	0	0.3	46
GO	**292**	327	17	20	204	562	937	**3.0**	3.1	0.8	1.3	2.4	4.3	7.4	**2550**	2491	389	898	1548	4584	7790	**(4.9)**	12.7	0	0	0	3.4	41
HU	**511**	427	192	254	367	682	1473	**3.7**	3.4	1.4	2.0	2.8	5.0	9.6	**3457**	2476	1520	2026	2647	4759	9153	**(5.7)**	14.2	0	0	0	5.6	43
IP	**491**	459	209	319	355	633	1131	**3.6**	3.5	0.4	1.2	2.8	6.4	11.4	**3092**	1916	1273	1746	2634	4356	5705	**(3.4)**	10.3	0	0	0	3.0	10.4
NO	**461**	193	205	333	446	523	881	**4.2**	3.3	0.9	1.6	3.7	5.4	14.0	**3155**	1630	1541	1898	2736	3850	6659	**(5.7)**	11.9	0	0	0	6.8	42
OV	**345**	152	123	240	319	427	598	**6.3**	6.7	1.1	2.9	5.4	8.4	18	**1877**	1125	465	1111	1662	2598	3472	**(8.7)**	18.7	0	0	0	6.9	48
PA	**334**	190	111	198	303	440	658	**18.8**	17.6	3.4	6.9	12.0	23	56	**1636**	1018	579	1071	1337	2217	3334	**(8.6)**	15.3	0	0	0	10.9	52
PS	**312**	177	154	183	275	432	579	**5.0**	5.0	1.6	2.2	3.5	5.7	17	**2579**	1495	1040	1465	2139	3733	5158	**(8.2)**	18.6	0	0	0	5.5	45
RE	**391**	370	13	151	232	554	855	**0.8**	0.9	0	0.2	0.7	1.5	2.6	**2591**	2504	228	480	1684	3843	5861	**7.2**	12.7	0	0	2.1	5.9	40
TA	**140**	115	16	19	133	208	389	**2.6**	2.7	0.5	1.1	2.4	3.0	7.4	**1214**	824	475	715	1012	1420	3406	**(4.9)**	13.2	0	0	0	3.2	45
TU	**583**	199	249	454	616	739	900	**21.9**	12.2	9.1	15	22	26	49	**2636**	912	1273	1893	2848	3472	4028	**11.1**	14.3	0	3.1	7.2	15.2	31
UM	**118**	150	8.4	14	27	124	460	**1.4**	1.2	0	0.7	1.3	2.2	3.9	**1114**	1295	116	280	498	1195	4140	**(3.6)**	6.2	0	0	0	5.5	20
UP	**173**	140	16	123	153	172	456	**2.4**	1.6	0.6	1.4	2.1	3.1	5.6	**1399**	1138	423	608	959	1460	3444	**(7.8)**	16.3	0	0	0	6.5	45
VE	**421**	143	158	349	481	514	622	**46.8**	20.7	17	29	47	69	74	**2221**	704	1083	1639	2389	2783	3444	**(2.5)**	7.8	0	0	0	0	26

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	Phosphorus [ng/m^3]							Lead [ng/m^3]							Sulfur [ng/m^3] *							Selenium [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**56.1**	60.5	14.9	24.9	43	80	261	**45.0**	52.7	2.0	20.3	30.4	49.0	199	**3860**	3499	1584	2160	2892	4629	14000	**16.8**	37.9	0	5.1	6.6	16.9	158
AL	**16.3**	6.5	8.1	11.0	13	21	27	**12.0**	9.5	0	5.1	10.1	14.2	23.6	**1699**	698	715	1117	1317	2061	2926	**(0.4)**	0.9	0	0	0	0	1.7
AS	**35.3**	49.2	9.9	15.2	21	31	124	**37.5**	44.8	6.6	13.0	20.4	40.8	104	**2870**	2444	1112	1624	2308	3154	6650	**7.4**	9.7	0	0.02	4.8	12.4	28.7
BA	**43.0**	28.3	14.7	24.4	37	60	92	**75.0**	39.3	27.3	44.8	74.1	101	148	**3090**	1369	1354	2207	2543	3853	5700	**1.8**	1.9	0	0	0.7	3.2	5.2
BS	**24.0**	13.8	8.6	11.9	23	33	49	**14.9**	9.3	0	8.7	16.9	20.1	30.8	**2557**	1945	565	845	1826	3681	6588	**(0.4)**	1.1	0	0	0	0	2.4
ER	**18.9**	12.6	8.8	11.9	15	22	46	**22.3**	25.6	4.3	6.4	12.0	26.6	89.5	**2427**	2079	550	1275	1586	2454	6934	**(1.0)**	2.0	0	0	0	1.3	4.2
GA	**25.0**	13.6	8.4	11.9	26	35	52	**25.2**	23.5	0	8.1	14.6	32.0	79.6	**1603**	975	364	788	1457	2484	3621	**(3.2)**	4.4	0	0	0.05	3.6	15.0
GN	**37.6**	24.6	11.9	19.8	32	54	80	**33.5**	32.3	3.5	14.4	27.5	50.7	107	**2101**	1315	547	1247	1608	2848	4359	**(0.6)**	1.2	0	0	0	0.07	2.6
GO	**14.7**	7.0	8.4	11.9	14	17	20	**5.0**	2.9	0	2.5	4.9	7.1	9.1	**2069**	1920	574	943	1642	2298	7020	**(0.6)**	0.9	0	0	0.02	1.3	2.5
HU	**138**	217	8.7	23.2	79	189	515	**29.1**	31.7	7.5	18.5	24.0	31.5	59.5	**2100**	1160	764	1480	1788	2691	4964	**4.3**	12.5	0	0	0.53	2.9	17.8
IP	**25.4**	21.2	7.2	10.2	13	44	58	**32.3**	93.2	4.0	6.8	12.0	26.7	67.2	**2134**	1915	598	769	1125	2916	6474	**(1.8)**	2.4	0	0	0.01	3.9	6.6
NO	**20.9**	14.8	8.4	10.3	15	25	64	**19.5**	30.1	2.8	6.2	13.2	19.0	129	**1752**	1710	664	989	1091	1394	7690	**(1.4)**	2.3	0	0	0	0.8	8.8
OV	**22.7**	11.7	5.3	14.8	21	30	45	**27.9**	16.8	8.1	14.5	22.9	36.8	64.7	**1825**	801	600	1038	1646	2446	2861	**(1.6)**	2.2	0	0	0.02	3.3	5.7
PA	**39.0**	13.1	19.8	29.3	35	49	63	**61.5**	22.9	27.1	40.9	60.8	78.1	94.7	**4541**	2488	1844	3185	4532	5603	11000	**2.7**	2.8	0	0	2.5	3.7	7.8
PS	**28.6**	15.1	10.8	17.2	27	41	54	**18.4**	17.0	2.3	8.3	12.9	30.3	45.2	**2108**	1449	627	759	1514	3073	4938	**(2.0)**	5.3	0	0	0	2.9	5.3
RE	**(8.0)**	4.5	1.2	2.8	12	12	12	**1.1**	1.9	0	0	0.06	1.8	6.1	**217**	182	42	61	144	279	442	**(0.7)**	1.9	0	0	0	0	5.1
TA	**14.6**	6.3	7.8	10.3	13	20	25	**9.7**	7.4	0	4.9	8.7	15.3	20.5	**2061**	1155	902	1260	1979	2692	4272	**(1.0)**	1.5	0	0	0	1.7	3.8
TU	**55.5**	17.3	35.2	45	56	66	83	**101**	27.6	61.8	83.5	94.2	109	157	**4987**	2433	1524	3485	5137	7403	8730	**2.8**	2.6	0	0.05	2.6	4.8	6.7
UM	**(8.7)**	4.1	0.7	7.8	12	12	14	**1.8**	2.8	0	0.08	1.7	2.7	8.5	**945**	661	149	530	793	1330	2370	**(0.4)**	1.1	0	0	0	0.02	3.5
UP	**11.9**	4.6	8.1	9.2	12	13	20	**5.6**	12.7	0	0.72	3.2	3.9	8.8	**1967**	1237	356	955	1726	2344	3667	**(1.4)**	5.0	0	0	0	0	1.6
VE	**51.2**	20.2	22.1	39.6	51	69	91	**94.4**	29.5	42.2	64.0	100	121	128	**5159**	2283	1698	2634	4793	6365	8901	**(1.4)**	1.3	0	0	0.05	2.1	3.1

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

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	Silicon [ng/m^3]							Titanium [ng/m^3]							Vanadium [ng/m^3]							Zinc [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**393**	274	150	231	357	476	1296	**7.0**	5.5	3.0	4.1	5.6	9.2	24.9	**9.0**	15.1	1.3	2.0	4.8	13.3	60.8	**96.2**	116	22	35	66	113	487
AL	**420**	458	112	148	242	335	1425	**3.5**	3.3	0.7	1.6	2.1	3.6	9.8	**2.4**	1.8	0.48	1.1	2.1	3.8	5.6	**17.7**	32.2	4.7	8.0	9.3	18	34
AS	**213**	180	103	129	171	237	472	**3.9**	4.6	1.1	1.6	2.0	3.2	11.0	**7.3**	10.4	1.0	2.0	3.2	6.9	34.5	**72.2**	103	17	33	51	61	190
BA	**728**	496	299	394	604	1104	1602	**23.5**	18.9	4.4	11.0	18.0	33.9	55.8	**9.4**	5.7	2.6	4.5	9.0	13.6	18.8	**106**	53.3	37	68	101	146	214
BS	**262**	176	73	173	254	347	634	**3.4**	2.3	0.7	1.7	3.5	5.0	7.9	**1.8**	1.2	0.40	0.45	1.9	2.8	3.4	**43.2**	28.6	5.4	22	43	57	86
ER	**325**	259	75	119	307	512	733	**3.2**	2.8	0.8	1.0	2.6	5.2	8.9	**(0.8)**	0.5	0.43	0.45	0.48	0.48	2.1	**61.0**	67.8	12	17	25	87	204
GA	**266**	187	24	163	264	338	773	**2.6**	2.5	0	1.1	2.3	3.7	9.7	**3.0**	2.1	0.45	1.2	2.9	4.4	7.1	**72.8**	69.5	13	35	47	94	288
GN	**914**	918	167	310	630	1336	2466	**6.6**	6.2	1.4	3.1	5.1	7.8	18.0	**3.6**	2.9	0.45	1.1	2.8	5.0	9.1	**319**	362	4.8	87	241	449	1005
GO	**183**	168	37	79	138	248	581	**2.0**	2.6	0.5	1.0	1.3	2.3	5.7	**3.4**	4.3	0.45	0.88	2.2	5.4	12.1	**20.2**	16.9	3.0	11	17	27	64
HU	**1250**	1609	303	504	843	1411	4102	**13.0**	12.5	2.6	5.0	9.5	19.4	38.8	**5.0**	4.3	1.2	2.5	3.6	6.4	13.2	**54.8**	99.2	6.9	14	31	64	143
IP	**153**	109	69	90	140	190	419	**7.3**	21.6	0.5	1.2	3.7	6.2	10.0	**3.7**	4.8	0.45	1.4	2.0	5.3	9.9	**34.7**	53.0	7.0	10	19	38	131
NO	**232**	223	105	131	149	237	899	**3.0**	3.3	0	1.2	1.6	3.3	12.8	**2.8**	3.5	0.45	0.78	1.7	3.0	14.6	**17.9**	11.1	6.9	11	15	26	44
OV	**746**	370	190	557	732	946	1220	**7.5**	3.3	0.8	6.1	8.0	9.4	12.2	**5.8**	4.1	1.43	2.8	5.4	7.7	14.0	**35.6**	28.4	10.0	17	33	46	64
PA	**508**	369	142	238	388	649	1031	**8.7**	10.3	1.6	3.5	4.9	8.6	22.3	**4.9**	2.9	1.52	3.0	4.7	6.9	10.6	**83.6**	67.9	22	37	57	112	242
PS	**219**	126	98	156	204	243	436	**3.1**	2.4	1.4	1.9	2.5	3.7	9.3	**2.3**	1.6	0.43	0.48	2.2	3.1	4.9	**42.6**	39.5	11.4	21	31	52	113
RE	**298**	390	12	24	130	643	1082	**4.2**	6.3	0	0	0.9	9.2	15.7	**(0.4)**	0.09	0.21	0.40	0.45	0.48	0.48	**1.6**	1.6	0	0.6	0.9	2.8	3.9
TA	**120**	102	24	49	95	171	342	**0.9**	0.83	0	0	0.8	1.5	2.4	**1.7**	1.2	0.40	0.45	1.4	2.6	3.2	**37.0**	22.9	8.2	19	32	54	79
TU	**850**	402	364	536	829	1156	1546	**11.4**	5.3	4.2	8.6	10.3	14.0	18.7	**5.2**	2.3	2.11	3.6	5.5	7.0	8.6	**122**	56.4	48	89	119	146	232
UM	**117**	105	18	24	74	221	305	**1.0**	1.6	0	0	0.8	1.3	4.8	**(0.7)**	1.1	0.21	0.44	0.45	0.48	3.4	**7.5**	6.1	1.6	3.6	5.7	11.1	21
UP	**176**	124	48	122	138	205	448	**1.5**	0.87	0	1.1	1.4	2.2	2.6	**1.3**	1.1	0.40	0.45	1.0	1.4	4.0	**18.5**	9.6	6.0	12	18	24	31
VE	**1006**	1757	209	514	681	956	6351	**10.2**	4.9	2.7	7.1	10.4	13.8	19.8	**1.3**	0.6	0.45	0.48	1.5	1.9	2.1	**191**	84	51	101	225	252	296

Tab. 9.3: Summer Mean Elemental Concentrations of all elements with standard deviation and percentiles.

	Aluminium [ng/m^3]							Arsenic [ng/m^3]							Bismuth [ng/m^3]							Bromine [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**142**	84	67	86	111	175	291	**(3.0)**	6.2	0.8	1.0	1.3	2	14	**0.27**	0.48	0	0	0.07	0.31	1.26	**3.5**	3.1	0.02	0.7	3.0	5.2	10.0
AL	**499**	496	146	196	317	609	1350	**(1.0)**	0.3	0.52	1.0	1.1	1.2	1.4	**0.20**	0.40	0	0	0.03	0.36	1.07	**4.3**	3.2	0.73	2.1	3.4	7.0	10.5
AS	**101**	62	27	71	97	128	171	**5.3**	4.1	1.0	1.3	4.9	8.1	13	**0.09**	0.28	0	0	0	0	0.50	**2.0**	2.1	0	0.11	1.5	3.5	6.1
BA	**512**	481	186	254	313	507	1038	**9.2**	11.3	1.3	3.2	6	8	18	**0.06**	0.28	0	0	0	0.01	0.26	**4.5**	3.1	0.73	1.9	3.6	6.6	11.6
BS	**147**	122	39	67	144	179	305	**(2.2)**	1.8	0.74	1.0	1.2	3.3	6	**0.18**	0.35	0	0	0	0.12	1.03	**3.6**	2.8	0	1.4	3.5	5.0	7.0
ER	**164**	152	37	44	82	254	341	**(1.7)**	1.0	0.76	0.95	1.0	2.1	4	**0.06**	0.20	0	0	0	0	0.32	**1.4**	1.6	0	0.4	0.9	1.3	4.4
GA	**238**	160	82	115	187	266	590	**7.6**	5.0	1.19	2.2	5.8	10.7	16	**0.19**	0.44	0	0	0	0.20	1.26	**3.3**	3.2	0	0.2	1.6	5.3	8.3
GN	**205**	283	26	82	129	250	631	**3.6**	4.6	0.86	1.1	2.2	5	8	**0.16**	0.38	0	0	0	0.18	1.07	**2.4**	2.8	0	0	1.3	4.1	8.4
GO	**112**	134	37	48	63	155	247	**(1.6)**	1.3	0.76	0.83	1.0	2.2	3.0	**0.12**	0.32	0	0	0	0	0.55	**2.1**	1.9	0.16	1.2	1.9	2.1	6.4
HU	**491**	342	228	323	405	527	884	**10.5**	15.8	0.9	1.0	2.2	11.7	40	**0.25**	0.36	0	0	0.07	0.31	0.88	**4.8**	3.6	0.35	2.1	3.8	5.9	10.7
IP	**97**	56	47	64	80	125	202	**(4.2)**	5.2	0.88	1.0	1.2	3.5	10	**0.27**	0.60	0	0	0	0.33	1.55	**2.2**	2.4	0	0	1.6	4.4	5.6
NO	**97**	65	17	57	84	124	233	**(2.2)**	2.2	0.61	0.97	1.1	2.0	5	**0.17**	0.33	0	0	0	0.17	0.79	**2.6**	2.8	0	0.03	1.9	4.1	6.2
OV	**485**	297	171	282	368	558	1099	**(3.2)**	4.1	0.53	1.1	1.3	4.8	8	**0.20**	0.46	0	0	0	0.14	1.59	**4.7**	2.9	0.35	2.8	3.9	5.4	10.8
PA	**280**	263	91	148	232	330	904	**4.7**	3.0	1.0	1.9	5	6	10	**0.08**	0.22	0	0	0	0	0.44	**3.6**	2.8	0	1.6	2.8	4.8	9.7
PS	**169**	163	50	77	103	174	369	**3.8**	3.4	0.95	1.1	2.9	5.5	10.9	**0.08**	0.23	0	0	0	0	0.42	**2.0**	2.1	0	0.19	1.2	2.8	4.7
RE	**79**	58	6	33	70	105	176	**(0.9)**	0.5	0.51	0.78	0.95	1.0	1.4	**0.16**	0.42	0	0	0	0.08	1.21	**(1.2)**	2.4	0	0	0	1.5	7.7
TA	**131**	94	31	50	110	211	263	**(1.4)**	1.1	0.51	0.97	1.0	1.2	4.6	**0.02**	0.07	0	0	0	0	0.17	**1.0**	1.4	0.0	0	0.02	1.6	3.4
TU	**303**	215	129	179	274	349	689	**7.0**	4.2	1.0	1.5	8	10	12	**0.16**	0.35	0	0	0	0.03	1.01	**7.4**	3.9	3.4	4.7	6.5	9.1	16.2
UM	**66**	77	10	19	49	70	215	**(0.9)**	0.4	0.50	0.81	0.87	1.0	1.2	**0.04**	0.08	0	0	0	0	0.27	**0.9**	0.9	0	0	0.6	1.2	2.4
UP	**95**	95	20	43	59	127	324	**(0.9)**	0.5	0.48	0.8	0.9	1.0	1.8	**0.01**	0.02	0	0	0	0	0.04	**0.8**	0.7	0.0	0.10	0.5	1.1	1.6
VE	**154**	80	78	116	124	163	287	**5.1**	3.6	1.1	1.7	6	7	9	**0.32**	0.55	0	0	0	0.36	1.26	**6.3**	5.8	1.1	2.0	3.3	11.8	13.3

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	Calcium [ng/m^3]							Cadmium [ng/m^3]							Chlorine [ng/m^3]							Cobalt [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**77**	41	35	56	74	98	137	**2.9**	4.0	0	0	0.44	4.3	9.5	**287**	733	40	56	93	113	1401	**3.5**	5.4	0	0	1.3	4	12
AL	**405**	250	82	226	315	619	866	**1.0**	2.4	0	0	0	0.32	5.1	**38**	41	19	23	29	40	61	**3.5**	5.9	0	0	1.9	5.0	17.9
AS	**(40)**	25	12	24	31	60	91	**2.8**	4.1	0	0	1.6	4.2	10.9	**288**	666	25	47	74	117	2129	**0.5**	2.3	0	0	0	0	1.7
BA	**209**	94	86	151	214	241	369	**3.0**	3.0	0	0.82	2.7	4.9	8.5	**237**	454	28	34	60	131	516	**0.7**	3.1	0	0	0	0	1.32
BS	**65**	34	24	42	66	102	116	**2.7**	3.5	0	0	0.44	5.7	7.6	**52**	56	16	24	29	57	187	**1.7**	3.4	0	0	0	1.1	11.0
ER	**47**	35	24	24	44	61	132	**1.3**	3.0	0	0	0	1.4	6.6	**21**	17	0.8	9.2	16	22	54	**0.5**	1.2	0	0	0	0.6	2.9
GA	**231**	172	66	89	187	326	509	**2.0**	3.2	0	0	0.19	2.9	10.4	**179**	189	35	55	98	189	633	**1.2**	3.3	0	0	0	0.32	9.6
GN	**209**	668	24	52	74	120	188	**4.3**	4.5	0	0	3.8	9.0	10.9	**75**	79	12	34	51	87	230	**1.0**	2.4	0	0	0	0	5.9
GO	**46**	33	12	24	52	66	121	**3.7**	2.4	0	2.5	4.8	5.0	5.2	**431**	1205	10	34	69	513	1733	**0.8**	2.2	0	0	0	0	4.0
HU	**170**	88	77	104	134	233	301	**3.3**	4.4	0	0	1.3	6.6	11.4	**206**	337	19	46	62	237	726	**2.7**	4.1	0	0	1.0	5.0	12.15
IP	**(36)**	21	24	24	24	54	75	**2.4**	3.1	0	0	1.7	5.4	8.5	**218**	552	13	39	84	162	617	**0.3**	1.5	0	0	0	0	0.85
NO	**49**	27	24	24	54	77	96	**1.0**	2.4	0	0	0	0.61	7.1	**247**	526	10	34	94	244	633	**1.4**	3.1	0	0	0	0.80	7.3
OV	**213**	108	57	168	201	256	474	**2.0**	2.9	0	0	0.47	3.6	8.5	**142**	175	27	72	102	192	290	**2.9**	5.6	0	0	0.11	6.0	15.8
PA	**87**	41	24	62	87	107	161	**2.2**	4.1	0	0	0	3.3	12.8	**77**	153	12	24	36	64	409	**0.3**	0.7	0	0	0	0	0.37
PS	**95**	40	50	64	91	117	180	**2.4**	5.0	0	0	0.22	3.8	13.7	**158**	499	18	36	50	116	207	**0.3**	1.1	0	0	0	0	2.1
RE	**(34)**	19	24	24	24	48	67	**2.8**	3.3	0	0	0	5.9	8.0	**618**	748	21	97	358	862	2441	**2.2**	4.3	0	0	0.12	2.4	14.2
TA	**120**	99	24	49	90	173	312	**1.5**	2.3	0	0	0.41	4.2	4.9	**30**	40	7.1	15	23	33	52	**0.5**	1.0	0	0	0	0.75	2.3
TU	**88**	31	57	68	86	106	144	**2.3**	3.9	0	0	0.14	3.5	9.8	**115**	200	25	39	53	112	489	**2.3**	4.1	0	0	0	1.9	11.6
UM	**(21)**	7	12	24	24	24	24	**3.4**	3.4	0	0	4.4	4.8	9.0	**56**	131	3.6	7.1	15	33	344	**0.6**	1.3	0	0	0	0.58	2.75
UP	**(30)**	21	12	24	24	27	80	**4.1**	2.2	1.4	2.7	4.8	5.0	9.5	**189**	771	7.1	7.1	20	57	732	**0.1**	0.2	0	0	0	0	0.64
VE	**92**	30	52	68	109	114	118	**2.1**	2.3	0	0	2.3	2.8	5.5	**47**	45	6.5	19	35	52	121	**4.9**	7.3	0	0	2.8	4.1	17.47

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	Copper [ng/m^3]							Iron [ng/m^3]							Gallium [ng/m^3]							Potassium [ng/m^3]						
centre	mean	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**
AC	8.8	10	0	0.03	6.2	14	30	98	66	40	59	78	128	269	(0.26)	0.54	0	0	0	0.14	1.00	108	67	29	54	101	130	251
AL	(3.3)	7.0	0	0	0	2.9	22	61	58	7	22	41	94	171	(0.15)	0.48	0	0	0	0	1.62	236	108	103	149	254	324	370
AS	3.4	5.9	0	0	2.1	4.2	16	47	29	18	24	52	67	86	(0.05)	0.25	0	0	0	0	0.14	124	76	49	68	99	147	290
BA	23.2	21	4.2	6.4	16	38	65	124	47	66	99	107	152	230	(0.26)	0.37	0	0	0	0.41	0.93	715	1540	105	144	178	245	403
BS	7.5	6.5	0.5	3.4	5.3	9.1	20	83	30	50	65	86	111	128	(0.16)	0.33	0	0	0	0	1.00	174	99	49	113	148	204	302
ER	3.8	3.5	0	0	3.7	7.7	9.2	59	48	15	28	46	97	153	(0.05)	0.15	0	0	0	0	0.43	98	61	21	58	79	105	252
GA	19.9	20.7	0	4.8	10.1	20	59	169	113	39	107	132	179	464	(0.18)	0.37	0	0	0	0.24	1.05	253	157	58	147	210	254	630
GN	18.0	31	2.1	8.3	12	22	39	75	43	30	42	73	106	165	(0.17)	0.28	0	0	0	0.33	0.71	228	116	60	164	189	320	415
GO	4.0	4.4	0	0.6	2.4	5.9	13	47	41	13	19	29	67	126	(0.09)	0.15	0	0	0	0.19	0.32	63	50	11	21	52	86	118
HU	28.9	39	1.0	4.2	17	40	99	80	45	33	55	75	105	151	(0.21)	0.61	0	0	0	0	1.76	202	118	59	99	147	290	422
IP	2.8	4.2	0	0	0.85	4.7	7.3	37	32	0	17	26	40	105	(0.05)	0.20	0	0	0	0	0.24	119	82	35	69	103	136	280
NO	3.7	6.5	0	0	0.31	4.4	18.2	36	24	9	18	30	42	87	(0.13)	0.28	0	0	0	0.07	0.67	85	52	23	47	72	93	221
OV	11.0	9.2	0	3.5	10.2	14.0	30	166	134	37	80	125	246	346	(0.22)	0.47	0	0	0	0.21	1.52	272	144	102	138	246	394	503
PA	6.7	5.4	0	2.3	5.1	9.2	13	103	43	50	69	94	129	187	(0.10)	0.21	0	0	0	0	0.62	181	119	72	116	137	180	436
PS	10.5	6.8	3.7	5.3	9.5	13	24	111	54	60	85	96	133	213	(0.18)	0.20	0	0	0	0.38	0.52	166	92	72	89	120	221	333
RE	(1.7)	4.4	0	0	0	1.1	12.6	21	26	0	0	16	32	47	(0.10)	0.31	0	0	0	0	0.95	32	30	0	12	23	56	91
TA	1.4	2.5	0	0	0.73	2.0	4.4	31	22	3	11	29	41	72	(0.04)	0.13	0	0	0	0	0.38	160	93	19	78	161	212	324
TU	15.2	8.4	6.1	9	13	18	29	167	40	111	147	164	194	231	(0.23)	0.36	0	0	0	0.36	1.19	205	76	90	145	207	229	312
UM	(0.9)	1.9	0	0	0	0.7	5.1	20	21	0	9	13	29	63	(0.07)	0.13	0	0	0	0.04	0.37	41	38	0	7	37	67	123
UP	2.3	2.3	0.02	0.8	2.2	3.8	6.8	35	31	0	18	28	61	67	(0.06)	0.10	0	0	0	0.08	0.32	47	37	0	14	43	70	111
VE	13.0	11.6	2.4	3	8	24	26	142	90	46	74	153	164	275	(0.29)	0.47	0	0	0	0.33	1.09	148	66	50	123	154	204	211

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	Magnesium [ng/m^3]							Manganese [ng/m^3]							Sodium [ng/m^3]							Nickel [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**329**	189	192	224	271	388	515	**4.8**	2.6	1.3	2.5	4.4	6.6	9	**2215**	1643	1054	1377	1819	2650	3178	**(5.5)**	16.7	0	0	0	2.7	51
AL	**440**	230	176	258	374	622	813	**2.2**	1.2	0.7	1.3	2.1	3.1	4.2	**1504**	694	774	1065	1453	2078	2731	**(5.0)**	14.7	0	0	0	0	46
AS	**233**	188	21	135	208	280	388	**3.5**	2.4	0.4	1.2	3.4	5.1	7.9	**1761**	1484	1028	1140	1273	1838	3173	**(1.4)**	6.1	0	0	0	0	6
BA	**573**	545	228	305	381	523	662	**6.5**	4.2	2.5	3.5	5.9	8	16	**2744**	1166	1292	1833	2546	3282	4812	**8.7**	18.2	0	0	0.3	11.1	52
BS	**148**	57	55	104	159	184	222	**2.9**	1.5	0.6	1.7	3.3	3.6	4.3	**1144**	395	470	926	1187	1330	1843	**(3.9)**	10.4	0	0	0	0	16.2
ER	**143**	84	20	59	113	217	227	**2.4**	1.7	0	1.0	2.5	3.9	5.8	**907**	391	413	632	824	1235	1643	**(2.0)**	9.2	0	0	0	0	6.2
GA	**391**	120	188	300	395	485	549	**22.6**	16.3	5.3	13.2	17.4	29	54	**3188**	1267	2000	2332	2788	3496	5429	**(9.8)**	22.7	0	0	0	10.6	60
GN	**149**	84	18	97	150	222	279	**5.0**	3.5	1.1	2.6	4.6	7	13	**1510**	562	765	1097	1577	1924	2565	**(7.8)**	15.6	0	0	0	7.6	47
GO	**296**	331	19	139	216	458	613	**2.5**	2.4	0.6	1.0	1.7	2.6	8.0	**2253**	2713	525	807	1453	3334	5144	**(3.9)**	9.7	0	0	0	2.5	13
HU	**604**	252	314	392	569	717	977	**2.6**	1.6	0.8	1.2	2.3	4.2	5.3	**4016**	1836	1890	2574	3451	5543	7263	**(8.3)**	23.4	0	0	0	1.9	72
IP	**269**	161	117	195	234	286	518	**3.4**	4.7	0	0.8	1.7	4.5	12.2	**2097**	1550	940	1285	1691	2688	4417	**(4.3)**	12.5	0	0	0	2.2	27.6
NO	**265**	170	110	164	231	314	542	**1.7**	1.3	0	0.5	1.6	2.3	3.4	**2056**	1464	964	1268	1733	2085	4137	**8.0**	14.9	0	0	0	5.4	41
OV	**377**	134	178	250	382	484	560	**6.4**	4.4	1.5	2.3	5.7	10.6	13	**2269**	969	1449	1544	2040	2719	4470	**(7.1)**	12.1	0	0	0	5.8	26
PA	**273**	146	119	151	259	394	461	**5.3**	3.6	2.3	3.1	4.4	6	11	**1338**	745	660	850	1012	1852	2541	**(5.2)**	11.3	0	0	0	1.7	30
PS	**257**	150	96	152	236	333	380	**4.8**	6.7	1.3	1.7	3.4	5.1	10	**1985**	1232	1073	1471	1724	2063	3030	**(4.9)**	11.4	0	0	0	3.9	30
RE	**188**	170	15	61	144	275	502	**0.3**	0.4	0	0	0.22	0.46	1.0	**1600**	1223	527	636	1104	2261	4166	**(4.0)**	14.8	0	0	0	0	44
TA	**144**	103	16	62	139	206	320	**1.8**	2.2	0	1.0	1.3	1.9	4.2	**775**	573	318	446	682	898	1392	**(7.0)**	24.1	0	0	0	0	47
TU	**334**	137	182	242	298	419	527	**5.9**	2.6	2.4	4	6	8	10	**1375**	633	703	919	1209	1722	2674	**(8.4)**	17.9	0	0	0	6.1	53
UM	**(79)**	106	7.8	14	15	159	314	**0.7**	0.6	0	0	0.8	1.0	1.7	**718**	683	69	278	646	843	2232	**(0.4)**	0.9	0	0	0	0	3
UP	**153**	210	14	30	120	178	403	**1.0**	0.7	0	0.6	0.9	1.4	2.0	**1069**	1678	157	392	589	1227	3021	**(1.4)**	3.4	0	0	0	0	8
VE	**172**	103	18	136	188	222	294	**8.7**	6.7	2	3	8	14	17	**1446**	781	356	902	1814	1976	2180	**(10)**	22.5	0	0	0	0	50

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	Phosphorus [ng/m^3]							Lead [ng/m^3]							Sulfur [ng/m^3] *							Selenium [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**26.8**	18.6	11.9	15.4	20	36	64	**24.2**	19.5	0	7.3	21.3	33.6	51	**3433**	1223	1558	2691	3395	4156	5605	**10.3**	9.9	0	1.4	9.0	18.1	27.9
AL	**17.0**	8.6	6.6	11.4	15	23	31	**12.1**	15.1	0.8	3.8	6.8	16.4	52.6	**2846**	1231	1020	2105	2902	3664	5591	**4.8**	8.0	0	0	2.4	7.0	25.1
AS	**20.4**	13.3	6.7	10.7	17	30	45	**15.5**	15.0	0	1.8	10.9	26.3	41	**3764**	1579	1406	2548	3644	4574	6389	**4.3**	5.3	0	0	2.3	6.9	12.2
BA	**27.9**	14.4	13.7	18.4	22	28	40	**42.3**	48.0	6.8	17.4	23.4	40	96	**4499**	1704	2143	3384	4284	5567	7733	**2.1**	4.9	0	0	0.17	3.3	7.2
BS	**20.6**	7.6	11.0	12.8	23	24	30	**13.7**	13.5	0	2.2	9.9	17.9	35.4	**2979**	1081	806	2315	2580	3386	4498	**3.6**	6.3	0	0	0.81	1.3	14.6
ER	**12.5**	6.7	5.6	8.3	11	17	28	**4.6**	6.8	0	0	1.5	5.0	19.7	**2908**	1666	1348	1488	1871	3693	5800	**(1.3)**	3.1	0	0	0	1.0	5.2
GA	**35.8**	35.6	5.2	11.6	19	39	104	**38.7**	25.9	7.3	16.0	24.5	56.0	77.3	**6122**	4098	1916	3324	5239	8305	15000	**9.6**	11.0	0	0.31	4.0	18.4	26.7
GN	**21.7**	8.7	9.0	14.5	22	30	32	**19.3**	23.3	0	4.0	14.3	36.5	55	**2394**	1246	1321	1541	2263	2720	5082	**(3.8)**	7.9	0	0	0	5.8	24.9
GO	**12.2**	8.0	1.9	10.2	12	14	20	**5.0**	8.5	0	0.6	2.4	3.7	18.1	**1998**	1934	429	828	1766	2708	4013	**(2.4)**	4.3	0	0	0	2.1	11.0
HU	**136**	148	2.3	14.3	84	223	379	**29.4**	33.9	0	1.9	15.3	47.0	96.9	**5217**	3015	1367	2467	4079	6935	9429	**11.6**	14.7	0	0	7.1	17.7	33.1
IP	**16.6**	15.8	1.3	7.6	10	20	51	**9.3**	12.0	0	0	5.1	13.5	30.1	**3215**	1633	1247	1681	2738	4561	5230	**2.6**	4.9	0	0	0.49	3.6	13.1
NO	**14.3**	11.9	2.2	8.5	11	16	46	**12.0**	14.4	0	0	4.6	15.3	45	**2989**	1464	1017	1986	2795	3728	5700	**4.5**	6.7	0	0	0.21	7.2	13.8
OV	**18.0**	8.5	7.4	11.1	16	24	28	**22.0**	15.7	5.9	13.6	18.7	25.3	52.3	**4527**	2906	1644	2319	3684	6335	8170	**5.5**	7.7	0	2.0	3.2	4.9	26.2
PA	**19.7**	10.2	11.1	14.4	19	24	33	**18.6**	12.3	4.7	9.7	17.4	21.7	42.6	**4589**	2167	1753	2981	3892	6211	8341	**2.9**	5.6	0	0	0.07	2.7	12.4
PS	**25.2**	11.6	11.7	15.9	21	31	44	**11.8**	12.8	0	3.5	8.6	12.8	38.2	**3245**	1488	1265	1708	2762	4127	5892	**(1.9)**	4.3	0	0	0	1.2	9.4
RE	**(7.8)**	4.3	1.3	5.9	12	12	12	**(4.7)**	11.8	0	0	0	4.9	35.8	**513**	407	145	273	443	656	847	**(2.9)**	7.8	0	0	0	1.4	25.0
TA	**12.4**	5.5	5.5	9.8	12	16	21	**3.1**	4.5	0	0	0.53	3.5	9.4	**1688**	1339	613	930	1266	2054	3496	**(0.4)**	1.8	0	0	0	0	1.8
TU	**22.8**	5.8	14.0	19	23	26	32	**34.6**	18.1	15.6	22.0	30.0	41	65	**4465**	2299	1629	2285	3919	6151	7652	**(3.6)**	6.7	0	0	0	2.6	17.0
UM	**(8.9)**	3.5	2.0	7.5	12	12	12	**(2.1)**	2.8	0	0	0	2.6	7.5	**795**	615	206	327	619	957	1958	**(0.6)**	1.3	0	0	0	0	2.2
UP	**10.5**	2.9	4.8	9.3	12	12	14	**1.7**	2.0	0	0	1.0	2.3	5.5	**1260**	978	232	591	949	1726	3242	**(0.5)**	0.8	0	0	0	0.45	2.0
VE	**23.9**	9.2	13.3	19.7	24	24	38	**43.7**	37.7	11.5	16.4	21	82	88	**3337**	1783	1249	1975	3394	4425	5643	**8.7**	11.9	0	0.81	3.1	10.9	28.6

- **NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

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	Silicon [ng/m^3]							Titanium [ng/m^3]							Vanadium [ng/m^3]							Zinc [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**310**	207	114	171	260	422	715	**4.4**	2.6	2.1	2.5	3.6	5.4	9.3	**5.9**	4.6	1.3	1.9	4.4	8.5	15.0	**30.5**	19	5.6	14	26	43	57
AL	**1064**	1000	312	416	739	1370	2727	**7.5**	7.1	2.6	2.8	5.3	8.2	18.9	**2.9**	2.1	0.43	1.9	2.5	3.7	7.8	**7.6**	7.4	0	2.9	6.3	11	23
AS	**284**	310	74	129	171	343	1094	**3.1**	2.3	1.1	1.6	2.5	3.7	8.2	**4.8**	2.9	1.4	2.4	4.4	7.0	9.9	**27.4**	18	6.9	14	24	42	60
BA	**767**	445	376	497	596	1161	1314	**21.0**	30.6	5.0	7.4	9.6	13.1	25.5	**10.5**	8.4	2.3	7.0	9.1	12.4	24.7	**60.6**	48.5	14	23	61	80	98
BS	**354**	250	140	257	336	465	671	**3.2**	2.0	1.1	1.9	3.2	3.9	5.1	**1.5**	0.8	0.45	1.0	1.6	1.9	2.9	**29.7**	21.1	8.2	17	27	39	49
ER	**346**	342	75	111	236	535	648	**2.8**	2.6	0.3	0.67	2.6	4.1	6.6	**(1.0)**	0.7	0.45	0.45	0.50	1.4	1.9	**12.0**	7.6	1.1	5.6	13.6	16	24
GA	**526**	327	196	295	445	666	1141	**4.6**	3.3	1.7	2.4	3.3	4.7	12.8	**11.8**	11.5	2.5	6.0	9.7	11.7	33.5	**178.9**	156	49	69	107	193	425
GN	**1365**	1786	217	432	641	1604	4203	**4.8**	7.1	1.0	1.8	3.0	4.7	10.6	**2.8**	2.6	0.50	1.2	1.8	4.5	7.7	**109.3**	78	25.7	57	106	158	235
GO	**252**	301	42	85	125	328	722	**3.1**	3.1	0.6	1.0	1.8	3.5	9.5	**5.3**	3.5	0.45	3.4	5.8	7.9	10.2	**9.3**	7.1	2.2	6.3	8.1	12	16
HU	**1428**	864	445	679	1099	1862	3135	**24.9**	73.7	3.3	4.8	8.4	12.9	32.6	**9.2**	6.1	1.8	2.7	7.3	12.9	18.7	**42.9**	55.8	0.6	6.1	26	62	186
IP	**189**	125	62	116	154	231	445	**2.8**	2.4	0.3	0.87	2.1	4.5	8.2	**10.0**	9.1	0.45	1.6	8.1	16.3	27.1	**14.4**	11.4	2.1	6.4	10	19	39
NO	**207**	162	71	124	171	247	466	**2.3**	1.9	0.6	0.76	1.5	3.4	5.4	**7.0**	7.0	0.48	1.5	4.0	11.7	21.0	**12.7**	11.7	0.5	4.6	8.6	16	28
OV	**843**	544	267	442	672	1006	1762	**7.8**	5.0	2.7	4.0	5.8	10.9	15.8	**6.2**	2.9	2.2	3.8	5.8	7.8	12.0	**29.2**	17.3	8.9	15	27	41	60
PA	**655**	527	218	363	551	843	1985	**11.0**	9.8	2.5	5.2	9.2	16.9	24.4	**3.7**	2.2	1.0	1.6	3.2	5.2	7.8	**29.2**	17.2	7.7	15	19	41	54
PS	**398**	350	123	186	267	435	859	**4.9**	3.0	1.5	2.5	3.8	6.9	9.6	**2.2**	2.0	0.45	0.50	1.8	3.1	6.4	**39.8**	34.5	16.0	19	29	44	124
RE	**214**	160	24	85	176	255	387	**3.1**	3.3	0	0.40	1.7	4.4	7.7	**(0.4)**	0.14	0.24	0.43	0.48	0.48	0.48	**2.1**	2.7	0	0	1.1	3.9	6.9
TA	**341**	229	65	170	304	471	747	**2.4**	1.5	1.0	1.3	1.9	3.5	5.7	**(0.7)**	0.4	0.24	0.48	0.5	1.1	1.5	**16.3**	12.3	5.0	6.8	13	20	39
TU	**643**	415	317	435	566	703	1551	**6.5**	3.8	3.4	4.5	6.0	6.9	13.7	**2.5**	1.6	0.48	1.0	2.0	3.5	5.7	**35.3**	15.7	18	23	34	46	70
UM	**183**	240	24	56	109	201	726	**1.4**	1.9	0	0	0.51	2.6	4.5	**(0.8)**	0.6	0.43	0.45	0.48	0.74	1.8	**3.0**	2.8	0	0.72	2.5	3.5	7.6
UP	**234**	240	40	98	148	325	737	**1.8**	1.7	0	0.73	1.5	2.9	4.9	**1.1**	1.2	0.43	0.44	0.6	1.5	3.4	**6.6**	4.1	1.8	3.1	6.2	9.5	15
VE	**240**	79	125	191	278	292	313	**3.3**	1.1	1.5	3.0	3.6	4.0	4.1	**2.1**	1.2	0.45	1.3	2.6	2.9	3.4	**92.9**	93	15	17	51	161	221

Tab. 9.4: Weekday Mean Elemental Concentrations of all elements with standard deviation and percentiles.

	Aluminium [ng/m^3]							Arsenic [ng/m^3]							Bismuth [ng/m^3]							Bromine [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**173**	133	67	96	150	200	386	**6.7**	11.1	1.0	1.1	3.4	7.5	26	**0.17**	0.39	0	0	0	0.07	1.26	**5.0**	6.7	0.02	1.3	3.2	6.2	12.8
AL	**363**	421	64	120	204	411	1350	**(1.5)**	1.1	0.81	1.0	1.1	1.3	4.7	**0.14**	0.33	0	0	0	0.12	1.07	**3.9**	3.1	0	1.7	3.4	5.5	10.8
AS	**118**	98	27	73	99	151	316	**6.3**	9.8	1.1	1.4	4.0	8.7	27	**0.17**	0.37	0	0	0	0.07	1.21	**4.8**	6.6	0	1.19	3.7	7.0	13.7
BA	**375**	197	122	254	312	495	660	**12.5**	9.2	1.4	5.7	10	19	31	**0.07**	0.26	0	0	0	0.00	0.36	**12.9**	11.8	1.35	4.6	7.2	20.4	36.1
BS	**162**	154	0	57	126	232	542	**(3.7)**	4.2	0.74	1.0	1.3	5.3	14	**0.10**	0.28	0	0	0	0.01	0.60	**5.2**	5.8	0	1.9	4.1	6.9	13.0
ER	**155**	124	18	65	130	229	353	**4.1**	4.5	0.81	0.95	2.1	6.1	17	**0.10**	0.27	0	0	0	0	0.74	**2.0**	2.0	0	0.64	1.5	2.5	7.2
GA	**193**	130	25	99	167	251	497	**7.5**	8.0	0.93	1.5	5.0	9.4	22	**0.14**	0.36	0	0	0	0	1.26	**3.7**	3.1	0	1.2	3.2	5.6	9.5
GN	**304**	434	21	76	134	271	1332	**6.4**	7.7	0.86	1.0	3.1	8.2	22	**0.08**	0.25	0	0	0	0	0.88	**3.2**	3.5	0	0.45	2.5	4.3	13.7
GO	**104**	90	36	53	77	127	233	**(2.2)**	1.8	0.64	0.83	1.2	3.0	6.3	**0.08**	0.22	0	0	0	0	0.36	**2.2**	1.8	0.11	0.78	2.0	2.7	6.4
HU	**482**	469	153	270	384	545	884	**14.4**	24.7	0.9	1.1	5.6	15.3	62	**0.13**	0.28	0	0	0	0.12	0.88	**5.0**	3.2	0.26	2.7	4.6	6.8	11.4
IP	**120**	240	35	52	71	111	270	**6.6**	16.3	0.88	1.0	2.5	5.7	30	**0.23**	0.44	0	0	0	0.34	1.36	**4.4**	5.5	0	0.49	3.4	5.6	11.2
NO	**109**	72	31	61	87	147	262	**4.4**	6.5	0.83	0.97	1.8	4.6	11.7	**0.09**	0.24	0	0	0	0	0.55	**3.5**	3.0	0	1.44	2.9	5.1	9.8
OV	**463**	237	108	286	444	637	941	**6.4**	5.9	0.90	1.2	5.8	8.9	19	**0.14**	0.34	0	0	0	0.03	0.98	**6.2**	4.4	0.35	2.8	5.2	9.1	16.3
PA	**236**	191	89	139	179	262	495	**9.0**	6.5	1.1	4.5	8	12.0	22	**0.07**	0.24	0	0	0	0	0.67	**10.8**	8.4	0.28	2.8	9.9	17.7	25.1
PS	**142**	143	35	64	86	158	444	**4.1**	3.7	0.93	1.1	2.7	6.1	11.9	**0.09**	0.24	0	0	0	0.03	0.62	**4.1**	4.5	0	0.71	2.8	6.2	10.5
RE	**123**	150	0	22	66	139	493	**(1.1)**	0.48	0.71	0.81	0.93	1.1	2.2	**0.10**	0.32	0	0	0	0	0.98	**1.1**	2.0	0	0	0.47	1.1	6.6
TA	**176**	375	10	46	77	195	498	**(2.4)**	2.3	0.83	1.0	1.1	3.2	8.2	**0.10**	0.23	0	0	0	0.03	0.55	**2.2**	2.5	0	0.21	1.51	3.4	8.1
TU	**402**	222	142	258	354	475	891	**14.8**	8.7	1.3	8.0	14	22	29	**0.05**	0.20	0	0	0	0	0.36	**21.0**	16.2	3.4	6.6	17.9	33.1	54.5
UM	**75**	73	10	31	53	96	225	**(1.2)**	0.83	0.76	0.82	0.88	1.1	3.5	**0.06**	0.18	0	0	0	0.01	0.36	**1.2**	1.3	0	0.23	0.93	1.8	3.7
UP	**102**	73	23	49	83	127	287	**(1.7)**	1.6	0.74	0.86	1.0	2.2	5.3	**0.07**	0.26	0	0	0	0	0.36	**1.5**	1.8	0	0.47	1.1	1.8	5.5
VE	**339**	210	116	193	335	449	833	**16.3**	10.2	1.7	10.6	19	27	33	**0.11**	0.26	0	0	0	0	0.36	**18.5**	15.5	2.0	13.3	20.7	29.5	39.4

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	Calcium [ng/m^3]							Cadmium [ng/m^3]							Chlorine [ng/m^3]							Cobalt [ng/m^3]						
centre	mean	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**
AC	94	52	24	64	89	114	157	3.1	4.1	0	0	0.44	5.2	13.3	1190	2049	54	104	366	1619	3739	2.1	4.2	0	0	0	1.9	12
AL	299	205	63	150	232	379	832	2.0	3.0	0	0	0	4.5	9.0	207	390	19	30	58	190	1304	2.7	4.8	0	0	0.84	2.7	16.3
AS	(49)	43	24	24	24	62	135	3.2	3.6	0	0	2.8	4.8	10.9	890	1488	45	91	321	1177	3958	1.5	3.2	0	0	0	1.2	9.2
BA	257	104	113	180	241	332	462	4.3	2.6	0	3.8	4.8	5.0	10.0	867	1360	31	110	230	997	4077	0.7	2.4	0	0	0	0	6.2
BS	70	37	24	50	63	96	131	4.0	3.4	0	0	4.7	5.0	11.8	473	614	16	45	151	831	1655	0.8	2.1	0	0	0	0.62	5.5
ER	59	46	24	24	52	78	167	3.7	2.7	0	0	4.5	4.8	10.0	291	603	2.9	19.4	64	227	1828	0.8	2.5	0	0	0	0.28	5.0
GA	213	153	24	95	185	290	509	3.7	3.2	0	0	4.7	5.2	10.4	400	510	37	99	195	542	1335	0.9	2.7	0	0	0	0	9.6
GN	164	422	24	57	88	140	388	4.3	3.5	0	0.91	4.8	5.2	11.9	754	1535	15	67	162	687	5139	0.7	1.8	0	0	0	0.04	5.8
GO	(43)	29	24	24	24	59	121	4.4	2.0	0	4.3	4.8	5.0	9.0	653	1021	13	40	283	696	3010	0.5	1.4	0	0	0	0.22	1.5
HU	183	103	71	106	156	220	414	4.0	3.3	0	0	4.5	5.0	10.0	987	1476	43	71	296	1510	4797	1.3	2.9	0	0	0	1.0	9.5
IP	(41)	26	24	24	24	57	85	3.7	2.7	0	0.74	4.7	5.0	8.5	1165	1974	22	92	528	1301	4040	0.8	2.9	0	0	0	0	3.5
NO	102	168	24	24	63	79	535	3.1	2.7	0	0	4.3	4.8	7.1	1028	1122	31	129	645	1514	3092	0.6	2.0	0	0	0	0.00	2.8
OV	321	204	64	187	265	396	847	3.2	3.0	0	0	4.0	4.9	8.5	544	601	32	119	268	878	1742	1.8	4.0	0	0	0	1.4	12.3
PA	86	58	24	54	75	99	220	4.1	3.7	0	0	4.5	5.0	11.8	913	1601	16	42	266	1260	4432	0.3	1.2	0	0	0	0	1.8
PS	87	45	24	61	75	105	181	3.4	4.0	0	0	3.0	5.0	10.1	708	981	24	95	281	873	2862	1.0	2.9	0	0	0	0	5.9
RE	(46)	35	24	24	24	56	136	3.4	2.8	0	0	4.5	5.0	8.0	925	1316	31	109	429	1123	3162	1.0	3.0	0	0	0	0.87	3.9
TA	92	126	24	24	50	108	325	3.3	2.6	0	0	4.3	4.8	7.6	257	330	8.4	29	119	355	1205	0.9	2.0	0	0	0	0.80	5.5
TU	123	59	55	84	107	145	260	3.9	2.8	0	1.9	4.8	5.0	9.5	1411	1892	29	87	489	2373	5971	0.8	2.4	0	0	0	0.07	9.1
UM	(25)	4.9	24	24	24	24	24	4.4	2.7	0	4.0	4.8	5.0	10.0	122	292	7.1	9.5	32	75	506	0.6	1.6	0	0	0	0.34	2.8
UP	(35)	23	24	24	24	24	82	4.6	2.0	0	4.5	4.8	5.0	9.5	258	572	7.1	38	87	205	872	0.5	1.9	0	0	0	0	1.6
VE	258	139	68	132	280	325	431	4.4	2.6	0	4.8	4.8	5.2	10.0	838	1165	19.1	121	660	1656	3348	0.8	3.6	0	0	0	0.04	4.1

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	Copper [ng/m^3]							Iron [ng/m^3]							Gallium [ng/m^3]							Potassium [ng/m^3]						
centre	mean	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**
AC	**10.1**	13	0	1.69	7.0	12.8	34.7	**133**	102	28	65	101	166	280	**(0.18)**	0.43	0	0	0	0.10	1.00	**176**	208	29	78	130	214	355
AL	**4.3**	8.7	0	0	0.96	4.3	25.9	**53**	50	0	20	38	70	171	**(0.22)**	0.48	0	0	0	0.27	1.62	**334**	190	102	228	282	411	782
AS	**7.4**	13.4	0	1.4	4.2	8.4	27.1	**69**	54	19	29	63	88	156	**(0.18)**	0.39	0	0	0	0.18	1.19	**172**	206	49	82	139	203	429
BA	**22.9**	20	4.2	9.5	16	34.0	65.4	**162**	81	61	103	144	208	341	**0.27**	0.34	0	0	0.17	0.41	0.84	**256**	142	82	153	228	335	562
BS	**6.5**	5.0	0	3.1	5.7	9.3	18.2	**84**	45	20	55	78	112	186	**(0.17)**	0.24	0	0	0.02	0.25	0.60	**247**	211	39	110	177	309	744
ER	**5.3**	5.3	0	0.51	4.1	8.9	13.4	**77**	58	5.1	29	66	115	198	**(0.16)**	0.25	0	0	0	0.22	0.65	**144**	130	21	63	121	177	398
GA	**16.8**	16.1	0	6.3	11.1	21.7	54.7	**169**	117	32	98	139	216	464	**(0.20)**	0.35	0	0	0	0.27	1.05	**179**	118	56	99	158	232	403
GN	**19.0**	24	0	5.9	13.8	21.9	63.9	**144**	129	23	64	102	182	397	**(0.16)**	0.26	0	0	0	0.24	0.71	**333**	297	44	167	245	382	1126
GO	**4.6**	5.4	0	0.77	2.5	7.0	17.9	**56**	53	5.7	22	38	77	156	**0.15**	0.20	0	0	0.08	0.22	0.60	**113**	98	11	49	95	145	363
HU	**31.9**	47	1.0	4.2	14.1	40.0	130	**84**	60	24	54	71	109	161	**(0.22)**	0.43	0	0	0	0.27	0.98	**314**	313	44	108	185	429	1046
IP	**5.4**	12.0	0	0	1.6	5.4	18.7	**44**	48	1.6	18	29	57	127	**(0.17)**	0.43	0	0	0	0.10	0.95	**227**	580	28	74	115	201	481
NO	**3.1**	4.8	0	0	1.2	4.2	12.3	**43**	29	0	24	35	59	101	**(0.12)**	0.21	0	0	0	0.18	0.46	**112**	69	23	60	92	161	254
OV	**10.0**	8.6	0	3.4	7.9	13.1	30.1	**153**	124	21	76	117	201	486	**(0.18)**	0.39	0	0	0	0.13	1.33	**230**	130	62	131	199	325	463
PA	**9.2**	6.0	0.55	4.6	8.4	12.2	20.8	**122**	56	52	86	114	143	238	**0.19**	0.27	0	0	0.02	0.32	0.81	**338**	246	101	155	240	487	856
PS	**10.8**	9.0	0.89	5.1	7.7	13.1	30.6	**106**	59	38	68	91	120	243	**(0.16)**	0.35	0	0	0	0.20	0.66	**178**	152	58	92	130	195	467
RE	**2.1**	3.2	0	0	1.2	2.7	8.9	**27**	32	0	4.5	15	39	98	**(0.10)**	0.22	0	0	0	0.13	0.67	**29**	28	0	2.0	23	49	91
TA	**2.9**	3.8	0	0	1.42	4.4	13.5	**36**	57	0	7.3	23	41	115	**(0.14)**	0.22	0	0	0	0.22	0.57	**381**	257	24	191	310	570	892
TU	**21.7**	14.3	6.1	10.8	19	29.2	47.1	**270**	147	111	166	231	331	597	**0.31**	0.31	0	0	0.27	0.48	1.08	**463**	374	95	211	312	623	1319
UM	**2.7**	4.3	0	0	0.51	3.6	11.2	**28**	23	0	10.1	20	39	81	**(0.12)**	0.28	0	0	0	0.15	0.46	**66**	51	0	30	60	89	144
UP	**4.6**	5.5	0	1.7	3.0	5.3	18.6	**52**	38	0	26	47	67	131	**0.15**	0.24	0	0	0.03	0.18	0.56	**104**	90	0	50	90	118	330
VE	**21.1**	11.0	3.3	13	21.7	27.6	36.2	**279**	148	74	184	309	388	473	**0.27**	0.31	0	0	0.32	0.41	1.09	**381**	291	80	204	340	544	1001

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	Magnesium [ng/m^3]							Manganese [ng/m^3]							Sodium [ng/m^3]							Nickel [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**383**	240	168	224	317	457	1090	**7.0**	5.9	1.5	3.4	6.4	8.6	15	**2823**	1889	955	1529	2384	3197	6995	**(6.4)**	15.8	0	0	0	3.8	51
AL	**335**	218	44	171	270	463	773	**2.2**	1.3	0.31	1.1	1.9	3.0	5.1	**1464**	878	489	822	1180	1900	3239	**(7.9)**	17.2	0	0	0	0.24	54
AS	**259**	195	21	143	215	337	677	**5.3**	4.4	0.41	2.3	5.0	7.7	12.1	**2117**	1467	993	1178	1567	2670	5695	**(4.0)**	9.7	0	0	0	2.2	29
BA	**394**	169	140	266	396	452	665	**12.1**	11.3	2.5	5.2	9.1	16	30	**2789**	1215	1121	1833	2693	3301	5244	**(7.6)**	14.4	0	0	0.001	7.2	49
BS	**157**	97	15	89	157	217	285	**3.4**	2.2	0.65	1.7	3.2	4.4	8.2	**1348**	746	446	867	1195	1646	2693	**(4.2)**	10.6	0	0	0	4.2	41
ER	**147**	114	16	36	125	227	367	**3.3**	2.2	0	1.8	2.9	4.7	6.9	**1080**	685	413	665	831	1311	2703	**(4.7)**	12.3	0	0	0	2.9	44
GA	**334**	177	20	219	331	415	685	**25.1**	20.6	2.3	10.0	19.6	35	65	**2813**	1556	712	2045	2491	3496	5975	**(8.0)**	18.3	0	0	0	8.1	57
GN	**214**	189	15	101	168	256	670	**12.2**	15.3	0.88	3.6	6.8	16	38	**2242**	1789	765	1173	1786	2565	6360	**(6.8)**	15.0	0	0	0	5.1	48
GO	**321**	447	15	56	201	395	1075	**2.9**	2.6	0.51	1.2	2.3	4.1	8.0	**2251**	2344	375	812	1413	2812	7790	**(7.7)**	15.0	0	0	0	6.3	46
HU	**629**	338	217	367	558	878	1402	**3.2**	2.6	0.84	1.6	2.6	4.2	7.5	**4360**	2270	1890	2470	3579	6013	9153	**(8.6)**	19.2	0	0	0	5.0	57
IP	**395**	342	117	213	328	422	883	**3.8**	4.0	0.03	1.1	2.9	5.8	12.2	**2837**	1790	940	1489	2330	3555	6199	**(5.1)**	12.7	0	0	0	2.9	47
NO	**388**	232	110	222	330	499	872	**2.5**	2.5	0	0.93	1.8	3.4	6.6	**2934**	1911	1007	1691	2166	3940	6659	**(6.2)**	12.9	0	0	0	4.7	42
OV	**368**	148	168	240	371	496	610	**7.5**	8.9	0.94	2.6	6.1	10.1	18	**2141**	1051	893	1453	1753	2840	4470	**(6.9)**	15.5	0	0	0	4.0	48
PA	**279**	178	96	153	216	394	651	**9.4**	12.7	1.8	3.7	5.4	8.9	49	**1424**	1022	449	829	1064	1651	3881	**(8.7)**	16.9	0	0	0	8.3	54
PS	**302**	193	94	168	257	351	785	**5.0**	5.4	1.5	2.0	3.2	5.3	15	**2551**	1607	1016	1499	1993	2914	6621	**(6.3)**	15.6	0	0	0	3.9	47
RE	**251**	288	14	61	168	378	678	**0.6**	0.7	0	0	0.31	0.89	2.4	**1888**	1949	247	632	1244	2261	5861	**(5.8)**	13.8	0	0	0	3.9	44
TA	**166**	173	16	47	139	214	434	**3.3**	3.4	0	1.3	2.1	4.1	11.4	**1038**	678	351	589	879	1187	3040	**(7.5)**	19.5	0	0	0	1.4	48
TU	**483**	247	190	281	435	633	920	**14.6**	11.4	2.4	6.8	11.5	21	40	**1978**	989	703	1211	1734	2684	3800	**10.0**	17.4	0	0	0	12.2	58
UM	**96**	116	13.5	14	26	159	333	**1.3**	1.1	0	0.67	1.1	2.1	3.0	**861**	897	69	316	584	919	2399	**(4.1)**	13.5	0	0	0	0	42
UP	**157**	171	14	20	133	193	456	**1.8**	1.5	0.32	0.9	1.4	2.1	5.6	**1178**	1329	294	537	674	1354	3444	**(4.8)**	11.7	0	0	0	3.5	44
VE	**366**	240	136	234	399	514	622	**21.7**	21.3	3.1	13.7	20.2	32	69	**1875**	1351	722	1249	1976	2517	3444	**(4.4)**	13.6	0	0	0	0	48

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	Phosphorus [ng/m^3]							Lead [ng/m^3]							Sulfur [ng/m^3] *							Selenium [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**37.3**	37.9	10.9	16.7	29	43	85	**27.8**	29.9	1.4	11.6	23.7	33.6	70	**3376**	2174	1207	2034	2824	4157	7016	**10.6**	11.3	0	2.4	7.0	14.3	27.9
AL	**16.0**	7.5	5.3	10.9	14	22	30	**12.0**	13.5	0	2.3	7.8	15.3	46.9	**2412**	1361	782	1261	2095	3276	5591	**(3.6)**	6.8	0	0	0.17	4.2	25.1
AS	**28.2**	33.8	6.7	12.8	21	36	76	**26.4**	32.2	0	9.3	18.7	39.1	79	**3389**	2063	1112	1872	3114	4447	6650	**9.1**	13.1	0	0	5.9	11.4	31.1
BA	**34.5**	22.6	11.9	18.4	27	44	80	**53.2**	37.7	11.7	22.8	36.9	78	146	**3321**	1647	1078	2119	2796	4361	6664	**(2.0)**	4.7	0	0	0	2.7	7.2
BS	**20.6**	11.7	1.9	11.9	19	27	47	**13.4**	11.5	0	3.6	11.9	19.0	36.3	**2171**	1485	485	884	2031	2841	5135	**(2.3)**	5.0	0	0	0	1.4	13.4
ER	**15.9**	9.7	5.3	10.5	12	19	36	**14.2**	17.0	0	2.7	8.8	19.3	47.9	**2516**	1897	550	1312	1659	3584	6541	**(2.0)**	4.3	0	0	0	1.9	12.6
GA	**32.1**	26.0	5.2	11.9	27	43	104	**35.5**	30.5	7.2	13.9	25.2	56.7	77.3	**3887**	3433	575	1550	2851	4762	12000	**6.8**	8.8	0	0	2.7	10.0	26.2
GN	**30.0**	20.2	9.0	12.6	27	38	74	**26.6**	26.8	0	5.0	19.4	36.9	88	**2062**	1219	547	1263	1762	2487	5082	**(1.9)**	5.3	0	0	0	1.4	14.7
GO	**14.7**	8.0	1.9	11.9	13	17	36	**5.0**	6.4	0	0.44	3.1	7.2	18.1	**2237**	1923	405	826	1835	2650	7020	**(1.2)**	2.9	0	0	0	1.6	10.0
HU	**139**	188	2.3	13.9	73	195	578	**30.1**	39.1	0	7.1	19.6	37.3	103.2	**3701**	3008	764	1480	2736	5011	8878	**7.2**	12.9	0	0	1.2	9.7	33.1
IP	**18.6**	16.8	1.5	8.8	12	20	58	**22.4**	62.2	0	1.8	8.2	25.8	53.6	**2305**	1820	598	894	1598	3112	6474	**(3.1)**	5.5	0	0	0.02	4.2	13.4
NO	**16.3**	11.9	2.2	9.6	13	18	46	**13.6**	24.2	0	2.6	6.4	16.4	47.3	**2269**	1667	664	1028	1720	3182	5700	**(2.0)**	4.8	0	0	0	1.7	12.8
OV	**19.9**	10.1	7.4	11.9	18	25	40	**24.1**	17.2	5.7	12.4	18.7	31.2	64.7	**2846**	2353	696	1472	2283	3110	7980	**3.6**	6.3	0	0	1.5	3.9	23.2
PA	**26.5**	13.6	10.8	17.8	25	32	56	**35.5**	24.8	4.8	15.1	34.5	51.6	86.1	**4136**	2131	1287	2778	3792	5410	7486	**2.9**	4.9	0	0	1.02	3.7	14.1
PS	**26.5**	14.1	10.3	16.2	22	36	54	**17.7**	16.0	0.12	5.4	12.5	29.3	45.5	**2362**	1557	699	1259	2054	3199	5025	**(2.9)**	6.0	0	0	0	3.3	19.5
RE	**(9.9)**	4.0	1.3	11.9	12	12	12	**3.0**	8.6	0	0	0	1.2	24.4	**350**	344	53	132	264	444	849	**(2.0)**	5.8	0	0	0	0	17.7
TA	**18.4**	16.3	6.7	10.8	14	22	35	**9.3**	9.8	0	0.5	6.99	13.5	30.1	**2213**	1377	631	1266	1862	2550	4675	**(2.1)**	4.9	0	0	0	1.9	12.1
TU	**38.8**	20.1	14.0	24	35	51	82	**61.8**	37.6	15.6	30.4	54.4	87	147	**4565**	2348	1391	2502	4396	6446	8730	**2.5**	4.4	0	0	0.05	3.7	10.5
UM	**(10.5)**	3.0	3.9	9.1	12	12	12	**3.2**	5.9	0	0	1.4	3.4	13.9	**985**	882	142	432	706	1382	3069	**(0.9)**	3.0	0	0	0	0.02	4.4
UP	**12.0**	4.7	4.8	9.4	12	12	21	**4.1**	9.9	0	0.30	1.6	3.6	13.0	**1603**	1135	232	728	1378	2246	3865	**(0.9)**	4.1	0	0	0	0	1.4
VE	**40.0**	21.0	19.7	28.2	40	59	83	**69.6**	44.1	16.4	52.8	82	100	128	**4818**	3165	1249	2647	4504	6360	12000	**3.3**	5.9	0	0	1.9	3.1	10.9

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

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	Silicon [ng/m^3]							Titanium [ng/m^3]							Vanadium [ng/m^3]							Zinc [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**259**	145	227	300	422	874	259	**145**	227	300	422	874	259	145	**227**	300	422	874	259	145	227	**300**	422	874	259	145	227	300
AL	**867**	117	253	428	963	2727	867	**117**	253	428	963	2727	867	117	**253**	428	963	2727	867	117	253	**428**	963	2727	867	117	253	428
AS	**251**	83	130	173	313	928	251	**83**	130	173	313	928	251	83	**130**	173	313	928	251	83	130	**173**	313	928	251	83	130	173
BA	**432**	284	485	629	1012	1602	432	**284**	485	629	1012	1602	432	284	**485**	629	1012	1602	432	284	485	**629**	1012	1602	432	284	485	629
BS	**208**	64	177	268	360	671	208	**64**	177	268	360	671	208	64	**177**	268	360	671	208	64	177	**268**	360	671	208	64	177	268
ER	**274**	75	123	270	494	733	274	**75**	123	270	494	733	274	75	**123**	270	494	733	274	75	123	**270**	494	733	274	75	123	270
GA	**292**	78	251	404	559	1141	292	**78**	251	404	559	1141	292	78	**251**	404	559	1141	292	78	251	**404**	559	1141	292	78	251	404
GN	**1614**	167	384	836	1633	4203	1614	**167**	384	836	1633	4203	1614	167	**384**	836	1633	4203	1614	167	384	**836**	1633	4203	1614	167	384	836
GO	**215**	42	91	151	261	658	215	**42**	91	151	261	658	215	42	**91**	151	261	658	215	42	91	**151**	261	658	215	42	91	151
HU	**1172**	351	665	1058	1556	3582	1172	**351**	665	1058	1556	3582	1172	351	**665**	1058	1556	3582	1172	351	665	**1058**	1556	3582	1172	351	665	1058
IP	**112**	68	100	142	197	427	112	**68**	100	142	197	427	112	68	**100**	142	197	427	112	68	100	**142**	197	427	112	68	100	142
NO	**177**	79	124	149	249	662	177	**79**	124	149	249	662	177	79	**124**	149	249	662	177	79	124	**149**	249	662	177	79	124	149
OV	**432**	190	481	681	1032	1719	432	**190**	481	681	1032	1719	432	190	**481**	681	1032	1719	432	190	481	**681**	1032	1719	432	190	481	681
PA	**422**	185	305	486	682	1386	422	**185**	305	486	682	1386	422	185	**305**	486	682	1386	422	185	305	**486**	682	1386	422	185	305	486
PS	**316**	100	168	214	406	1017	316	**100**	168	214	406	1017	316	100	**168**	214	406	1017	316	100	168	**214**	406	1017	316	100	168	214
RE	**304**	24	62	130	358	1024	304	**24**	62	130	358	1024	304	24	**62**	130	358	1024	304	24	62	**130**	358	1024	304	24	62	130
TA	**898**	24	89	221	417	1195	898	**24**	89	221	417	1195	898	24	**89**	221	417	1195	898	24	89	**221**	417	1195	898	24	89	221
TU	**457**	317	472	694	900	2012	457	**317**	472	694	900	2012	457	317	**472**	694	900	2012	457	317	472	**694**	900	2012	457	317	472	694
UM	**210**	24	62	112	245	726	210	**24**	62	112	245	726	210	24	**62**	112	245	726	210	24	62	**112**	245	726	210	24	62	112
UP	**191**	68	122	163	330	688	191	**68**	122	163	330	688	191	68	**122**	163	330	688	191	68	122	**163**	330	688	191	68	122	163
VE	**1224**	191	313	577	830	1817	1224	**191**	313	577	830	1817	1224	191	**313**	577	830	1817	1224	191	313	**577**	830	1817	1224	191	313	577

Tab. 9.5: Weekend Mean Elemental Concentrations of all elements, with standard deviation and percentiles

	Aluminium [ng/m^3]							Arsenic [ng/m^3]							Bismuth [ng/m^3]							Bromine [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**184**	154	65	89	120	234	504	**7.9**	22.9	0.63	1.4	3.2	10.1	76	**0.10**	0.28	0	0	0.006	0.04	0.89	**4.8**	7.4	2.1	3.1	3.7	4.5	27.0
AL	**308**	252	43	136	267	388	969	**(1.8)**	2.0	0.51	0.53	0.59	2.7	5.6	**0.01**	0.12	0	0	0	0.02	0.42	**3.8**	1.4	1.0	2.9	4.0	4.9	5.8
AS	**137**	110	58	76	100	171	445	**4.4**	2.9	0.63	0.67	4.9	6.8	8.1	**0.07**	0.09	0	0	0.012	0.13	0.25	**3.9**	2.0	1.7	2.0	3.5	6.2	7.1
BA	**426**	650	115	183	213	313	2465	**12.5**	14.7	3.6	4.4	8.2	12.6	57	**0.12**	0.08	0	0	0	0.01	0.20	**10.1**	8.6	1.9	4.1	8.9	11.1	32.3
BS	**136**	79	41	71	115	213	272	**(3.6)**	3.0	0.43	0.67	3.4	6.4	8.6	**0.03**	0.31	0	0	0	0.04	1.03	**5.5**	2.9	2.5	3.5	4.9	6.4	11.4
ER	**123**	73	42	63	117	181	261	**5.2**	7.7	0.43	1.6	3.9	7.0	28	**0.07**	0.09	0	0	0	0	0.32	**2.6**	1.7	0.46	1.5	2.7	3.5	6.5
GA	**214**	197	69	125	147	187	748	**10.3**	5.5	2.95	4.7	10.7	12.6	20	**0.06**	0.11	0	0	0	0.04	0.30	**4.1**	2.1	1.5	2.3	4.0	5.4	7.9
GN	**136**	70	26	99	119	165	303	**4.7**	3.2	0.72	2.3	4.5	6.4	12	**0.04**	0.13	0	0	0	0.06	0.42	**3.9**	2.6	0.96	1.4	3.7	5.1	9.8
GO	**77**	45	30	37	69	101	168	**(1.7)**	2.2	0.44	0.45	1.0	1.6	7.6	**0.12**	0.01	0	0	0	0	0.04	**2.3**	1.0	1.47	1.6	1.9	2.3	4.2
HU	**345**	197	97	200	259	510	693	**7.4**	4.6	1.6	3.3	6.9	11.4	15	**0.10**	0.21	0	0	0	0.09	0.68	**4.6**	2.3	2.29	3.0	3.9	6.0	10.7
IP	**109**	56	47	64	77	156	207	**6.6**	7.5	0.46	2.1	2.6	10.0	25	**0.01**	0.02	0	0	0	0	0.04	**5.6**	6.0	0.22	2.0	4.7	6.0	18.4
NO	**103**	68	17	50	96	150	235	**3.9**	4.0	0.44	0.61	2.4	6.1	11.2	**0.03**	0.16	0	0	0	0	0.51	**4.5**	5.2	0	2.0	3.2	5.2	18.3
OV	**476**	328	146	196	456	476	1386	**5.4**	3.6	0.52	3.4	5.8	7.9	12.0	**0.06**	0.06	0	0	0	0.04	0.18	**8.6**	6.1	3.2	3.8	6.1	11.3	24.7
PA	**202**	96	94	116	208	277	375	**8.7**	8.1	0.57	2.4	7.5	17.4	23	**0.06**	0.13	0	0	0.013	0.09	0.44	**10.8**	7.4	1.8	5.4	10.3	16.9	24.9
PS	**138**	78	66	79	118	178	337	**2.6**	1.9	0.45	0.8	2.6	4.4	5.4	**0.03**	0.12	0	0	0	0	0.42	**4.1**	2.2	0.89	2.3	3.7	5.4	7.9
RE	**83**	74	8	11	47	133	226	**(0.5)**	0.20	0.31	0.43	0.46	0.57	1.0	**0.00**	0.11	0	0	0	0.18	0.32	**1.2**	1.4	0	0	0.70	2.0	4.4
TA	**107**	66	35	51	91	160	245	**(2.9)**	2.9	0.42	0.52	1.3	5.6	8.1	**0.05**	0.01	0	0	0	0	0.04	**2.2**	1.3	0	1.3	1.83	3.4	4.1
TU	**322**	114	133	222	346	443	459	**13.7**	6.9	0.93	9.6	13	20	24	**0.00**	0.30	0	0	0	0	1.0	**23.7**	15.9	5.5	8.7	16.7	38.1	49.9
UM	**63**	45	15	28	49	105	149	**(0.7)**	0.41	0.30	0.45	0.51	1.0	1.5	**0.07**	0.10	0	0	0	0.01	0.27	**1.3**	1.0	0	0.45	1.16	1.8	3.3
UP	**103**	80	20	56	72	142	302	**(1.6)**	1.8	0.45	0.56	1.0	1.9	6.3	**0.05**	0.09	0	0	0	0.18	0.21	**1.9**	1.3	0.52	1.4	1.4	2.6	4.5
VE	**224**	98	189	189	211	368	368	**14.2**	3.6	15.0	15.0	17	22	22	**0.07**	0.04	0	0	0	0.06	0.06	**15.5**	10.0	15.5	15.5	18.7	34.3	34.3

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	Calcium [ng/m^3]							Cadmium [ng/m^3]							Chlorine [ng/m^3]							Cobalt [ng/m^3]						
centre	mean	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**
AC	**59.9**	31	26	36	53	88	114	**2.5**	2.2	0	0	1.6	4.3	5.5	**738**	2251	38	85	361	1011	7416	**1.19**	3.0	0	0	0.71	2.1	9.6
AL	**226**	216	76	114	186	222	878	**3.7**	1.8	0	0	0	2.3	5.1	**390**	565	14	33	95	683	1856	**0.00**	0.95	0	0	0.21	0.81	3.1
AS	**(33)**	22	12	12	38	47	73	**2.4**	2.2	0	0	2.4	4.3	6.9	**660**	575	17	70	705	1027	1693	**0.39**	0.39	0	0	0	0.19	1.0
BA	**144**	47	86	98	148	177	217	**1.9**	1.6	0	1.4	2.5	2.9	4.8	**743**	899	24	64	178	1678	2213	**1.96**	0.19	0	0	0	0	0.66
BS	**37.4**	17	12	26	41	45	65	**2.3**	1.9	0	0	2.5	4.0	6.0	**475**	599	21	29	219	575	1745	**0.06**	3.3	0	0	0	1.13	11.0
ER	**32.0**	20	12	18	28	45	74	**2.6**	1.4	0	0.53	2.2	2.4	4.7	**365**	1042	5.8	16.0	105	299	3634	**0.19**	0.18	0	0	0	0	0.57
GA	**170**	112	56	76	131	245	407	**2.1**	2.0	0	0	2.2	2.4	5.9	**419**	379	52	119	256	768	1054	**0.16**	0.34	0	0	0	0.60	0.85
GN	**59.4**	20	12	51	65	71	88	**0.8**	2.2	0	0	2.4	3.4	5.8	**506**	687	25	51	187	603	1897	**0.49**	0.36	0	0	0	0	0.94
GO	**(25)**	18	12	12	12	36	58	**2.4**	1.1	0	2.3	2.3	2.4	4.8	**371**	673	10	45	126	400	2235	**1.38**	0.40	0	0	0	0	0.96
HU	**132**	74	53	85	109	151	301	**2.0**	1.3	0	1.1	2.3	2.5	4.0	**420**	426	18	61	231	661	1409	**0.72**	1.5	0	0	0	0.83	5.0
IP	**(27)**	14	12	12	29	35	51	**1.6**	1.5	0	0	2.1	2.4	4.5	**1055**	1206	23	89	617	1883	3308	**0.11**	0.36	0	0	0	0	1.2
NO	**50.0**	50	12	29	32	49	188	**1.6**	1.1	0	0	0.61	2.4	2.5	**828**	1143	16	75	462	1093	3850	**0.08**	2.3	0	0	0	0	7.3
OV	**187**	125	24	80	138	245	440	**2.1**	1.5	0	0.57	2.1	2.5	4.8	**607**	564	51	73	174	1006	1564	**0.21**	0.08	0	0	0	0	0.22
PA	**74.2**	39	41	44	75	91	171	**1.1**	1.7	0	1.4	2.3	4.2	5.2	**895**	1509	12	64	646	1402	4716	**0.79**	1.00	0	0	0	0.12	3.5
PS	**57.2**	27	34	35	48	70	118	**1.7**	1.1	0	0	0	1.9	2.5	**567**	624	22	53	245	1109	1634	**0.03**	0.82	0	0	0	0.87	2.1
RE	**(29)**	20	12	12	26	36	73	**2.0**	2.8	0	0	2.1	3.9	9.2	**911**	1110	19	57	721	1082	3605	**0.30**	1.5	0	0	0	0.51	3.9
TA	**64.6**	56	12	26	41	97	185	**1.3**	1.2	0	1.1	2.4	2.5	4.0	**377**	457	13.1	26	205	609	1464	**0.63**	0.46	0	0	0	0.48	1.4
TU	**96.4**	34	62	72	91	135	164	**2.3**	1.7	0	0.93	2.5	3.3	5.3	**1280**	1224	25	50	1083	2046	3584	**0.19**	3.7	0	0	0.01	0.13	12.3
UM	**(13)**	4.8	12	12	12	12	27	**2.5**	1.1	0	2.3	2.4	2.6	2.8	**190**	486	3.6	5.2	19	87	1566	**0.06**	0.87	0	0	0	0	2.8
UP	**(32)**	23	12	12	31	34	75	**2.0**	1.5	0	2.3	2.4	2.6	6.4	**111**	119	8.1	17	36	264	301	**0.28**	0.20	0	0	0	0	0.65
VE	**199**	110	136	136	234	356	356	**2.7**	0.25	2.0	2.0	2.4	2.5	2.5	**584**	1094	134.7	135	442	2165	2165	**0.74**	0.005	0	0	0	0.01	0.01

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	Copper [ng/m^3]							Iron [ng/m^3]							Gallium [ng/m^3]							Potassium [ng/m^3]						
centre	mean	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**	**mean**	**SD**	**5%**	**25%**	**50%**	**75%**	**95%**
AC	**7.9**	7.5	1.5	2.3	7.2	13.7	21.7	**96.6**	62	43	69	77	119	239	**(0.17)**	0.33	0	0	0.02	0.14	1.00	**179**	213	94	110	138	183	797
AL	**4.4**	6.5	0	0.49	2.1	6.4	22.7	**41.5**	34	0	22	33	58	126	**(0.04)**	0.09	0	0	0	0	0.29	**343**	247	106	135	302	455	894
AS	**2.4**	2.6	0	0	2.0	4.8	7.5	**50.1**	23	18	42	48	58	109	**(0.03)**	0.11	0	0	0	0	0.35	**166**	72	81	111	147	233	289
BA	**17.3**	20.8	0.90	6.0	9.0	19.0	75.1	**100.6**	42	44	76	90	110	182	**0.21**	0.27	0	0	0.15	0.31	0.93	**880**	2119	83	130	196	397	7572
BS	**6.5**	6.0	2.0	3.5	5.1	6.4	23.9	**62.4**	21	27	50	59	68	100	**(0.14)**	0.33	0	0	0	0.06	1.12	**272**	170	113	119	222	431	594
ER	**4.2**	4.1	0	2.0	3.8	6.4	13.8	**56.6**	51	19.5	30	43	69	186	**(0.10)**	0.17	0	0	0.01	0.22	0.51	**174**	220	58	87	110	235	839
GA	**20.5**	22.2	3.5	6.9	17.0	20.9	80.4	**158.7**	123	66	102	130	144	493	**(0.09)**	0.13	0	0	0	0.18	0.38	**233**	162	80	120	186	254	630
GN	**11.0**	6.2	0	5.9	12.3	15.8	18.8	**81.8**	43	28	47	69	115	152	**(0.07)**	0.10	0	0	0	0.10	0.29	**319**	174	139	199	266	399	779
GO	**3.1**	1.4	0	2.6	3.4	4.3	4.6	**42.6**	20	13.2	29	42	62	66	**0.04**	0.05	0	0	0.02	0.06	0.16	**121**	93	50	68	79	132	350
HU	**13.9**	8.6	2.1	7.2	13.4	19.5	29.4	**56.1**	28	14.4	32	56	84	98	**(0.09)**	0.14	0	0	0.03	0.15	0.40	**263**	174	55	130	177	434	551
IP	**3.0**	2.0	0	1.1	3.1	4.8	6.0	**37.4**	18	9.3	16	39	49	67	**(0.14)**	0.13	0	0.02	0.11	0.23	0.43	**155**	104	40	58	110	259	330
NO	**3.3**	3.8	0	0.78	1.7	5.1	11.4	**37.2**	20	8.0	27	35	62	64	**(0.07)**	0.21	0	0	0	0	0.67	**119**	57	57	79	93	150	221
OV	**6.8**	4.0	0	4.7	6.4	10.4	12.9	**105.0**	72	37	56	77	112	269	**(0.17)**	0.16	0	0	0.17	0.30	0.43	**239**	125	97	112	194	306	484
PA	**9.5**	4.0	3.8	7.1	9.2	13.7	16.4	**123.2**	61	61	91	119	162	255	**0.17**	0.21	0	0	0.08	0.31	0.62	**399**	365	72	191	301	694	1281
PS	**7.9**	4.7	0	4.5	7.7	11.9	14.9	**79.0**	42	0	52	81	105	148	**(0.17)**	0.18	0	0	0.15	0.28	0.52	**184**	88	95	106	167	259	326
RE	**0.7**	0.85	0	0	0.39	1.8	2.2	**15.3**	16	0	0.75	7.8	23	47	**(0.07)**	0.09	0	0	0	0.18	0.23	**28**	21	7.9	11.7	16	40	71
TA	**2.4**	2.1	0.16	1.1	1.83	3.0	8.4	**20.6**	16	0	8.6	16	29	57	**(0.08)**	0.11	0	0	0.02	0.16	0.33	**405**	395	64	145	242	530	1210
TU	**27.5**	16.1	11.9	12.6	27.8	33.6	67.4	**251.5**	109	146	159	211	333	473	**0.38**	0.36	0	0.10	0.33	0.44	1.26	**533**	385	123	289	408	787	1431
UM	**1.7**	1.6	0	0	1.7	3.3	3.5	**17.7**	7.2	9.5	10.9	17	24	30	**(0.09)**	0.13	0	0	0	0.25	0.28	**51**	29	4.6	32	48	67	102
UP	**4.1**	3.8	0.02	0.54	4.0	7.4	10.9	**57.3**	56	0	17	43	63	175	**0.09**	0.09	0	0	0.09	0.14	0.25	**135**	140	31	42	70	209	496
VE	**18.9**	7.8	15.5	15	20.4	30.7	30.7	**234.4**	92	212	212	260	391	391	**0.23**	0.27	0	0	0.09	0.56	0.56	**300**	325	189	189	237	774	774

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	Magnesium [ng/m^3]							Manganese [ng/m^3]							Sodium [ng/m^3]							Nickel [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**304**	148	167	241	268	388	622	**5.6**	6.3	1.1	2.8	4.4	8.0	23	**2005**	1074	1116	1499	1774	2434	4435	**(3.4)**	7.6	0	0	0	0.10	23
AL	**288**	178	149	193	244	286	813	**1.6**	1.1	0.56	0.86	1.3	1.7	4.2	**1083**	408	508	872	1034	1255	2118	**(0.3)**	0.6	0	0	0	0	1.8
AS	**243**	64	134	208	224	302	365	**4.0**	1.9	0.80	2.5	4.0	6.1	6.4	**1619**	594	1076	1159	1506	1755	2798	**(2.0)**	6.7	0	0	0	0	22
BA	**558**	767	125	241	293	460	2938	**5.9**	3.3	1.8	3.4	5.1	8.2	13	**2504**	1400	992	1679	1816	3009	5484	**(3.3)**	8.5	0	0	0	2.8	30
BS	**174**	43	104	123	184	200	243	**2.9**	1.3	0.49	1.4	3.5	3.9	3.9	**1193**	347	753	964	1190	1278	1964	**(1.7)**	4.9	0	0	0	0	16
ER	**172**	80	92	114	169	218	379	**2.5**	2.3	0.96	1.3	2.1	3.2	8.8	**1151**	754	513	787	1152	1394	3389	**(2.3)**	6.9	0	0	0	0	24
GA	**358**	127	145	277	359	434	549	**16.7**	13.8	5.5	8.1	14.4	16.0	54	**3093**	1399	1855	2522	2673	3068	6721	**(4.7)**	4.1	0	0.55	4.6	8.1	11
GN	**156**	71	52	129	149	166	353	**7.2**	5.8	1.82	2.9	4.7	9.8	21	**1835**	792	860	1193	1600	2396	3418	**(0.4)**	1.3	0	0	0	0.11	4.5
GO	**199**	190	9	90	137	265	675	**1.9**	1.6	0.71	1.0	1.5	1.9	6.2	**1526**	1523	354	525	1244	1848	5536	**(1.2)**	1.5	0	0	0	2.5	3.4
HU	**472**	209	183	290	509	618	874	**2.1**	1.3	0.47	1.2	1.9	2.5	5.3	**3237**	1363	1199	2132	2944	4378	5277	**(2.5)**	6.5	0	0	0	1.8	23
IP	**265**	54	209	214	276	319	343	**2.4**	2.2	0.40	0.47	1.8	4.4	6.7	**1663**	358	1223	1415	1558	1862	2484	**(7.0)**	9.3	0	0.81	3.6	6.8	27
NO	**269**	70	171	208	264	289	407	**2.6**	2.3	0.30	0.35	2.0	4.6	6.7	**1903**	479	1432	1567	1798	2071	3083	**(4.8)**	11.0	0	0	0	2.3	34
OV	**310**	138	18	249	294	365	542	**4.1**	3.1	1.3	1.6	3.0	5.0	11	**1871**	759	556	1489	1786	2323	3045	**(5.8)**	9.1	0	0	1.7	7.0	26
PA	**267**	153	73	146	288	382	563	**9.6**	9.4	2.8	4.1	7.2	16.6	33	**1335**	695	682	954	1114	1910	2735	**(5.4)**	10.2	0	0	0.07	3.6	30
PS	**270**	98	154	187	250	337	483	**3.1**	1.8	0.40	1.5	3.2	4.4	6	**1942**	747	1107	1343	2003	2212	3798	**(6.5)**	11.8	0	0	0	11.8	30
RE	**257**	234	47	121	209	302	855	**0.4**	0.4	0	0.18	0.35	0.42	1.4	**1937**	1469	527	613	1700	2817	4826	**(4.4)**	8.4	0	0	0	3.4	22
TA	**133**	36	78	102	132	153	205	**1.8**	1.7	0.25	0.62	1.1	2.3	5.8	**851**	449	337	541	779	1073	2004	**(0.8)**	1.6	0	0	0	1.1	4.8
TU	**402**	140	217	285	376	536	627	**10.4**	6.2	3.9	4.2	9.1	15.2	22	**1629**	744	717	1085	1527	2361	3028	**8.0**	10.1	0	0	3.2	14.9	32
UM	**88**	114	7.6	7.8	46	138	370	**0.7**	0.4	0	0.44	0.76	1.1	1.3	**821**	851	135	325	593	978	3073	**(3.0)**	7.1	0	0	0	2.7	23
UP	**150**	57	41	115	160	177	264	**2.0**	2.0	0.37	0.63	1.4	2.8	7.2	**961**	410	413	518	926	1349	1554	**(2.8)**	7.7	0	0	0	0	26
VE	**217**	85	199	199	203	349	349	**14.9**	11.2	8.0	8.0	20.5	30.4	30	**1026**	505	727	727	807	1639	1639	**(10.5)**	15.0	0	0	0.10	26	26

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	Phosphorus [ng/m^3]							Lead [ng/m^3]							Sulfur [ng/m^3] *							Selenium [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**26.8**	23.7	10.9	16.2	19.8	40.9	89.3	**28.1**	42.8	6.9	13.9	20.8	31.3	152	**3931**	2315	2691	3023	3300	4508	10000	**14.4**	47.9	1.2	2.7	5.6	15.4	158
AL	**14.7**	6.4	5.7	8.9	15.1	20.4	24.6	**9.0**	5.8	3.4	5.1	6.8	11.7	23.6	**2464**	930	1020	1842	2470	2890	4636	**(1.5)**	2.9	0	0	0	2.0	9.7
AS	**21.1**	13.1	6.6	12.2	18.4	26.2	53.5	**18.8**	11.7	9.1	10.2	13.2	25.6	43	**3521**	1367	1202	2909	3033	4681	5588	**5.0**	3.2	0.69	2.4	5.3	6.2	12.5
BA	**25.1**	19.6	7.6	15.0	16.9	29.1	81.7	**51.6**	62.6	6.8	18.2	36.8	49.5	238	**3274**	1721	1354	1737	3010	4119	7156	**(2.2)**	2.3	0	0.01	1.9	3.6	6.7
BS	**20.8**	7.5	8.6	11.9	23.1	27.6	30.8	**14.4**	8.5	3.6	9.6	14.3	16.9	35.2	**3174**	1277	768	1886	3532	4299	4498	**(2.6)**	4.4	0	0	1.0	4.4	14.6
ER	**13.8**	10.9	4.9	8.8	13.0	17.7	46.1	**15.2**	25.7	1.2	5.3	9.4	18.1	92.6	**3114**	1773	1273	1812	2924	4334	6934	**(1.6)**	1.7	0	0	1.6	2.2	5.2
GA	**44.5**	44.9	14.0	18.3	28.2	49.7	164	**45.2**	25.8	12.1	29.6	41.9	50.4	89.2	**3866**	2625	1480	2484	3161	3931	11000	**6.6**	7.9	1.3	1.4	3.4	6.6	23.0
GN	**24.4**	6.7	12.3	19.6	25.1	27.3	37.5	**14.8**	9.9	4.0	4.6	14.1	20.9	33	**2222**	934	979	1374	2169	2721	3809	**(1.4)**	2.9	0	0	0	1.3	8.7
GO	**12.3**	4.5	7.0	10.1	10.7	13.8	21.5	**5.7**	6.9	0	1.4	2.9	6.8	23.5	**2041**	1494	704	943	1456	3035	4985	**(0.6)**	0.84	0	0	0	1.3	2.3
HU	**92.8**	86	8.7	26.2	62.7	154	263	**19.1**	11.7	2.3	10.7	17.5	24.3	44.8	**3704**	3633	988	1491	2061	4533	12000	**4.3**	5.5	0	0.49	1.5	7.1	17.7
IP	**18.5**	18.3	1.0	8.4	10.1	38.5	53.8	**12.1**	8.0	0.81	7.2	11.7	17.9	26.9	**2963**	1819	884	1726	2762	3631	7004	**(1.8)**	2.0	0	0	0.78	3.8	5.1
NO	**14.6**	10.9	6.4	8.3	8.9	19.0	36.3	**14.2**	14.5	0.12	1.6	12.6	22.4	45.0	**2503**	1641	1023	1365	2242	2869	6671	**(3.3)**	4.0	0	0	1.2	7.2	9.7
OV	**18.2**	8.5	6.8	13.1	16.2	21.0	35.7	**19.3**	11.8	5.3	13.4	16.7	21.3	53.7	**2812**	1636	775	1500	2018	3467	6111	**1.8**	1.9	0	0	0.88	3.5	4.8
PA	**24.6**	13.1	14.0	16.6	19.3	37.3	54.4	**38.9**	26.9	12.1	21.2	34.6	58.1	94.7	**4460**	2558	1140	2192	4577	6303	8462	**4.1**	3.7	0	1.9	2.9	6.9	11.8
PS	**23.0**	10.6	8.6	15.5	21.1	30.0	43.8	**10.8**	6.4	0	5.6	11.5	14.9	20.9	**3099**	1682	590	1513	3464	4333	5892	**(2.2)**	2.2	0	0.34	1.9	3.4	6.9
RE	**(4.4)**	1.9	0.82	2.8	5.9	5.9	6.1	**1.6**	2.8	0	0	0	1.8	8.7	**397**	245	77	167	334	547	797	**(0.8)**	2.0	0	0	0	1.0	6.7
TA	**12.1**	6.2	0.87	7.8	12.1	15.5	22.9	**7.1**	5.6	0	3.4	6.14	9.1	19.1	**1908**	1008	371	1271	1949	2337	4197	**(0.7)**	0.91	0	0	0.38	1.3	2.8
TU	**36.4**	15.0	18.8	21.4	36.9	50.8	56.8	**72.5**	34.7	26.0	39.1	71.1	104	127	**4025**	2576	1524	1732	3090	5073	9448	**3.8**	4.7	0	1.3	2.6	5.3	17.0
UM	**(4.9)**	3.1	0.69	0.71	6.0	7.0	8.8	**2.9**	3.2	0	0.98	2.2	3.4	11.0	**994**	543	156	628	901	1429	1958	**(0.6)**	2.0	0	0	0	0	6.2
UP	**10.5**	7.6	1.1	6.7	8.7	13.8	30.5	**6.5**	6.4	0.34	2.74	4.8	9.2	23.2	**2117**	1471	532	600	1865	2669	5460	**(2.2)**	2.7	0	0	1.6	2.9	7.8
VE	**29.3**	9.2	29.5	29.5	30.3	45.8	45.8	**52.3**	18.5	56.1	56.1	59	89.5	89.5	**3069**	1207	1264	1264	2634	3669	3669	**0.7**	0.99	0	0	1.2	2.0	2.0

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

...continued

	Silicon [ng/m^3]							Titanium [ng/m^3]							Vanadium [ng/m^3]							Zinc [ng/m^3]						
centre	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%	mean	SD	5%	25%	50%	75%	95%
AC	**337**	309	69	150	192	485	1080	**4.8**	3.7	1.9	2.5	4.4	6.0	13.3	**6.1**	3.9	2.47	2.9	6.8	8.0	15.6	**46.5**	62	14.6	23.8	36.0	57	223
AL	**617**	506	87	203	522	803	1934	**4.8**	3.9	0.86	2.1	3.7	6.8	14.3	**2.0**	0.93	0.26	1.6	2.1	2.4	3.7	**8.9**	6.6	1.9	4.2	7.5	10.4	23
AS	**247**	260	64	101	151	343	940	**3.1**	1.8	1.6	1.9	2.5	3.7	8.1	**4.7**	1.9	2.40	2.8	4.9	6.9	7.3	**34.9**	18	15.4	19.5	33.9	44	73
BA	**483**	278	171	308	390	573	1179	**22.3**	42.6	4.4	6.4	8.0	10.6	155	**5.9**	3.1	0.71	3.6	5.7	8.4	10.1	**57.4**	63.1	5.5	20.1	41.3	72	242
BS	**276**	166	73	140	192	428	557	**2.9**	1.2	1.34	2.1	2.6	3.5	5.0	**1.8**	0.80	0.23	1.1	2.0	2.4	2.8	**32.5**	17.3	5.4	19.7	34.5	44	62
ER	**236**	170	63	77	204	426	461	**2.3**	1.7	0.63	0.87	2.2	3.8	5.9	**(1.0)**	0.58	0.21	0.64	1.02	1.5	2.1	**35.2**	67.3	6.1	14.1	18.1	33	242
GA	**437**	399	163	256	279	355	1485	**3.7**	3.4	0.70	2.3	3.1	3.2	12.8	**10.9**	11.0	2.49	4.4	8.2	10.9	39.5	**209.2**	213	54.9	71.8	139	219	766
GN	**1439**	2070	268	459	763	1135	7707	**3.6**	2.3	0.69	2.3	3.1	4.3	9.4	**3.7**	2.0	1.50	2.3	3.0	4.5	8.3	**175.7**	122	62.7	83.3	148	217	481
GO	**182**	114	37	94	146	293	350	**2.3**	2.7	0.32	1.1	1.5	2.3	9.5	**3.1**	2.4	0.78	1.0	2.4	4.7	6.8	**13.9**	10.6	5.8	6.7	9.6	15.1	38
HU	**1085**	854	303	451	829	1436	3135	**8.4**	6.1	1.4	4.7	7.6	10.3	24.2	**6.6**	6.3	1.83	2.6	3.1	10.5	18.7	**26.7**	19.0	2.6	12.1	25.1	30	63
IP	**151**	87	62	74	119	226	309	**2.9**	2.2	0.71	1.1	2.1	4.6	7.2	**6.3**	5.9	1.28	1.9	4.7	8.7	20.4	**20.0**	13.7	5.0	7.0	17.9	34	44
NO	**168**	101	67	76	127	238	342	**2.5**	1.8	0.69	0.84	2.2	3.7	5.4	**4.6**	6.1	0.62	1.4	2.4	5.6	21.0	**14.8**	15.8	2.3	4.7	9.6	19	55
OV	**751**	583	266	336	598	786	2484	**7.6**	5.6	1.7	2.7	6.8	7.9	23.2	**5.3**	3.0	2.04	2.6	5.1	6.7	12.0	**25.3**	15.7	7.5	15.2	22.7	28	60
PA	**456**	225	174	332	471	577	980	**5.3**	3.3	2.1	3.0	4.6	7.4	12.8	**4.0**	2.1	0.81	3.0	4.0	4.7	7.8	**49.3**	45.2	18.9	26.5	31.2	71	147
PS	**281**	180	90	143	242	359	727	**3.4**	2.0	0.84	2.0	3.0	4.3	7.9	**2.5**	1.8	0.21	0.89	2.3	3.9	5.7	**26.7**	14.1	7.7	12.5	29.0	38	49
RE	**193**	226	12	31	85	387	705	**2.3**	3.9	0	0.27	0.50	2.2	12.4	**(0.2)**	0.07	0.20	0.23	0.23	0.24	0.45	**1.4**	1.1	0.16	0.49	1.1	2.6	3.2
TA	**239**	151	61	126	190	360	499	**1.8**	1.2	0	0.9	1.7	2.3	4.0	**1.4**	1.0	0.23	0.46	1.29	2.3	2.9	**36.0**	26.8	6.8	13.0	32.3	56	79
TU	**598**	190	327	514	562	818	917	**7.9**	4.1	3.4	5.1	6.5	10.5	17.6	**3.4**	1.8	0.83	2.1	3.5	4.6	6.6	**62.7**	37.3	19.8	24.8	66.9	93	125
UM	**132**	112	12	41	98	249	342	**1.7**	1.6	0	0.25	1.27	2.8	5.1	**(1.3)**	1.2	0.19	0.52	0.77	1.83	4.2	**5.6**	3.6	0.77	2.76	4.9	7.6	12.8
UP	**239**	202	40	93	163	365	720	**2.0**	1.5	0	1.07	2.0	2.5	6.0	**1.6**	1.3	0.23	0.69	1.12	2.6	4.0	**15.7**	12.2	1.8	6.3	11.1	25.2	40
VE	**410**	204	282	282	407	681	681	**6.7**	2.9	4.7	4.7	6.5	10.4	10.4	**2.0**	0.46	1.26	1.26	1.7	2.2	2.2	**63.7**	29	49.3	49.3	53.7	101	101

Tab. 9.6: Annual Mean Elemental Concentrations of all elements

	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn
AC	177	7.4	0.14	5.1	87	2.9	1113	1.93	9.7	127	0.17	182	365	6.9	2635	5.3	35.4	28.6	3487	11.9	363	5.3	6.8	52.4
AL	344	1.6	0.11	3.9	277	1.0	280	2.03	4.6	49	0.16	350	318	2.0	1338	5.5	15.8	11.3	2401	2.9	730	5.6	2.7	12.2
AS	128	6.3	0.14	4.7	46	2.8	892	1.11	6.3	66	0.14	182	260	5.1	1998	3.2	27.2	25.8	3461	8.2	263	3.6	5.7	45.4
BA	389	12.5	0.06	12.1	226	3.0	831	0.48	21.3	145	0.25	430	438	10.4	2700	6.4	32.0	52.7	3305	2.1	686	19.0	9.0	80.5
BS	151	3.6	0.10	5.3	60	2.7	472	0.94	6.5	78	0.16	255	162	3.3	1299	3.7	20.8	13.5	2474	2.3	299	3.1	1.6	32.9
ER	148	4.5	0.08	2.2	52	1.3	329	0.56	5.0	72	0.14	157	156	3.1	1111	4.0	15.5	14.8	2725	1.8	313	2.8	0.8	38.5
GA	197	8.6	0.11	3.8	199	2.0	411	0.67	17.9	166	0.17	191	338	23.0	2868	7.0	35.6	39.0	3773	6.5	453	4.0	9.6	149.7
GN	257	5.8	0.08	3.4	139	4.3	667	0.58	16.7	125	0.14	326	196	10.7	2108	5.1	28.3	23.2	2114	1.8	1404	5.5	3.3	185.0
GO	97	2.0	0.06	2.2	38	3.7	547	0.46	4.1	52	0.12	112	280	2.7	2004	5.7	14.0	5.3	2161	1.2	216	2.3	3.9	15.8
HU	444	12.2	0.13	4.9	168	3.3	806	1.16	26.6	76	0.18	297	582	2.9	4023	6.8	125.0	26.9	3709	6.4	1259	17.1	6.7	40.9
IP	115	6.4	0.15	4.7	37	2.4	1147	0.58	4.6	41	0.16	201	361	3.3	2544	5.7	18.1	18.8	2378	2.6	165	4.5	5.6	22.4
NO	108	4.3	0.08	3.9	92	1.0	1027	0.63	3.2	42	0.10	116	363	2.6	2701	5.8	16.1	13.6	2327	2.3	204	2.6	4.5	15.0
OV	467	6.2	0.10	7.1	281	2.0	562	1.23	9.0	138	0.18	232	349	6.4	2046	6.5	19.5	22.9	2812	3.0	781	7.4	5.5	31.1
PA	228	9.2	0.07	11.1	85	2.2	963	0.33	9.4	124	0.19	364	280	9.9	1419	7.9	26.4	37.4	4244	3.3	539	8.2	4.2	47.0
PS	141	3.7	0.07	4.1	79	2.4	668	0.87	10.0	98	0.17	180	293	4.4	2377	6.3	25.5	15.7	2573	2.7	321	3.9	2.2	40.1
RE	111	0.9	0.10	1.2	41	2.8	936	0.95	1.7	23	0.09	29	257	0.5	1929	5.5	8.1	2.6	370	1.7	245	3.0	0.4	2.2
TA	156	2.5	0.07	2.2	85	1.5	289	0.72	2.7	32	0.12	386	157	2.8	984	5.5	16.6	8.6	2124	1.7	367	2.7	1.3	32.6
TU	380	14.4	0.06	21.3	116	2.3	1322	0.90	23.1	262	0.32	471	457	13.3	1857	9.0	37.7	63.8	4351	2.7	744	8.5	3.6	70.1
UM	70	1.1	0.05	1.2	22	3.4	160	0.45	2.4	25	0.11	63	97	1.2	880	3.8	9.0	3.0	988	0.8	172	1.6	0.9	6.2
UP	103	1.8	0.07	1.7	34	4.1	225	0.45	4.5	54	0.14	116	159	1.9	1164	4.0	11.6	5.0	1791	1.3	247	2.0	1.4	14.9
VE	336	19.4	0.06	22.9	257	2.1	1099	0.85	22.1	302	0.29	411	372	30.7	1944	4.2	43.0	80.1	4798	2.8	759	8.7	1.9	135.5
Ratio max/ min	6.7	16.0	3.0	17.8	12.8	4.3	8.3	6.2	15.6	11.4	3.6	16.2	6.0	46.0	4.6	2.8	15.4	24.5	11.8	14.9	8.5	11.9	24.0	84.1

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 9.7: Winter Mean Elemental Concentrations of all elements

ce str	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn
AC	216	15.0	0.05	9.6	113	3.7	2725	0.81	14.5	187	0.20	319	460	11.5	3385	7.6	56.1	45.0	3860	16.8	393	7.0	9.0	96.2
AL	206	2.5	0.03	3.8	205	2.7	678	0.48	6.7	33	0.11	546	190	1.6	883	4.5	16.3	12.0	1699	0.4	420	3.5	2.4	17.7
AS	133	10.0	0.12	7.1	51	3.7	1774	1.16	9.8	82	0.23	260	305	7.2	2465	3.5	35.3	37.5	2870	7.4	213	3.9	7.3	72.2
BA	379	18.3	0.04	22.5	249	4.4	1704	0.03	26.8	190	0.32	401	384	17.4	2629	8.8	43.0	75.0	3090	1.8	728	23.5	9.4	106
BS	197	6.7	0.00	7.6	66	4.1	1044	0.17	6.6	85	0.15	397	192	4.2	1577	1.5	24.0	14.9	2557	0.4	262	3.4	1.8	43.2
ER	150	6.5	0.02	2.7	63	4.4	782	0.19	4.9	80	0.16	219	208	3.7	1566	2.3	18.9	22.3	2427	1.0	325	3.2	0.8	61.0
GA	119	7.2	0.00	4.1	141	4.9	507	0.08	10.6	127	0.12	136	197	16.1	1774	2.1	25.0	25.2	1603	3.2	266	2.6	3.0	72.8
GN	322	9.4	0.04	5.3	121	4.5	1714	0.18	19.9	176	0.17	512	266	16.3	3164	4.7	37.6	33.5	2101	0.6	914	6.6	3.6	319
GO	84	2.2	0.03	2.6	40	4.6	891	0.35	5.1	56	0.12	113	292	3.0	2550	4.9	14.7	5.0	2069	0.6	183	2.0	3.4	20.2
HU	469	16.5	0.08	5.5	186	4.1	1419	0.07	30.7	85	0.20	393	511	3.7	3457	5.7	138	29.1	2100	4.3	1250	13.0	5.0	54.8
IP	162	11.0	0.08	8.4	41	4.3	2418	0.27	5.9	50	0.20	335	491	3.6	3092	3.4	25.4	32.3	2134	1.8	153	7.3	3.7	34.7
NO	134	6.3	0.03	6.4	209	4.3	1811	0.33	3.5	51	0.12	160	461	4.2	3155	5.7	20.9	19.5	1752	1.4	232	3.0	2.8	17.9
OV	483	9.0	0.05	10.5	387	3.6	996	0.18	7.5	117	0.17	206	345	6.3	1877	8.7	22.7	27.9	1825	1.6	746	7.5	5.8	35.6
PA	226	16.1	0.02	19.6	99	4.3	2175	0.08	11.4	167	0.25	655	334	18.8	1636	8.6	39.0	61.5	4541	2.7	508	8.7	4.9	83.6
PS	112	4.1	0.02	6.3	76	4.4	1309	0.78	11.5	97	0.22	221	312	5.0	2579	8.2	28.6	18.4	2108	2.0	219	3.1	2.3	42.6
RE	155	0.8	0.04	1.5	56	4.1	1515	0.32	1.5	30	0.10	30	391	0.8	2591	7.2	8.0	1.1	217	0.7	298	4.2	0.4	1.6
TA	68	3.2	0.03	2.3	30	4.0	538	0.14	2.8	19	0.14	433	140	2.6	1214	4.9	14.6	9.7	2061	1.0	120	0.9	1.7	37.0
TU	449	21.7	0.01	38.0	137	4.3	3015	0.29	29.6	379	0.45	876	583	21.9	2636	11.1	55.5	101	4987	2.8	850	11.4	5.2	122
UM	50	1.4	0.02	1.1	22	4.3	332	0.03	2.5	21	0.10	71	118	1.4	1114	3.6	8.7	1.8	945	0.4	117	1.0	0.7	7.5
UP	78	2.5	0.12	2.1	26	3.6	346	0.84	5.5	50	0.22	139	173	2.4	1399	7.8	11.9	5.6	1967	1.4	176	1.5	1.3	18.5
VE	381	24.7	0.01	27.8	319	4.6	1859	0.01	26.0	358	0.32	554	421	46.8	2221	2.5	51.2	94.4	5159	1.4	1006	10.2	1.3	191
Ratio max/ min	9.7	27.1		34.5	17.6	1.8	9.1	38.7	20.5	19.9	4.5	29.2	4.9	27.4	3.9	7.4	17.3	91.8	23.0	42.0	10.7	26.1	23.5	199

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 9.8: Summer Mean Elemental Concentrations of all elements

ce ar	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn
AC	142	3.0	0.27	3.5	77	2.9	287	3.5	8.8	98	0.26	108	329	4.8	2215	5.5	26.8	24.2	3433	10.3	310	4.4	5.9	30.5
AL	499	1.0	0.20	4.3	405	1.0	38	3.5	3.3	61	0.15	236	440	2.2	1504	5.0	17.0	12.1	2846	4.8	1064	7.5	2.9	7.6
AS	101	5.3	0.09	2.0	40	2.8	288	0.5	3.4	47	0.05	124	233	3.5	1761	1.4	20.4	15.5	3764	4.3	284	3.1	4.8	27.4
BA	512	9.2	0.06	4.5	209	3.0	237	0.7	23.2	124	0.26	715	573	6.5	2744	8.7	27.9	42.3	4499	2.1	767	21.0	10.5	60.6
BS	147	2.2	0.18	3.6	65	2.7	52	1.7	7.5	83	0.16	174	148	2.9	1144	3.9	20.6	13.7	2979	3.6	354	3.2	1.5	29.7
ER	164	1.7	0.06	1.4	47	1.3	21	0.5	3.8	59	0.05	98	143	2.4	907	2.0	12.5	4.6	2908	1.3	346	2.8	1.0	12.0
GA	238	7.6	0.19	3.3	231	2.0	179	1.2	19.9	169	0.18	253	391	22.6	3188	9.8	35.8	38.7	6122	9.6	526	4.6	11.8	178.9
GN	205	3.6	0.16	2.4	209	4.3	75	1.0	18.0	75	0.17	228	149	5.0	1510	7.8	21.7	19.3	2394	3.8	1365	4.8	2.8	109.3
GO	112	1.6	0.12	2.1	46	3.7	431	0.8	4.0	47	0.09	63	296	2.5	2253	3.9	12.2	5.0	1998	2.4	252	3.1	5.3	9.3
HU	491	10.5	0.25	4.8	170	3.3	206	2.7	28.9	80	0.21	202	604	2.6	4016	8.3	136	29.4	5217	11.6	1428	24.9	9.2	42.9
IP	97	4.2	0.27	2.2	36	2.4	218	0.3	2.8	37	0.05	119	269	3.4	2097	4.3	16.6	9.3	3215	2.6	189	2.8	10.0	14.4
NO	97	2.2	0.17	2.6	49	1.0	247	1.4	3.7	36	0.13	85	265	1.7	2056	8.0	14.3	12.0	2989	4.5	207	2.3	7.0	12.7
OV	485	3.2	0.20	4.7	213	2.0	142	2.9	11.0	166	0.22	272	377	6.4	2269	7.1	18.0	22.0	4527	5.5	843	7.8	6.2	29.2
PA	280	4.7	0.08	3.6	87	2.2	77	0.3	6.7	103	0.10	181	273	5.3	1338	5.2	19.7	18.6	4589	2.9	655	11.0	3.7	29.2
PS	169	3.8	0.08	2.0	95	2.4	158	0.3	10.5	111	0.18	166	257	4.8	1985	4.9	25.2	11.8	3245	1.9	398	4.9	2.2	39.8
RE	79	0.9	0.16	1.2	34	2.8	618	2.2	1.7	21	0.10	32	188	0.3	1600	4.0	7.8	4.7	513	2.9	214	3.1	0.4	2.1
TA	131	1.4	0.02	1.0	120	1.5	30	0.5	1.4	31	0.04	160	144	1.8	775	7.0	12.4	3.1	1688	0.4	341	2.4	0.7	16.3
TU	303	7.0	0.16	7.4	88	2.3	115	2.3	15.2	167	0.23	205	334	5.9	1375	8.4	22.8	34.6	4465	3.6	643	6.5	2.5	35.3
UM	66	0.9	0.04	0.9	21	3.4	56	0.6	0.9	20	0.07	41	79	0.7	718	0.4	8.9	2.1	795	0.6	183	1.4	0.8	3.0
UP	95	0.9	0.01	0.8	30	4.1	189	0.1	2.3	35	0.06	47	153	1.0	1069	1.4	10.5	1.7	1260	0.5	234	1.8	1.1	6.6
VE	154	5.1	0.32	6.3	92	2.1	47	4.9	13.0	142	0.29	148	172	8.7	1446	10	23.9	43.7	3337	8.7	240	3.3	2.1	92.9
Ratio max/ min	7.8	11.7	27.0	9.3	19.3	4.3	29.4	35.0	32.1	8.5	6.5	22.3	7.6	75.3	5.6	24.5	17.4	24.9	11.9	29.0	7.8	17.8	29.5	85.2

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 9.9: Weekday Mean Elemental Concentrations of all elements

Centr	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn
AC	173	6.7	0.17	5.0	94	3.1	1190	2.1	10.1	133	0.18	176	383	7.0	2823	6.4	37.3	27.8	3376	10.6	368	5.4	7.4	50.3
AL	363	1.5	0.14	3.9	299	2.0	207	2.7	4.3	53	0.22	334	335	2.2	1464	7.9	16.0	12.0	2412	3.6	789	5.9	3.0	13.7
AS	118	6.3	0.17	4.8	49	3.2	890	1.5	7.4	69	0.18	172	259	5.3	2117	4.0	28.2	26.4	3389	9.1	259	3.5	5.7	44.5
BA	375	12.5	0.07	12.9	257	4.3	867	0.7	22.9	162	0.27	256	394	12.1	2789	7.6	34.5	53.2	3321	2.0	764	17.8	10.2	90.1
BS	162	3.7	0.10	5.2	70	4.0	473	0.8	6.5	84	0.17	247	157	3.4	1348	4.2	20.6	13.4	2171	2.3	315	3.2	1.5	33.0
ER	155	4.1	0.10	2.0	59	3.7	291	0.8	5.3	77	0.16	144	147	3.3	1080	4.7	15.9	14.2	2516	2.0	338	3.0	0.7	38.3
GA	193	7.5	0.14	3.7	213	3.7	400	0.9	16.8	169	0.20	179	334	25.1	2813	8.0	32.1	35.5	3887	6.8	462	4.2	8.8	125
GN	304	6.4	0.08	3.2	164	4.3	754	0.7	19.0	144	0.16	333	214	12.2	2242	6.8	30.0	26.6	2062	1.9	1397	6.2	3.2	192
GO	104	2.2	0.08	2.2	43	4.4	653	0.5	4.6	56	0.15	113	321	2.9	2251	7.7	14.7	5.0	2237	1.2	225	2.3	4.3	17.1
HU	482	14.4	0.13	5.0	183	4.0	987	1.3	31.9	84	0.22	314	629	3.2	4360	8.6	139	30.1	3701	7.2	1330	20.1	6.7	46.9
IP	120	6.6	0.23	4.4	41	3.7	1165	0.8	5.4	44	0.17	227	395	3.8	2837	5.1	18.6	22.4	2305	3.1	172	5.3	5.7	24.2
NO	109	4.4	0.09	3.5	102	3.1	1028	0.6	3.1	43	0.12	112	388	2.5	2934	6.2	16.3	13.6	2269	2.0	221	2.6	4.5	15.1
OV	463	6.4	0.14	6.2	321	3.2	544	1.8	10.0	153	0.18	230	368	7.5	2141	6.9	19.9	24.1	2846	3.6	796	7.4	5.7	33.5
PA	236	9.0	0.07	10.8	86	4.1	913	0.3	9.2	122	0.19	338	279	9.4	1424	8.7	26.5	35.5	4136	2.9	564	9.1	4.2	43.7
PS	142	4.1	0.09	4.1	87	3.4	708	1.0	10.8	106	0.16	178	302	5.0	2551	6.3	26.5	17.7	2362	2.9	337	4.0	2.0	45.5
RE	123	1.1	0.10	1.1	46	3.4	925	1.0	2.1	27	0.10	29	251	0.6	1888	5.8	9.9	3.0	350	2.0	268	3.3	0.5	2.5
TA	176	2.4	0.10	2.2	92	3.3	257	0.9	2.9	36	0.14	381	166	3.3	1038	7.5	18.4	9.3	2213	2.1	419	3.0	1.2	31.5
TU	402	14.8	0.05	21.0	123	3.9	1411	0.8	21.7	270	0.31	463	483	14.6	1978	10.0	38.8	61.8	4565	2.5	800	8.9	3.7	74.6
UM	75	1.2	0.06	1.2	25	4.4	122	0.6	2.7	28	0.12	66	96	1.3	861	4.1	10.5	3.2	985	0.9	194	1.6	0.8	6.3
UP	102	1.7	0.07	1.5	35	4.6	258	0.5	4.6	52	0.15	104	157	1.8	1178	4.8	12.0	4.1	1603	0.9	251	1.9	1.3	14.3
VE	339	16.3	0.11	18.5	258	4.4	838	0.8	21.1	279	0.27	381	366	21.7	1875	4.4	40.0	69.6	4818	3.3	797	11.5	2.1	110

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 9.10: Weekend Mean Elemental Concentrations of all elements

Centr	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn
AC	184	7.9	0.10	4.8	59.9	2.5	738	1.19	7.9	96.6	0.17	179	304	5.6	2005	3.4	26.8	28.1	3931	14.4	337	4.8	6.1	46.5
AL	308	1.8	0.01	3.8	226	3.7	390	0.00	4.4	41.5	0.04	343	288	1.6	1083	0.3	14.7	9.0	2464	1.5	617	4.8	2.0	8.9
AS	137	4.4	0.07	3.9	33	2.4	660	0.39	2.4	50.1	0.03	166	243	4.0	1619	2.0	21.1	18.8	3521	5.0	247	3.1	4.7	34.9
BA	426	12.5	0.12	10.1	144	1.9	743	1.96	17.3	100.6	0.21	880	558	5.9	2504	3.3	25.1	51.6	3274	2.2	483	22.3	5.9	57.4
BS	136	3.6	0.03	5.5	37.4	2.3	475	0.06	6.5	62.4	0.14	272	174	2.9	1193	1.7	20.8	14.4	3174	2.6	276	2.9	1.8	32.5
ER	123	5.2	0.07	2.6	32.0	2.6	365	0.19	4.2	56.6	0.10	174	172	2.5	1151	2.3	13.8	15.2	3114	1.6	236	2.3	1.0	35.2
GA	214	10.3	0.06	4.1	170	2.1	419	0.16	20.5	158.7	0.09	233	358	16.7	3093	4.7	44.5	45.2	3866	6.6	437	3.7	10.9	209.2
GN	136	4.7	0.04	3.9	59.4	0.8	506	0.49	11.0	81.8	0.07	319	156	7.2	1835	0.4	24.4	14.8	2222	1.4	1439	3.6	3.7	175.7
GO	77	1.7	0.12	2.3	25	2.4	371	1.38	3.1	42.6	0.04	121	199	1.9	1526	1.2	12.3	5.7	2041	0.6	182	2.3	3.1	13.9
HU	345	7.4	0.10	4.6	132	2.0	420	0.72	13.9	56.1	0.09	263	472	2.1	3237	2.5	92.8	19.1	3704	4.3	1085	8.4	6.6	26.7
IP	109	6.6	0.01	5.6	27	1.6	1055	0.11	3.0	37.4	0.14	155	265	2.4	1663	7.0	18.5	12.1	2963	1.8	151	2.9	6.3	20.0
NO	103	3.9	0.03	4.5	50.0	1.6	828	0.08	3.3	37.2	0.07	119	269	2.6	1903	4.8	14.6	14.2	2503	3.3	168	2.5	4.6	14.8
OV	476	5.4	0.06	8.6	187	2.1	607	0.21	6.8	105.0	0.17	239	310	4.1	1871	5.8	18.2	19.3	2812	1.8	751	7.6	5.3	25.3
PA	202	8.7	0.06	10.8	74.2	1.1	895	0.79	9.5	123.2	0.17	399	267	9.6	1335	5.4	24.6	38.9	4460	4.1	456	5.3	4.0	49.3
PS	138	2.6	0.03	4.1	57.2	1.7	567	0.03	7.9	79.0	0.17	184	270	3.1	1942	6.5	23.0	10.8	3099	2.2	281	3.4	2.5	26.7
RE	83	0.5	0.00	1.2	29	2.0	911	0.30	0.7	15.3	0.07	28	257	0.4	1937	4.4	4.4	1.6	397	0.8	193	2.3	0.2	1.4
TA	107	2.9	0.05	2.2	64.6	1.3	377	0.63	2.4	20.6	0.08	405	133	1.8	851	0.8	12.1	7.1	1908	0.7	239	1.8	1.4	36.0
TU	322	13.7	0.00	23.7	96.4	2.3	1280	0.19	27.5	251.5	0.38	533	402	10.4	1629	8.0	36.4	72.5	4025	3.8	598	7.9	3.4	62.7
UM	63	0.7	0.07	1.3	13	2.5	190	0.06	1.7	17.7	0.09	51	88	0.7	821	3.0	4.9	2.9	994	0.6	132	1.7	1.3	5.6
UP	103	1.6	0.05	1.9	32	2.0	111	0.28	4.1	57.3	0.09	135	150	2.0	961	2.8	10.5	6.5	2117	2.2	239	2.0	1.6	15.7
VE	224	14.2	0.07	15.5	199	2.7	584	0.74	18.9	234.4	0.23	300	217	14.9	1026	10.5	29.3	52.3	3069	0.7	410	6.7	2.0	63.7

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 10.1: Annual Mean Elemental Concentrations of all elements: % of $PM_{2.5}$ mass

Centr	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn	All
AC	0.74	0.03	0.00	0.02	0.36	0.01	4.6	0.01	0.04	0.53	0.00	0.76	1.5	0.03	10.9	0.02	0.15	0.12	14.5	0.05	1.5	0.02	0.03	0.22	36.2
AL	2.62	0.01	0.00	0.03	2.11	0.01	2.1	0.02	0.04	0.37	0.00	2.7	2.4	0.02	10.2	0.04	0.12	0.09	18.3	0.02	5.6	0.04	0.02	0.09	46.9
AS	0.62	0.03	0.00	0.02	0.22	0.01	4.3	0.01	0.03	0.32	0.00	0.88	1.3	0.02	9.6	0.02	0.13	0.12	16.7	0.04	1.3	0.02	0.03	0.22	35.8
BA	1.75	0.06	0.00	0.05	1.02	0.02	3.7	0.00	0.10	0.65	0.00	1.9	2.0	0.05	12.2	0.03	0.14	0.24	14.9	0.01	3.1	0.09	0.04	0.36	42.4
BS	0.87	0.02	0.00	0.03	0.34	0.02	2.7	0.01	0.04	0.45	0.00	1.5	0.93	0.02	7.5	0.02	0.12	0.08	14.2	0.01	1.7	0.02	0.01	0.19	30.7
ER	0.91	0.03	0.00	0.01	0.32	0.02	2.0	0.00	0.03	0.44	0.00	1.0	0.96	0.02	6.8	0.02	0.10	0.09	16.8	0.01	1.9	0.02	0.00	0.24	31.7
GA	1.21	0.05	0.00	0.02	1.22	0.02	2.5	0.00	0.11	1.02	0.00	1.2	2.1	0.14	17.6	0.04	0.22	0.24	23.2	0.04	2.8	0.02	0.06	0.92	54.8
GN	1.35	0.03	0.00	0.02	0.73	0.02	3.5	0.00	0.09	0.66	0.00	1.7	1.03	0.06	11.1	0.03	0.15	0.12	11.1	0.01	7.4	0.03	0.02	0.97	40.1
GO	0.76	0.02	0.00	0.02	0.30	0.03	4.3	0.00	0.03	0.41	0.00	0.89	2.2	0.02	15.8	0.05	0.11	0.04	17.1	0.01	1.7	0.02	0.03	0.13	44.0
HU	2.57	0.07	0.00	0.03	0.97	0.02	4.7	0.01	0.15	0.44	0.00	1.7	3.4	0.02	23.3	0.04	0.72	0.16	21.5	0.04	7.3	0.10	0.04	0.24	67.4
IP	0.70	0.04	0.00	0.03	0.23	0.02	7.0	0.00	0.03	0.25	0.00	1.2	2.2	0.02	15.5	0.03	0.11	0.11	14.5	0.02	1.0	0.03	0.03	0.14	43.1
NO	0.66	0.03	0.00	0.02	0.57	0.02	6.3	0.00	0.02	0.26	0.00	0.72	2.2	0.02	16.7	0.04	0.10	0.08	14.4	0.01	1.3	0.02	0.03	0.09	43.6
OV	2.94	0.04	0.00	0.04	1.77	0.02	3.5	0.01	0.06	0.87	0.00	1.5	2.2	0.04	12.9	0.04	0.12	0.14	17.7	0.02	4.9	0.05	0.03	0.20	49.1
PA	0.65	0.03	0.00	0.03	0.24	0.01	2.7	0.00	0.03	0.35	0.00	1.0	0.79	0.03	4.0	0.02	0.07	0.11	12.0	0.01	1.5	0.02	0.01	0.13	23.9
PS	0.79	0.02	0.00	0.02	0.44	0.01	3.8	0.00	0.06	0.55	0.00	1.0	1.6	0.02	13.3	0.04	0.14	0.09	14.4	0.02	1.8	0.02	0.01	0.23	38.5
RE	2.97	0.02	0.00	0.03	1.11	0.09	25.0	0.03	0.05	0.62	0.00	0.78	6.9	0.01	51.6	0.15	0.22	0.07	9.9	0.04	6.6	0.08	0.01	0.06	106.3
TA	1.06	0.02	0.00	0.01	0.58	0.02	2.0	0.00	0.02	0.21	0.00	2.6	1.1	0.02	6.7	0.04	0.11	0.06	14.4	0.01	2.5	0.02	0.01	0.22	31.6
TU	0.85	0.03	0.00	0.05	0.26	0.01	2.9	0.00	0.05	0.58	0.00	1.05	1.02	0.03	4.1	0.02	0.08	0.14	9.7	0.01	1.7	0.02	0.01	0.16	22.8
UM	1.25	0.02	0.00	0.02	0.39	0.07	2.9	0.01	0.04	0.44	0.00	1.12	1.7	0.02	15.7	0.07	0.16	0.05	17.6	0.01	3.1	0.03	0.02	0.11	44.8
UP	0.99	0.02	0.00	0.02	0.33	0.04	2.2	0.00	0.04	0.51	0.00	1.12	1.5	0.02	11.2	0.04	0.11	0.05	17.2	0.01	2.4	0.02	0.01	0.14	38.0
VE	0.81	0.05	0.00	0.06	0.62	0.01	2.6	0.00	0.05	0.73	0.00	1.0	0.90	0.07	4.7	0.01	0.10	0.19	11.6	0.01	1.8	0.02	0.00	0.33	25.7

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 10.2: Winter Mean Elemental Concentrations of all elements: % of $PM_{2.5}$ mass

Centr	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn	All
AC	0.58	0.04	0.00	0.03	0.31	0.01	7.4	0.00	0.04	0.50	0.00	0.86	1.24	0.03	9.1	0.02	0.15	0.12	10.4	0.05	1.06	0.02	0.02	0.26	32.3
AL	1.34	0.02	0.00	0.02	1.33	0.02	4.4	0.00	0.04	0.21	0.00	3.54	1.23	0.01	5.7	0.03	0.11	0.08	11.0	0.00	2.72	0.02	0.02	0.11	32.0
AS	0.55	0.04	0.00	0.03	0.21	0.02	7.3	0.00	0.04	0.34	0.00	1.06	1.25	0.03	10.1	0.01	0.14	0.15	11.8	0.03	0.87	0.02	0.03	0.30	34.3
BA	1.25	0.06	0.00	0.07	0.82	0.01	5.6	0.00	0.09	0.63	0.00	1.33	1.27	0.06	8.7	0.03	0.14	0.25	10.2	0.01	2.41	0.08	0.03	0.35	33.4
BS	0.83	0.03	0.00	0.03	0.28	0.02	4.4	0.00	0.03	0.36	0.00	1.68	0.81	0.02	6.7	0.01	0.10	0.06	10.8	0.00	1.11	0.01	0.01	0.18	27.4
ER	0.75	0.03	0.00	0.01	0.32	0.02	3.9	0.00	0.02	0.40	0.00	1.10	1.05	0.02	7.9	0.01	0.10	0.11	12.2	0.00	1.63	0.02	0.00	0.31	29.9
GA	1.10	0.07	0.00	0.04	1.30	0.05	4.7	0.00	0.10	1.18	0.00	1.27	1.83	0.15	16.5	0.02	0.23	0.23	14.9	0.03	2.46	0.02	0.03	0.67	46.8
GN	1.15	0.03	0.00	0.02	0.43	0.02	6.1	0.00	0.07	0.63	0.00	1.83	0.95	0.06	11.3	0.02	0.13	0.12	7.5	0.00	3.27	0.02	0.01	1.14	34.9
GO	0.68	0.02	0.00	0.02	0.32	0.04	7.1	0.00	0.04	0.45	0.00	0.91	2.34	0.02	20.5	0.04	0.12	0.04	16.6	0.01	1.47	0.02	0.03	0.16	50.9
HU	2.73	0.10	0.00	0.03	1.08	0.02	8.2	0.00	0.18	0.49	0.00	2.29	2.97	0.02	20.1	0.03	0.80	0.17	12.2	0.02	7.27	0.08	0.03	0.32	59.2
IP	0.76	0.05	0.00	0.04	0.19	0.02	11.4	0.00	0.03	0.23	0.00	1.58	2.31	0.02	14.5	0.02	0.12	0.15	10.0	0.01	0.72	0.03	0.02	0.16	42.4
NO	0.76	0.04	0.00	0.04	1.18	0.02	10.2	0.00	0.02	0.29	0.00	0.90	2.60	0.02	17.8	0.03	0.12	0.11	9.9	0.01	1.31	0.02	0.02	0.10	45.5
OV	2.76	0.05	0.00	0.06	2.22	0.02	5.7	0.00	0.04	0.67	0.00	1.18	1.98	0.04	10.7	0.05	0.13	0.16	10.4	0.01	4.27	0.04	0.03	0.20	40.8
PA	0.41	0.03	0.00	0.04	0.18	0.01	3.9	0.00	0.02	0.30	0.00	1.18	0.60	0.03	3.0	0.02	0.07	0.11	8.2	0.00	0.92	0.02	0.01	0.15	19.2
PS	0.53	0.02	0.00	0.03	0.36	0.02	6.2	0.00	0.05	0.46	0.00	1.06	1.49	0.02	12.3	0.04	0.14	0.09	10.1	0.01	1.05	0.01	0.01	0.20	34.2
RE	3.23	0.02	0.00	0.03	1.18	0.09	31.6	0.01	0.03	0.63	0.00	0.62	8.14	0.02	54.0	0.15	0.17	0.02	4.5	0.01	6.21	0.09	0.01	0.03	110.8
TA	0.44	0.02	0.00	0.01	0.19	0.03	3.5	0.00	0.02	0.12	0.00	2.78	0.90	0.02	7.8	0.03	0.09	0.06	13.2	0.01	0.77	0.01	0.01	0.24	30.2
TU	0.65	0.03	0.00	0.05	0.20	0.01	4.4	0.00	0.04	0.55	0.00	1.27	0.84	0.03	3.8	0.02	0.08	0.15	7.2	0.00	1.23	0.02	0.01	0.18	20.7
UM	0.87	0.02	0.00	0.02	0.38	0.07	5.7	0.00	0.04	0.37	0.00	1.22	2.03	0.02	19.2	0.06	0.15	0.03	16.3	0.01	2.01	0.02	0.01	0.13	48.7
UP	0.68	0.02	0.00	0.02	0.22	0.03	3.0	0.01	0.05	0.43	0.00	1.21	1.50	0.02	12.1	0.07	0.10	0.05	17.0	0.01	1.53	0.01	0.01	0.16	38.3
VE	0.75	0.05	0.00	0.05	0.63	0.01	3.6	0.00	0.05	0.70	0.00	1.09	0.82	0.09	4.4	0.00	0.10	0.18	10.1	0.00	1.97	0.02	0.00	0.37	25.0

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 10.3: Summer Mean Elemental Concentrations of all elements: % of $PM_{2.5}$ mass

Centr	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn	All
AC	0.81	0.02	0.00	0.02	0.44	0.02	1.63	0.02	0.05	0.56	0.00	0.61	1.88	0.03	12.61	0.03	0.15	0.14	19.54	0.06	1.76	0.02	0.03	0.17	40.6
AL	4.34	0.01	0.00	0.04	3.53	0.01	0.33	0.03	0.03	0.53	0.00	2.05	3.83	0.02	13.09	0.04	0.15	0.11	24.77	0.04	9.26	0.07	0.03	0.07	62.4
AS	0.58	0.03	0.00	0.01	0.23	0.02	1.66	0.00	0.02	0.27	0.00	0.72	1.34	0.02	10.18	0.01	0.12	0.09	21.75	0.02	1.64	0.02	0.03	0.16	38.9
BA	2.56	0.05	0.00	0.02	1.04	0.02	1.18	0.00	0.12	0.62	0.00	3.57	2.86	0.03	13.71	0.04	0.14	0.21	22.48	0.01	3.83	0.10	0.05	0.30	53.0
BS	1.07	0.02	0.00	0.03	0.47	0.02	0.38	0.01	0.05	0.60	0.00	1.27	1.08	0.02	8.35	0.03	0.15	0.10	21.75	0.03	2.59	0.02	0.01	0.22	38.3
ER	1.49	0.02	0.00	0.01	0.43	0.01	0.19	0.00	0.03	0.54	0.00	0.90	1.30	0.02	8.25	0.02	0.11	0.04	26.46	0.01	3.15	0.03	0.01	0.11	43.1
GA	1.14	0.04	0.00	0.02	1.11	0.01	0.86	0.01	0.10	0.81	0.00	1.21	1.87	0.11	15.25	0.05	0.17	0.19	29.29	0.05	2.52	0.02	0.06	0.86	55.7
GN	1.59	0.03	0.00	0.02	1.62	0.03	0.58	0.01	0.14	0.59	0.00	1.78	1.15	0.04	11.73	0.06	0.17	0.15	18.60	0.03	10.61	0.04	0.02	0.85	49.8
GO	0.99	0.01	0.00	0.02	0.41	0.03	3.79	0.01	0.04	0.42	0.00	0.56	2.61	0.02	19.85	0.03	0.11	0.04	17.60	0.02	2.22	0.03	0.05	0.08	48.9
HU	2.90	0.06	0.00	0.03	1.00	0.02	1.22	0.02	0.17	0.48	0.00	1.19	3.57	0.02	23.75	0.05	0.80	0.17	30.85	0.07	8.44	0.15	0.05	0.25	75.3
IP	0.64	0.03	0.00	0.01	0.24	0.02	1.45	0.00	0.02	0.24	0.00	0.79	1.79	0.02	13.94	0.03	0.11	0.06	21.38	0.02	1.25	0.02	0.07	0.10	42.2
NO	0.66	0.02	0.00	0.02	0.34	0.01	1.69	0.01	0.03	0.24	0.00	0.58	1.81	0.01	14.10	0.06	0.10	0.08	20.50	0.03	1.42	0.02	0.05	0.09	41.9
OV	2.90	0.02	0.00	0.03	1.27	0.01	0.85	0.02	0.07	0.99	0.00	1.63	2.26	0.04	13.59	0.04	0.11	0.13	27.10	0.03	5.05	0.05	0.04	0.17	56.4
PA	1.41	0.02	0.00	0.02	0.43	0.01	0.39	0.00	0.03	0.52	0.00	0.91	1.37	0.03	6.72	0.03	0.10	0.09	23.05	0.01	3.29	0.06	0.02	0.15	38.7
PS	1.06	0.02	0.00	0.01	0.60	0.01	0.99	0.00	0.07	0.70	0.00	1.04	1.62	0.03	12.46	0.03	0.16	0.07	20.37	0.01	2.50	0.03	0.01	0.25	42.1
RE	2.42	0.03	0.00	0.04	1.06	0.09	19.00	0.07	0.05	0.65	0.00	0.99	5.78	0.01	49.23	0.12	0.24	0.15	15.80	0.09	6.59	0.10	0.01	0.06	102.6
TA	1.28	0.01	0.00	0.01	1.17	0.01	0.29	0.00	0.01	0.30	0.00	1.57	1.41	0.02	7.58	0.07	0.12	0.03	16.50	0.00	3.34	0.02	0.01	0.16	33.9
TU	1.32	0.03	0.00	0.03	0.38	0.01	0.50	0.01	0.07	0.73	0.00	0.89	1.45	0.03	5.96	0.04	0.10	0.15	19.37	0.02	2.79	0.03	0.01	0.15	34.1
UM	1.36	0.02	0.00	0.02	0.44	0.07	1.14	0.01	0.02	0.41	0.00	0.85	1.63	0.01	14.77	0.01	0.18	0.04	16.37	0.01	3.76	0.03	0.02	0.06	41.2
UP	1.32	0.01	0.00	0.01	0.42	0.06	2.64	0.00	0.03	0.48	0.00	0.66	2.13	0.01	14.91	0.02	0.15	0.02	17.58	0.01	3.26	0.03	0.02	0.09	43.9
VE	0.96	0.03	0.00	0.04	0.58	0.01	0.29	0.03	0.08	0.89	0.00	0.93	1.07	0.05	9.02	0.06	0.15	0.27	20.82	0.05	1.50	0.02	0.01	0.58	37.4

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 10.4: Weekday Mean Elemental Concentrations of all elements: % of $PM_{2.5}$ mass

Centr	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn	All
AC	0.72	0.03	0.00	0.02	0.39	0.01	5.0	0.01	0.04	0.55	0.00	0.73	1.60	0.03	11.8	0.03	0.16	0.12	14.1	0.04	1.5	0.02	0.03	0.21	37.1
AL	2.91	0.01	0.00	0.03	2.39	0.02	1.7	0.02	0.03	0.42	0.00	2.67	2.68	0.02	11.7	0.06	0.13	0.10	19.3	0.03	6.3	0.05	0.02	0.11	50.6
AS	0.58	0.03	0.00	0.02	0.24	0.02	4.3	0.01	0.04	0.33	0.00	0.84	1.26	0.03	10.3	0.02	0.14	0.13	16.5	0.04	1.3	0.02	0.03	0.22	36.3
BA	1.62	0.05	0.00	0.06	1.11	0.02	3.8	0.00	0.10	0.70	0.00	1.11	1.70	0.05	12.1	0.03	0.15	0.23	14.4	0.01	3.3	0.08	0.04	0.39	41.0
BS	1.02	0.02	0.00	0.03	0.44	0.03	3.0	0.00	0.04	0.53	0.00	1.55	0.98	0.02	8.5	0.03	0.13	0.08	13.6	0.01	2.0	0.02	0.01	0.21	32.2
ER	1.01	0.03	0.00	0.01	0.39	0.02	1.9	0.00	0.03	0.50	0.00	0.94	0.95	0.02	7.0	0.03	0.10	0.09	16.3	0.01	2.2	0.02	0.00	0.25	31.8
GA	1.15	0.04	0.00	0.02	1.27	0.02	2.4	0.01	0.10	1.01	0.00	1.07	1.99	0.15	16.8	0.05	0.19	0.21	23.2	0.04	2.8	0.02	0.05	0.74	53.2
GN	1.61	0.03	0.00	0.02	0.87	0.02	4.0	0.00	0.10	0.76	0.00	1.76	1.13	0.06	11.9	0.04	0.16	0.14	10.9	0.01	7.4	0.03	0.02	1.02	42.0
GO	0.78	0.02	0.00	0.02	0.33	0.03	4.9	0.00	0.03	0.43	0.00	0.86	2.43	0.02	17.0	0.06	0.11	0.04	16.9	0.01	1.7	0.02	0.03	0.13	46.0
HU	2.70	0.08	0.00	0.03	1.03	0.02	5.5	0.01	0.18	0.47	0.00	1.76	3.52	0.02	24.4	0.05	0.78	0.17	20.7	0.04	7.5	0.11	0.04	0.26	69.4
IP	0.75	0.04	0.00	0.03	0.26	0.02	7.2	0.01	0.03	0.27	0.00	1.41	2.46	0.02	17.6	0.03	0.12	0.14	14.3	0.02	1.1	0.03	0.04	0.15	46.1
NO	0.70	0.03	0.00	0.02	0.66	0.02	6.6	0.00	0.02	0.27	0.00	0.72	2.49	0.02	18.8	0.04	0.10	0.09	14.6	0.01	1.4	0.02	0.03	0.10	46.8
OV	2.99	0.04	0.00	0.04	2.07	0.02	3.5	0.01	0.06	0.99	0.00	1.49	2.38	0.05	13.8	0.04	0.13	0.16	18.4	0.02	5.1	0.05	0.04	0.22	51.7
PA	0.71	0.03	0.00	0.03	0.26	0.01	2.7	0.00	0.03	0.37	0.00	1.02	0.84	0.03	4.3	0.03	0.08	0.11	12.4	0.01	1.7	0.03	0.01	0.13	24.9
PS	0.83	0.02	0.00	0.02	0.51	0.02	4.1	0.01	0.06	0.62	0.00	1.04	1.76	0.03	14.8	0.04	0.15	0.10	13.7	0.02	2.0	0.02	0.01	0.26	40.2
RE	3.31	0.03	0.00	0.03	1.23	0.09	24.9	0.03	0.06	0.72	0.00	0.78	6.75	0.02	50.8	0.16	0.27	0.08	9.4	0.05	7.2	0.09	0.01	0.07	106.0
TA	1.20	0.02	0.00	0.02	0.63	0.02	1.8	0.01	0.02	0.25	0.00	2.60	1.14	0.02	7.1	0.05	0.13	0.06	15.1	0.01	2.9	0.02	0.01	0.22	33.2
TU	0.88	0.03	0.00	0.05	0.27	0.01	3.1	0.00	0.05	0.59	0.00	1.01	1.05	0.03	4.3	0.02	0.08	0.14	10.0	0.01	1.7	0.02	0.01	0.16	23.5
UM	1.32	0.02	0.00	0.02	0.43	0.08	2.1	0.01	0.05	0.48	0.00	1.16	1.69	0.02	15.1	0.07	0.19	0.06	17.3	0.02	3.4	0.03	0.01	0.11	43.8
UP	1.01	0.02	0.00	0.02	0.35	0.05	2.6	0.01	0.05	0.52	0.00	1.03	1.56	0.02	11.7	0.05	0.12	0.04	15.9	0.01	2.5	0.02	0.01	0.14	37.6
VE	0.86	0.04	0.00	0.05	0.65	0.01	2.1	0.00	0.05	0.71	0.00	0.96	0.92	0.05	4.7	0.01	0.10	0.18	12.2	0.01	2.0	0.03	0.01	0.28	25.9

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 10.5: Weekend Mean Elemental Concentrations of all elements: % of $PM_{2.5}$ mass

Centr	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S *	Se	Si	Ti	V	Zn	All
AC	0.79	0.03	0.00	0.02	0.26	0.01	3.2	0.01	0.03	0.41	0.00	0.77	1.30	0.02	8.6	0.01	0.11	0.12	16.9	0.06	1.44	0.02	0.03	0.20	34.3
AL	2.20	0.01	0.00	0.03	1.62	0.01	2.8	0.00	0.03	0.30	0.00	2.46	2.06	0.01	7.7	0.00	0.11	0.06	17.6	0.01	4.41	0.03	0.01	0.06	41.6
AS	0.72	0.02	0.00	0.02	0.17	0.01	3.5	0.00	0.01	0.27	0.00	0.88	1.29	0.02	8.6	0.01	0.11	0.10	18.7	0.03	1.31	0.02	0.03	0.18	36.0
BA	2.14	0.06	0.00	0.05	0.72	0.01	3.7	0.00	0.09	0.50	0.00	4.42	2.80	0.03	12.6	0.02	0.13	0.26	16.4	0.01	2.42	0.11	0.03	0.29	46.8
BS	0.65	0.02	0.00	0.03	0.18	0.01	2.3	0.01	0.03	0.30	0.00	1.29	0.82	0.01	5.7	0.01	0.10	0.07	15.0	0.01	1.31	0.01	0.01	0.15	28.0
ER	0.69	0.03	0.00	0.01	0.18	0.01	2.0	0.00	0.02	0.32	0.00	0.97	0.96	0.01	6.5	0.01	0.08	0.09	17.5	0.01	1.32	0.01	0.01	0.20	30.9
GA	1.36	0.07	0.00	0.03	1.08	0.01	2.7	0.00	0.13	1.01	0.00	1.48	2.28	0.11	19.7	0.03	0.28	0.29	24.6	0.04	2.78	0.02	0.07	1.33	59.3
GN	0.68	0.02	0.00	0.02	0.30	0.01	2.5	0.00	0.06	0.41	0.00	1.61	0.79	0.04	9.2	0.00	0.12	0.07	11.2	0.01	7.24	0.02	0.02	0.88	35.3
GO	0.68	0.01	0.00	0.02	0.22	0.02	3.3	0.00	0.03	0.38	0.00	1.07	1.76	0.02	13.5	0.01	0.11	0.05	18.0	0.01	1.61	0.02	0.03	0.12	41.0
HU	2.12	0.05	0.00	0.03	0.81	0.01	2.6	0.00	0.09	0.35	0.00	1.62	2.91	0.01	19.9	0.02	0.57	0.12	22.8	0.03	6.68	0.05	0.04	0.16	61.0
IP	0.56	0.03	0.00	0.03	0.14	0.01	5.5	0.00	0.02	0.19	0.00	0.80	1.38	0.01	8.6	0.04	0.10	0.06	15.4	0.01	0.78	0.02	0.03	0.10	33.8
NO	0.61	0.02	0.00	0.03	0.30	0.01	4.9	0.00	0.02	0.22	0.00	0.70	1.59	0.02	11.3	0.03	0.09	0.08	14.8	0.02	1.00	0.01	0.03	0.09	35.8
OV	2.84	0.03	0.00	0.05	1.11	0.01	3.6	0.00	0.04	0.63	0.00	1.43	1.85	0.02	11.2	0.03	0.11	0.12	16.8	0.01	4.49	0.05	0.03	0.15	44.6
PA	0.54	0.02	0.00	0.03	0.20	0.01	2.4	0.00	0.03	0.33	0.00	1.07	0.72	0.03	3.6	0.01	0.07	0.10	12.0	0.01	1.23	0.01	0.01	0.13	22.5
PS	0.71	0.01	0.00	0.02	0.30	0.00	2.9	0.00	0.04	0.41	0.00	0.95	1.39	0.02	10.0	0.03	0.12	0.06	16.0	0.01	1.45	0.02	0.01	0.14	34.6
RE	2.29	0.01	0.00	0.03	0.81	0.08	25.2	0.02	0.02	0.42	0.00	0.76	7.12	0.01	53.7	0.12	0.12	0.04	11.0	0.02	5.36	0.06	0.01	0.04	107.3
TA	0.71	0.02	0.00	0.01	0.43	0.01	2.5	0.00	0.02	0.14	0.00	2.68	0.88	0.01	5.6	0.01	0.08	0.05	12.6	0.00	1.58	0.01	0.01	0.24	27.6
TU	0.74	0.03	0.00	0.05	0.22	0.01	2.9	0.00	0.06	0.58	0.00	1.22	0.92	0.02	3.7	0.02	0.08	0.17	9.2	0.01	1.37	0.02	0.01	0.14	21.6
UM	1.17	0.01	0.00	0.02	0.25	0.04	3.6	0.01	0.03	0.33	0.00	0.96	1.65	0.01	15.4	0.06	0.09	0.06	18.6	0.01	2.48	0.03	0.02	0.10	44.9
UP	0.99	0.02	0.00	0.02	0.31	0.02	1.1	0.00	0.04	0.55	0.00	1.30	1.44	0.02	9.2	0.03	0.10	0.06	20.4	0.02	2.30	0.02	0.02	0.15	38.1
VE	0.71	0.04	0.00	0.05	0.63	0.01	1.9	0.00	0.06	0.74	0.00	0.95	0.69	0.05	3.3	0.03	0.09	0.17	9.7	0.00	1.30	0.02	0.01	0.20	20.6

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

Tab. 11.1: Ratios Winter/Summer Mean Elemental Concentrations of all elements

centre	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V	Zn
AC	1.53	4.95	(0.20)	2.71	1.47	1.27	9.49	(0.23)	1.65	1.91	(0.76)	2.97	1.40	2.41	1.53	(1.38)	2.09	1.86	1.12	1.64	1.27	1.60	1.53	3.16
AL	0.41	(2.41)	(0.13)	0.89	0.51	2.71	17.90	(0.14)	2.05	0.53	(0.73)	2.32	0.43	0.73	0.59	(0.89)	0.96	0.99	0.60	(0.09)	0.39	0.47	0.83	2.32
AS	1.32	1.88	(1.36)	3.59	(1.28)	1.34	6.17	(2.48)	2.89	1.73	(4.41)	2.10	1.31	2.06	1.40	(2.46)	1.73	2.42	0.76	1.72	0.75	1.26	1.50	2.63
BA	0.74	1.98	(0.62)	4.99	1.19	1.46	7.19	(0.04)	1.15	1.54	1.25	0.56	0.67	2.67	0.96	(1.02)	1.54	1.77	0.69	(0.87)	0.95	1.12	0.89	1.75
BS	1.34	(3.01)	(0.02)	2.11	1.02	1.51	20.12	(0.10)	0.88	1.04	(0.96)	2.28	1.30	1.46	1.38	(0.39)	1.16	1.09	0.86	(0.12)	0.74	1.08	1.14	1.45
ER	0.91	3.89	(0.31)	1.91	1.34	3.51	37.85	(0.38)	1.29	1.34	(3.40)	2.22	1.46	1.55	1.73	(1.15)	1.52	4.89	0.83	(0.72)	0.94	1.15	(0.78)	5.06
GA	0.50	0.95	(0.02)	1.24	0.61	2.40	2.83	(0.06)	0.53	0.75	(0.63)	0.54	0.50	0.71	0.56	(0.21)	0.70	0.65	0.26	0.33	0.51	0.57	0.26	0.41
GN	1.57	2.61	(0.27)	2.25	0.58	1.04	22.95	(0.19)	1.11	2.33	(0.99)	2.24	1.79	3.24	2.10	(0.60)	1.73	1.74	0.88	(0.15)	0.67	1.37	1.28	2.92
GO	0.75	(1.41)	(0.23)	1.21	(0.86)	1.24	2.07	(0.41)	1.28	1.19	1.32	1.79	0.98	1.18	1.13	(1.25)	1.20	0.99	1.04	(0.27)	0.73	0.65	0.64	2.18
HU	0.96	1.56	(0.30)	1.15	1.10	1.25	6.89	(0.03)	1.06	1.06	(0.96)	1.95	0.85	1.39	0.86	(0.69)	1.01	0.99	0.40	0.37	0.88	0.52	0.54	1.28
IP	1.67	2.61	(0.28)	3.81	(1.14)	1.81	11.09	(0.94)	2.13	1.35	(4.23)	2.81	1.82	1.05	1.47	(0.80)	1.53	3.47	0.66	(0.70)	0.81	2.61	0.37	2.41
NO	1.38	2.81	(0.18)	2.44	4.25	4.51	7.33	(0.23)	0.93	1.43	(0.95)	1.87	1.74	2.51	1.53	(0.71)	1.47	1.62	0.59	(0.32)	1.12	1.29	0.39	1.41
OV	1.00	2.79	(0.23)	2.24	1.82	1.86	7.01	(0.06)	0.68	0.70	(0.79)	0.76	0.92	0.99	0.83	(1.22)	1.26	1.27	0.40	0.30	0.89	0.96	0.93	1.22
PA	0.81	3.40	(0.26)	5.40	1.14	1.96	28.28	(0.29)	1.70	1.63	2.54	3.63	1.22	3.58	1.22	(1.66)	1.98	3.31	0.99	0.92	0.78	0.79	1.34	2.86
PS	0.66	1.07	(0.26)	3.11	0.80	1.86	8.27	(2.42)	1.09	0.88	(1.25)	1.33	1.21	1.03	1.30	(1.67)	1.14	1.56	0.65	(1.02)	0.55	0.64	1.04	1.07
RE	1.97	(0.90)	(0.27)	1.19	(1.64)	1.49	2.45	(0.14)	0.87	1.42	(0.98)	0.93	2.08	2.50	1.62	(1.77)	(1.02)	0.23	0.42	(0.24)	1.39	1.35	(0.91)	0.77
TA	0.52	(2.32)	(1.37)	2.30	0.25	2.69	17.88	(0.27)	2.00	0.64	(3.27)	2.71	0.97	1.48	1.57	(0.71)	1.18	3.11	1.22	(2.51)	0.35	0.37	2.27	2.27
TU	1.48	3.09	(0.08)	5.13	1.55	1.91	26.20	(0.13)	1.95	2.27	1.98	4.28	1.75	3.74	1.92	1.31	2.43	2.91	1.12	0.79	1.32	1.75	2.12	3.45
UM	0.76	(1.55)	(0.46)	1.30	(1.04)	1.25	5.96	(0.04)	2.63	1.08	(1.43)	1.71	1.49	1.97	1.55	(8.30)	(0.97)	0.87	1.19	(0.60)	0.64	0.73	(0.88)	2.52
UP	0.82	(2.80)	(10.0)	2.72	(0.85)	0.88	1.83	(15.57)	2.36	1.44	3.78	2.95	1.13	2.47	1.31	(5.67)	1.14	3.25	1.56	(2.65)	0.76	0.80	1.18	2.79
VE	2.48	4.87	(0.04)	4.41	3.46	2.14	39.87	(0.00)	2.01	2.52	1.13	3.73	2.45	5.38	1.54	(0.24)	2.15	2.16	1.55	0.16	4.19	3.12	0.63	2.06

Tab. 11.2: Ratio Weekday/Weekend Mean Elemental Concentrations of all elements

ce	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	I	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V	Zn
AC	0.94	0.85	1.42	1.04	1.57	1.62	1.61	1.07	1.29	1.37	1.07	3.72	0.98	1.26	1.25	1.41	1.90	1.39	0.99	0.86	0.74	1.09	1.11	1.22	1.08
AL	1.18	0.86	3.04	1.02	1.32	1.54	0.53	4.26	0.98	1.27	6.06	3.80	0.97	1.17	1.42	1.35	30.44	1.08	1.34	0.98	2.48	1.28	1.23	1.48	1.53
AS	0.87	1.43	2.46	1.21	1.49	1.23	1.35	7.63	3.12	1.37	5.75	3.83	1.04	1.07	1.33	1.31	1.96	1.34	1.40	0.96	1.83	1.05	1.14	1.21	1.28
BA	0.88	0.99	2.00	1.28	1.79	1.84	1.17	11.7	1.32	1.60	1.27	1.74	0.29	0.71	2.03	1.11	2.31	1.38	1.03	1.01	0.94	1.58	0.80	1.73	1.57
BS	1.19	1.03	0.83	0.95	1.86	1.66	1.00	0.58	1.01	1.35	1.17	3.22	0.91	0.90	1.18	1.13	2.45	0.99	0.93	0.68	0.87	1.14	1.12	0.83	1.02
ER	1.26	0.77	3.43	0.76	1.85	2.27	0.80	10.0	1.25	1.36	1.65	1.84	0.83	0.86	1.32	0.94	2.08	1.16	0.93	0.81	1.26	1.43	1.30	0.70	1.09
GA	0.90	0.73	2.50	0.91	1.26	1.76	0.96	4.28	0.82	1.07	2.14	2.28	0.77	0.93	1.51	0.91	1.70	0.72	0.79	1.01	1.03	1.06	1.13	0.81	0.60
GN	2.24	1.35	1.45	0.82	2.77	2.06	1.49	4.69	1.73	1.76	2.43	3.28	1.04	1.37	1.70	1.22	18.27	1.23	1.80	0.93	1.33	0.97	1.72	0.89	1.09
GO	1.35	1.31	19.00	1.00	1.71	1.93	1.76	2.52	1.47	1.32	4.19	1.05	0.94	1.62	1.53	1.48	6.66	1.20	0.87	1.10	2.03	1.23	1.01	1.40	1.23
HU	1.40	1.95	1.40	1.09	1.39	2.06	2.35	1.80	2.30	1.50	2.32	1.50	1.20	1.33	1.55	1.35	3.43	1.50	1.57	1.00	1.66	1.23	2.39	1.02	1.76
IP	1.10	0.99	32.71	0.78	1.52	2.25	1.10	7.32	1.80	1.17	1.18	1.78	1.47	1.49	1.58	1.71	0.73	1.00	1.86	0.78	1.74	1.14	1.80	0.90	1.21
NO	1.06	1.12	1.45	0.77	2.04	2.90	1.24	0.78	0.92	1.15	1.66	1.46	0.94	1.44	0.95	1.54	1.31	1.11	0.96	0.91	0.62	1.32	1.03	0.99	1.02
OV	0.97	1.18	4.39	0.72	1.72	1.92	0.90	53.85	1.47	1.46	1.09	2.14	0.96	1.19	1.84	1.14	1.19	1.09	1.25	1.01	2.05	1.06	0.97	1.06	1.33
PA	1.17	1.04	1.01	1.01	1.17	1.72	1.02	0.80	0.97	0.99	1.16	1.74	0.85	1.05	0.98	1.07	1.62	1.08	0.91	0.93	0.71	1.24	1.72	1.05	0.89
PS	1.03	1.56	2.18	1.01	1.53	4.24	1.25	2.07	1.37	1.34	0.97	1.95	0.97	1.12	1.61	1.31	0.97	1.15	1.64	0.76	1.31	1.20	1.19	0.81	1.71
RE	1.49	2.02	1.49	0.96	1.56	1.27	1.02	1.37	2.89	1.75	1.55	9.40	1.06	0.98	1.48	0.97	1.33	2.25	1.93	0.88	2.35	1.39	1.43	2.07	1.75
TA	1.64	0.81	32.33	1.02	1.43	1.68	0.68	2.99	1.23	1.76	1.62	1.68	0.94	1.26	1.80	1.22	9.21	1.51	1.30	1.16	2.83	1.76	1.70	0.90	0.88
TU	1.25	1.08	0.55	0.88	1.27	1.59	1.10	0.71	0.79	1.07	0.80	2.51	0.87	1.20	1.40	1.21	1.24	1.07	0.85	1.13	0.66	1.34	1.13	1.08	1.19
UM	1.20	1.77	1.27	0.95	1.84	2.20	0.64	2.03	1.54	1.56	1.36	2.58	1.30	1.09	1.85	1.05	1.35	2.13	1.07	0.99	1.48	1.47	0.95	0.63	1.14
UP	0.99	1.08	1.03	0.78	1.11	1.82	2.33	8.78	1.11	0.91	1.72	3.13	0.77	1.05	0.90	1.23	1.72	1.14	0.64	0.76	0.41	1.05	0.95	0.80	0.91
VE	1.51	1.15	9.00	1.20	1.29	1.18	1.44	386	1.12	1.19	1.17	2.11	1.27	1.68	1.46	1.83	0.41	1.36	1.33	1.57	4.76	1.94	1.73	1.04	1.72

Tab. 11.3: Ratio Si/Ca, Si/Al, Si/Mg for each centre: Mean of all "annual" filters, mean of the "winter" (w), "summer" (s), "weekday" (wd) and the "weekend" filters.

	Ratio Si / Ca					Ratio Si / Al					Ratio Si / Mg				
	mean	w	s	wd	wk	mean	w	s	wd	wk	mean	w	s	wd	wk
AC	4.0	3.5	3.9	3.8	4.9	2.1	2.0	2.3	2.2	1.7	1.2	1.0	1.1	1.2	1.1
AL	2.7	2.1	2.9	2.7	3.2	2.3	2.1	2.3	2.3	2.0	2.2	2.4	2.2	2.3	2.0
AS	5.2	3.2	6.3	4.8	6.6	2.2	1.7	2.9	2.3	1.6	1.2	0.9	1.6	1.3	1.0
BA	3.0	2.9	3.6	3.0	3.3	2.0	1.9	2.0	2.0	1.7	1.8	1.9	1.9	2.0	1.3
BS	4.8	3.9	5.4	4.3	7.1	2.6	1.7	2.9	2.7	2.2	1.9	1.3	2.7	2.0	1.6
ER	6.1	5.0	7.5	5.7	7.3	2.2	2.4	2.2	2.3	1.8	2.0	1.7	2.3	2.1	1.4
GA	2.7	2.1	3.0	2.7	2.8	2.4	2.4	2.4	2.5	2.1	1.4	1.5	1.4	1.5	1.2
GN	14.2	7.8	15.6	12.2	23.5	10.0	3.9	13.1	9.6	12.1	7.7	3.4	10.2	7.2	10.0
GO	5.1	4.8	5.2	4.9	6.2	2.2	2.1	2.0	2.1	2.3	1.2	1.0	1.4	1.3	1.1
HU	7.3	6.0	8.1	7.2	8.0	2.9	2.9	2.8	2.9	3.1	2.3	2.5	2.3	2.2	2.3
IP	3.9	3.7	4.5	3.6	4.8	1.9	1.7	2.0	2.0	1.4	0.6	0.4	0.8	0.6	0.6
NO	3.1	2.0	3.9	2.9	4.0	2.1	2.0	2.3	2.1	2.0	0.8	0.6	0.9	0.8	0.6
OV	3.4	2.3	4.6	3.1	4.7	1.7	1.6	1.8	1.8	1.6	2.4	2.4	2.3	2.3	2.6
PA	6.4	5.4	7.3	6.5	6.3	2.4	2.1	2.5	2.5	2.3	2.1	1.5	2.5	2.2	1.9
PS	3.9	3.0	3.9	3.6	4.9	2.6	2.2	2.6	2.7	2.0	1.4	0.9	1.9	1.4	1.1
RE	7.0	6.6	5.3	6.6	8.4	2.9	1.9	3.5	2.9	3.1	1.7	1.7	1.7	1.6	2.0
TA	4.0	3.3	3.2	3.9	4.0	2.4	1.7	2.8	2.4	2.2	2.2	0.8	2.7	2.3	1.9
TU	6.4	6.2	7.0	6.5	6.3	2.0	1.9	2.2	2.0	2.0	1.7	1.4	2.0	1.7	1.5
UM	7.6	9.2	2.2	6.9	9.2	2.7	2.8	3.1	2.9	2.1	2.1	1.4	2.3	2.2	1.5
UP	6.7	4.3	8.4	6.5	7.1	2.5	2.4	2.5	2.5	2.2	1.7	1.1	2.0	1.7	1.6
VE	3.1	3.8	2.7	3.3	1.9	2.3	3.0	1.9	2.4	1.8	2.0	2.5	1.3	2.0	1.8

Tab. 12.1: Antwerp City: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.70																								
Al	0.67	0.63																							
As	**0.82**	0.73	0.56																						
Bi	-0.05	0.09	0.06	-0.04																					
Br	**0.85**	0.59	0.59	0.79	**0.84**																				
Ca	0.66	0.73	0.74	0.57	0.25	0.64																			
Cd	-0.04	0.20	-0.03	0.36	0.29	0.14	0.34																		
Cl	**0.83**	0.49	0.52	0.74	0.08	**0.86**	0.62	0.21																	
Co	0.14	0.41	0.14	0.71	**0.90**	0.71	0.32	0.44	0.07																
Cu	0.61	0.61	0.62	0.62	0.79	0.78	0.72	0.31	0.58	0.77															
Fe	0.75	**0.90**	0.79	0.62	0.09	0.65	**0.81**	0.03	0.57	0.31	0.69														
Ga	0.06	-0.13	-0.09	0.47	**0.88**	0.34	0.04	0.15	0.11	**0.91**	0.44	-0.07													
K	**0.92**	0.74	0.75	**0.83**	0.03	**0.88**	0.71	0.14	**0.82**	0.21	0.72	**0.81**	0.01												
Mg	0.38	0.20	0.33	0.46	-0.08	0.44	0.54	0.35	0.71	0.02	0.33	0.30	0.01	0.40											
Mn	**0.84**	**0.83**	0.74	0.77	0.05	0.76	0.75	0.01	0.71	0.19	0.64	**0.89**	-0.03	**0.88**	0.35										
Na	0.19	0.03	0.09	0.34	0.02	0.32	0.38	0.36	0.61	0.01	0.20	0.09	0.08	0.22	**0.94**	0.18									
Ni	0.03	0.02	0.07	-0.16	0.29	0.18	0.23	-0.04	0.19	0.27	0.22	0.14	0.41	0.02	0.43	0.05	0.42								
P	0.79	0.61	0.61	0.72	0.25	0.75	0.66	0.01	0.73	0.11	0.69	0.73	0.21	**0.81**	0.39	**0.80**	0.22	0.19							
Pb	**0.80**	0.68	0.56	**0.90**	0.72	**0.91**	0.63	0.32	0.71	0.79	0.77	0.67	0.34	**0.83**	0.31	0.76	0.19	0.17	0.67						
S	**0.89**	0.53	0.57	0.68	-0.19	0.66	0.44	-0.14	0.63	0.03	0.43	0.58	0.09	0.75	0.24	0.66	0.01	-0.07	0.62	0.63					
Se	0.48	0.47	0.23	0.74	0.66	0.52	0.18	0.68	0.42	**0.84**	0.30	0.30	0.22	0.44	0.20	0.43	0.17	0.35	0.26	0.66	0.40				
Si	0.46	0.60	**0.93**	0.36	0.11	0.38	0.70	-0.01	0.27	0.20	0.55	0.73	-0.12	0.57	0.19	0.60	-0.03	0.09	0.46	0.38	0.37	0.10			
Ti	0.79	0.75	**0.91**	0.64	0.09	0.71	**0.80**	0.04	0.63	0.14	0.71	**0.87**	-0.04	**0.84**	0.34	**0.83**	0.12	0.15	0.71	0.70	0.65	0.31	**0.80**		
V	0.39	0.13	0.18	0.15	0.07	0.27	0.23	-0.04	0.44	-0.13	0.11	0.20	0.23	0.25	0.33	0.27	0.30	0.05	0.37	0.17	0.40	0.08	0.03	0.33	
Zn	**0.87**	0.76	0.69	0.76	0.27	**0.83**	0.69	-0.02	0.77	0.42	0.72	**0.82**	0.03	**0.91**	0.35	**0.88**	0.18	-0.01	0.79	**0.82**	0.72	0.41	0.53	0.79	0.19

Tab. 12.2: Albacete: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.54																								
Al	0.24	-0.05																							
As	0.57	0.15	-0.27																						
Bi	-0.04	-0.16	0.14																						
Br	0.31	0.22	0.25	0.23	**0.80**																				
Ca	0.18	0.15	0.62	-0.47	0.06	0.22																			
Cd	-0.30	0.22	-0.06		-0.39	-0.28	0.17																		
Cl	0.41	0.36	-0.23	0.57	0.23	0.15	-0.21	0.11																	
Co	-0.09	-0.17	0.32		**0.93**	0.79	0.20	-0.54	0.04																
Cu	0.06	0.27	-0.07	0.07	0.33	0.60	0.11	-0.36	0.39	0.39															
Fe	0.27	0.01	**0.94**	0.09	0.38	0.32	0.64	0.00	-0.19	0.46	0.01														
Ga	-0.04	-0.14	0.09	0.15	**0.90**	**0.87**	0.28	-0.69	-0.14	**0.85**	**0.93**	0.24													
K	0.59	0.63	0.03	0.03	-0.21	0.12	0.05	0.02	0.41	-0.25	0.06	0.05	-0.40												
Mg	0.17	-0.08	**0.80**	-0.31	0.37	0.32	**0.83**	0.10	-0.26	0.44	0.05	0.79	0.36	-0.07											
Mn	0.24	0.09	0.63	0.00	0.32	0.44	0.55	-0.03	-0.16	0.37	0.19	0.70	0.44	0.06	0.65										
Na	0.04	-0.09	0.23	0.24	0.63	0.46	0.34	-0.07	-0.04	0.78	0.43	0.30	0.69	-0.20	0.59	0.41									
Ni	-0.37	-0.23	-0.29			-0.14	-0.34		-0.38	-0.22	0.00	-0.03	-0.35	-0.45	-0.37	-0.10	-0.16								
P	0.46	0.39	0.59	-0.11	-0.14	0.24	0.53	-0.02	-0.14	-0.07	-0.05	0.58	-0.04	0.44	0.53	0.41	0.08	-0.15							
Pb	0.07	0.14	0.11	0.09	**0.82**	**0.87**	0.08	-0.38	0.19	0.77	0.79	0.22	**0.87**	0.01	0.16	0.30	0.40	-0.03	0.01						
S	0.57	0.04	0.31	0.57	0.08	0.25	0.28	-0.36	-0.13	0.06	-0.15	0.25	0.27	-0.02	0.43	0.23	0.39	0.01	0.38	-0.02					
Se	-0.11	-0.20	0.15		**0.97**	**0.81**	0.07	-0.40	0.00	**0.88**	0.41	0.30	**0.90**	-0.37	0.21	0.30	0.51	-0.12	-0.20	**0.84**	0.00				
Si	0.20	-0.05	**0.98**	-0.30	0.13	0.20	0.61	-0.07	-0.27	0.32	-0.08	**0.92**	0.08	0.01	**0.81**	0.62	0.23	-0.30	0.57	0.10	0.29	0.15			
Ti	0.26	-0.02	**0.99**	-0.13	0.12	0.22	0.58	-0.06	-0.22	0.29	-0.08	**0.93**	0.06	0.03	0.78	0.65	0.22	-0.33	0.58	0.09	0.30	0.11	**0.98**		
V	0.48	0.33	0.39	0.28	-0.04	0.12	0.26	-0.19	-0.01	0.00	-0.07	0.38	0.04	0.08	0.32	0.33	0.19	-0.03	0.43	-0.01	0.57	-0.04	0.40	0.42	
Zn	0.20	0.06	0.10	0.55	0.14	0.07	0.28	0.28	0.16	0.20	0.25	0.23	-0.03	0.18	0.24	0.36	0.16	-0.15	0.04	0.09	-0.01	0.40	0.12	0.11	0.13

Tab. 12.3: Antwerp South: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.91**																								
Al	0.56	0.58																							
As	**0.82**	**0.82**	0.54																						
Bi	-0.03	0.04	0.09	-0.27																					
Br	0.70	0.64	0.51	**0.84**	0.57																				
Ca	0.67	0.67	0.45	0.55	0.54	0.56																			
Cd	-0.23	-0.20	-0.04	0.07	0.04	0.00	-0.22																		
Cl	0.69	0.62	0.39	0.77	-0.08	0.71	0.51	-0.14																	
Co	-0.05	0.13	0.15	0.08	**0.96**	0.25	0.48		-0.14																
Cu	0.67	0.66	0.49	**0.89**	0.74	**0.82**	0.63	-0.42	0.59	0.47															
Fe	0.73	**0.84**	0.69	0.64	-0.08	0.53	0.67	-0.27	0.52	0.18	0.59														
Ga	0.12	0.15	0.21	0.59	0.77	0.37	0.23		-0.14	0.62	0.59	0.08													
K	**0.81**	**0.84**	0.67	**0.87**	-0.01	0.70	0.65	-0.06	0.73	0.01	0.72	0.78	0.08												
Mg	0.19	0.10	0.15	0.26	-0.24	0.25	0.14	-0.12	0.61	-0.29	0.14	0.12	-0.31	0.21											
Mn	0.60	0.73	0.58	0.67	-0.03	0.50	0.49	-0.05	0.43	0.15	0.56	**0.84**	0.10	0.73	0.10										
Na	0.09	0.03	0.01	0.25	-0.20	0.26	0.15	-0.07	0.59	-0.26	0.15	0.02	-0.32	0.17	**0.94**	-0.01									
Ni	-0.10	-0.12	0.04	-0.30	0.15	0.03	-0.41		-0.19	-0.10	0.20	-0.05	0.33	-0.17	-0.23	-0.15	-0.26								
P	0.78	0.77	0.50	**0.84**	0.00	0.65	0.58	-0.03	0.66	-0.07	0.64	0.66	0.20	0.71	0.33	0.54	0.26	0.05							
Pb	0.66	0.67	0.59	**0.88**	0.55	**0.88**	0.58	-0.11	0.69	0.40	**0.86**	0.56	0.45	0.77	0.21	0.53	0.20	-0.05	0.58						
S	0.75	0.63	0.42	0.57	0.01	0.43	0.48	-0.18	0.31	-0.04	0.37	0.45	0.13	0.47	0.00	0.32	-0.13	-0.06	0.51	0.37					
Se	0.12	0.25	0.22	0.19	0.70	0.35	-0.04	-0.10	0.04	0.57	0.23	0.23	0.68	0.06	-0.02	0.21	-0.04	0.12	0.12	0.29	0.11				
Si	0.25	0.32	0.71	0.20	0.09	0.26	0.30	0.18	0.06	0.29	0.32	0.43	0.22	0.34	0.00	0.32	-0.10	-0.06	0.24	0.37	0.19	0.18			
Ti	0.66	0.71	0.78	0.73	-0.11	0.48	0.59	-0.07	0.51	-0.01	0.56	0.78	0.06	0.79	0.18	0.65	0.10	-0.10	0.66	0.60	0.42	0.06	0.60		
V	0.71	0.65	0.38	0.76	-0.13	0.53	0.35	-0.01	0.67	-0.23	0.43	0.47	0.14	0.62	0.35	0.38	0.28	-0.15	0.79	0.50	0.52	0.05	0.08	0.47	
Zn	0.74	**0.80**	0.63	**0.86**	-0.06	0.73	0.64	-0.27	0.66	0.08	**0.80**	0.77	0.12	**0.92**	0.16	0.77	0.16	-0.15	0.69	**0.81**	0.38	0.08	0.34	0.74	0.51

Tab. 12.4: Barcelona: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.76																								
Al	0.48	0.32																							
As	0.72	0.67	0.74																						
Bi	-0.30	-0.20	-0.17	-0.33																					
Br	0.79	0.79	0.20	0.62	-0.05																				
Ca	0.48	0.70	0.35	0.48	0.24	0.49																			
Cd	0.41	0.63	0.14	0.25	-0.22	0.52	0.53																		
Cl	0.77	0.57	0.33	0.56	-0.21	0.77	0.31	0.30																	
Co	-0.19	-0.21	-0.21	-0.46	**0.91**	0.19	0.64		-0.25																
Cu	0.60	0.62	0.53	0.67	0.04	0.41	0.42	0.39	0.36	0.11															
Fe	0.75	**0.89**	0.42	0.67	-0.04	0.78	**0.85**	0.67	0.57	0.18	0.57														
Ga	0.28	0.19	0.40	0.51	0.74	0.16	0.14	-0.43	0.25	0.66	0.45	0.21													
K	0.35	0.13	**0.90**	0.72	-0.26	0.08	0.04	0.03	0.25	-0.32	0.46	0.15	0.34												
Mg	0.40	0.18	**0.93**	0.70	-0.17	0.11	0.14	0.00	0.34	-0.25	0.47	0.22	0.41	**0.93**											
Mn	0.58	**0.80**	0.23	0.56	-0.13	0.71	0.64	0.48	0.43	-0.11	0.45	**0.80**	0.08	0.11	0.11										
Na	0.38	0.33	0.41	0.43	0.44	0.28	0.28	-0.16	0.44	0.14	0.32	0.31	0.45	0.28	0.56	0.22									
Ni	-0.24	-0.23	-0.20	-0.29	0.35	-0.22	-0.33	-0.50	-0.17	0.13	0.02	-0.20	0.44	-0.15	-0.12	-0.18	-0.03								
P	0.79	0.76	0.60	0.75	-0.11	0.69	0.67	0.37	0.67	-0.10	0.59	**0.82**	0.33	0.43	0.47	0.65	0.36	-0.20							
Pb	0.72	0.67	0.75	**0.94**	-0.08	0.68	0.43	0.22	0.56	-0.07	0.68	0.67	0.50	0.71	0.68	0.60	0.38	-0.15	0.77						
S	0.58	0.21	0.52	0.34	-0.08	0.11	0.14	-0.26	0.25	-0.03	0.41	0.25	0.42	0.40	0.51	0.05	0.41	0.12	0.37	0.34					
Se	0.12	0.09	0.13	0.33	**0.99**	0.18	0.33	-0.18	0.06	**0.80**	0.25	0.20	0.78	0.00	0.12	0.02	0.53	0.04	0.21	0.29	0.19				
Si	0.49	0.57	0.63	0.45	0.27	0.37	0.76	0.46	0.29	0.44	0.43	0.76	0.28	0.24	0.40	0.49	0.39	-0.22	0.62	0.47	0.39	0.35			
Ti	0.54	0.35	**0.90**	0.78	-0.24	0.30	0.25	0.07	0.50	-0.26	0.55	0.39	0.39	**0.90**	**0.88**	0.24	0.37	-0.16	0.63	0.77	0.43	0.07	0.43		
V	0.63	0.51	0.54	0.49	0.70	0.36	0.42	0.00	0.34	0.73	0.51	0.51	0.52	0.34	0.48	0.28	0.41	-0.08	0.48	0.47	0.65	0.68	0.49	0.37	
Zn	0.68	0.77	0.57	**0.84**	0.19	0.63	0.55	0.41	0.55	0.06	0.66	0.71	0.59	0.47	0.51	0.63	0.44	-0.05	0.75	**0.84**	0.25	0.45	0.48	0.61	0.46

Tab. 12.5: Basel: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.65																								
Al	0.17	0.53																							
As	0.28	0.59	0.79																						
Bi	-0.51	-0.32	-0.38																						
Br	0.48	0.56	0.54	0.67	0.55																				
Ca	0.01	0.60	0.52	0.51	-0.45	0.31																			
Cd	-0.38	-0.21	-0.51	-0.02	0.47	0.62	0.06																		
Cl	0.72	0.61	0.39	0.65	-0.33	0.59	0.19	0.11																	
Co	-0.36	-0.28	-0.18	-0.07	**0.95**	0.04	-0.28	0.24	-0.32																
Cu	0.03	0.32	0.22	0.55	0.79	0.32	0.15	0.16	0.07	0.78															
Fe	0.50	**0.86**	0.61	0.54	-0.45	0.53	0.69	-0.31	0.42	-0.26	0.32														
Ga	-0.30	-0.16	-0.11	-0.05	**0.88**	0.04	-0.20		-0.29	**0.88**	0.78	-0.10													
K	**0.86**	0.75	0.41	0.60	-0.54	0.63	0.23	-0.19	**0.81**	-0.35	0.13	0.65	-0.36												
Mg	0.15	0.34	0.36	0.52	-0.50	0.22	0.35	-0.37	0.50	-0.40	-0.06	0.40	-0.26	0.33											
Mn	0.61	**0.81**	0.60	0.68	-0.51	0.63	0.45	0.00	0.66	-0.34	0.17	0.74	-0.28	0.73	0.34										
Na	0.09	0.34	0.35	0.65	-0.07	0.36	0.46	0.01	0.48	-0.20	0.19	0.41	-0.03	0.32	0.79	0.41									
Ni	0.12	0.04	-0.22	-0.45	0.54	0.27	-0.50		0.06	-0.07	0.16	0.28	0.25	0.09	0.08	-0.09	0.13								
P	0.55	0.76	0.39	0.34	-0.21	0.50	0.57	0.07	0.52	-0.22	0.17	0.66	-0.33	0.59	0.43	0.73	0.42	-0.12							
Pb	0.20	0.31	0.22	0.72	0.76	0.53	0.09	0.55	0.22	0.60	0.69	0.23	0.58	0.26	-0.15	0.27	0.23	0.19	0.31						
S	0.79	0.43	0.08	0.02	-0.56	0.23	-0.15	-0.61	0.34	-0.21	-0.05	0.40	-0.13	0.59	0.01	0.46	-0.07	0.11	0.38	0.14					
Se	-0.43	-0.35	-0.29	0.28	**0.95**	0.36	-0.32	0.58	-0.28	**0.84**	0.71	-0.43	0.77	-0.40	-0.36	-0.50	-0.07	-0.12	-0.15	**0.85**	-0.47				
Si	0.13	0.44	0.73	0.37	-0.59	0.27	0.53	-0.52	0.06	-0.23	0.17	0.64	-0.11	0.25	0.30	0.41	0.20	-0.15	0.28	0.03	0.19	-0.31			
Ti	0.40	0.66	0.73	0.63	-0.68	0.42	0.49	-0.50	0.38	-0.36	0.19	0.69	-0.28	0.60	0.34	0.68	0.29	-0.21	0.41	0.09	0.38	-0.46	0.76		
V	0.62	0.40	0.09	0.36	-0.25	0.31	0.17	-0.17	0.61	-0.29	0.08	0.30	-0.08	0.53	0.16	0.43	0.22	0.11	0.28	0.06	0.32	-0.23	0.00	0.24	
Zn	0.66	0.78	0.45	0.61	-0.33	0.60	0.37	0.10	0.62	-0.28	0.36	0.66	-0.23	0.76	0.22	0.78	0.38	-0.01	0.74	0.48	0.48	-0.09	0.34	0.58	0.31

Tab. 12.6: Erfurt: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.80**																								
Al	0.47	0.57																							
As	**0.87**	0.76	0.53																						
Bi	-0.36	-0.33	-0.45																						
Br	0.50	0.27	0.14	0.71	0.58																				
Ca	0.41	0.74	0.72	0.48		0.13																			
Cd	-0.34	-0.08	-0.46		0.18	0.24	0.36																		
Cl	0.79	0.62	0.25	**0.80**	-0.53	0.52	0.32	0.55																	
Co	-0.04	-0.08	-0.25	0.47		**0.82**	0.10		-0.10																
Cu	0.48	0.54	0.48	0.59	0.56	0.48	0.54	0.16	0.33	**0.88**															
Fe	0.69	**0.89**	0.71	0.69	-0.46	0.21	**0.81**	-0.34	0.45	-0.15	0.60														
Ga	-0.01	0.07	0.11	0.13		0.28	-0.02		-0.09		0.75	0.15													
K	**0.91**	0.79	0.49	**0.90**	-0.27	0.50	0.46	-0.41	**0.80**	-0.12	0.50	0.69	0.04												
Mg	0.59	0.53	0.53	0.58	-0.48	0.37	0.47	0.34	0.66	-0.40	0.28	0.50	-0.06	0.59											
Mn	0.77	**0.86**	0.68	0.71	-0.17	0.36	0.77	-0.21	0.54	0.31	0.65	**0.88**	0.15	0.77	0.51										
Na	0.50	0.32	0.12	0.57	-0.26	0.54	0.23	0.47	0.74	0.14	0.26	0.27	0.09	0.51	0.79	0.31									
Ni	-0.15	0.01	-0.06	-0.27		-0.32	-0.20		-0.26		0.26	0.24	0.32	-0.23	-0.36	0.01	-0.32								
P	**0.88**	**0.85**	0.58	0.79	-0.39	0.36	0.66	-0.01	0.69	-0.41	0.49	**0.81**	-0.03	**0.85**	0.72	**0.86**	0.52	-0.07							
Pb	0.77	0.69	0.27	**0.94**	0.09	0.72	0.37	0.08	0.79	0.74	0.60	0.56	0.24	**0.82**	0.47	0.63	0.58	-0.27	0.64						
S	0.79	0.49	0.49	0.49	-0.39	0.41	0.16	-0.50	0.45	-0.06	0.36	0.51	0.02	0.61	0.49	0.56	0.30	-0.14	0.71	0.44					
Se	-0.03	-0.08	-0.11	0.32	**0.95**	0.77	0.19	0.27	0.01	**0.95**	0.59	-0.09	0.69	0.00	-0.02	0.16	0.24	-0.10	-0.09	0.39	-0.01				
Si	0.39	0.58	**0.95**	0.49	-0.39	0.09	0.78	-0.50	0.17	-0.15	0.47	0.74	0.11	0.45	0.49	0.67	0.07	-0.08	0.53	0.23	0.36	-0.07			
Ti	0.60	0.73	**0.91**	0.63	-0.39	0.21	**0.82**	-0.64	0.39	-0.23	0.51	**0.84**	0.05	0.66	0.57	**0.82**	0.20	-0.02	0.75	0.44	0.52	-0.04	**0.92**		
V	0.20	0.23	0.38	-0.05		0.18	0.09		0.11		0.04	0.10	-0.18	-0.03	0.41	0.29	0.10		0.29	-0.07	0.43	0.22	0.26	0.24	
Zn	**0.83**	**0.81**	0.35	**0.94**	-0.35	0.47	0.46	-0.05	**0.82**	-0.01	0.49	0.69	0.03	**0.87**	0.56	0.70	0.57	-0.18	0.77	**0.91**	0.47	0.03	0.32	0.52	-0.05

Tab. 12.7: Galdakao: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.60																								
Al	0.49	0.34																							
As	0.46	0.59	0.30																						
Bi	-0.10	0.12	-0.20																						
Br	0.35	0.48	-0.04	0.53	**0.81**																				
Ca	0.46	0.62	0.65	0.30	-0.27	0.13																			
Cd	0.16	0.45	0.39	-0.18	-0.20	-0.34	0.19																		
Cl	-0.09	0.14	-0.04	0.51	0.09	0.29	0.00	0.11																	
Co	0.29	0.74	0.14	-0.34	**0.91**	0.69	0.13		-0.15																
Cu	0.41	0.39	0.05	0.60	0.09	0.45	0.15	-0.14	0.25	0.09															
Fe	0.47	0.69	0.38	0.71	-0.26	0.43	0.58	0.07	0.30	-0.08	0.75														
Ga	0.22	0.26	0.11	0.44	0.77	0.65	0.18		0.05	0.73	0.26	0.18													
K	0.75	0.45	0.49	0.38	-0.22	0.40	0.52	-0.03	-0.05	0.02	0.37	0.45	0.20												
Mg	0.35	0.11	0.46	0.37	0.07	0.01	0.20	0.05	0.49	-0.16	0.27	0.28	0.22	0.28											
Mn	0.50	0.76	0.29	0.76	-0.08	0.46	0.55	0.23	0.28	0.16	0.74	**0.92**	0.28	0.44	0.24										
Na	0.33	0.21	0.22	0.48	0.02	0.22	0.21	-0.03	0.64	-0.06	0.57	0.54	0.27	0.28	**0.82**	0.47									
Ni	0.26	0.26	0.36	0.08	0.11	0.20	0.40	0.00	0.03	0.16	0.22	0.23	0.43	0.26	0.28	0.24	0.29								
P	0.24	0.20	0.00	0.53	-0.27	0.17	0.06	-0.25	0.18	-0.36	**0.82**	0.68	-0.11	0.14	0.16	0.57	0.45	0.18							
Pb	0.36	0.45	0.14	**0.87**	0.55	0.59	0.23	-0.15	0.21	0.13	0.76	0.67	0.42	0.38	0.17	0.72	0.40	0.11	0.57						
S	**0.90**	0.27	0.37	0.11	-0.07	0.11	0.21	0.09	-0.29	0.18	0.19	0.12	0.20	0.61	0.30	0.14	0.18	0.23	0.04	0.09					
Se	-0.12	0.02	-0.29	0.00	0.44	0.39	-0.12	-0.18	-0.12	0.60	0.37	0.16	0.72	-0.09	-0.05	0.22	0.15	0.37	0.25	0.33	-0.16				
Si	0.49	0.38	**0.95**	0.32	-0.03	-0.06	0.61	0.44	0.00	0.42	0.10	0.41	0.21	0.39	0.50	0.35	0.25	0.30	0.01	0.16	0.37	-0.27			
Ti	0.54	0.56	**0.93**	0.40	0.03	0.14	0.77	0.43	0.01	0.38	0.21	0.56	0.22	0.57	0.39	0.50	0.25	0.36	0.11	0.27	0.33	-0.22	**0.90**		
V	0.55	0.38	0.37	0.50	-0.12	0.12	0.39	0.07	-0.07	-0.28	0.49	0.44	0.09	0.47	0.25	0.47	0.31	0.41	0.34	0.55	0.42	-0.11	0.34	0.44	
Zn	0.38	0.32	0.27	0.66	-0.19	0.26	0.32	-0.11	0.24	-0.31	**0.82**	**0.83**	0.11	0.40	0.34	0.73	0.62	0.12	**0.80**	0.72	0.15	0.19	0.26	0.36	0.51

Tab. 12.8: Grenoble: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.79																								
Al	0.22	0.16																							
As	0.79	0.69	0.23																						
Bi	0.00	0.00	0.30																						
Br	0.72	0.55	0.16	0.73	**0.83**																				
Ca	0.05	-0.03	0.47	0.50	0.36	0.20																			
Cd	-0.11	-0.08	-0.28	0.00	-0.18	-0.24	-0.14																		
Cl	**0.84**	0.72	0.09	**0.83**	-0.33	0.68	0.04	-0.04																	
Co	-0.05	-0.05	0.08	0.01	**0.81**	0.52	0.34	-0.08	-0.17																
Cu	0.44	0.49	0.12	0.67	**0.87**	0.36	0.13	0.09	0.47	0.13															
Fe	0.70	**0.82**	0.46	0.69	0.22	0.52	0.13	-0.23	0.74	-0.07	0.48														
Ga	0.27	0.24	0.41	0.71	**0.95**	0.40	0.32	-0.39	0.40	0.76	0.51	0.48													
K	**0.89**	0.73	0.19	**0.83**	-0.14	0.74	0.00	-0.15	**0.82**	0.05	0.36	0.62	0.28												
Mg	0.33	0.28	**0.82**	0.54	-0.03	0.26	0.26	-0.06	0.38	-0.12	0.34	0.62	0.44	0.33											
Mn	0.69	0.71	0.19	0.79	0.02	0.53	0.00	-0.17	0.78	0.14	0.45	**0.87**	0.44	0.66	0.41										
Na	0.79	0.75	0.21	**0.81**	-0.16	0.63	-0.01	0.08	**0.92**	-0.10	0.50	0.79	0.39	0.79	0.47	**0.81**									
Ni	0.01	0.26	0.09	-0.05		-0.02	0.07	-0.21	0.07		0.20	0.31	0.27	-0.11	0.05	0.06	0.08								
P	0.74	**0.86**	0.31	0.75	0.52	0.54	0.10	-0.17	0.72	0.12	0.49	**0.84**	0.32	0.68	0.48	0.76	0.73	0.18							
Pb	0.71	0.67	0.17	**0.93**	**0.81**	0.66	0.11	0.23	0.74	0.53	0.71	0.68	0.62	0.70	0.28	0.77	0.75	0.02	0.70						
S	0.56	0.21	0.18	0.44	0.15	0.32	0.01	0.14	0.32	0.27	0.24	0.23	0.35	0.45	0.14	0.28	0.28	0.01	0.18	0.43					
Se	-0.20	-0.23	-0.14	0.39	**0.93**	0.43	0.10	-0.05	-0.13	0.71	0.06	-0.26	0.21	-0.09	-0.24	-0.15	-0.09	-0.33	-0.08	0.27	-0.02				
Si	0.03	0.10	0.43	0.05	0.48	-0.01	0.19	-0.18	-0.05	-0.20	0.42	0.20	-0.05	-0.06	0.35	0.02	0.01	0.00	0.16	0.06	-0.05	0.01			
Ti	0.25	0.24	**0.91**	0.23	0.32	0.23	0.68	-0.33	0.18	0.19	0.20	0.52	0.46	0.19	0.77	0.20	0.23	0.16	0.37	0.19	0.11	-0.10	0.43		
V	0.47	0.38	0.19	0.55	-0.32	0.29	0.36	-0.13	0.48	-0.46	0.45	0.35	0.18	0.37	0.34	0.32	0.47	-0.07	0.41	0.35	0.29	-0.11	0.49	0.28	
Zn	0.75	0.76	0.06	0.71	0.01	0.59	-0.01	-0.10	**0.90**	-0.08	0.50	0.79	0.41	0.67	0.29	**0.80**	**0.93**	0.13	0.72	0.71	0.21	-0.09	0.02	0.16	0.47

Tab. 12.9: Gothenburg: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.39																								
Al	0.46	0.33																							
As	0.62	0.47	0.46																						
Bi																									
Br	0.49	0.27	0.42	0.35																					
Ca	0.30	0.31	0.47	0.23		0.42																			
Cd	-0.57	0.68	0.41			0.51																			
Cl	0.09	-0.09	-0.03	0.15		0.34	0.48	0.10																	
Co	-0.24	0.37	0.66	0.23		0.60	0.13		-0.16																
Cu	0.01	0.64	0.24	0.29		0.03	0.07		-0.10	0.73															
Fe	0.14	**0.86**	0.47	0.39		0.13	0.35	0.41	-0.11	0.39	0.72														
Ga	0.10	0.35	0.10	0.10		-0.04	0.09		-0.07	-0.50	0.52	0.37													
K	0.67	0.40	0.31	0.59		0.41	0.03	-0.25	0.03	-0.25	0.05	0.21	0.04												
Mg	-0.02	-0.13	-0.02	0.15		0.16	0.55		0.60	-0.19	-0.12	-0.10	0.05	0.32											
Mn	0.41	0.74	0.49	0.63		0.40	0.45	-0.13	0.08	0.36	0.38	0.74	0.02	0.32	-0.04										
Na	0.09	-0.17	0.05	0.10		0.28	0.47	-0.30	**0.92**	-0.15	-0.12	-0.15	-0.12	-0.04	0.57	0.05									
Ni	0.05	0.26	0.08	0.32		-0.17	0.01		-0.15	-0.62	0.74	0.50	0.79	0.01	-0.18	0.07	-0.22								
P	0.67	0.68	0.60	0.63		0.47	0.62	0.68	0.08	0.24	0.45	0.64	0.16	0.55	0.14	0.66	0.08	0.26							
Pb	0.54	0.36	0.51	0.72		0.70	0.16	0.01	0.02	**0.93**	0.14	0.27	-0.07	0.47	-0.13	0.48	-0.06	-0.01	0.47						
S	**0.81**	0.14	0.51	0.51		0.35	0.10	-0.70	-0.13	-0.19	-0.11	-0.02	0.00	0.50	-0.11	0.19	-0.05	-0.01	0.55	0.40					
Se	-0.05	0.15	0.20	0.53		0.40	0.00		-0.26	**0.81**	0.39	0.30	0.62	-0.17	-0.36	0.49	-0.24	0.28	0.07	0.62	-0.16				
Si	0.25	0.46	**0.90**	0.47		0.33	0.36	0.35	-0.11	0.76	0.42	0.64	0.03	0.24	-0.10	0.56	-0.05	0.03	0.56	0.54	0.25	0.38			
Ti	0.21	0.58	0.62	0.45		0.31	0.57	0.36	-0.11	0.67	0.41	0.68	-0.04	0.16	-0.13	0.61	-0.10	0.08	0.55	0.30	0.13	0.27	0.70		
V	0.23	0.04	0.29	0.12		0.26	0.50		0.27	-0.13	0.02	0.03	0.02	0.04	0.37	0.20	0.39	0.01	0.23	0.04	0.28	0.01	0.21	0.22	
Zn	0.50	0.77	0.34	0.74		0.30	0.21	0.07	0.00	-0.10	0.60	0.64	0.27	0.52	-0.11	0.68	-0.06	0.25	0.63	0.40	0.27	-0.10	0.40	0.42	0.06

Tab. 12.10: Huelva: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.59																								
Al	0.22	0.17																							
As	0.33	0.14	0.06																						
Bi	0.13	-0.18	0.09	0.54																					
Br	0.65	0.67	0.09	0.23	0.51																				
Ca	0.39	0.36	0.72	0.47	0.23	0.30																			
Cd	-0.28	0.48	0.22	0.36	0.09	-0.16	0.02																		
Cl	-0.02	-0.11	-0.06	0.44	0.39	-0.02	0.25	0.09																	
Co	0.22	0.18	0.37	0.32	**0.82**	0.68	0.14	0.09	-0.24																
Cu	0.25	0.08	0.10	**0.89**	0.42	0.20	0.47	0.18	0.44	0.54															
Fe	0.30	0.31	**0.95**	0.15	0.12	0.22	0.79	0.29	-0.04	0.50	0.19														
Ga	0.32	0.20	0.14	0.32	0.66	0.48	0.18		-0.11	**0.89**	0.47	0.28													
K	0.61	0.77	0.26	0.09	-0.30	0.60	0.46	0.04	-0.13	-0.03	0.05	0.39	0.11												
Mg	0.23	-0.18	0.37	0.39	0.40	0.03	0.48	-0.12	0.56	0.08	0.41	0.32	0.18	-0.16											
Mn	0.49	0.41	0.44	0.06	0.09	0.41	0.47	-0.26	0.03	0.58	0.12	0.58	0.25	0.40	0.14										
Na	0.13	-0.15	-0.09	0.37	0.27	0.04	0.21	0.02	0.62	-0.02	0.41	-0.09	0.18	-0.18	**0.85**	-0.05									
Ni	-0.02	0.37	0.24	0.04	0.41	0.33	0.19		-0.17	0.73	0.24	0.40	**0.84**	0.25	0.00	0.34	-0.02								
P	0.42	0.10	0.09	0.78	0.36	0.22	0.47	-0.06	0.47	0.37	**0.89**	0.17	0.42	0.10	0.46	0.14	0.53	0.14							
Pb	0.39	0.45	0.09	0.76	0.38	0.48	0.42	0.31	0.21	0.42	0.68	0.19	0.51	0.23	0.19	0.14	0.20	0.32	0.62						
S	**0.81**	0.21	0.15	0.20	0.16	0.37	0.15	-0.24	-0.26	0.31	0.17	0.17	0.50	0.22	0.25	0.31	0.15	-0.09	0.38	0.21					
Se	0.22	-0.08	0.15	0.70	0.68	0.35	0.46	0.02	0.41	0.71	**0.82**	0.29	0.67	-0.17	0.63	0.31	0.58	0.27	0.73	0.63	0.28				
Si	0.44	0.11	**0.86**	0.35	0.30	0.16	0.75	-0.14	0.12	0.26	0.36	**0.82**	0.17	0.18	0.57	0.45	0.14	0.07	0.43	0.28	0.40	0.48			
Ti	0.12	0.15	0.18	0.16	-0.06	0.04	0.23	0.53	0.00	0.06	0.24	0.25	-0.09	0.10	0.04	0.10	0.03	-0.14	0.22	0.26	0.10	0.18	0.21		
V	0.70	0.23	0.11	0.11	0.16	0.41	0.20	-0.17	-0.22	0.37	0.21	0.16	0.50	0.34	0.16	0.38	0.12	0.01	0.34	0.24	0.76	0.35	0.32	0.16	
Zn	0.31	0.15	0.10	**0.94**	0.40	0.21	0.52	0.26	0.44	0.27	**0.89**	0.21	0.26	0.12	0.36	0.22	0.33	0.04	**0.80**	0.71	0.18	0.72	0.39	0.26	0.18

Tab. 12.11: Ipswich: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.78																								
Al	0.53	0.48																							
As	0.53	0.51	**0.93**																						
Bi	-0.01	0.18	0.38	-0.28																					
Br	0.75	0.71	0.71	0.71	0.03																				
Ca	-0.12	0.04	-0.08	-0.11	0.18	-0.10																			
Cd	0.52	0.65	0.55	0.70	0.60	0.57	0.06																		
Cl	0.64	0.58	0.77	**0.80**	-0.30	**0.83**	0.04	0.61																	
Co	-0.21	-0.17	-0.13		**0.94**	0.06	-0.12		-0.21																
Cu	0.43	0.47	**0.89**	**0.91**	0.54	0.69	-0.03	0.64	0.68	0.24															
Fe	0.58	0.73	0.15	0.09	0.26	0.30	0.15	0.19	0.19	-0.16	0.15														
Ga	0.32	0.34	0.64	**0.85**	0.67	0.56	0.26		0.49	0.60	**0.88**	0.09													
K	0.52	0.49	**0.98**	**0.93**	0.41	0.71	-0.04	0.58	**0.80**	-0.12	**0.89**	0.13	0.67												
Mg	0.28	0.25	0.76	**0.81**	-0.09	0.57	0.23	0.58	**0.83**	-0.12	0.74	-0.09	0.61	0.79											
Mn	0.42	0.46	0.21	0.12	0.74	0.25	0.51	0.39	0.16	0.08	0.26	0.51	0.36	0.25	0.11										
Na	-0.11	-0.10	0.19	0.28	0.00	0.16	0.52	0.42	0.47	-0.04	0.29	-0.23	0.36	0.23	0.76	-0.01									
Ni	0.02	0.26	0.08	-0.13	0.39	0.07	0.36		-0.11	0.19	0.41	0.57	0.50	0.22	-0.08	0.33	-0.02								
P	**0.86**	0.78	0.54	0.48	0.33	0.70	0.05	0.66	0.59	-0.29	0.44	0.61	0.37	0.52	0.27	0.51	-0.11	0.28							
Pb	0.50	0.50	**0.97**	**0.94**	0.30	0.73	-0.08	0.63	0.78	-0.04	**0.93**	0.10	0.74	**0.98**	**0.82**	0.18	0.29	0.33	0.50						
S	0.77	0.42	0.22	0.19	0.17	0.33	-0.15	0.31	0.18	-0.05	0.11	0.45	0.12	0.17	-0.07	0.41	-0.31	-0.03	0.65	0.14					
Se	-0.11	0.04	0.03	0.14	0.51	0.30	0.28	-0.29	-0.02	**0.92**	**0.82**	-0.04	**0.88**	0.02	0.08	0.16	0.25	0.26	-0.04	0.67	-0.09				
Si	0.44	0.44	0.48	0.50	0.54	0.41	0.20	0.36	0.32	-0.29	0.41	0.44	0.28	0.37	0.24	0.38	0.01	0.08	0.54	0.38	0.36	0.12			
Ti	0.45	0.44	**0.97**	**0.92**	0.30	0.64	-0.03	0.56	0.75	-0.07	**0.89**	0.09	0.69	**0.99**	0.79	0.23	0.23	0.18	0.48	**0.97**	0.12	0.06	0.35		
V	0.44	0.28	0.27	0.09	0.37	-0.04	0.02	0.31	-0.17	-0.10	0.03	0.38	-0.13	0.23	-0.30	0.44	-0.33	-0.08	0.52	0.19	0.69	-0.19	0.33	0.27	
Zn	0.73	0.70	**0.85**	**0.87**	0.12	0.78	-0.03	0.58	**0.81**	-0.13	**0.80**	0.40	0.62	**0.87**	0.66	0.36	0.15	0.31	0.66	**0.88**	0.37	0.12	0.47	**0.83**	0.20

Tab. 12.12: Norwich: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.71																								
Al	0.54	0.57																							
As	0.26	0.43	0.10																						
Bi	-0.11	0.12	0.42																						
Br	0.61	0.64	0.54	0.27	0.76																				
Ca	-0.02	0.32	0.30	0.11	-0.21	0.10																			
Cd	-0.22	-0.09	-0.38	-0.66		-0.42	-0.12																		
Cl	0.32	0.33	0.29	0.32	-0.39	0.52	0.14	0.12																	
Co	0.22	0.04	0.20		**0.82**	0.66	-0.44		-0.42																
Cu	0.32	0.29	0.26	0.02	0.79	0.43	-0.08	-0.50	-0.01	**0.85**															
Fe	0.67	0.76	0.67	0.19	0.17	0.46	0.18	-0.27	0.24	0.27	0.25														
Ga	0.02	-0.02	0.13	0.42		0.34	-0.18		-0.41	**0.96**	0.66	0.09													
K	0.68	0.69	0.55	0.28	-0.32	0.58	0.23	0.00	0.40	-0.09	0.22	0.73	-0.16												
Mg	-0.03	0.04	0.12	0.11	-0.29	0.08	0.21	0.14	0.74	-0.22	-0.07	0.08	-0.32	0.22											
Mn	0.44	0.57	0.62	0.20	0.19	0.48	0.30	-0.49	0.39	0.02	0.09	0.71	0.16	0.61	0.17										
Na	-0.21	-0.16	-0.11	0.08	-0.31	-0.09	0.08	0.18	0.63	-0.21	-0.11	-0.12	-0.31	0.04	**0.96**	-0.07									
Ni	-0.03	0.11	0.19	-0.18	0.63	-0.08	-0.19	0.26	-0.25	0.62	0.27	0.46	0.40	0.17	-0.19	0.27	-0.22								
P	**0.81**	0.77	0.56	0.25	0.15	0.59	0.05	-0.14	0.34	0.25	0.39	0.71	-0.10	0.63	0.01	0.46	-0.17	0.06							
Pb	0.30	0.36	0.18	**0.96**	-0.04	0.30	0.06	-0.63	0.08	**0.82**	0.20	0.18	0.24	0.33	-0.07	0.18	-0.09	-0.16	0.26						
S	**0.81**	0.41	0.35	0.15	0.27	0.36	-0.22	-0.29	-0.02	0.66	0.44	0.46	0.23	0.37	-0.24	0.11	-0.34	0.17	0.64	0.23					
Se	0.15	0.07	0.29	0.62	**0.91**	0.38	-0.16	-0.37	-0.14	0.72	0.66	0.01	**0.90**	0.02	-0.27	0.05	-0.28	0.18	0.09	0.70	0.31				
Si	0.24	0.37	**0.80**	-0.02	0.68	0.18	0.40	-0.22	-0.06	0.30	0.14	0.47	0.38	0.32	0.00	0.50	-0.17	0.26	0.26	0.13	0.15	0.41			
Ti	0.49	0.63	0.54	0.11	0.39	0.35	0.27	-0.41	0.14	0.01	0.20	0.65	0.06	0.52	0.12	0.54	-0.04	0.03	0.48	0.18	0.27	0.15	0.55		
V	0.53	0.28	0.21	0.22	0.26	0.15	-0.14	-0.14	-0.16	0.68	0.49	0.35	0.41	0.26	-0.18	0.09	-0.22	0.04	0.55	0.41	0.66	0.44	0.26	0.37	
Zn	0.61	0.54	0.40	0.77	-0.26	0.34	0.07	-0.32	0.24	0.31	0.17	0.53	0.16	0.55	0.07	0.38	-0.03	-0.02	0.50	0.77	0.42	0.20	0.29	0.40	0.51

Tab. 12.13: Oviedo: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.48																								
Al	0.60	0.43																							
As	0.44	0.64	0.29																						
Bi	0.01	-0.05	-0.13																						
Br	0.57	0.63	0.42	0.41	0.19																				
Ca	0.33	0.75	0.46	0.58	-0.03	0.42																			
Cd	-0.16	0.37	0.00	0.39	0.50	-0.05	0.44																		
Cl	0.13	0.29	-0.05	0.39	-0.24	0.37	0.18	0.06																	
Co	0.18	-0.03	0.12	0.54	**0.92**	0.21	0.08	0.06	-0.41																
Cu	0.28	0.26	0.25	0.59	**0.87**	0.19	0.17	-0.09	-0.06	0.72															
Fe	0.50	0.29	0.57	0.54	0.16	0.11	0.31	-0.20	-0.04	0.44	0.55														
Ga	0.07	0.03	0.03	0.21	**0.96**	0.22	0.05	0.14	-0.22	**0.91**	0.61	0.11													
K	0.74	0.27	0.62	0.34	-0.06	0.33	0.21	-0.40	-0.11	0.33	0.36	0.70	0.10												
Mg	0.30	0.15	0.40	0.38	0.05	0.03	0.28	0.31	0.37	-0.08	0.33	0.42	-0.03	0.23											
Mn	0.26	0.20	0.40	0.27	0.11	0.01	0.17	-0.19	0.03	0.29	0.27	0.71	0.13	0.33	0.34										
Na	-0.09	-0.19	-0.07	0.05	0.20	-0.17	-0.10	0.14	0.44	0.01	0.16	0.05	0.02	-0.11	0.77	0.04									
Ni	0.13	0.23	0.14	0.34	-0.02	0.05	0.27	0.31	-0.06	0.24	0.26	0.12	0.48	0.08	0.20	0.09	0.05								
P	0.60	0.75	0.70	0.56	-0.22	0.51	0.67	-0.01	0.10	0.12	0.40	0.55	-0.01	0.50	0.25	0.31	-0.16	0.17							
Pb	0.43	0.58	0.33	0.65	0.73	0.68	0.45	0.16	0.10	0.52	0.59	0.39	0.60	0.33	0.20	0.17	-0.01	0.19	0.51						
S	0.69	-0.06	0.43	0.02	0.12	0.02	-0.07	-0.07	-0.33	0.21	0.24	0.46	0.16	0.65	0.28	0.19	0.01	0.11	0.15	0.19					
Se	0.10	-0.01	0.03	0.62	**0.96**	0.25	0.02	0.22	-0.19	0.73	0.58	0.16	**0.90**	0.10	0.06	0.19	0.06	0.06	-0.09	0.65	0.24				
Si	0.55	0.32	**0.91**	0.32	-0.16	0.26	0.43	0.50	-0.11	0.01	0.17	0.55	0.00	0.57	0.43	0.43	-0.05	0.19	0.58	0.23	0.47	0.00			
Ti	0.62	0.38	**0.98**	0.30	-0.18	0.38	0.43	-0.06	0.01	0.11	0.23	0.60	-0.01	0.65	0.43	0.41	-0.02	0.20	0.68	0.28	0.44	0.00	**0.91**		
V	0.59	0.32	0.54	0.29	-0.08	0.28	0.48	0.00	0.03	0.16	0.27	0.44	-0.09	0.60	0.31	0.22	-0.02	0.10	0.55	0.20	0.43	-0.08	0.49	0.54	
Zn	0.60	0.60	0.51	0.61	0.17	0.48	0.46	-0.05	0.22	0.14	0.53	0.59	0.08	0.57	0.48	0.39	0.12	0.18	0.68	0.59	0.28	0.08	0.41	0.49	0.60

Tab. 12.14: Pavia: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.76																								
Al	0.13	0.13																							
As	0.78	0.71	0.03																						
Bi	-0.30	0.04	-0.04	-0.22																					
Br	**0.80**	**0.88**	0.01	0.75	-0.04																				
Ca	0.30	0.45	0.63	0.35	0.20	0.36																			
Cd	-0.22	0.27	0.21	-0.39	0.06	-0.24	0.00																		
Cl	**0.89**	0.72	0.12	0.76	-0.25	0.75	0.32	-0.03																	
Co	-0.36	-0.12	-0.26	0.50	0.71	0.01	-0.12		-0.30																
Cu	0.39	0.37	-0.04	0.53	**0.85**	0.42	0.29	-0.08	0.37	0.64															
Fe	0.71	0.70	0.51	0.70	-0.09	0.67	0.70	-0.01	0.68	-0.03	0.52														
Ga	-0.21	-0.13	-0.07	0.11	**0.88**	-0.10	0.01	0.34	-0.15	0.78	0.64	-0.01													
K	**0.81**	0.76	0.08	**0.84**	-0.27	**0.80**	0.34	-0.25	0.77	-0.18	0.37	0.70	-0.18												
Mg	0.53	0.41	0.63	0.43	-0.23	0.39	0.69	-0.16	0.55	-0.27	0.17	0.68	-0.21	0.41											
Mn	0.69	0.59	0.20	0.70	-0.18	0.58	0.57	-0.27	0.76	-0.31	0.39	0.73	-0.14	0.65	0.53										
Na	0.48	0.34	0.34	0.40	-0.26	0.36	0.43	-0.16	0.56	-0.27	0.18	0.51	-0.25	0.35	**0.87**	0.45									
Ni	-0.06	0.13	-0.18	-0.16	0.46	0.05	-0.19	0.38	0.11	0.72	0.38	0.11	0.61	-0.11	-0.15	-0.10	-0.04								
P	0.72	0.78	0.21	0.72	-0.11	0.75	0.49	-0.03	0.73	-0.23	0.44	0.78	-0.18	0.74	0.46	0.72	0.40	0.12							
Pb	**0.81**	**0.81**	0.09	**0.82**	0.33	**0.92**	0.40	-0.24	0.79	0.33	0.56	0.74	0.01	**0.83**	0.41	0.68	0.35	0.03	**0.80**						
S	0.49	0.22	0.29	0.25	-0.25	0.18	0.14	-0.39	0.30	-0.45	0.09	0.31	-0.09	0.31	0.57	0.22	0.48	-0.12	0.25	0.18					
Se	-0.07	-0.05	0.07	0.26	**0.91**	0.07	0.14	-0.09	-0.06	0.55	0.61	0.04	0.69	-0.18	-0.02	-0.05	-0.02	0.25	-0.03	0.27	-0.09				
Si	0.09	0.12	**0.93**	0.02	0.28	-0.04	0.72	0.27	0.08	0.04	0.03	0.51	0.00	0.04	0.58	0.28	0.27	-0.28	0.22	0.09	0.16	0.18			
Ti	0.13	0.17	0.45	0.11	0.40	0.07	0.56	0.05	0.12	-0.18	0.26	0.36	0.07	0.10	0.37	0.32	0.15	-0.07	0.29	0.13	0.23	0.15	0.55		
V	0.33	0.30	0.19	0.15	-0.18	0.29	0.17	-0.27	0.19	-0.02	0.08	0.28	0.06	0.28	0.42	0.07	0.35	-0.01	0.18	0.22	0.62	0.07	0.08	-0.03	
Zn	**0.81**	0.61	0.13	**0.84**	-0.01	0.63	0.39	-0.51	**0.84**	0.00	0.49	0.73	-0.07	0.76	0.51	**0.84**	0.50	-0.03	0.74	0.78	0.31	0.04	0.12	0.13	0.16

Tab. 12.15: Paris: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.58																								
Al	0.32	0.25																							
As	0.60	0.71	0.27																						
Bi	-0.20	0.16	-0.22																						
Br	0.63	0.52	0.09	0.41	0.16																				
Ca	0.40	0.58	0.62	0.49	-0.07	0.29																			
Cd	-0.23	-0.21	-0.32	0.17	-0.54	0.10	-0.16																		
Cl	0.44	0.15	0.03	0.33	-0.35	0.73	0.12	0.62																	
Co	-0.32	-0.10	0.10	0.43	**0.88**	0.48	0.26	0.32	0.24																
Cu	0.33	0.52	0.08	0.39	0.46	0.42	0.31	-0.14	0.18	0.74															
Fe	0.69	**0.80**	0.58	0.68	0.03	0.47	0.79	-0.24	0.15	0.13	0.48														
Ga	0.00	-0.11	0.08	0.48	0.05	0.21	0.16	0.44	0.25	**0.89**	0.36	0.06													
K	**0.83**	0.63	0.45	0.54	-0.13	0.70	0.56	-0.25	0.50	-0.23	0.35	0.71	0.05												
Mg	-0.10	-0.23	0.15	-0.03	-0.28	0.16	0.12	0.50	0.57	0.25	-0.06	-0.10	0.37	-0.01											
Mn	0.47	0.36	0.65	0.36	-0.16	0.41	0.66	-0.27	0.23	0.16	0.18	0.61	0.19	0.57	0.01										
Na	-0.19	-0.24	-0.08	-0.09	-0.08	0.16	0.05	0.62	0.54	0.30	-0.02	-0.20	0.45	-0.12	**0.94**	-0.13									
Ni	0.11	-0.24	0.31	-0.06	-0.35	0.14	0.08	**0.81**	0.28	0.63	0.14	0.05	0.75	0.15	0.43	0.08	0.43								
P	0.60	0.69	0.52	0.56	-0.18	0.46	0.59	-0.25	0.29	0.19	0.45	0.72	0.00	0.70	-0.02	0.39	-0.12	0.06							
Pb	0.49	0.57	0.17	0.73	0.71	0.72	0.43	0.25	0.39	0.59	0.49	0.55	0.43	0.60	-0.02	0.39	0.02	0.20	0.46						
S	0.72	0.28	0.38	0.38	-0.14	0.21	0.35	-0.30	0.01	-0.30	0.12	0.55	0.01	0.52	-0.10	0.38	-0.24	0.14	0.36	0.17					
Se	-0.21	0.27	-0.24	0.37	**0.93**	0.32	0.09	0.27	-0.01	**0.80**	0.64	0.06	0.53	-0.11	0.03	0.02	0.28	-0.02	-0.01	0.67	-0.34				
Si	0.18	0.22	**0.96**	0.28	-0.11	-0.02	0.62	-0.32	-0.06	0.13	0.08	0.54	0.11	0.32	0.15	0.56	-0.04	0.27	0.44	0.17	0.25	-0.15			
Ti	0.46	0.44	**0.85**	0.48	-0.17	0.16	**0.80**	-0.44	0.00	0.10	0.24	0.76	0.06	0.59	0.07	0.61	-0.11	0.16	0.62	0.28	0.51	-0.20	**0.84**		
V	0.47	0.19	-0.04	0.30	-0.43	0.08	-0.06	0.37	0.19	-0.24	0.11	0.17	-0.12	0.20	-0.14	0.07	-0.15	0.08	0.20	0.10	0.46	-0.21	-0.11	0.03	
Zn	0.53	0.55	0.45	0.66	0.23	0.48	0.54	-0.12	0.22	0.20	0.24	0.64	0.18	0.61	-0.18	0.65	-0.19	0.01	0.49	0.66	0.36	0.22	0.39	0.48	0.25

Tab. 12.16: Reykjavik: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	-0.05																								
Al	0.28	0.09																							
As	0.23	-0.01	0.19																						
Bi	-0.33	0.07	-0.19																						
Br	0.31	0.10	-0.11		**0.95**																				
Ca	0.40	0.04	0.73			0.10																			
Cd	0.13	-0.61	0.43			0.32																			
Cl	0.71	-0.16	0.01	0.12	0.00	0.31	0.30	0.08																	
Co	-0.18	0.11	-0.11			**0.96**	-0.65	0.47	-0.08																
Cu	-0.12	0.12	0.03	0.06		0.66	0.09	0.31	-0.15	**0.89**															
Fe	0.13	0.22	0.79	0.24		-0.19	0.53	-0.27	-0.04	-0.07	0.17														
Ga	-0.13	0.08	-0.14	0.46		0.71	-0.20		-0.12	**0.91**	**0.88**	0.21													
K	0.66	0.13	0.08	0.51	0.17	0.26	0.25	-0.35	0.47	-0.18	0.02	0.14	0.17												
Mg	0.78	-0.10	0.17	0.15	0.30	0.36	0.45	0.30	**0.96**	-0.04	-0.08	0.08	-0.07	0.52											
Mn	0.27	0.22	**0.81**	0.54		-0.08	0.79	0.23	-0.09	-0.15	0.05	0.64	-0.29	0.10	0.10										
Na	0.69	-0.16	0.02	0.12	-0.19	0.27	0.25	-0.05	**0.97**	-0.09	-0.16	0.00	-0.12	0.51	**0.95**	-0.13									
Ni	0.15	0.15	0.05			-0.04	0.06		0.24	-0.14	0.34	0.53	0.44	0.29	0.08	-0.20	0.27								
P	-0.17	0.08	**0.80**			0.09	0.43		-0.49			0.60		-0.27	-0.39	**0.80**	-0.49								
Pb	-0.26	0.00	-0.18		**0.99**	**0.85**	-0.24	0.45	-0.22	**0.97**	**0.89**	-0.19	**0.90**	-0.27	-0.35	-0.08	-0.20	-0.11							
S	0.39	0.16	0.05	0.04	-0.17	0.29	-0.26	-0.02	0.07	0.19	0.04	0.01	0.27	0.50	0.13	-0.09	0.20	0.00	0.79	0.19					
Se	-0.38	0.02	-0.15		**0.96**	**0.85**	-0.14	0.32	-0.27	**0.93**	**0.88**	-0.35		-0.27	-0.26	-0.07	-0.28	-0.37		**0.96**	-0.04				
Si	0.09	0.16	**0.94**	0.18	-0.24	-0.18	0.57	0.39	-0.14	-0.12	0.08	0.79	-0.18	-0.05	-0.02	0.76	-0.12	0.15	**0.82**	-0.15	0.06	-0.08			
Ti	0.18	0.17	**0.87**	0.26		-0.09	0.72	0.42	-0.06	-0.01	0.22	**0.80**	-0.16	0.06	0.13	**0.83**	-0.05	0.08	**0.87**	-0.01	0.01	-0.10	**0.90**		
V																									
Zn	-0.06	0.28	-0.03	0.16	**0.84**	0.16	0.03	-0.46	-0.09	0.32	0.49	0.37	0.57	0.11	-0.03	-0.07	-0.09	0.57	0.00	0.29	0.04	0.34	0.01	0.04	

Tab. 12.17: Tartu: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.82**																								
Al	0.18	0.07																							
As	0.78	0.69	0.27																						
Bi	0.15	0.18	0.10																						
Br	0.32	0.38	-0.02	0.54	0.54																				
Ca	-0.01	-0.06	**0.87**	0.18	0.12	-0.10																			
Cd	-0.02	0.07	0.23	0.78	0.58	0.04	0.47																		
Cl	0.63	0.63	-0.10	0.62	0.00	0.22	-0.29	-0.02																	
Co	-0.06	0.12	-0.07	0.29	**0.88**	0.67	-0.04	0.74	-0.08																
Cu	0.14	0.22	0.19	0.52	0.78	0.38	0.19	0.47	0.14	0.65															
Fe	0.29	0.12	**0.94**	0.31	0.68	0.03	**0.85**	0.41	-0.05	0.15	0.39														
Ga	-0.01	0.07	0.01	0.33		0.43	0.08	0.50	-0.10	0.51	0.70	0.21													
K	**0.87**	0.79	0.26	0.74	0.01	0.39	0.11	0.13	0.58	0.09	0.20	0.33	-0.08												
Mg	0.19	0.13	**0.86**	0.32	-0.03	-0.04	**0.83**	0.24	0.08	-0.11	0.23	**0.85**	-0.04	0.24											
Mn	0.58	0.49	0.60	0.52	0.22	0.28	0.47	0.22	0.27	0.10	0.28	0.64	0.01	0.60	0.50										
Na	0.11	0.13	-0.01	0.23	0.14	0.23	-0.02	0.20	0.40	0.30	0.10	0.04	0.05	0.08	0.40	0.04									
Ni	-0.21	-0.10	0.30	-0.09		-0.07	0.63		-0.15	0.49	0.56	0.57	0.49	-0.13	0.65	0.00	0.38								
P	0.19	0.17	0.40	0.48	0.12	0.10	0.31	0.21	0.02	-0.08	0.45	**0.81**	0.26	0.27	0.29	0.43	-0.03	-0.02							
Pb	0.46	0.51	0.33	0.76	**0.91**	0.75	0.07	0.01	0.31	0.72	0.62	0.48	0.59	0.43	0.22	0.56	0.17	0.19	0.35						
S	0.76	0.52	0.08	0.41	0.13	0.20	-0.10	-0.03	0.27	0.03	0.07	0.21	0.11	0.52	0.09	0.40	0.08	-0.25	0.15	0.34					
Se	-0.10	0.00	0.16	0.57	**0.97**	0.51	0.28	0.73	-0.26	**0.87**	0.73	0.63	0.55	-0.17	0.01	0.15	0.02	0.34	0.14	0.76	-0.01				
Si	0.15	0.05	**1.00**	0.26	0.13	-0.02	**0.89**	0.23	-0.13	-0.06	0.24	**0.94**	0.03	0.24	**0.85**	0.59	-0.03	0.38	0.41	0.34	0.05	0.22			
Ti	0.18	0.08	**0.99**	0.31	0.16	-0.02	**0.87**	0.37	-0.09	-0.02	0.25	**0.94**	0.06	0.28	**0.88**	0.57	0.00	0.43	0.44	0.37	0.05	0.26	**0.99**		
V	0.33	0.24	0.00	0.49	0.37	0.25	-0.26	0.56	0.34	0.17	0.18	0.07	-0.10	0.27	0.19	0.13	0.36	-0.22	0.32	0.32	0.33	0.14	-0.14	-0.02	
Zn	**0.83**	**0.82**	0.09	0.74	0.36	0.39	-0.09	0.06	0.75	0.08	0.34	0.18	0.10	**0.84**	0.11	0.49	0.17	-0.03	0.24	0.49	0.47	-0.01	0.07	0.11	0.24

Tab. 12.18: Turin: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.68																								
Al	0.46	0.59																							
As	0.67	0.69	0.46																						
Bi	-0.50	-0.40	-0.05																						
Br	**0.81**	0.74	0.48	0.67	-0.42																				
Ca	0.42	0.61	**0.82**	0.47	-0.28	0.46																			
Cd	0.33	0.32	0.33	0.09		0.24	0.21																		
Cl	**0.90**	0.64	0.36	0.64	-0.53	0.79	0.37	0.34																	
Co	-0.45	-0.25	-0.14	0.18	0.71	-0.35	-0.14	0.27	-0.44																
Cu	0.49	0.42	0.52	0.53	0.26	0.55	0.53	0.25	0.39	-0.06															
Fe	0.75	0.79	0.74	0.64	-0.44	**0.86**	0.78	0.18	0.69	-0.34	0.64														
Ga	0.07	-0.04	0.15	0.17	0.74	0.04	-0.04	0.76	0.04	0.44	0.13	0.00													
K	**0.82**	0.64	0.49	0.64	-0.44	**0.88**	0.53	0.10	**0.87**	-0.24	0.50	**0.83**	0.05												
Mg	0.62	0.63	**0.81**	0.52	-0.39	0.55	**0.84**	0.02	0.54	-0.37	0.57	0.79	0.02	0.65											
Mn	0.75	0.79	0.59	0.63	-0.56	0.75	0.56	0.38	0.64	-0.31	0.54	**0.83**	0.13	0.68	0.63										
Na	0.75	0.68	0.54	0.48	-0.61	0.66	0.57	0.03	0.77	-0.40	0.37	0.74	0.01	0.77	0.76	0.69									
Ni	-0.06	-0.04	0.04	-0.11	0.14	-0.09	-0.23	0.39	-0.13	-0.11	-0.02	-0.08	0.47	-0.19	-0.20	0.15	-0.27								
P	**0.82**	**0.81**	0.67	0.73	-0.44	**0.89**	0.64	0.14	0.78	-0.26	0.62	**0.92**	-0.03	**0.85**	0.72	**0.84**	0.72	-0.15							
Pb	0.75	0.70	0.51	0.72	-0.17	**0.95**	0.51	0.31	0.73	-0.01	0.66	**0.84**	0.19	**0.87**	0.56	0.73	0.61	-0.07	**0.87**						
S	0.50	0.27	0.31	0.25	0.36	0.20	0.15	0.11	0.30	0.21	0.18	0.25	0.35	0.31	0.46	0.38	0.47	0.16	0.29	0.20					
Se	-0.11	-0.09	-0.01	0.25	**0.96**	-0.16	-0.17	0.38	-0.22	**0.84**	0.05	-0.22	0.62	-0.20	-0.17	-0.12	-0.22	0.13	-0.23	0.01	0.35				
Si	0.34	0.52	**0.94**	0.37	-0.01	0.35	**0.88**	0.32	0.26	-0.01	0.48	0.70	0.07	0.41	**0.80**	0.53	0.48	-0.02	0.56	0.39	0.25	0.00			
Ti	0.49	0.63	**0.89**	0.52	-0.03	0.62	0.77	0.28	0.45	-0.04	0.51	**0.81**	0.03	0.63	0.79	0.62	0.57	-0.15	0.77	0.64	0.21	-0.05	**0.84**		
V	**0.83**	0.55	0.46	0.46	-0.35	0.56	0.44	0.40	0.71	-0.21	0.26	0.60	0.10	0.64	0.58	0.65	0.75	-0.06	0.66	0.50	0.64	-0.01	0.37	0.42	
Zn	0.78	0.77	0.59	0.64	-0.47	**0.82**	0.56	0.41	0.74	-0.33	0.54	**0.88**	0.14	**0.81**	0.65	**0.91**	0.76	0.03	**0.85**	**0.81**	0.34	-0.13	0.52	0.67	0.65

Tab. 12.19: Umea: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.50																								
Al	0.09	0.10																							
As	0.10	0.20	0.18																						
Bi	-0.42	-0.31	0.10																						
Br	0.19	-0.05	0.24	0.16	**0.84**																				
Ca																									
Cd	0.54	0.34	-0.09		-0.45	**-0.81**																			
Cl	-0.20	-0.12	0.10	0.09	-0.13	-0.04		-0.02																	
Co	-0.28	-0.49	-0.19		**0.84**	0.48		-0.38	**0.84**																
Cu	-0.06	-0.02	0.13	0.67	**0.94**	0.63			0.00	**0.82**															
Fe	0.10	0.45	0.62	0.38	0.33	0.18		-0.01	-0.03	0.31	0.39														
Ga	-0.13	-0.21	-0.02	0.48		0.66			-0.32	**0.92**	**0.92**	0.33													
K	0.71	0.51	0.21	0.23	-0.27	0.18		0.13	-0.21	-0.29	-0.04	0.31	-0.02												
Mg	0.09	-0.03	0.19	0.34	-0.45	-0.03		0.17	**0.81**	**-0.88**	-0.07	-0.08	-0.33	-0.01											
Mn	0.41	0.50	0.31	0.44	0.41	0.21		0.19	0.04	0.49	0.42	0.63	0.33	0.49	-0.04										
Na	0.19	-0.04	0.24	0.18	-0.14	0.07		0.41	**0.80**	-0.30	0.05	0.06	-0.15	0.10	**0.95**	0.20									
Ni	-0.28	-0.20	-0.16		**0.88**	0.29			-0.29		0.75	0.18	**0.84**	-0.23	-0.33	0.19	0.15								
P	0.37	0.64	0.27	0.35		-0.14			-0.26		0.38	0.71	0.48	0.67	-0.28	0.79	-0.11	0.11							
Pb	-0.11	-0.15	0.17	0.39	**0.95**	**0.83**		-0.63	-0.21	**0.86**	**0.86**	0.32	**0.91**	0.03	-0.25	0.33	-0.08	0.55	0.27						
S	**0.87**	0.21	0.04	0.25	-0.16	0.31		0.40	-0.27	-0.16	0.05	0.05	0.09	0.67	-0.03	0.39	0.16	-0.06	0.46	0.04					
Se	-0.08	-0.12	0.23		**0.90**	**0.83**		-0.58	0.72	0.77	**0.92**	0.47		-0.22		0.35	-0.10	**0.85**		**0.90**	-0.02				
Si	-0.08	0.09	**0.91**	0.13	0.12	0.18		-0.06	0.04	-0.18	0.12	0.61	-0.08	0.17	0.10	0.24	0.13	-0.18	0.20	0.15	-0.13	0.19			
Ti	-0.05	0.04	0.74	0.16	0.11	0.24		-0.30	-0.07	-0.24	0.00	0.43	-0.23	0.20	0.01	0.05	0.05	-0.40	0.04	0.11	-0.04	0.25	0.75		
V	0.31	0.41	0.62	0.63	0.52	0.21			-0.16		0.31	0.64	0.62	0.48	0.00	0.60	0.15	0.04	0.42	0.26	0.41		0.63	0.69	
Zn	0.62	0.53	0.02	0.22	0.44	0.40		-0.28	-0.26	0.38	0.48	0.47	0.42	0.69	-0.30	0.62	-0.06	0.39	0.70	0.40	0.63	0.39	-0.02	-0.01	0.44

Tab. 12.20: Uppsala: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.66																								
Al	0.40	0.26																							
As	0.70	0.71	0.46																						
Bi	0.65	**0.81**	0.18																						
Br	0.43	0.34	0.34	0.48	**0.93**																				
Ca	0.23	0.53	0.39	0.36		-0.14																			
Cd	-0.25	-0.06	0.28		**0.86**	0.45																			
Cl	0.07	-0.09	0.00	0.39	0.05	0.01	0.11	0.12																	
Co	-0.05	0.10	0.38	-0.49		**0.96**			-0.25																
Cu	0.19	0.38	0.26	0.22	**0.96**	0.70	0.40	0.63	-0.08	**0.97**															
Fe	0.29	0.60	0.47	0.20	0.04	0.17	0.56	-0.15	-0.10	-0.01	0.44														
Ga	0.05	0.21	0.04	0.25		0.55	0.01		-0.18	**0.91**	0.75	-0.04													
K	0.74	0.62	0.47	0.55	0.73	0.43	0.20	0.10	-0.01	0.14	0.31	0.44	0.13												
Mg	0.16	-0.07	0.25	0.47	-0.49	-0.01	0.22	-0.26	**0.87**	-0.51	-0.10	-0.07	-0.20	0.07											
Mn	0.68	0.73	0.56	0.59	0.59	0.46	0.42	0.08	0.17	0.19	0.42	0.64	0.14	**0.84**	0.28										
Na	0.14	-0.10	0.18	0.45	0.21	0.12	0.10	-0.11	**0.88**	0.12	-0.05	-0.17	-0.13	0.08	**0.96**	0.18									
Ni	0.03	0.12	-0.11	-0.43		-0.03			0.21		0.15	0.32	0.23	-0.01	-0.30	0.32	-0.29								
P	0.71	0.72	0.46	0.55		0.40	0.59	0.40	-0.02	-0.20	0.24	0.68	-0.12	0.62	0.03	0.68	-0.07	-0.29							
Pb	0.28	0.23	0.27	0.61	**0.98**	**0.83**	-0.03	0.59	-0.08	**0.98**	0.76	0.12	0.62	0.40	-0.12	0.37	0.00	-0.20	0.18						
S	**0.86**	0.44	0.36	0.54	0.50	0.44	-0.06	-0.25	-0.06	0.05	0.10	0.07	0.03	0.60	0.07	0.48	0.12	-0.15	0.48	0.29					
Se	-0.01	0.17	0.14		**0.98**	**0.87**	-0.32	**0.88**	-0.26		**0.89**	-0.10	0.78	0.12	-0.34	0.10	0.34	-0.18	-0.13	**0.90**	0.09				
Si	0.25	0.23	**0.95**	0.36	0.15	0.27	0.41	0.31	-0.09	0.41	0.29	0.53	0.04	0.44	0.13	0.53	0.06	-0.23	0.45	0.29	0.19	0.20			
Ti	0.32	0.32	**0.90**	0.37	0.10	0.24	0.40	0.26	-0.12	0.35	0.30	0.66	0.00	0.46	0.07	0.60	-0.02	-0.07	0.58	0.24	0.25	0.05	**0.91**		
V	0.62	0.27	0.41	0.38	0.49	0.29	0.15	-0.28	0.13	-0.10	-0.01	-0.06	-0.04	0.43	0.46	0.25	0.44	-0.57	0.16	0.21	0.75	0.08	0.29	0.21	
Zn	0.61	0.70	0.28	0.54	**0.94**	0.60	0.35	0.17	-0.02	0.74	0.57	0.61	0.38	0.64	-0.07	0.69	-0.05	0.30	0.63	0.44	0.45	0.40	0.21	0.33	0.28

Tab. 12.21: Verona: Pearson within-city correlation coefficients of all elements

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.77																								
Al	0.45	0.44																							
As	**0.81**	**0.85**	0.28																						
Bi																									
Br	**0.84**	0.78	0.48	0.76																					
Ca	0.62	0.64	0.56	0.69		0.52																			
Cd	0.57	0.78	0.62			0.78	0.57																		
Cl	0.78	0.65	0.29	**0.81**		0.67	0.57	**0.98**																	
Co																									
Cu	0.78	0.75	0.38	0.78		**0.87**	0.64	0.10	0.62																
Fe	**0.82**	**0.81**	0.56	0.78		**0.91**	0.72	0.61	0.62		**0.92**														
Ga	0.35	0.37	0.22	0.11		0.52	0.11		0.26		0.58	0.55													
K	**0.91**	0.70	0.43	0.77		0.70	0.69	0.60	**0.89**		0.71	0.74	0.39												
Mg	0.45	0.41	**0.84**	0.35		0.32	0.58		0.36		0.26	0.42	0.09	0.49											
Mn	0.58	0.58	0.13	0.72		0.49	0.52	0.43	0.71		0.61	0.57	0.14	0.63	0.20										
Na	0.34	0.32	0.66	0.22		0.19	0.41	0.00	0.40		0.20	0.26	0.12	0.45	**0.90**	0.26									
Ni	0.31	0.41	0.36	0.01		0.25	0.29		0.13		0.72	0.61		0.43	0.36	0.13	0.61								
P	**0.87**	**0.88**	0.46	**0.87**		0.78	0.67	0.61	0.78		**0.82**	**0.84**	0.39	**0.87**	0.44	0.68	0.37	0.70							
Pb	**0.84**	**0.85**	0.37	**0.82**		**0.92**	0.57	0.20	0.65		**0.95**	**0.92**	0.59	0.72	0.28	0.59	0.22	0.76	**0.86**						
S	0.63	0.51	0.39	0.37		0.33	0.35	0.38	0.20		0.39	0.43	0.15	0.47	0.48	0.31	0.36	0.42	0.51	0.46					
Se	-0.17	-0.01	-0.18	-0.29		-0.08	-0.22		-0.24		0.18	-0.10	0.16	-0.16	-0.15	-0.15	0.20		-0.12	0.14	0.03				
Si	0.38	0.42	0.42	0.44		0.35	0.31	0.59	0.45		0.30	0.42	0.08	0.48	0.44	0.42	0.44	0.33	0.55	0.33	0.13	-0.11			
Ti	0.62	0.66	**0.91**	0.55		0.70	0.72	0.76	0.46		0.63	**0.80**	0.36	0.60	0.73	0.32	0.52	0.39	0.68	0.62	0.37	-0.18	0.55		
V	0.25	0.22	0.29	-0.13		0.06	0.06		-0.30		0.11	0.13	0.15	0.03	0.32	-0.19	0.24		0.15	0.15	**0.80**	0.15	-0.04	0.18	
Zn	0.57	0.64	0.08	0.70		0.44	0.55	-0.25	0.66		0.70	0.57	0.30	0.62	0.20	**0.81**	0.31	**0.81**	0.72	0.69	0.37	0.28	0.26	0.27	-0.04

Tab. 13.1: Antwerp City: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.80**																								
Al	**0.96**	**0.84**																							
As	**0.89**	0.77	**0.81**																						
Bi																									
Br	**0.95**	0.72	**0.95**	**0.86**																					
Ca	0.78	**0.81**	**0.88**	0.62		0.77																			
Cd																									
Cl	**0.93**	0.65	**0.93**	0.79		**0.95**	**0.80**																		
Co																									
Cu	**0.80**	0.74	**0.89**	0.64		**0.84**	0.79		0.78																
Fe	**0.84**	**0.88**	**0.92**	0.65		**0.80**	**0.92**		0.77		**0.83**														
Ga	0.27	-0.12	0.27	0.72		0.45	0.09		0.44		0.29	0.12													
K	**0.97**	**0.84**	**0.97**	**0.86**		**0.94**	**0.83**		**0.90**		**0.89**	**0.89**	0.19												
Mg	0.52	0.28	0.57	0.39		0.56	0.66		0.77		0.42	0.45	0.37	0.48											
Mn	**0.90**	**0.91**	**0.95**	**0.81**		**0.86**	**0.85**		**0.80**		**0.80**	**0.95**	0.17	**0.92**	0.39										
Na	0.35	0.13	0.40	0.27		0.40	0.53		0.63		0.25	0.29	0.35	0.31	**0.97**	0.24									
Ni	-0.27	-0.50	-0.24			-0.09	-0.21		0.02		-0.08	-0.37		-0.27	0.39	-0.39	0.52								
P	**0.85**	0.71	**0.91**	0.73		**0.88**	**0.80**		**0.84**		**0.88**	**0.87**	0.57	**0.86**	0.50	**0.86**	0.33	-0.01							
Pb	**0.93**	0.79	**0.89**	**0.96**		**0.92**	0.70		**0.83**		0.75	0.77	0.33	**0.92**	0.37	**0.89**	0.22	-0.13	**0.82**						
S	**0.98**	0.73	**0.92**	**0.85**		**0.93**	0.71		**0.92**		0.74	0.78	0.31	**0.92**	0.52	**0.84**	0.36	-0.29	**0.81**	**0.88**					
Se	0.54	0.42	0.40	0.79		0.52	0.12		0.49		0.20	0.18	0.20	0.44	0.32	0.43	0.34		0.25	0.65	0.56				
Si	**0.83**	**0.89**	**0.92**	0.64		**0.83**	**0.92**		0.77		**0.89**	**0.96**	0.09	**0.90**	0.45	**0.90**	0.28	-0.34	**0.85**	0.75	0.77	0.18			
Ti	**0.95**	**0.84**	**0.98**	0.79		**0.91**	**0.86**		**0.92**		**0.85**	**0.92**	0.25	**0.96**	0.56	**0.95**	0.40	-0.29	**0.90**	**0.88**	**0.91**	0.39	**0.88**		
V	0.38	0.14	0.32	0.11		0.25	0.22		0.40		0.09	0.26	0.54	0.21	0.40	0.27	0.36	-0.22	0.31	0.16	0.48	0.11	0.15	0.40	
Zn	**0.92**	**0.89**	**0.95**	**0.82**		**0.90**	**0.87**		**0.83**		**0.86**	**0.94**	0.18	**0.96**	0.44	**0.95**	0.28	-0.24	**0.88**	**0.91**	**0.84**	0.39	**0.93**	**0.93**	0.12

Tab. 13.2: Albacete: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.46																								
Al	0.13	-0.26																							
As	0.53	-0.60	-0.02																						
Bi																									
Br	0.54	0.73	-0.09	-0.09																					
Ca	0.19	0.19	0.64	-0.49		0.12																			
Cd																									
Cl	0.57	0.30	-0.14	0.53		0.30	0.03																		
Co	0.48	0.62	-0.13			0.24	**0.80**		0.40																
Cu	0.23	0.67	-0.18	0.41		0.73	0.51		0.48																
Fe	0.12	-0.25	**0.91**	0.21		-0.30	0.73		-0.10	-0.01	-0.17														
Ga	0.27	-0.21	-0.23			-0.05	-0.47		0.20		0.34	-0.15													
K	0.59	0.49	0.19	-0.67		0.47	0.35		0.13	0.03	0.18	0.18	-0.28												
Mg	0.20	-0.08	0.79	-0.12		0.08	**0.88**		0.02	0.41	0.20	**0.85**	-0.25	0.29											
Mn	0.29	0.14	0.75	0.15		0.10	0.71		-0.18	0.49	0.03	**0.80**	-0.29	0.19	0.70										
Na	0.21	0.08	0.37	0.46		0.18	0.57		0.39	0.49	0.32	0.54	0.06	0.03	0.69	0.47									
Ni	**-0.88**	-0.53	-0.32			-0.76	-0.42		-0.59			-0.01		**-0.84**	-0.35		-0.09								
P	0.28	0.21	0.47	-0.57		0.44	0.34		-0.19	-0.23	0.33	0.36	-0.19	0.66	0.26	0.38	-0.10								
Pb	0.20	0.69	-0.23	-0.43		**0.82**	0.16		0.26	0.36	**0.89**	-0.29	-0.32	0.29	0.02	-0.04	0.10	-0.21	0.36						
S	0.72	0.07	-0.03	0.78		0.19	-0.14		0.64	-0.62	-0.13	-0.06	0.31	0.23	-0.03	-0.12	0.13	**-0.80**	-0.16	-0.12					
Se																									
Si	0.06	-0.29	**0.98**	-0.07		-0.17	0.69		-0.22	-0.18	-0.18	**0.91**	-0.25	0.18	0.79	0.74	0.32	-0.32	0.47	-0.26	-0.11				
Ti	0.21	-0.22	**0.97**	0.14		-0.09	0.65		-0.15	0.04	-0.12	**0.88**	-0.21	0.16	0.75	**0.82**	0.31	-0.34	0.44	-0.23	-0.01		**0.97**		
V	0.40	0.33	0.04	0.17		0.14	0.14		0.20	0.05	0.01	0.07	0.59	0.00	0.11	0.36	0.22	-0.20	-0.10	-0.05	0.36		0.05	0.12	
Zn	0.11	-0.13	0.63	0.48		-0.12	**0.84**		0.04	0.77	-0.11	0.72	-0.29	0.08	**0.88**	0.67	0.63	-0.31	0.02	-0.15	-0.03		0.65	0.61	0.18

Tab. 13.3: Antwerp South: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.97**																								
Al	**0.93**	**0.96**																							
As	**0.94**	**0.97**	**0.96**																						
Bi	-0.18	-0.16	0.21	0.08																					
Br	**0.92**	**0.89**	**0.91**	**0.94**	0.60																				
Ca	**0.90**	**0.91**	**0.90**	**0.92**		**0.86**																			
Cd																									
Cl	**0.84**	**0.81**	**0.83**	**0.91**	-0.05	**0.83**	**0.83**																		
Co	-0.18	-0.13	0.02			0.14			-0.34																
Cu	**0.84**	**0.86**	**0.88**	**0.93**	0.74	**0.90**	**0.94**		0.73																
Fe	**0.81**	**0.87**	**0.87**	**0.82**	-0.21	0.71	**0.84**		0.64	-0.04	0.74														
Ga	0.18	0.22	0.30	0.59		0.42	0.60		0.02		0.53	0.12													
K	**0.92**	**0.94**	**0.91**	**0.93**	-0.12	**0.82**	**0.92**		**0.82**	-0.14	**0.85**	**0.83**	0.15												
Mg	0.34	0.31	0.33	0.41	-0.42	0.35	0.31		0.65	-0.51	0.25	0.22	-0.26	0.28											
Mn	0.71	**0.80**	0.77	0.77	-0.20	0.63	**0.84**		0.46	0.03	0.71	**0.90**	0.23	0.76	0.07										
Na	0.36	0.31	0.37	0.42	-0.18	0.40	0.38		0.67	-0.41	0.36	0.17	-0.16	0.33	**0.97**	-0.01									
Ni	-0.40	-0.46	-0.43			-0.32			-0.55		-0.27	-0.58	0.25	-0.52	-0.27	-0.46	-0.19								
P	**0.91**	**0.92**	**0.92**	**0.91**	-0.30	**0.80**	0.79		0.77	-0.29	0.71	**0.82**	0.16	**0.81**	0.41	0.69	0.38	-0.32							
Pb	**0.85**	**0.88**	**0.90**	**0.97**	0.50	**0.93**	**0.92**		**0.83**	0.27	**0.92**	0.70	0.43	**0.87**	0.27	0.66	0.34	-0.47	0.73						
S	**0.89**	**0.85**	**0.84**	**0.88**	0.08	**0.89**	**0.86**		**0.80**	-0.05	0.74	0.72	0.12	0.76	0.34	0.58	0.33	-0.49	0.78	**0.81**					
Se	0.18	0.22	0.31	0.32	0.68	0.40	0.18		0.27	0.62	0.28	0.18	0.71	0.02	0.24	0.09	0.21	-0.25	0.27	0.33	0.36				
Si	**0.87**	**0.92**	**0.93**	**0.91**	-0.03	**0.80**	**0.95**		0.72	-0.01	**0.86**	**0.90**	0.21	**0.92**	0.26	**0.88**	0.29	-0.46	**0.83**	**0.83**	0.72	0.11			
Ti	**0.82**	**0.88**	**0.88**	**0.91**	-0.50	0.70	**0.86**		0.74	-0.23	0.75	**0.89**	0.03	**0.91**	0.28	**0.83**	0.30	-0.51	**0.82**	0.78	0.63	-0.02	**0.93**		
V	**0.82**	**0.81**	**0.80**	0.79	-0.20	0.70	0.63		0.78	-0.37	0.55	0.65	0.13	0.68	0.56	0.46	0.53	-0.41	**0.92**	0.61	0.73	0.40	0.64	0.63	
Zn	**0.91**	**0.94**	**0.91**	**0.94**	0.00	**0.85**	**0.95**		0.74	0.00	**0.92**	**0.84**	0.22	**0.95**	0.21	**0.82**	0.27	-0.42	**0.81**	**0.89**	0.77	0.05	**0.95**	**0.90**	0.60

Tab. 13.4: Barcelona: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.64																								
Al	0.60	0.67																							
As	0.66	**0.83**	0.58																						
Bi																									
Br	**0.82**	0.77	0.67	0.74																					
Ca	0.57	**0.90**	0.76	0.77		0.70																			
Cd																									
Cl	**0.83**	0.52	0.60	0.42		0.71	0.46																		
Co																									
Cu	0.48	0.75	0.48	0.66		0.50	0.73		0.31																
Fe	0.70	**0.92**	0.79	**0.86**		**0.88**	**0.93**		0.57		0.67														
Ga	0.26	0.19	0.03	0.14		0.26	0.07		0.39		0.23	0.20													
K	0.51	0.31	0.41	0.46		0.42	0.32		0.43		0.33	0.46	0.28												
Mg	0.48	0.46	**0.88**	0.31		0.50	0.51		0.64		0.22	0.56	-0.04	0.24											
Mn	0.38	0.74	0.40	0.59		0.58	**0.80**		0.21		0.49	0.77	0.06	0.24	0.19										
Na	0.39	0.56	**0.82**	0.36		0.52	0.59		0.52		0.24	0.60	-0.18	0.11	**0.91**	0.36									
Ni	-0.32	-0.11	-0.29	-0.28		-0.19	-0.38		-0.08		-0.06	-0.20	0.76	0.07	-0.17	-0.10	-0.16								
P	0.77	**0.82**	0.69	0.71		0.77	0.77		0.70		0.54	**0.83**	0.34	0.48	0.49	0.59	0.54	-0.06							
Pb	0.66	**0.85**	0.53	**0.86**		**0.88**	0.74		0.49		0.57	**0.89**	0.36	0.42	0.28	0.70	0.39	0.05	0.76						
S	**0.85**	0.31	0.53	0.36		0.59	0.29		0.73		0.14	0.42	0.19	0.49	0.49	0.05	0.30	-0.36	0.58	0.32					
Se	0.61	0.30	0.50	0.54		**0.82**	0.25		0.55		0.22	0.55	0.28	0.06	0.37	0.24	0.32	-0.09	0.52	0.69	0.45				
Si	0.51	0.72	**0.95**	0.59		0.62	**0.83**		0.47		0.52	**0.83**	-0.05	0.34	**0.82**	0.58	**0.83**	-0.29	0.67	0.55	0.36	0.32			
Ti	0.53	0.47	0.63	0.43		0.49	0.49		0.72		0.42	0.55	0.36	0.62	0.63	0.20	0.56	0.08	0.58	0.38	0.45	0.15	0.54		
V	**0.85**	0.74	**0.80**	0.75		0.77	0.69		0.78		0.61	**0.80**	0.29	0.52	0.63	0.35	0.51	-0.19	**0.81**	0.67	0.70	0.54	0.71	0.60	
Zn	0.68	**0.85**	0.51	0.74		0.72	0.77		0.62		0.66	**0.83**	0.54	0.38	0.38	0.70	0.42	0.31	0.78	**0.83**	0.35	0.39	0.54	0.52	0.70

Tab. 13.5: Basel: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.56																								
Al	0.01	0.54																							
As	0.13	0.49	0.79																						
Bi																									
Br	0.42	0.63	0.72	0.67																					
Ca	-0.12	0.68	0.53	0.61		0.37																			
Cd																									
Cl	0.73	0.62	0.43	0.53		0.60	-0.07																		
Co																									
Cu	-0.03	0.59	0.65	0.65		0.43	0.76		0.22																
Fe	0.44	**0.92**	0.62	0.63		0.67	**0.84**		0.54		0.71														
Ga	-0.33	0.23	0.26	-0.02		0.02	0.34		-0.09		0.49	0.23													
K	**0.86**	0.76	0.35	0.49		0.67	0.12		**0.84**		0.33	0.70	-0.13												
Mg	-0.09	0.42	0.16	0.53		0.17	0.49		0.34		0.26	0.49	0.22	0.08											
Mn	0.59	**0.87**	0.66	0.67		0.75	0.56		0.71		0.57	**0.85**	0.05	0.79	0.28										
Na	0.02	0.44	0.40	0.79		0.32	0.62		0.45		0.53	0.60	0.21	0.28	**0.83**	0.47									
Ni	0.50	0.60	0.63			**0.81**			0.77		-0.13	0.58		0.65	0.62	0.54	0.09								
P	0.45	**0.86**	0.48	0.44		0.56	**0.85**		0.47		0.58	**0.85**	-0.07	0.62	0.63	**0.81**	0.45	0.47							
Pb	0.51	0.72	0.70	**0.80**		0.67	0.38		0.73		0.63	0.69	0.05	0.73	0.11	**0.86**	0.45	0.29	0.73						
S	**0.96**	0.50	-0.03	0.07		0.32	-0.11		0.67		-0.08	0.36	-0.22	0.78	-0.12	0.55	-0.04	0.41	0.43	0.45					
Se																									
Si	0.10	0.79	**0.85**	0.73		0.70	0.79		0.41		0.79	**0.84**	0.30	0.46	0.39	0.77	0.53	0.50	0.70	0.66	0.03				
Ti	0.44	**0.84**	0.68	0.69		0.73	0.46		0.64		0.71	0.78	0.21	0.76	0.16	**0.88**	0.41	0.54	0.63	**0.80**	0.37		0.79		
V	0.71	0.18	-0.15	0.20		0.08	0.06		0.45		0.14	0.23	0.10	0.62	-0.09	0.10	0.15		0.04	0.32	0.64		-0.14	0.11	
Zn	0.62	**0.82**	0.56	0.66		0.68	0.39		0.75		0.60	0.79	-0.11	**0.85**	0.18	**0.94**	0.46	0.51	0.77	**0.88**	0.55		0.70	**0.88**	0.18

Tab. 13.6: Erfurt: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.82**																								
Al	0.66	**0.84**																							
As	**0.95**	**0.81**	0.68																						
Bi																									
Br	**0.81**	0.49	0.37	0.70																					
Ca	0.37	0.78	**0.87**	0.38		0.11																			
Cd																									
Cl	**0.92**	0.64	0.50	**0.89**		**0.84**	0.22																		
Co																									
Cu	0.68	**0.81**	0.76	0.72		0.45	0.59		0.61																
Fe	0.76	**0.97**	**0.87**	0.74		0.44	**0.85**		0.60		**0.84**														
Ga	0.15	0.32	0.31	0.26		-0.04	-0.08		0.08		0.59	0.31													
K	**0.98**	**0.86**	0.70	**0.93**		**0.80**	0.42		**0.87**		0.75	**0.80**	0.23												
Mg	0.60	0.44	0.48	0.69		0.61	0.25		0.73		0.52	0.45	0.28	0.56											
Mn	**0.80**	**0.93**	0.78	0.74		0.52	0.78		0.64		0.77	**0.93**	0.10	**0.84**	0.40										
Na	0.58	0.28	0.26	0.59		0.65	0.00		0.73		0.38	0.32	0.28	0.52	**0.90**	0.32									
Ni	-0.20	0.20	0.11			-0.31			-0.23		0.35	0.20		-0.17		-0.08	-0.46								
P	**0.93**	**0.91**	0.75	**0.87**		0.76	0.61		**0.82**		**0.81**	**0.86**	0.20	**0.95**	0.71	**0.91**	0.62	-0.17							
Pb	**0.96**	**0.82**	0.64	**0.97**		0.79	0.41		**0.91**		0.72	0.76	0.18	**0.96**	0.63	0.79	0.59	-0.18	**0.93**						
S	**0.93**	0.66	0.54	**0.86**		**0.92**	0.22		**0.93**		0.55	0.60	-0.01	**0.91**	0.61	0.66	0.61	-0.25	**0.86**	**0.91**					
Se	0.50	0.50	0.60			**0.83**	**0.95**		0.62		0.53	0.57		0.57	0.69	0.70	0.55		0.73	0.60	0.74				
Si	0.49	**0.82**	**0.94**	0.50		0.13	**0.95**		0.30		0.69	**0.86**	0.27	0.55	0.31	0.78	0.06	0.14	0.62	0.47	0.31	0.50			
Ti	0.73	**0.91**	**0.94**	0.69		0.47	**0.87**		0.57		0.79	**0.93**	0.17	0.79	0.46	**0.91**	0.27	-0.05	**0.86**	0.74	0.63	0.75	**0.91**		
V																									
Zn	**0.94**	**0.81**	0.61	**0.97**		0.72	0.42		**0.88**		0.69	0.76	0.19	**0.92**	0.60	0.77	0.59	-0.19	**0.90**	**0.98**	**0.87**	0.53	0.46	0.71	

Tab. 13.7: Galdakao: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.91**																								
Al	0.79	0.74																							
As	**0.81**	**0.81**	0.59																						
Bi																									
Br	**0.95**	**0.86**	0.77	0.66																					
Ca	0.73	0.67	**0.90**	0.39		0.72																			
Cd																									
Cl	0.64	0.53	0.44	0.64		0.59	0.18																		
Co																									
Cu	0.53	0.64	0.12	0.60		0.45	-0.12		0.66																
Fe	**0.89**	**0.90**	**0.87**	**0.85**		**0.81**	0.76		0.61		0.52														
Ga	0.52	0.31	0.39	0.57		0.40	0.40		0.54		0.50	0.42													
K	**0.95**	**0.87**	0.77	0.71		**0.95**	0.74		0.61		0.36	**0.83**	0.35												
Mg	0.38	0.38	0.09	0.57		0.21	-0.04		0.79		0.74	0.42	0.21	0.27											
Mn	**0.81**	**0.80**	0.67	**0.96**		0.67	0.53		0.62		0.55	**0.92**	0.53	0.70	0.51										
Na	0.50	0.33	0.46	0.43		0.44	0.18		0.78		0.42	0.52	0.20	0.44	0.78	0.50									
Ni	-0.53	-0.33				-0.57			-0.38		-0.18	-0.24		-0.52	-0.14	-0.21	-0.45								
P	0.23	0.48	0.07	0.48		0.18	-0.12		0.52		0.77	0.47	-0.15	0.16	0.58	0.46	0.18								
Pb	**0.80**	0.73	0.47	**0.87**		0.65	0.42		0.53		0.55	0.78	0.59	0.64	0.40	**0.88**	0.43	-0.57	0.30						
S	**0.87**	0.72	0.64	0.47		**0.85**	0.69		0.37		0.33	0.64	0.52	0.79	0.10	0.54	0.33	-0.57	-0.26	0.64					
Se	0.35	0.36	-0.26	0.69		0.07	-0.30		0.21		0.65	0.30		0.07	0.56	0.63	0.13		0.17	**0.85**	0.22				
Si	0.79	**0.84**	**0.91**	0.77		0.73	**0.81**		0.47		0.37	**0.92**	0.42	0.71	0.24	**0.85**	0.38		0.40	0.67	0.56	0.12			
Ti	0.76	**0.84**	**0.91**	0.57		0.75	**0.80**		0.42		0.34	**0.84**	0.15	0.75	0.17	0.65	0.25		0.42	0.43	0.56	-0.28	**0.90**		
V	**0.82**	**0.84**	0.48	**0.88**		0.74	0.39		**0.88**		0.73	0.78	0.51	0.77	0.76	0.77	0.59		0.62	0.64	0.47	0.31	0.62	0.58	
Zn	0.74	0.66	0.73	0.76		0.68	0.60		0.66		0.35	**0.90**	0.25	0.72	0.42	**0.86**	0.66	-0.39	0.36	0.69	0.48	0.26	0.75	0.60	0.67

Tab. 13.8: Grenoble: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.74																								
Al	-0.04	-0.17																							
As	**0.83**	0.68	0.50																						
Bi																									
Br	0.76	0.64	0.09	**0.88**																					
Ca	0.06	0.11	**0.80**	0.60		0.24																			
Cd																									
Cl	**0.87**	0.78	0.04	**0.88**		**0.82**	0.35																		
Co																									
Cu	0.75	**0.87**	0.14	0.76		0.65	0.56		**0.90**																
Fe	0.66	0.76	0.25	0.76		0.66	0.64		**0.88**		**0.94**														
Ga	0.69	0.67	0.33	0.79		0.78	0.61		**0.81**		**0.80**	**0.80**													
K	**0.88**	0.68	0.00	**0.92**		**0.84**	0.05		**0.84**		0.62	0.58	0.70												
Mg	0.13	0.02	**0.84**	**0.82**		0.31	**0.89**		0.35		0.56	0.55	0.69	0.17											
Mn	0.70	0.66	0.11	**0.85**		0.67	0.40		**0.87**		**0.85**	**0.89**	**0.82**	0.68	0.41										
Na	0.77	0.77	0.20	**0.86**		0.76	0.47		**0.93**		**0.91**	**0.90**	**0.88**	0.77	0.45	**0.87**									
Ni	0.15	0.61	-0.07	-0.06		0.15	0.30		0.23		0.51	0.39	0.08	-0.09	0.00	0.02	0.20								
P	0.57	0.79	0.05	0.76		0.45	0.46		0.73		0.79	**0.84**	0.69	0.47	0.33	0.76	0.67	0.41							
Pb	**0.82**	0.77	0.10	**0.97**		0.75	0.28		**0.91**		**0.87**	**0.82**	**0.87**	**0.84**	0.30	**0.91**	**0.90**	0.15	0.74						
S	**0.84**	0.34	0.06	0.60		0.54	-0.11		0.54		0.34	0.30	0.46	0.73	0.10	0.44	0.42	-0.29	0.20	0.58					
Se																									
Si	-0.07	0.02	0.75	0.33		0.15	**0.87**		0.17		0.42	0.50	0.30	-0.10	**0.87**	0.26	0.29	0.37	0.32	0.09	-0.16				
Ti	0.02	0.01	**0.86**	0.46		0.19	**0.90**		0.21		0.43	0.45	0.50	0.00	**0.89**	0.19	0.33	0.19	0.18	0.11	-0.06		**0.88**		
V	0.78	0.66	0.16	0.74		0.66	0.34		**0.84**		0.79	0.76	0.76	0.65	0.51	0.76	0.79	0.05	0.63	0.76	0.49		0.27	0.41	
Zn	0.74	**0.83**	-0.03	0.72		0.66	0.36		**0.91**		**0.96**	**0.90**	**0.81**	0.63	0.24	**0.85**	**0.93**	0.32	0.72	**0.82**	0.32		0.20	0.20	**0.80**

Tab. 13.9: Gothenburg: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.16																								
Al	0.22	0.32																							
As	0.02	0.43	0.53																						
Bi																									
Br	0.39	-0.12	0.29	-0.30																					
Ca	0.65	0.45	0.26	-0.65		0.64																			
Cd																									
Cl	-0.09	-0.19	0.25	-0.20		0.78	0.33																		
Co	0.33	0.50	0.51			0.59			0.30																
Cu	-0.08	0.74	0.19	0.50		-0.21	0.03		-0.13	0.05															
Fe	0.01	**0.95**	0.38	0.42		-0.15	0.31		-0.13	0.16	**0.81**														
Ga	-0.29	0.27	0.31	0.56		-0.16	-0.25		-0.09		0.59	0.46													
K	0.55	0.33	0.38	0.34		0.30	0.35		0.03	0.15	0.13	0.29	-0.27												
Mg	-0.10	-0.19	0.16	-0.20		0.79	0.34		**0.98**		-0.17	-0.18	-0.05	-0.08											
Mn	0.24	**0.88**	0.49	0.43		0.08	0.51		0.08	0.79	0.58	**0.85**	0.07	0.33	0.00										
Na	-0.10	-0.20	0.30	-0.21		0.74	0.32		**0.97**	0.29	-0.13	-0.14	-0.06	0.04	**0.99**	0.09									
Ni	0.04	0.14	0.34			-0.28			-0.21		**0.86**	0.47	**0.82**	0.17	-0.51	0.09	-0.11								
P	0.51	**0.81**	0.23	0.30		0.20	0.60		0.00	0.70	0.64	0.76	-0.04	0.53	-0.04	**0.82**	0.00	0.13							
Pb	0.46	0.18	0.36	0.08		0.35	0.56		0.02		-0.24	0.12	-0.25	0.51	0.15	0.16	-0.01	-0.31	0.09						
S	0.69	-0.18	0.21	0.18		0.05	-0.06		-0.31	-0.02	-0.21	-0.25	-0.17	0.43	-0.30	-0.16	-0.25	0.20	0.03	0.45					
Se	0.06	-0.17	-0.39			-0.27			-0.16		-0.09	-0.47		-0.51		0.09	-0.18		0.29	-0.77	-0.09				
Si	-0.14	0.64	0.75	0.67		-0.09	-0.05		0.04	0.01	0.51	0.75	0.33	0.27	-0.09	0.66	0.07	0.31	0.37	0.11	-0.17	-0.43			
Ti	0.18	**0.88**	0.58	0.42		0.14	0.56		0.07	0.66	0.63	**0.90**	0.33	0.45	-0.02	**0.91**	0.06	0.29	**0.85**	0.17	-0.17	-0.19	0.74		
V	0.25	0.04	0.45	-0.11		0.49	0.22		0.42	0.49	0.18	0.04	0.00	0.00	0.46	0.24	0.53	0.20	0.11	0.19	0.26	-0.21	0.20	0.12	
Zn	0.11	**0.82**	0.34	0.64		-0.07	0.23		-0.08	0.11	**0.86**	**0.81**	0.39	0.26	-0.11	0.75	-0.10	0.26	0.67	0.05	-0.15	-0.06	0.60	0.73	0.10

Tab. 13.10: Huelva: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.59																								
Al	0.22	0.09																							
As	0.31	-0.18	-0.01																						
Bi																									
Br	0.75	**0.85**	0.06	0.09																					
Ca	0.49	0.22	0.79	0.40		0.30																			
Cd																									
Cl	0.22	-0.33	-0.02	0.63		-0.05	0.33																		
Co																									
Cu	0.23	-0.25	0.01	**0.98**		-0.04	0.43		0.63																
Fe	0.31	0.23	**0.97**	0.01		0.18	**0.84**		0.01		0.04														
Ga	0.26	0.10	0.28	0.41		-0.07	0.48		0.30		0.46	0.37													
K	0.67	0.71	0.20	-0.13		0.78	0.32		-0.24		-0.20	0.30	0.06												
Mg	0.05	-0.40	0.53	0.47		-0.22	0.62		0.76		0.50	0.51	0.38	-0.28											
Mn	0.41	0.31	0.41	-0.09		0.30	0.45		0.04		-0.09	0.56	0.22	0.32	0.13										
Na	-0.09	-0.42	-0.05	0.47		-0.22	0.24		**0.90**		0.50	-0.03	0.24	-0.37	0.79	-0.07									
Ni	-0.16	0.42	0.46	-0.32		-0.28	0.25		-0.32		-0.23	0.49	0.69	0.23	0.07	0.34	-0.40								
P	0.14	-0.32	0.00	**0.87**		-0.12	0.44		**0.84**		**0.93**	0.01	0.42	-0.31	0.64	-0.10	**0.81**	-0.32							
Pb	0.43	-0.01	0.05	**0.97**		0.23	0.48		0.58		**0.94**	0.09	0.45	0.00	0.42	-0.01	0.38	-0.24	**0.84**						
S	**0.88**	0.30	0.18	0.52		0.57	0.49		0.31		0.46	0.23	0.10	0.47	0.14	0.31	0.01	-0.32	0.38	0.61					
Se	0.27	-0.47	0.37	**0.91**		0.00	0.78		**0.94**		**0.92**	0.37	0.48	-0.33	**0.87**	-0.17	**0.80**		**0.93**	**0.93**	0.57				
Si	0.23	-0.09	**0.92**	0.32		-0.02	**0.87**		0.29		0.35	**0.89**	0.36	0.04	0.73	0.32	0.21	0.33	0.37	0.35	0.29	**0.93**			
Ti	0.60	0.38	0.72	-0.05		0.29	0.72		-0.04		-0.04	0.75	0.32	0.41	0.26	0.51	-0.17	0.41	-0.06	0.05	0.46	0.06	0.62		
V	0.66	0.46	0.02	0.02		0.51	0.26		-0.04		-0.01	0.13	-0.01	0.67	-0.20	0.44	-0.20	-0.33	-0.07	0.10	0.56	0.03	-0.03	0.54	
Zn	0.33	-0.17	0.06	**0.96**		0.08	0.49		0.63		**0.95**	0.10	0.46	-0.12	0.48	0.08	0.45	-0.26	**0.86**	**0.97**	0.56	**0.96**	0.38	0.02	0.05

Tab. 13.11: Ipswich: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.81**																								
Al	0.59	0.50																							
As	0.62	0.59	**0.96**																						
Bi																									
Br	**0.89**	0.72	0.77	0.78																					
Ca	-0.19	-0.12	-0.15	-0.18		-0.32																			
Cd																									
Cl	0.79	0.59	**0.89**	**0.87**		**0.87**	-0.09																		
Co	0.05	-0.26	0.23			0.21			0.20																
Cu	0.56	0.55	**0.98**	**0.96**		0.73	-0.10		**0.86**	0.11															
Fe	0.53	0.79	0.08	0.09		0.29	0.18		0.20	-0.69	0.16														
Ga	0.60	0.56	**0.98**	**0.97**		0.74	0.05		**0.88**		**0.99**	0.18													
K	0.57	0.50	**0.99**	**0.96**		0.75	-0.11		**0.87**	0.24	**0.98**	0.08	**0.98**												
Mg	0.35	0.24	**0.86**	**0.84**		0.54	0.14		**0.83**	0.29	**0.84**	-0.12	**0.89**	**0.87**											
Mn	0.48	0.52	0.26	0.25		0.32	0.74		0.35	-0.30	0.36	0.62	0.44	0.30	0.24										
Na	-0.09	-0.17	0.27	0.27		-0.01	0.56		0.39	0.07	0.29	-0.20	0.43	0.29	0.71	0.16									
Ni	0.57	**0.88**	0.62	**0.83**		0.32			0.50		**0.95**	**0.97**	**0.85**	0.71	-0.02	0.61	0.03								
P	**0.92**	0.79	0.58	0.60		**0.88**	-0.09		0.71		0.56	0.54	0.63	0.56	0.31	0.57	-0.16	0.65							
Pb	0.57	0.52	**0.99**	**0.98**		0.75	-0.17		**0.87**	0.27	**0.98**	0.08	**0.98**	**0.99**	**0.85**	0.25	0.25	**0.81**	0.56						
S	**0.87**	0.54	0.29	0.32		0.66	-0.09		0.53	0.30	0.21	0.41	0.31	0.25	0.09	0.44	-0.18	0.26	0.75	0.26					
Se	0.78	**0.83**	0.78	0.65		0.69			0.69		0.71	0.62	**0.85**	**0.93**	0.09	0.55	-0.11		0.70	**0.88**	0.47				
Si	**0.84**	**0.85**	0.65	0.68		0.75	0.08		0.77		0.68	0.59	0.69	0.65	0.47	0.58	0.08	**0.89**	**0.85**	0.64	0.55	0.79			
Ti	0.50	0.46	**0.99**	**0.95**		0.70	-0.10		**0.84**	0.26	**0.98**	0.04	**0.97**	**0.99**	**0.89**	0.27	0.35	0.58	0.51	**0.99**	0.19	0.78	0.61		
V	0.55	0.53	0.27	0.67		0.27	0.28		0.30		0.18	0.52	0.53	0.39	-0.13	0.57	-0.18	0.71	0.52	0.53	0.68	0.05	0.38	0.32	
Zn	0.79	0.72	**0.89**	**0.91**		0.79	-0.11		**0.90**	0.18	**0.89**	0.34	**0.90**	**0.89**	0.71	0.43	0.16	0.76	0.69	**0.90**	0.52	0.73	**0.83**	**0.86**	0.57

Tab. 13.12: Norwich: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.72																								
Al	0.64	0.65																							
As	0.21	0.40	0.10																						
Bi																									
Br	**0.82**	0.61	0.62	0.22																					
Ca	-0.09	0.31	0.26	0.25		-0.14																			
Cd																									
Cl	**0.86**	0.61	0.49	0.23		**0.90**	-0.11																		
Co																									
Cu	0.62	0.37	0.34	-0.01		0.75	-0.20		0.76																
Fe	0.71	0.73	0.77	0.09		0.47	0.21		0.50		0.33														
Ga	-0.41	-0.23	-0.12	0.67		-0.52	0.12		-0.38		-0.19	-0.07													
K	0.69	0.69	0.64	0.38		0.57	0.12		0.61		0.48	0.71	-0.20												
Mg	0.15	0.26	0.06	-0.18		0.07	0.19		0.41		0.26	0.24	-0.24	0.28											
Mn	0.29	0.39	0.72	0.04		0.22	0.21		0.12		-0.07	**0.80**	0.29	0.54	-0.01										
Na	-0.13	-0.05	-0.33	-0.17		-0.14	0.02		0.21		0.15	-0.13	-0.14	0.02	**0.91**	-0.31									
Ni	-0.52	-0.66	-0.05			-0.39	-0.33		-0.50		-0.15	0.05	**0.80**	-0.11	-0.06	0.69	0.06								
P	**0.95**	0.75	0.64	0.21		0.71	-0.11		0.73		0.57	0.75	-0.36	0.66	0.09	0.30	-0.21	-0.46							
Pb	0.11	0.28	0.07	**0.95**		0.17	0.27		0.10		-0.12	-0.03	0.39	0.33	-0.30	0.03	-0.26	-0.26	0.06						
S	**0.92**	0.47	0.42	0.12		0.61	-0.23		0.69		0.51	0.56	-0.36	0.49	0.04	0.12	-0.16	-0.45	**0.89**	0.03					
Se																									
Si	0.06	0.37	0.71	-0.04		0.01	0.54		-0.10		-0.27	0.48	0.17	0.31	0.10	0.68	-0.20	0.19	0.07	0.02	-0.12				
Ti	0.28	0.68	0.42	-0.08		0.21	0.35		0.27		0.08	0.53	-0.37	0.44	0.56	0.40	0.34	-0.19	0.28	-0.04	0.03		0.46		
V	0.68	0.47	0.19	0.33		0.17	-0.09		0.41		0.25	0.51	-0.39	0.48	0.31	0.01	0.14	-0.42	0.72	0.06	**0.81**		-0.10	0.22	
Zn	0.45	0.58	0.55	**0.84**		0.42	0.17		0.33		0.17	0.40	0.42	0.66	-0.13	0.35	-0.29	-0.03	0.40	0.75	0.29		0.38	0.17	0.39

Tab. 13.13: Oviedo: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.47																								
Al	0.63	0.66																							
As	0.51	0.65	0.52																						
Bi																									
Br	**0.88**	0.53	0.61	0.29																					
Ca	0.37	0.74	0.61	0.66		0.34																			
Cd																									
Cl	0.27	-0.17	0.08	0.20		0.18	-0.13																		
Co																									
Cu	0.51	0.56	0.39	**0.85**		0.25	0.30		0.30																
Fe	0.51	0.53	0.58	**0.86**		0.29	0.45		0.21		**0.90**														
Ga	0.28	0.41	-0.02	0.00		0.17	0.18		-0.45		0.16	0.01													
K	**0.82**	0.48	0.64	0.63		0.75	0.35		0.06		0.55	0.65	0.30												
Mg	0.14	0.15	0.23	0.61		-0.04	0.21		0.69		0.52	0.55	-0.43	0.09											
Mn	0.30	0.19	0.43	0.42		0.06	0.12		0.22		0.49	0.71	0.08	0.45	0.48										
Na	-0.11	-0.23	-0.15	0.25		-0.22	-0.19		**0.80**		0.24	0.16	-0.45	-0.18	**0.85**	0.24									
Ni	0.02	0.29	-0.21	0.27		-0.19	0.19		-0.25		0.71	0.34	**0.84**	0.10	0.48	0.19	0.31								
P	0.74	**0.85**	0.74	**0.80**		0.66	0.71		-0.09		0.75	0.70	0.27	0.67	0.16	0.26	-0.28	0.15							
Pb	0.63	**0.89**	0.60	0.67		0.73	0.63		-0.08		0.61	0.57	0.28	0.64	0.14	0.16	-0.22	0.13	**0.88**						
S	**0.84**	0.17	0.45	0.39		0.63	0.14		0.17		0.37	0.42	0.37	0.76	0.13	0.41	-0.06	0.25	0.47	0.32					
Se	0.51	0.73	0.53	0.53		0.40	0.22		0.09		0.64	0.59	0.24	0.53	0.36	0.64	0.14	0.39	**0.80**	0.75	0.50				
Si	0.45	0.62	**0.87**	0.56		0.39	0.74		0.01		0.29	0.56	-0.08	0.44	0.36	0.42	-0.02	-0.06	0.70	0.52	0.34	0.56			
Ti	0.64	0.61	**0.95**	0.57		0.57	0.58		0.50		0.55	0.64	-0.08	0.60	0.51	0.47	0.26	0.03	0.76	0.59	0.44	0.70	**0.84**		
V	0.57	0.31	0.54	0.55		0.41	0.60		0.39		0.33	0.44	0.02	0.53	0.36	0.19	0.17	0.08	0.55	0.32	0.52	-0.05	0.62	0.53	
Zn	0.65	0.73	0.64	**0.87**		0.53	0.53		0.21		**0.89**	**0.89**	0.10	0.73	0.47	0.47	0.10	0.31	**0.84**	0.78	0.45	0.61	0.56	0.68	0.51

Tab. 13.14: Pavia: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.67																								
Al	0.60	0.68																							
As	0.74	0.46	0.55																						
Bi																									
Br	0.71	**0.84**	0.79	0.61																					
Ca	0.26	0.51	**0.92**	0.35		0.58																			
Cd																									
Cl	**0.87**	0.58	0.59	0.74		0.64	0.29																		
Co																									
Cu	0.55	0.44	0.71	0.56		0.66	0.66		0.56																
Fe	0.70	0.64	**0.92**	0.68		**0.82**	**0.81**		0.69		**0.85**														
Ga	-0.18	-0.09	0.07	-0.08		0.01	0.41		-0.08		0.32	-0.07													
K	0.68	0.52	0.51	0.77		0.63	0.27		0.65		0.64	0.69	-0.19												
Mg	**0.80**	0.74	**0.88**	0.72		0.78	0.70		**0.85**		0.65	**0.86**	0.04	0.62											
Mn	0.64	0.51	0.68	0.70		0.53	0.66		0.77		0.63	0.75	-0.02	0.52	**0.82**										
Na	**0.89**	0.70	0.68	0.79		0.74	0.38		**0.97**		0.59	0.76	-0.12	0.69	**0.91**	**0.80**									
Ni	-0.29	-0.16	-0.22	-0.52		-0.24	-0.34		-0.13		0.11	-0.25	0.53	-0.42	-0.26	-0.20	-0.25								
P	0.56	0.52	0.73	0.51		0.63	0.50		0.72		0.67	0.79	-0.15	0.49	0.71	0.72	0.75	0.25							
Pb	0.79	0.70	0.75	0.75		**0.86**	0.53		**0.81**		0.70	**0.85**	-0.21	**0.82**	**0.81**	0.68	**0.85**	-0.30	0.75						
S	0.61	0.56	0.25	0.37		0.37	0.00		0.50		0.18	0.26	-0.09	0.32	0.53	0.31	0.59	-0.07	0.25	0.26					
Se	0.65	0.49	0.62	0.27		0.62	0.42		0.65		0.48	0.52	-0.03	0.31	0.63	0.29	0.63	-0.04	0.48	0.59	0.56				
Si	0.44	0.56	**0.91**	0.42		0.59	**0.91**		0.47		0.60	**0.85**	-0.12	0.38	0.76	0.73	0.55	-0.33	0.68	0.60	0.08	0.37			
Ti	0.25	0.50	0.78	0.24		0.45	0.78		0.27		0.44	0.67	-0.17	0.26	0.62	0.59	0.38	-0.30	0.56	0.38	0.18	0.23	**0.90**		
V	0.26	0.34	0.22	0.04		0.18	0.08		0.13		0.14	0.13	0.16	0.16	0.33	-0.02	0.23	0.13	0.02	0.07	0.71	0.66	0.02	0.11	
Zn	**0.84**	0.55	0.59	**0.87**		0.65	0.36		**0.91**		0.65	0.73	-0.09	0.73	0.79	**0.81**	**0.92**	-0.21	0.70	**0.86**	0.43	0.49	0.45	0.22	0.11

Tab. 13.15: Paris: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.58																								
Al	**0.82**	0.68																							
As	0.62	0.73	0.65																						
Bi																									
Br	0.77	0.65	**0.83**	0.55																					
Ca	0.57	0.77	0.65	0.70		0.59																			
Cd	**-0.85**	**-0.82**	-0.69			-0.39	**-0.84**																		
Cl	0.57	0.31	0.63	0.44		**0.81**	0.41	0.33																	
Co																									
Cu	0.21	0.36	0.20	0.29		0.40	0.33	-0.14	0.27																
Fe	0.78	**0.85**	0.78	0.75		0.76	**0.91**	**-0.88**	0.48		0.35														
Ga	-0.04	-0.09	0.03	0.37		0.22	0.22		0.24		0.42	0.11													
K	**0.90**	0.72	**0.89**	0.67		**0.88**	0.74	-0.76	0.68		0.31	**0.85**	0.10												
Mg	-0.19	-0.28	-0.06	0.03		0.11	0.10	0.57	0.54		0.07	-0.07	0.40	-0.08											
Mn	**0.82**	0.69	**0.89**	0.72		**0.82**	0.78	**-0.90**	0.60		0.26	**0.87**	0.22	**0.91**	-0.01										
Na	-0.30	-0.27	-0.23	-0.13		-0.01	0.11	0.61	0.39		0.12	-0.11	0.48	-0.18	**0.95**	-0.17									
Ni	-0.17	-0.35	-0.14	-0.25		0.14	0.01		0.24		0.12	-0.16	**0.82**	0.06	0.55	0.03	0.67								
P	0.55	**0.80**	0.62	0.63		0.66	0.67	**-0.82**	0.43		0.33	0.73	0.05	0.66	-0.21	0.55	-0.18	-0.23							
Pb	0.66	0.69	0.69	0.76		0.78	0.76	-0.48	0.53		0.44	**0.80**	0.55	**0.81**	-0.03	**0.83**	-0.06	0.42	0.64						
S	**0.84**	0.23	0.67	0.33		0.52	0.32	-0.52	0.40		0.01	0.52	-0.02	0.65	-0.13	0.71	-0.28	-0.18	0.09	0.40					
Se	-0.34	-0.12	-0.15	0.65		0.11	0.11		0.18		0.74	-0.08	**0.99**	-0.12	0.69	0.02	0.68		0.05	0.49	-0.47				
Si	0.70	**0.80**	**0.87**	**0.80**		0.68	**0.80**	-0.70	0.45		0.25	**0.82**	0.10	**0.83**	-0.13	**0.82**	-0.18	-0.12	0.68	0.75	0.48	-0.08			
Ti	**0.81**	0.75	**0.81**	0.76		0.68	**0.89**	**-0.93**	0.45		0.29	**0.93**	0.10	**0.87**	-0.11	**0.87**	-0.14	-0.12	0.65	0.75	0.63	-0.17	**0.89**		
V	0.41	-0.25	0.02	-0.09		-0.01	-0.29	-0.04	0.13		-0.24	-0.10	-0.32	0.09	-0.19	0.07	-0.31	-0.43	-0.25	-0.27	0.63	-0.44	-0.18	-0.01	
Zn	0.77	**0.80**	0.78	0.62		0.77	**0.82**	**-0.82**	0.50		0.26	**0.89**	0.19	**0.89**	-0.15	**0.89**	-0.16	0.14	0.64	**0.87**	0.54	-0.03	**0.84**	**0.87**	-0.07

Tab. 13.16: Reykjavik: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.05																								
Al	0.12	0.25																							
As																									
Bi																									
Br	**0.82**	0.16	-0.11																						
Ca	0.13	0.14	0.75			-0.02																			
Cd																									
Cl	0.75	-0.06	-0.14			**0.84**	0.06																		
Co	0.17	0.42	**0.81**			0.64			0.24																
Cu	0.08	0.36	0.32			-0.22	-0.20		-0.22	-0.22															
Fe	0.07	0.36	**0.95**			-0.15	0.56		-0.18	0.31	0.55														
Ga	0.47	-0.17	0.20			0.21	-0.04		0.37		0.33	0.02													
K	**0.80**	0.31	0.16			0.76	0.09		0.70	0.44	-0.02	0.05	0.42												
Mg	0.77	0.08	-0.03			**0.85**	0.22		**0.97**	0.23	-0.12	-0.09	0.39	0.71											
Mn	0.15	0.43	**0.84**			-0.14	0.74		-0.36	0.59	0.43	**0.87**	-0.13	0.20	-0.16										
Na	0.68	-0.10	-0.12			0.76	0.08		**0.99**	0.01	-0.20	-0.13	0.39	0.64	**0.95**	-0.37									
Ni	0.40	0.18	0.14			0.07	0.08		0.37		0.56	0.24	**0.81**	0.34	0.27	0.04	0.39								
P																									
Pb	-0.23	0.47	-0.15			-0.12	-0.36		-0.35		0.47	-0.08		-0.20	-0.56	0.21	-0.35	-0.44							
S	0.77	-0.06	0.05			**0.81**	0.18		**0.88**	-0.45	-0.02	0.06	0.41	0.68	**0.92**	-0.03	**0.88**	0.32		-0.16					
Se																									
Si	-0.14	0.35	**0.98**			-0.25	0.55		-0.30	0.71	0.42	**0.96**	-0.29	-0.07	-0.28	**0.84**	-0.27	0.16		-0.09	-0.11				
Ti	0.07	0.35	**0.94**			-0.17	0.79		-0.24	0.29	0.40	**0.96**	-0.49	0.07	-0.15	**0.90**	-0.20	0.05		0.16	0.02		**0.97**		
V																									
Zn	0.33	0.45	0.17			0.05	0.03		-0.07	-0.32	**0.81**	0.37	0.07	0.19	-0.01	0.38	-0.08	0.36		0.27	0.08		0.21	0.33	

Tab. 13.17: Tartu: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.87**																								
Al	0.66	0.51																							
As	0.74	0.75	0.66																						
Bi																									
Br	**0.81**	0.67	0.62	0.62																					
Ca	0.21	0.30	0.67			0.34																			
Cd																									
Cl	0.60	0.58	0.31	0.51		0.55	-0.38																		
Co																									
Cu	0.22	0.19	0.03	0.43		0.22	-0.08		0.21																
Fe	0.43	0.28	0.65	0.13		0.40	0.56		0.09		0.03														
Ga	-0.01	0.04	0.04	0.51		-0.28	-0.10		0.01		0.66	0.28													
K	**0.90**	**0.88**	0.50	0.70		0.71	0.17		0.51		0.24	0.28	0.02												
Mg	0.00	-0.01	0.20	0.01		0.33	0.56		0.23		0.25	0.20	-0.09	-0.05											
Mn	0.71	0.63	0.61	0.44		0.59	0.45		0.39		-0.02	0.36	-0.19	0.62	0.04										
Na	-0.14	-0.12	0.15	0.01		0.19	0.35		0.28		-0.10	0.17	-0.14	-0.16	**0.94**	-0.04									
Ni	-0.46	-0.47	0.09	0.12		-0.20			-0.28		0.77	0.18		-0.41	**0.87**	-0.12	0.64								
P	0.79	0.72	0.65	0.55		0.67	0.30		0.36		-0.08	0.58	-0.25	0.72	-0.03	0.79	0.05	-0.18							
Pb	0.76	0.72	0.59	0.71		0.70	0.38		0.44		0.33	0.37	0.25	0.66	0.07	0.72	-0.10	0.25	0.58						
S	0.71	0.46	0.62	0.20		0.62	0.45		0.00		0.03	0.53	-0.21	0.62	-0.13	0.52	-0.31	-0.47	0.59	0.42					
Se	**0.80**	0.66	0.50			**0.89**			0.25		0.15	0.54	0.16	0.72	0.26	**0.82**	-0.38		0.41	**0.87**	0.76				
Si	0.60	0.57	**0.87**	0.49		0.56	0.66		0.33		0.18	0.59	-0.01	0.46	0.08	0.59	0.10	0.00	0.58	0.73	0.51	0.51			
Ti	0.77	0.63	0.69	0.63		0.71	0.78		0.37		-0.08	0.46	0.08	0.60	0.14	0.52	0.08	-0.01	0.50	0.64	0.54	**0.80**	0.68		
V	0.18	0.08	0.56	0.37		0.30	0.67		-0.01		0.01	0.17	-0.35	0.03	0.17	0.12	0.24	-0.13	0.29	0.04	0.37	0.08	0.58	0.49	
Zn	**0.87**	**0.87**	0.47	0.74		0.65	-0.10		**0.80**		0.26	0.25	0.09	**0.86**	-0.09	0.53	-0.09	-0.42	0.61	0.67	0.37	0.52	0.49	0.64	0.02

Tab. 13.18: Turin: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.53																								
Al	0.51	0.67																							
As	0.34	0.32	0.29																						
Bi																									
Br	0.49	0.54	0.77	-0.06																					
Ca	0.33	0.47	**0.81**	0.26		0.55																			
Cd																									
Cl	**0.85**	0.44	0.49	0.34		0.49	0.40																		
Co																									
Cu	0.40	0.47	**0.83**	0.20		**0.80**	0.73		0.43																
Fe	0.56	0.62	**0.92**	0.12		**0.87**	**0.84**		0.51		**0.89**														
Ga	0.04	0.16	0.17	0.18		0.11	0.16		0.06		0.29	0.14													
K	0.63	0.35	0.65	0.11		**0.82**	0.58		0.75		0.68	0.77	0.10												
Mg	0.63	0.58	**0.88**	0.31		0.68	0.78		0.65		0.79	**0.86**	0.27	0.74											
Mn	0.54	0.66	0.67	0.17		0.49	0.40		0.31		0.59	0.69	0.34	0.33	0.60										
Na	0.79	0.62	0.70	0.16		0.64	0.60		**0.84**		0.64	0.75	0.20	0.74	**0.84**	0.62									
Ni	0.13	0.32	0.32	0.00		0.26	0.06		-0.06		0.31	0.33	0.63	0.11	0.27	0.72	0.19								
P	0.68	0.66	**0.84**	0.21		**0.85**	0.56		0.64		0.78	**0.85**	-0.03	0.74	0.75	0.64	0.74	0.18							
Pb	0.39	0.40	0.73	0.01		**0.91**	0.61		0.46		**0.83**	**0.83**	0.28	**0.85**	0.67	0.43	0.61	0.31	0.73						
S	0.67	0.47	0.11	0.14		0.19	-0.10		0.39		0.09	0.20	0.22	0.19	0.33	0.53	0.48	0.47	0.31	0.05					
Se	0.20	0.18	-0.24	-0.03		-0.31	-0.25		-0.12		-0.31	-0.22	0.39	-0.42	-0.07	0.26	-0.01	0.39	-0.36	-0.42	0.63				
Si	0.46	0.61	**0.92**	0.28		0.70	**0.89**		0.45		**0.86**	**0.93**	0.15	0.61	**0.83**	0.70	0.68	0.32	0.75	0.69	0.06	-0.23			
Ti	0.33	0.45	**0.87**	0.19		0.76	0.62		0.35		0.73	0.79	-0.01	0.62	0.76	0.47	0.51	0.08	0.78	0.72	-0.03	-0.55	0.76		
V	**0.90**	0.58	0.51	0.27		0.41	0.36		0.73		0.36	0.52	-0.02	0.47	0.59	0.60	0.75	0.14	0.68	0.27	0.64	0.28	0.47	0.29	
Zn	0.58	0.65	0.79	0.16		0.66	0.55		0.44		0.73	**0.81**	0.26	0.55	0.75	**0.85**	0.76	0.47	0.72	0.62	0.38	0.01	0.79	0.63	0.58

Tab. 13.19: Umea: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.65																								
Al	0.13	0.04																							
As	0.16	0.01	-0.12																						
Bi																									
Br	0.41	0.09	0.13	-0.10																					
Ca																									
Cd																									
Cl	-0.29	-0.39	0.28	-0.05		0.09																			
Co																									
Cu	0.52	0.35	0.57			0.40			0.01																
Fe	0.63	0.72	0.42	-0.11		0.21			-0.15		0.61														
Ga	0.24	0.02	0.53			-0.08			-0.31		0.64	0.61													
K	**0.84**	0.72	0.32	0.38		0.18			-0.29		0.42	0.70	0.25												
Mg	0.11	-0.57	0.15			0.08			**0.91**			-0.06		-0.23											
Mn	0.60	0.40	0.67	0.12		0.32			-0.05		0.50	0.61	0.50	0.67	-0.27										
Na	-0.10	-0.35	0.23	0.01		0.24			**0.89**		0.13	-0.11	-0.29	-0.21	**0.99**	0.12									
Ni	-0.69	-0.76	-0.59			-0.73			-0.65			-0.62		-0.74											
P	**0.92**	0.72	0.74	0.29		-0.05			-0.57		0.53	**0.80**	**0.92**	**0.96**		**0.80**	-0.40								
Pb	0.54	0.25	0.64			0.57			-0.31		0.74	0.61	0.68	0.61	-0.40	0.78	0.02		**0.88**						
S	0.79	0.22	0.21	0.26		0.45			-0.35		0.51	0.42	0.49	0.66	-0.13	0.62	-0.10	-0.60	**0.93**	0.77					
Se																									
Si	-0.26	0.14	**0.81**	-0.11		-0.13			0.06		0.68	0.35	0.52	0.13	-0.31	0.38	-0.05		0.75	0.53	-0.17				
Ti	-0.03	0.10	0.24			0.16			-0.05		0.69	0.01	-0.27	0.17	-0.29	0.10	-0.04		**0.83**	0.24	0.14		0.50		
V																									
Zn	**0.80**	0.72	0.28	-0.02		0.35			-0.41		0.65	**0.80**	0.39	**0.84**	-0.40	0.63	-0.28	-0.63	**0.93**	0.73	0.72		0.24	0.35	

Tab. 13.20: Uppsala: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.60																								
Al	0.34	0.50																							
As	0.45	0.70	0.37																						
Bi																									
Br	0.19	0.22	0.44	-0.06																					
Ca																									
Cd																									
Cl	-0.13	-0.05	0.02	0.11		0.13																			
Co	0.14	0.77	0.78						-0.23																
Cu	0.15	0.45	0.58	0.37		0.73			-0.16	**0.96**															
Fe	0.26	0.68	0.30	0.41		0.05			-0.02	0.57	0.40														
Ga	0.35	0.41	0.52	0.40		0.72			-0.39		**0.89**	0.31													
K	0.29	0.27	0.53	-0.01		0.27			-0.33	0.70	0.44	0.15	0.47												
Mg	-0.12	-0.10	0.01	0.13		0.12			**0.83**		-0.18	-0.39	-0.36	-0.26											
Mn	0.49	0.55	0.77	0.29		0.49			-0.03	**0.94**	0.70	0.53	0.58	0.60	-0.07										
Na	-0.02	-0.03	0.22	0.22		0.27			0.74	0.54	-0.03	-0.36	-0.24	-0.06	**0.95**	-0.01									
Ni	0.07	-0.13	0.19			-0.24			-0.03		-0.09	0.10	-0.14	-0.26		0.16	-0.42								
P	0.47	0.52	-0.18	0.32		0.14			-0.02		0.01	0.54	0.26	-0.08	-0.15	0.10	-0.22								
Pb	0.09	0.30	0.54	0.49		**0.86**			-0.17		**0.89**	0.21	0.74	0.55	-0.12	0.64	0.06	-0.51	0.07						
S	**0.86**	0.31	0.26	0.24		0.14			-0.27	0.05	0.02	-0.03	0.36	0.45	-0.17	0.26	0.03	-0.26	0.09	0.07					
Se																									
Si	0.05	0.48	**0.81**	0.23		0.39			-0.07	0.79	0.61	0.40	0.40	0.58	-0.07	0.71	0.05	-0.02	0.00	0.59	-0.10				
Ti	0.26	0.60	0.72	0.39		0.31			-0.12	0.79	0.61	0.75	0.50	0.52	-0.35	**0.84**	-0.25	-0.16	0.25	0.53	0.03		0.71		
V	0.55	0.15	0.33	0.20		-0.01			-0.30		-0.08	-0.32	0.29	0.59	0.45	0.01	**0.81**		-0.39	0.01	**0.81**		0.12	-0.17	
Zn	0.66	0.59	0.48	0.47		0.44			-0.30	0.79	0.62	0.61	0.75	0.59	-0.46	0.74	-0.27	-0.11	0.40	0.60	0.55		0.37	0.67	0.15

Tab. 13.21: Verona: Winter within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.72																								
Al	-0.04	0.21																							
As	**0.86**	**0.89**	0.17																						
Bi																									
Br	0.77	0.59	0.37	0.79																					
Ca	0.57	0.49	0.40	0.67		0.63																			
Cd																									
Cl	**0.95**	0.73	-0.08	**0.83**		0.73	0.42																		
Co																									
Cu	0.72	0.56	0.33	**0.84**		**0.89**	0.74		0.63																
Fe	0.65	0.57	0.57	0.77		**0.86**	**0.84**		0.52		**0.87**														
Ga	0.17	-0.38	0.01	-0.22		0.07	0.10		0.15		-0.02	0.02													
K	**0.94**	0.63	0.00	0.74		0.71	0.54		**0.90**		0.60	0.58	0.46												
Mg	0.62	**0.80**	0.59	**0.84**		0.70	**0.82**		0.54		0.75	**0.89**	-0.14	0.57											
Mn	0.38	0.42	-0.23	0.58		0.19	0.19		0.36		0.44	0.32	-0.28	0.25	0.37										
Na	0.73	**0.91**	0.16	**0.93**		0.61	0.48		0.78		0.65	0.61	-0.23	0.65	0.78	0.66									
Ni																									
P	0.77	**0.90**	0.23	**0.90**		0.73	0.52		**0.81**		0.68	0.63	-0.06	0.76	0.77	0.42	**0.93**								
Pb	**0.85**	**0.85**	0.17	**0.98**		**0.84**	0.70		**0.81**		**0.88**	**0.80**	-0.26	0.70	**0.82**	0.51	**0.86**		**0.85**						
S	0.54	0.64	-0.20	0.63		0.15	0.19		0.49		0.36	0.24	-0.50	0.34	0.40	0.70	0.65		0.43	0.58					
Se																									
Si	0.32	0.47	0.30	0.44		0.49	0.12		0.34		0.29	0.49	0.03	0.38	0.47	0.35	0.55		0.58	0.39	0.02				
Ti	0.22	0.40	**0.94**	0.41		0.61	0.58		0.16		0.52	0.77	0.05	0.25	0.77	-0.09	0.37		0.46	0.42	-0.14		0.51		
V	0.47	0.45	-0.59	0.50		0.42	-0.21		0.37		0.54	-0.17	-0.59	0.32	-0.11	0.16	0.25		0.39	0.57	0.40		0.03	-0.50	
Zn	0.60	0.77	-0.12	**0.85**		0.42	0.54		0.58		0.62	0.49	-0.58	0.40	0.64	0.74	**0.81**		0.66	**0.83**	0.79		0.15	0.05	0.43

Tab. 14.1: Antwerp City: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.70																								
Al	0.57	0.48																							
As	0.19	0.77	0.14																						
Bi	0.01	-0.01	-0.05																						
Br	0.24	0.18	0.31	-0.18	**0.85**																				
Ca	0.66	0.64	0.72	0.27	0.22	0.46																			
Cd	0.03	-0.10	0.02		0.30	0.30	0.30																		
Cl	0.06	-0.03	0.00	-0.04	-0.01	0.23	0.33	0.75																	
Co	0.26	0.38	0.06		**0.88**	0.73	0.29	0.35	0.01																
Cu	0.20	0.39	0.35	0.30	0.77	**0.87**	0.57	0.26	0.46	0.74															
Fe	0.70	**0.90**	0.65	0.57	-0.09	0.26	0.68	-0.22	-0.03	0.24	0.44														
Ga	0.04	0.18	-0.22		**0.93**	0.79	0.23		0.06	**0.96**	0.73	-0.03													
K	0.59	0.61	0.69	0.55	-0.05	0.31	0.59	0.04	0.15	0.26	0.35	0.71	-0.13												
Mg	-0.01	0.01	0.04	0.73	-0.19	-0.02	0.25	0.67	**0.85**	-0.10	0.04	0.07	-0.09	0.25											
Mn	0.57	0.57	0.66	0.35	-0.18	0.05	0.53	-0.10	-0.14	0.03	0.16	0.70	0.06	0.63	0.08										
Na	-0.23	-0.23	-0.19	-0.05	-0.05	0.05	0.08	0.68	**0.86**	-0.08	0.07	-0.18	0.36	0.00	**0.93**	-0.14									
Ni	0.59	0.72	0.40		0.09	0.47	0.75		0.67	0.14	0.51	**0.84**	0.24	0.48	**0.83**	0.76	0.61								
P	0.51	0.46	0.21	0.68	-0.03	-0.21	0.33	-0.14	-0.08	0.03	0.18	0.47	0.10	0.43	0.14	0.55	-0.04	0.63							
Pb	0.29	0.44	0.28	0.30	0.70	**0.89**	0.51	0.29	0.24	0.77	**0.90**	0.48	0.73	0.44	0.06	0.17	0.07	0.63	-0.03						
S	0.75	0.55	0.46	0.39	-0.14	-0.05	0.29	-0.31	-0.26	0.16	-0.11	0.55	-0.07	0.57	-0.13	0.67	-0.38	0.17	0.51	0.06					
Se	0.12	0.49	0.16	**0.81**	0.64	0.65	0.37	0.51	0.22	**0.87**	0.74	0.40	**0.91**	0.43	0.18	0.10	0.15	0.38	0.03	**0.82**	-0.01				
Si	0.53	0.55	**0.95**	0.37	0.03	0.28	0.79	0.04	-0.03	0.16	0.43	0.68	-0.04	0.64	0.02	0.68	-0.21	0.50	0.26	0.31	0.39	0.28			
Ti	0.63	0.51	**0.85**	0.04	-0.07	0.37	0.76	-0.16	0.05	0.01	0.43	0.70	-0.19	0.69	0.01	0.57	-0.19	0.60	0.33	0.34	0.36	0.10	**0.80**		
V	0.24	-0.03	0.08	-0.32	-0.02	-0.15	0.19	-0.37	-0.06	-0.17	-0.08	0.02	0.02	0.20	-0.08	0.14	-0.11	0.46	0.39	-0.09	0.35	-0.30	0.05	0.32	
Zn	0.55	0.62	0.41	0.18	0.17	0.55	0.39	-0.20	-0.05	0.36	0.64	0.70	-0.02	0.56	-0.13	0.45	-0.25	0.51	0.23	0.70	0.48	0.41	0.37	0.45	-0.02

Tab. 14.2: Albacete: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.80**																								
Al	0.50	0.23																							
As																									
Bi	0.30	0.11	0.33																						
Br	0.48	0.36	0.48		**0.86**																				
Ca	0.62	0.47	0.64		0.26	0.32																			
Cd	-0.20	-0.16	-0.03			-0.68	0.17																		
Cl	0.16	-0.02	-0.13		0.03	-0.01	-0.18	-0.35																	
Co	0.39	0.12	0.53		**0.92**	**0.84**	0.18	-0.67	0.01																
Cu	-0.09	-0.04	0.06		**0.81**	0.51	0.16		0.01	0.68															
Fe	0.50	0.26	**0.96**		0.64	0.59	0.73	-0.08	-0.16	0.61	0.30														
Ga																									
K	0.55	0.56	0.48		0.08	0.30	0.45	-0.34	0.06	0.05	-0.25	0.45													
Mg	0.68	0.45	**0.87**		0.45	0.46	**0.87**	0.20	-0.16	0.43	0.05	**0.90**		0.52											
Mn	0.53	0.31	0.67		0.59	0.51	0.70	0.05	-0.09	0.40	0.07	0.76		0.47	0.79										
Na	0.65	0.53	0.40		**0.86**	0.66	0.45	-0.30	-0.12	**0.83**	0.48	0.53		0.25	0.61	0.49									
Ni																									
P	0.68	0.64	0.66		0.06	0.38	0.62	0.13	-0.17	0.10	-0.25	0.65		0.70	0.72	0.45	0.41								
Pb	0.26	0.13	0.30		**0.96**	**0.87**	0.13	-0.71	0.14	**0.89**	0.78	0.46		0.03	0.25	0.34	0.61		0.04						
S	**0.90**	0.74	0.24		0.20	0.34	0.38	0.14	0.00	0.23	-0.29	0.22		0.36	0.45	0.31	0.64		0.54	0.13					
Se	0.06	0.01	0.25		**0.98**	**0.88**	0.06	-0.54	-0.12	**0.89**	**0.88**	0.41		-0.15	0.17	0.19	0.67		0.01	**0.96**	-0.04				
Si	0.51	0.28	**0.98**		0.34	0.44	0.61	-0.06	-0.10	0.54	0.06	**0.93**		0.47	**0.87**	0.64	0.43		0.63	0.29	0.25	0.25			
Ti	0.49	0.22	**1.00**		0.32	0.45	0.62	0.04	-0.12	0.51	0.02	**0.95**		0.46	**0.86**	0.65	0.37		0.64	0.28	0.22	0.21	**0.98**		
V	0.63	0.64	0.24		-0.05	0.05	0.25	-0.45	-0.07	0.08	-0.31	0.21		0.25	0.31	-0.04	0.36		0.53	-0.05	0.69	-0.04	0.28	0.24	
Zn	0.22	0.27	-0.12		0.62	0.34	0.17	-0.67	0.20	0.45	0.66	0.08		-0.12	0.18	0.22	0.51		-0.11	0.53	0.17	0.64	0.00	-0.11	0.05

Tab. 14.3: Antwerp South: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.88**																								
Al	0.35	0.36																							
As	0.40	0.49	0.41																						
Bi																									
Br	0.09	0.10	-0.27	0.28																					
Ca	0.31	0.35	0.42	0.35		0.32																			
Cd	-0.31	-0.32	-0.08	0.13		-0.24	-0.26																		
Cl	0.28	0.15	0.01	0.05		0.19	0.65	-0.24																	
Co																									
Cu	0.36	0.36	-0.01	0.71		0.64	0.67	-0.45	0.26																
Fe	0.76	**0.81**	0.61	0.35		0.05	0.45	-0.44	0.20		0.38														
Ga																									
K	0.54	0.65	0.74	0.64		0.06	0.30	-0.14	0.05		0.34	0.73													
Mg	-0.03	-0.19	0.04	-0.24		-0.37	0.39	-0.11	0.77		0.20	-0.02		-0.09											
Mn	0.57	0.60	0.62	0.40		-0.11	0.15	-0.11	-0.01		0.31	**0.80**		0.70	-0.06										
Na	-0.22	-0.31	-0.11	-0.19		-0.45	0.35	-0.03	0.72		0.00	-0.20		-0.23	**0.95**	-0.26									
Ni																									
P	0.67	0.72	0.54	0.50		-0.24	0.77	-0.25	0.29		0.25	0.57		0.54	0.12	0.52	-0.10								
Pb	0.03	0.14	0.03	0.69		**0.85**	**0.82**	-0.23	0.13		0.78	0.10		0.22	-0.31	-0.05	-0.31		-0.08						
S	0.75	0.72	0.35	0.42		-0.06	-0.33	-0.19	-0.09		0.17	0.60		0.62	-0.17	0.62	-0.31		0.72	-0.07					
Se	0.12	0.13	-0.32	0.28		**0.85**	0.64	-0.43	0.11		**0.87**	0.15		0.14	-0.18	0.09	-0.40		-0.18	**0.94**	-0.03				
Si	0.12	0.20	0.44	-0.23		-0.06	0.26	0.26	-0.08		0.01	0.29		0.20	-0.13	0.12	-0.16		0.17	0.06	0.04	-0.08			
Ti	0.56	0.59	0.74	0.54		-0.02	0.55	-0.13	0.22		0.17	0.73		0.69	-0.03	0.56	-0.12		0.62	0.13	0.46	-0.07	0.48		
V	0.47	0.32	0.15	0.52		-0.11	-0.36	-0.12	0.03		0.20	0.16		0.27	-0.16	0.20	-0.17		0.59	-0.08	0.65	-0.25	-0.10	0.33	
Zn	0.41	0.59	0.61	0.55		0.23	0.46	-0.46	0.08		0.45	0.72		**0.82**	-0.13	0.60	-0.24		0.38	0.38	0.39	0.36	0.19	0.59	0.05

Tab. 14.4: Barcelona: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.66																								
Al	0.76	0.39																							
As	**0.80**	0.45	**0.94**																						
Bi	-0.27	-0.71	-0.24																						
Br	0.70	0.35	0.72	**0.84**	0.38																				
Ca	0.23	0.43	0.25	0.17	0.37	0.45																			
Cd	0.34	0.52	0.25	0.05	-0.36	0.37	0.25																		
Cl	0.79	0.38	**0.94**	**0.99**	-0.36	0.69	0.04	0.12																	
Co																									
Cu	0.73	0.40	0.60	0.71	-0.17	0.58	-0.09	0.37	0.69																
Fe	0.54	0.71	0.56	0.47	0.15	0.55	**0.82**	0.52	0.34		0.27														
Ga	0.61	0.35	0.53	**0.81**		0.77	0.26		0.48		0.55	0.76													
K	0.73	0.31	**0.95**	**0.98**	-0.34	0.66	0.04	0.10	**0.99**		0.66	0.34	0.48												
Mg	0.79	0.35	**0.96**	**0.97**	-0.28	0.70	0.12	0.09	**0.98**		0.66	0.41	0.52	**0.99**											
Mn	0.55	0.75	0.52	0.57	-0.19	0.49	0.55	0.30	0.45		0.32	0.75	0.78	0.42	0.46										
Na	0.75	0.39	0.51	0.72	0.08	0.62	0.23	-0.16	0.56		0.51	0.32	0.56	0.52	0.63	0.38									
Ni	-0.17	-0.35	-0.30	-0.35		-0.25	-0.25	-0.57	-0.32		-0.03	-0.13	0.30	-0.31	-0.26	-0.21	0.02								
P	0.78	0.39	**0.96**	**0.91**	-0.13	0.76	0.34	0.21	**0.89**		0.61	0.58	0.59	**0.90**	**0.94**	0.56	0.61	-0.27							
Pb	**0.82**	0.38	**0.95**	**0.98**	-0.13	**0.82**	0.15	0.20	**0.96**		0.75	0.46	0.65	**0.95**	**0.96**	0.51	0.60	-0.27	**0.93**						
S	**0.81**	0.39	0.48	0.55	0.24	0.40	0.12	-0.03	0.47		0.60	0.34	0.54	0.45	0.56	0.29	0.75	0.26	0.54	0.53					
Se	0.20	-0.10	0.12	0.75	**0.99**	0.65	0.49	-0.10	0.01		0.21	0.33	**0.81**	0.02	0.09	0.21	0.46	0.09	0.26	0.26	0.31				
Si	0.41	0.47	0.57	0.36	0.43	0.53	0.71	0.62	0.28		0.12	**0.87**	0.63	0.30	0.36	0.59	0.18	-0.19	0.56	0.42	0.23	0.38			
Ti	0.76	0.36	**0.97**	**0.97**	-0.30	0.69	0.08	0.13	**0.98**		0.65	0.39	0.52	**0.99**	**0.98**	0.45	0.52	-0.30	**0.92**	**0.96**	0.47	0.07	0.36		
V	0.75	0.38	0.24	0.74		0.33	0.22	-0.03	0.68		0.33	0.29	0.66	0.25	0.50	0.30	0.50	-0.15	0.30	0.55	0.56	**0.81**	0.19	0.34	
Zn	**0.84**	0.57	**0.90**	**0.93**	-0.26	0.76	0.20	0.22	**0.90**		0.71	0.55	0.65	**0.89**	**0.91**	0.66	0.67	-0.21	**0.86**	**0.94**	0.57	0.22	0.44	**0.90**	0.49

Tab. 14.5: Basel: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.76																								
Al	0.47	0.54																							
As	0.00	0.24	0.48																						
Bi	-0.60	-0.29	-0.76																						
Br	-0.38	-0.12	-0.13	-0.23	0.74																				
Ca	0.10	0.50	0.36	-0.24	-0.55	-0.14																			
Cd	-0.44	-0.31	-0.64			0.64	-0.07																		
Cl	0.15	0.23	-0.06	0.27	0.44	-0.37	-0.16	-0.38																	
Co	-0.65	-0.48	-0.55			0.61	-0.67		-0.34																
Cu	-0.02	0.18	-0.08	0.48	**0.86**	0.54	-0.25	0.15	-0.04	**0.81**															
Fe	0.62	**0.82**	0.74	0.53	-0.63	-0.32	0.54	-0.69	0.19	-0.54	-0.01														
Ga																									
K	0.76	0.51	0.45	0.10	-0.39	-0.07	0.10	-0.18	-0.13	-0.55	-0.02	0.51													
Mg	0.28	0.01	0.43	0.39	-0.63	-0.31	-0.11	-0.66	-0.10	-0.36	-0.30	0.41		0.41											
Mn	0.49	0.48	0.58	0.51	-0.68	-0.16	0.03	-0.35	-0.08	-0.50	-0.21	0.49		0.35	0.13										
Na	-0.03	0.01	0.01	0.54	-0.58	0.32	-0.12	0.28	-0.09	-0.32	0.07	0.18		0.20	0.43	0.13									
Ni																									
P	0.54	0.42	0.19	-0.76	-0.62	-0.15	0.27	0.10	0.17	-0.64	-0.33	0.28		0.25	0.17	0.45	0.30								
Pb	-0.22	-0.04	-0.24	-0.52	**0.83**	0.78	-0.20	0.59	-0.16	0.54	0.77	-0.35		-0.13	-0.58	-0.31	0.17		-0.06						
S	0.71	0.25	0.32	0.00	-0.62	-0.39	-0.29	-0.37	-0.14	-0.46	-0.19	0.26		0.51	0.54	0.49	-0.11		0.28	-0.46					
Se	-0.43	-0.15	-0.49		**0.91**	**0.89**	-0.39	0.68	0.24		**0.80**	-0.57		-0.30	-0.64	-0.55	0.06		-0.21	**0.94**	-0.62				
Si	0.43	0.57	**0.92**	0.40	-0.64	-0.06	0.52	-0.58	-0.05	-0.44	-0.03	0.76		0.48	0.44	0.35	0.01		0.13	-0.22	0.23	-0.39			
Ti	0.63	0.63	**0.92**	0.31	**-0.85**	-0.13	0.41	-0.55	-0.16	-0.61	-0.07	0.77		0.63	0.50	0.54	0.07		0.36	-0.26	0.46	-0.48	**0.92**		
V	-0.32	-0.05	0.43	0.70	0.29	-0.16	0.09	-0.53	0.30	-0.02	0.02	0.18		-0.35	0.05	0.11	-0.13		-0.09	-0.14	-0.28	-0.02	0.42	0.33	
Zn	0.49	0.61	0.21	0.45	-0.38	0.26	0.29	0.31	-0.18	-0.36	0.28	0.43		0.47	0.01	0.44	0.50		0.38	0.30	0.16	0.11	0.22	0.40	-0.21

Tab. 14.6: Erfurt: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.72																								
Al	0.64	0.66																							
As	0.11	-0.17	0.06																						
Bi																									
Br	-0.04	-0.22	0.07	-0.40																					
Ca	0.29	0.66	**0.81**			0.04																			
Cd	-0.54	-0.28	-0.57																						
Cl	0.59	0.42	0.40	-0.20		0.42	0.25	-0.30																	
Co	-0.41	-0.26	-0.52			0.68			-0.01																
Cu	0.27	0.12	0.44	-0.77		0.38	0.23		0.43	0.39															
Fe	0.63	**0.82**	0.72	0.03		-0.09	**0.89**	-0.39	0.50	-0.50	0.31														
Ga																									
K	0.69	0.45	0.64	0.64		-0.09	0.36	-0.26	0.11	-0.33	-0.02	0.47													
Mg	0.62	0.47	0.73	-0.06		0.37	0.52	-0.43	0.46	-0.29	0.36	0.61		0.63											
Mn	0.62	0.78	**0.86**	-0.03		-0.09	**0.90**	-0.33	0.50	-0.33	0.47	**0.88**		0.52	0.58										
Na	-0.09	-0.27	-0.12	-0.56		0.73	0.03	0.35	0.38	0.51	0.29	0.02		-0.14	0.43	-0.06									
Ni																									
P	0.59	0.65	0.68	0.22		-0.05	**0.80**	-0.05	0.40	-0.35	0.35	**0.89**		0.58	0.65	**0.80**	0.07								
Pb	-0.07	-0.40	-0.19			**0.91**	-0.27		0.40	0.66	0.31	-0.36		-0.14	0.12	-0.32	0.56		-0.28						
S	**0.93**	0.53	0.49	0.28		0.06	0.11	-0.59	0.57	-0.46	0.16	0.52		0.65	0.66	0.43	0.08		0.56	0.06					
Se	-0.44	-0.53	-0.32			**0.95**			0.27		0.68	-0.65		-0.33	0.03	-0.44	**0.87**		-0.70	**0.91**	-0.49				
Si	0.59	0.67	**0.97**	0.20		0.12	**0.85**	-0.47	0.32	-0.43	0.36	0.76		0.68	0.77	**0.83**	-0.08		0.72	-0.16	0.46	-0.28			
Ti	0.62	0.68	**0.96**	0.23		0.05	**0.90**	-0.66	0.37	-0.52	0.24	0.79		0.69	0.74	**0.86**	-0.12		0.73	-0.20	0.49	-0.41	**0.97**		
V	0.65	0.66	0.57	-0.27		0.23	0.02		0.62		0.47	0.39		0.03	0.39	0.57	0.05		0.35	0.19	0.56		0.46	0.34	
Zn	0.62	0.61	0.35	0.32		-0.16	0.47	-0.22	0.55	-0.06	0.36	0.75		0.39	0.46	0.60	0.05		0.66	-0.22	0.59	-0.56	0.38	0.40	0.41

Tab. 14.7: Galdakao: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.44																								
Al	0.45	0.36																							
As	0.24	-0.04	0.38																						
Bi	-0.48	-0.05	-0.56																						
Br	0.03	-0.10	-0.32	0.30	**0.89**																				
Ca	0.24	0.55	0.64	0.10	-0.73	-0.31																			
Cd	0.09	0.40	0.34	-0.38		-0.27	0.06																		
Cl	-0.27	-0.25	-0.25	0.53	0.10	0.38	-0.20	-0.26																	
Co	-0.30	**0.93**	-0.66				-0.79		-0.03																
Cu	0.13	0.05	-0.08	0.57	-0.24	0.42	-0.04	-0.07	0.74																
Fe	0.12	0.25	0.28	0.61	-0.55	0.05	0.37	-0.02	0.61	-0.46	**0.84**														
Ga	-0.50	0.08	-0.34			0.57	-0.14		-0.08		-0.30	-0.49													
K	0.56	0.23	0.45	0.49	**-0.92**	0.34	0.39	-0.07	-0.08	**-0.97**	0.20	0.24	-0.29												
Mg	0.51	0.12	0.49	0.64	-0.25	-0.02	0.20	-0.26	0.34	-0.11	0.37	0.42	-0.23	0.36											
Mn	0.13	0.47	0.18	0.44	-0.54	0.09	0.39	0.14	0.45	-0.34	**0.81**	**0.89**	-0.39	0.21	0.32										
Na	0.17	0.05	0.03	0.61	-0.23	0.28	0.12	-0.28	**0.83**	-0.23	**0.84**	**0.80**	-0.25	0.18	0.67	0.68									
Ni	0.44	**0.83**	0.73	0.25	-0.01	0.23	**0.82**	0.28	-0.06		0.25	0.45		0.35	0.20	0.65	0.18								
P	0.07	-0.11	-0.01	0.66	-0.46	0.09	0.02	-0.20	0.72	-0.55	**0.86**	**0.91**	**-0.93**	0.10	0.36	0.74	**0.82**	0.19							
Pb	-0.11	-0.12	0.01	0.69	0.30	0.73	0.01	-0.13	0.68	0.00	0.79	0.61	0.27	0.26	0.26	0.49	0.68	0.30	0.62						
S	**0.96**	0.28	0.32	0.07	-0.31	-0.02	0.06	0.14	-0.36	-0.15	-0.02	-0.09	-0.56	0.45	0.41	-0.09	0.02	0.14	-0.10	-0.24					
Se	-0.55	-0.12	-0.39	-0.07	0.04	0.43	-0.24	0.24	0.41	0.59	0.43	0.25	0.48	-0.40	-0.21	0.33	0.26	0.21	0.27	0.54	-0.62				
Si	0.47	0.38	**0.96**	0.31	-0.29	-0.40	0.60	0.45	-0.27	0.20	-0.05	0.26	-0.25	0.31	0.47	0.19	0.02	0.71	-0.02	-0.03	0.36	-0.36			
Ti	0.42	0.48	**0.96**	0.43	-0.52	-0.23	0.74	0.27	-0.19	-0.50	0.06	0.42	-0.28	0.51	0.44	0.36	0.12	0.74	0.08	0.14	0.26	-0.33	**0.91**		
V	0.58	0.61	0.54	0.43	-0.34	0.25	0.55	0.14	0.02	-0.09	0.44	0.54	-0.23	0.58	0.44	0.59	0.39	0.78	0.30	0.38	0.38	-0.16	0.52	0.69	
Zn	0.03	-0.08	0.15	0.66	-0.49	0.11	0.15	-0.15	0.73	-0.55	**0.83**	**0.92**	-0.47	0.22	0.42	0.74	**0.82**	0.15	**0.95**	0.67	-0.12	0.29	0.11	0.23	0.30

Tab. 14.8: Grenoble: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.76																								
Al	0.54	0.32																							
As	0.50	0.58	0.05																						
Bi	-0.28	0.01	0.19																						
Br	0.44	0.40	0.48	0.33	**0.90**																				
Ca	0.33	-0.09	**0.89**	0.69	0.27	0.48																			
Cd	0.36	0.24	0.19	0.27		-0.11	0.21																		
Cl	0.37	0.26	0.72	0.54	0.21	0.42	0.72	0.25																	
Co																									
Cu	0.32	0.43	0.10	**0.96**	**0.89**	0.14	0.07	0.13	0.52																
Fe	0.55	0.71	0.65	0.20	0.24	0.27	0.28	0.12	0.38		0.15														
Ga	0.34	0.38	0.37			0.54	0.33	-0.34	0.01		0.38	0.45													
K	0.57	0.68	0.26	0.17	-0.43	0.41	-0.01	-0.05	-0.05		0.07	0.44	0.64												
Mg	0.52	0.43	0.72	0.47	0.11	0.24	0.60	0.36	0.72		0.38	0.59	-0.26	0.30											
Mn	0.41	0.72	0.28	0.11	0.16	0.18	-0.21	0.17	0.17		0.16	0.77	0.31	0.40	0.29										
Na	0.33	0.55	-0.08	0.17	-0.44	0.16	-0.40	0.32	0.20		0.12	0.23	-0.38	0.29	0.14	0.47									
Ni	-0.09	0.03	0.16			-0.24	0.07	0.04	0.16		-0.24	0.63	0.29	-0.26	0.01	0.32	0.13								
P	0.69	**0.81**	0.49	0.51	0.39	0.64	0.28	0.08	0.46		0.41	0.61	0.45	0.71	0.56	0.55	0.51	-0.10							
Pb	0.47	0.62	0.23	**0.81**	**0.89**	0.59	0.14	0.52	0.46		0.72	0.28	0.51	0.12	0.22	0.41	0.23	-0.27	0.66						
S	0.70	0.37	0.17	0.17	-0.47	-0.11	-0.07	0.47	0.11		0.13	0.22	-0.07	0.16	0.27	0.28	0.33	0.06	0.16	0.17					
Se	0.09	0.15	-0.10		**0.91**	**0.80**	0.04	-0.27	-0.01		0.66	-0.30	0.27	0.05	-0.30	-0.09	0.14	-0.39	0.45	**0.85**	-0.19				
Si	0.33	0.43	0.25	**0.81**	0.44	0.24	0.23	-0.08	0.55		**0.86**	0.21	0.31	0.13	0.40	0.20	0.06	-0.21	0.46	0.56	-0.03	0.36			
Ti	0.47	0.20	**0.97**	0.12	0.23	0.50	**0.96**	0.12	0.73		0.11	0.52	0.40	0.20	0.66	0.11	-0.18	0.12	0.43	0.21	0.09	-0.02	0.27		
V	0.52	0.49	0.13	0.73		0.04	0.57	0.12	0.39		0.51	0.04	-0.63	0.25	0.37	0.03	0.50	-0.18	0.40	0.22	0.49	0.07	0.60	0.13	
Zn	0.16	0.34	-0.09	-0.09	-0.34	0.17	-0.29	0.20	0.10		-0.07	0.09	-0.27	0.09	-0.12	0.42	**0.84**	-0.08	0.29	0.22	0.19	0.12	-0.06	-0.17	0.20

Tab. 14.9: Gothenburg: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.37																								
Al	0.66	0.70																							
As	**0.80**	0.60	**0.93**																						
Bi																									
Br	0.17	0.56	0.53	0.74																					
Ca	0.53	0.36	0.59			0.28																			
Cd																									
Cl	0.08	-0.35	-0.15	0.08		-0.19	0.55																		
Co																									
Cu	-0.13	0.50	0.42	0.25		0.21	-0.19		-0.25																
Fe	0.44	**0.89**	**0.86**	0.78		0.51	0.53		-0.18		0.58														
Ga	0.26	0.23	0.17			-0.17			-0.34		0.23	0.15													
K	0.78	0.55	0.76	0.76		0.35	0.57		-0.06		-0.06	0.65	0.19												
Mg	0.33	-0.32	0.01	**0.82**		-0.17	0.58		**0.92**		-0.27	-0.17	0.05	0.08											
Mn	0.55	0.65	0.66	**0.89**		0.61	0.36		-0.04		0.07	0.71	0.12	0.65	-0.02										
Na	0.25	-0.39	-0.10	0.36		-0.25	0.44		**0.92**		-0.29	-0.25	0.02	-0.01	**0.99**	-0.07									
Ni	0.20	0.68	0.15			-0.17			-0.27		**0.89**	0.51		0.05	-0.13	0.17	-0.15								
P	**0.90**	0.63	**0.94**	**0.88**		0.49			0.14		0.36	0.77	0.17	**0.82**	**0.81**	0.52	0.50	0.18							
Pb	0.06	0.57	0.51	**0.91**		**0.88**	0.34		-0.15		0.61	0.61	-0.06	0.17	-0.21	0.62	-0.26	-0.15	0.45						
S	**0.89**	0.29	0.66	0.76		0.24	0.44		-0.16		-0.19	0.33	0.26	0.73	0.14	0.39	0.02	0.04	**0.93**	0.00					
Se	-0.13	0.48	0.03			0.72	-0.18		0.28		0.26	0.30		-0.15	-0.56	0.55	-0.32		-0.18	**0.87**	-0.32				
Si	0.49	0.77	**0.96**	**0.89**		0.63	0.50		-0.19		0.56	**0.91**	0.12	0.67	-0.11	0.67	-0.20	0.13	**0.89**	0.70	0.46	0.24			
Ti	0.29	0.69	0.66	**0.93**		0.46	0.56		-0.27		0.29	0.71	-0.14	0.49	-0.23	0.48	-0.33	0.14	0.56	0.38	0.32	0.10	0.69		
V	0.42	0.29	0.29			0.04	0.62		0.18		-0.34	0.25	0.39	0.47	0.22	0.20	0.20	0.14	0.70	-0.19	0.37	-0.47	0.22	0.23	
Zn	0.61	0.61	**0.84**	**0.86**		0.46	0.55		-0.22		0.20	0.70	0.27	0.72	-0.04	0.62	-0.16	0.26	**0.87**	0.34	0.70	-0.10	0.74	0.59	0.14

Tab. 14.10: Huelva: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.37																								
Al	0.14	0.24																							
As	-0.10	0.42	0.17																						
Bi	0.35	0.30	0.26	-0.35																					
Br	0.56	0.48	0.02	-0.01	**0.93**																				
Ca	0.28	0.51	0.58	0.52	0.04	0.20																			
Cd	-0.13	0.71	0.35	0.56	0.09	-0.13	0.10																		
Cl	0.02	-0.17	-0.19	0.37	0.08	0.27	0.12	-0.15																	
Co	0.17	0.51	0.12	0.17	**0.88**	**0.83**	-0.04	0.09	-0.18																
Cu	0.32	0.57	0.19	0.78	0.09	0.36	0.47	0.27	-0.01	0.53															
Fe	0.13	0.42	**0.90**	0.53	0.32	0.12	0.62	0.44	-0.21	0.45	0.44														
Ga																									
K	0.43	0.68	0.46	0.20	0.17	0.31	**0.88**	0.17	-0.04	0.09	0.41	0.49													
Mg	0.53	0.39	0.17	0.46	0.10	0.47	0.56	-0.13	0.43	0.15	0.45	0.20		0.46											
Mn	0.62	0.50	0.45	0.32	0.59	0.75	0.56	-0.03	0.10	0.61	0.60	0.55		0.50	0.60										
Na	0.32	0.43	-0.16	0.55	-0.04	0.41	0.39	-0.01	0.49	0.19	0.51	-0.03		0.36	**0.89**	0.39									
Ni	-0.45	0.14	-0.38			0.34	-0.30		-0.13		0.56	0.41		-0.32	0.12	0.26	0.47								
P	0.59	0.42	0.08	0.58	0.02	0.38	0.40	0.04	0.15	0.36	**0.87**	0.25		0.46	0.43	0.60	0.46	0.15							
Pb	0.41	0.64	-0.01	**0.84**	0.31	0.54	0.36	0.38	0.08	0.64	**0.84**	0.32		0.34	0.38	0.61	0.44	0.60	0.74						
S	**0.95**	0.32	0.10	-0.21	0.31	0.48	0.11	-0.07	-0.15	0.18	0.28	0.07		0.29	0.40	0.51	0.20	-0.43	0.55	0.34					
Se	0.26	0.41	-0.05	0.61	0.55	0.56	0.21	0.02	0.05	0.66	**0.88**	0.29		0.09	0.42	0.70	0.51		0.74	**0.83**	0.24				
Si	0.68	0.29	0.73	0.20	0.19	0.31	0.65	0.02	0.05	0.00	0.33	0.68		0.59	0.47	0.69	0.13	-0.59	0.47	0.28	0.55	0.11			
Ti	0.15	0.54	0.22	0.37	-0.08	0.01	0.26	0.63	-0.12	-0.14	0.33	0.40		0.42	-0.10	0.07	-0.03	-0.22	0.37	0.48	0.11	0.09	0.26		
V	**0.88**	0.33	0.15	-0.12	0.30	0.52	0.20	-0.07	-0.13	0.34	0.44	0.16		0.34	0.45	0.64	0.30	-0.12	0.67	0.46	**0.90**	0.41	0.57	0.10	
Zn	0.35	0.62	0.05	**0.95**	-0.13	0.23	0.57	0.40	0.10	0.19	**0.80**	0.30		0.53	0.49	0.44	0.56	0.10	0.74	**0.87**	0.25	0.59	0.36	0.56	0.34

Tab. 14.11: Ipswich: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.69																								
Al	0.47	0.48																							
As	0.13	-0.13	0.53																						
Bi	0.04	0.57	0.32																						
Br	0.43	0.38	0.50	0.13	0.26																				
Ca	-0.18	0.37	0.41			0.35																			
Cd	0.13	0.44	0.00	-0.25	0.68	0.31																			
Cl	0.08	-0.11	-0.07	0.16	-0.60	0.39	0.37	0.35																	
Co																									
Cu	0.39	0.47	0.25	-0.10	0.77	**0.81**	0.46	0.37	0.20																
Fe	0.66	0.70	0.60	-0.06	0.57	0.23	0.06	0.25	-0.13		0.19														
Ga																									
K	0.61	0.67	0.57	0.05	**0.83**	0.50	0.32	0.38	0.02		0.42	0.58													
Mg	-0.15	-0.27	-0.03	0.34	0.04	0.51	0.47	0.22	**0.82**		0.33	-0.24		-0.10											
Mn	0.33	0.64	0.48	-0.15	**0.92**	0.36	0.38	0.41	-0.10		0.47	0.58		**0.82**	-0.05										
Na	-0.32	-0.35	-0.24	-0.26	0.01	0.36	0.48	0.24	0.77		0.33	-0.38		-0.19	**0.95**	-0.11									
Ni	-0.19	0.05	-0.09			0.04			-0.32		0.36	0.64		-0.21	0.11	0.51	0.41								
P	0.76	**0.82**	0.55	-0.32	0.37	0.30	0.31	0.42	-0.06		0.42	**0.81**		0.62	-0.25	0.49	-0.33	0.23							
Pb	0.42	0.55	0.49	0.10	0.39	**0.95**	0.38	0.43	0.22		**0.93**	0.32		0.43	0.37	0.46	0.24	0.19	0.50						
S	**0.92**	0.68	0.47	0.13	0.01	0.50	-0.31	0.22	-0.05		0.38	0.68		0.62	-0.26	0.38	-0.41	-0.19	0.79	0.49					
Se	-0.10	0.15	0.24		0.39	0.77	0.55	0.29	-0.19		0.77	-0.08		0.17	0.14	0.30	0.27	0.38	0.20	**0.89**	0.01				
Si	0.29	0.39	**0.88**	0.46	0.40	0.45	0.75	0.13	0.26		0.18	0.41		0.51	0.25	0.43	0.08	-0.20	0.41	0.43	0.23	0.24			
Ti	0.58	**0.80**	0.56	0.26	0.74	0.28	0.37	0.23	-0.14		0.36	0.60		0.65	-0.21	0.58	-0.34	-0.35	0.77	0.51	0.63	0.09	0.47		
V	0.73	**0.82**	0.33	-0.20	0.07	0.34	0.34	0.33	0.27		0.26	0.69		0.62	-0.34	0.41	-0.47	-0.27	**0.83**	0.42	0.75	-0.12	0.33	0.61	
Zn	0.76	0.55	0.61	0.17	**0.83**	0.54	0.11	0.45	0.15		0.43	0.76		0.73	0.09	0.61	-0.10	0.28	0.69	0.50	0.72	0.11	0.45	0.50	0.44

Tab. 14.12: Norwich: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.65																								
Al	0.32	0.54																							
As	**0.90**	0.37	0.19																						
Bi	-0.22	0.44	0.52																						
Br	0.34	0.36	0.30		**0.87**																				
Ca	0.06	0.46	0.53			0.17																			
Cd	-0.28	-0.28	-0.59			-0.60																			
Cl	-0.03	-0.28	-0.05	0.65	-0.34	-0.02	0.26	-0.37																	
Co	0.17	0.42	0.58		**0.82**	0.79			-0.29																
Cu	0.26	0.59	0.40		0.78	0.71	-0.03		-0.31																
Fe	0.47	0.60	0.70	0.32	0.22	0.19	0.39	-0.39	-0.12	0.57	0.28														
Ga	0.28	0.20	0.16						-0.26		0.74	0.11													
K	0.72	0.54	0.49	0.56	-0.20	0.29	0.06	-0.31	-0.03	0.71	0.23	0.65	0.14												
Mg	-0.15	-0.30	0.10	0.55	-0.14	-0.18	0.24	0.03	**0.81**	0.72	-0.24	0.08	-0.09	-0.02											
Mn	0.53	0.57	0.79	0.67	0.44	0.60	0.39	-0.61	0.09	0.74	0.55	0.67		0.58	0.21										
Na	-0.26	-0.41	-0.04	0.48	-0.20	-0.22	0.18	0.22	**0.82**	0.61	-0.29	-0.07	-0.22	-0.12	**0.97**	0.07									
Ni	-0.19	0.32	0.26		0.63	0.01	-0.01		-0.38		0.31	0.68	0.22	0.32	-0.10	0.13	-0.16								
P	0.75	**0.88**	0.42	0.41	0.09	0.25	0.37	-0.26	-0.03	0.28	0.43	0.59	-0.24	0.69	-0.07	0.52	-0.18	0.18							
Pb	0.76	0.52	0.42		0.33	**0.81**	-0.09	-0.64	-0.03	**0.89**	0.63	0.32		0.56	-0.09	0.62	-0.19	-0.36	0.52						
S	**0.89**	0.65	0.34	**0.85**	-0.03	0.35	0.10	-0.08	-0.15	0.44	0.34	0.52	0.50	0.67	-0.20	0.56	-0.33	0.07	0.70	0.78					
Se	0.30	0.42	0.46		**0.93**	**0.94**	0.23		-0.07	0.72	0.71	0.21		0.18	-0.19	0.54	-0.25	0.07	0.20	0.73	0.45				
Si	0.25	0.54	**0.87**	0.06	0.73	0.48	0.59	-0.34	-0.07	0.55	0.42	0.60	0.42	0.41	0.08	0.73	-0.06	0.30	0.35	0.40	0.33	0.59			
Ti	0.65	0.69	0.78	0.61	0.34	0.47	0.43	-0.47	-0.12	0.41	0.42	0.72	0.44	0.72	-0.05	**0.82**	-0.21	0.21	0.59	0.52	0.65	0.44	**0.81**		
V	**0.80**	0.77	0.42	**0.80**	0.15	0.50	0.33	-0.05	0.14	0.58	0.53	0.68	0.34	0.67	0.00	0.62	-0.18	0.09	**0.80**	0.69	**0.81**	0.50	0.44	0.68	
Zn	**0.87**	0.59	0.43	**0.89**	-0.18	0.40	0.13	-0.42	-0.06	0.73	0.27	0.63	0.52	0.77	-0.07	0.64	-0.17	-0.04	0.65	0.76	0.79	0.26	0.33	0.68	0.75

Tab. 14.13: Oviedo: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.65																								
Al	0.61	0.53																							
As	0.45	0.37	0.09																						
Bi	0.03	0.33	-0.06																						
Br	0.32	0.22	0.58	0.17	0.53																				
Ca	0.35	0.62	0.56	0.10	0.23	0.17																			
Cd	0.15	-0.10	-0.34		**0.82**	0.22	-0.35																		
Cl	-0.24	-0.17	-0.26	**0.88**	-0.20	-0.17	-0.08	0.04																	
Co	0.09	0.34	0.45		**0.93**	0.65	0.28	0.17	-0.27																
Cu	0.09	0.39	0.19	0.57	**0.87**	0.50	0.18	0.06	-0.14	0.78															
Fe	0.59	0.68	0.56	0.79	0.10	0.26	0.57	-0.32	-0.09	0.38	0.36														
Ga	-0.12	0.12	-0.07		**0.97**	0.60	0.16		0.24		**0.91**	-0.11													
K	0.75	0.53	0.67	0.46	-0.15	0.33	0.36	-0.28	-0.27	0.30	0.09	**0.80**	-0.23												
Mg	0.47	0.27	0.45	0.10	0.08	0.31	0.28	0.00	0.30	-0.08	0.05	0.25	0.23	0.20											
Mn	0.68	0.72	0.62	0.53	0.22	0.35	0.62	-0.33	-0.18	0.30	0.34	**0.86**	0.00	0.75	0.28										
Na	-0.21	-0.18	-0.22	-0.14	0.24	-0.06	-0.10	-0.06	0.60	-0.01	0.07	-0.18	0.46	-0.34	0.62	-0.23									
Ni	0.32	0.14	0.37		0.08	0.34	0.17		-0.20		0.18	0.06	0.34	0.32	0.36	-0.09	0.02								
P	0.41	0.60	0.69	0.11	-0.16	0.00	0.65	-0.47	-0.21	0.26	0.22	0.64	-0.22	0.56	0.22	0.63	-0.23	0.11							
Pb	0.15	0.26	0.16	0.64	**0.94**	0.70	0.11	0.15	-0.17	0.72	0.77	0.29	**0.91**	0.10	0.13	0.30	0.08	0.03	-0.01						
S	**0.93**	0.52	0.50	0.34	0.11	0.31	0.25	0.26	-0.27	0.00	0.08	0.51	-0.11	0.67	0.43	0.57	-0.15	0.29	0.27	0.25					
Se	0.08	0.06	-0.01	0.67	**0.97**	0.66	0.11	0.43	-0.16	0.75	0.65	0.04	**0.97**	-0.06	0.05	0.15	0.10	0.03	-0.26	**0.90**	0.17				
Si	0.67	0.41	**0.91**	0.20	-0.11	0.51	0.43	0.37	-0.27	0.01	0.03	0.46	-0.08	0.66	0.41	0.53	-0.30	0.39	0.52	0.03	0.58	-0.05			
Ti	0.65	0.51	**0.97**	0.24	-0.13	0.52	0.57	-0.31	-0.23	0.36	0.10	0.60	-0.12	0.73	0.42	0.65	-0.28	0.33	0.68	0.09	0.51	-0.05	**0.91**		
V	0.61	0.55	0.66	-0.13	-0.11	0.17	0.49	-0.43	-0.29	0.10	0.14	0.57	-0.40	0.60	0.35	0.66	-0.15	0.08	0.74	0.02	0.53	-0.20	0.54	0.65	
Zn	0.46	0.44	0.39	0.16	0.64	0.20	0.16	-0.28	-0.05	0.26	0.24	0.44	0.04	0.37	0.49	0.48	0.21	0.21	0.42	0.27	0.44	-0.01	0.27	0.35	0.73

Tab. 14.14: Pavia: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.54																								
Al	0.17	0.37																							
As	0.53	0.43	-0.24																						
Bi																									
Br	0.60	0.31	-0.18	0.22																					
Ca	0.37	0.61	0.79	-0.14		0.27																			
Cd	-0.44	-0.09	0.58	-0.32		-0.66	0.09																		
Cl	0.70	0.45	-0.01	0.48		0.51	0.15	-0.24																	
Co																									
Cu	0.30	0.20	-0.21	0.28		0.68	0.09	-0.75	0.14																
Fe	0.43	0.57	0.70	0.16		0.12	0.75	0.04	0.28		0.26														
Ga																									
K	0.67	0.24	0.06	0.64		0.19	0.15	-0.34	0.31		0.09	0.30													
Mg	0.49	0.32	0.67	-0.01		0.07	0.67	0.35	0.14		0.04	0.71		0.26											
Mn	0.44	0.34	0.10	0.43		0.04	0.19	-0.34	0.38		0.18	0.52		0.40	0.15										
Na	0.29	0.08	0.15	0.11		0.10	0.20	-0.04	0.15		0.22	0.37		0.03	0.72	0.04									
Ni	-0.79	-0.12	-0.51			-0.21	-0.32		-0.57		0.26	0.40		-0.66	-0.52	0.02	-0.32								
P	0.72	0.70	0.16	0.70		0.54	0.43	-0.15	**0.80**		0.34	0.53		0.43	0.30	0.47	0.19	0.00							
Pb	0.45	0.37	-0.01	0.30		**0.86**	0.37	-0.60	0.30		0.78	0.30		0.19	0.06	0.24	-0.10	0.05	0.50						
S	0.75	0.21	0.22	0.27		0.30	0.29	-0.21	0.17		0.21	0.34		0.61	0.72	0.16	0.57	-0.71	0.27	0.16					
Se	-0.19	0.13	-0.09	-0.55		0.62	0.27	-0.42	-0.17		**0.82**	0.09		-0.39	-0.22	-0.32	-0.12	0.64	0.06	**0.82**	-0.29				
Si	0.14	0.46	**0.98**	-0.22		-0.17	**0.82**	0.53	0.00		-0.20	0.70		0.03	0.61	0.15	0.05	-0.40	0.20	0.05	0.12	0.03			
Ti	0.25	0.38	0.30	0.02		0.20	0.26	0.28	0.04		0.20	0.13		0.06	0.10	-0.02	-0.16	-0.07	0.23	0.23	0.19	0.24	0.28		
V	0.34	0.14	0.19	-0.02		0.19	0.22	0.14	0.10		0.11	0.31		0.19	0.60	-0.16	0.64	-0.48	0.16	-0.01	0.60	-0.17	0.12	-0.18	
Zn	0.50	0.19	-0.13	0.75		0.46	0.00	-0.69	0.46		0.60	0.43		0.52	0.06	0.60	0.11	0.76	0.56	0.59	0.27	0.20	-0.14	-0.08	0.07

Tab. 14.15: Paris: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.58																								
Al	0.39	0.04																							
As	0.48	0.65	-0.13																						
Bi																									
Br	0.12	0.39	0.03	0.19																					
Ca	0.54	0.43	0.66	0.14		0.26																			
Cd	-0.32	-0.27	-0.38	0.65		-0.29	-0.20																		
Cl	-0.21	-0.25	-0.17	0.58		0.25	0.04	**0.83**																	
Co																									
Cu	0.53	0.72	-0.06	0.60		0.46	0.28	-0.14	-0.17																
Fe	0.77	**0.80**	0.51	0.52		0.37	0.72	-0.26	-0.17		0.61														
Ga	-0.37	-0.40	-0.36	0.36		0.12	-0.35		-0.19		0.32	-0.38													
K	0.52	0.36	0.46	0.00		0.34	0.46	-0.44	-0.16		0.25	0.47	-0.65												
Mg	-0.05	-0.36	0.16	-0.36		0.06	0.16	0.50	0.76		-0.29	-0.06	-0.37	0.02											
Mn	0.30	0.13	**0.87**	0.04		0.08	0.67	-0.28	-0.10		-0.07	0.54	-0.02	0.33	0.15										
Na	-0.27	-0.41	-0.20	-0.32		0.16	-0.06	0.76	**0.90**		-0.29	-0.27	-0.05	-0.23	**0.88**	-0.11									
Ni	0.10	-0.40	-0.02			0.28	-0.32		-0.35		-0.01	-0.30		-0.33	0.30	0.04	0.44								
P	**0.82**	0.52	0.48	0.19		0.11	0.58	-0.38	-0.25		0.55	0.68	-0.56	0.70	-0.05	0.31	-0.31	-0.17							
Pb	0.11	0.39	-0.07	0.79		0.73	0.13	0.66	0.62		0.50	0.27	0.25	0.27	-0.25	0.06	-0.10	-0.17	0.06						
S	0.79	0.26	0.34	0.20		0.14	0.39	-0.42	-0.27		0.27	0.51	-0.17	0.39	0.13	0.25	-0.14	0.30	0.68	0.00					
Se	-0.32	0.74	-0.51			**0.94**	0.01		0.78		0.72	0.22	0.19	0.08	-0.53	-0.15	0.04		-0.32	**0.96**	-0.50				
Si	0.35	0.07	**0.97**	-0.04		0.07	0.66	-0.34	-0.16		-0.01	0.53	-0.24	0.38	0.10	**0.84**	-0.20	-0.28	0.42	-0.01	0.25	-0.36			
Ti	0.46	0.20	**0.82**	0.01		0.03	0.71	-0.59	-0.23		0.11	0.58	-0.44	0.56	0.15	0.67	-0.21	-0.31	0.60	-0.11	0.36	-0.61	**0.84**		
V	0.34	0.20	-0.18	0.58		-0.27	-0.05	0.71	**0.81**		0.27	0.08	-0.19	-0.06	-0.09	-0.07	0.16		0.30	0.44	0.37	-0.56	-0.18	-0.16	
Zn	0.31	0.31	0.53	0.53		0.25	0.43	-0.01	-0.13		0.21	0.48	0.07	0.43	-0.16	0.69	-0.24	-0.24	0.29	0.61	0.18	0.59	0.53	0.36	0.39

Tab. 14.16: Reykjavik: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	-0.15																								
Al	0.23	-0.11																							
As																									
Bi																									
Br	-0.61	0.42	-0.54																						
Ca	0.05	0.32	0.39																						
Cd	-0.09	-0.35	0.28																						
Cl	0.59	-0.53	-0.08			-0.22	0.10	-0.36																	
Co	-0.11	-0.15	-0.06			**0.95**		0.47	-0.09																
Cu	-0.56	-0.17	-0.39						-0.16	**0.91**															
Fe	0.13	-0.24	0.45				-0.11	-0.36	0.02	-0.15	-0.07														
Ga																									
K	0.57	0.07	-0.15			-0.41	0.19	**-0.81**	0.34	-0.30	-0.19	0.26													
Mg	0.72	-0.57	0.09			-0.25	0.19	-0.18	**0.94**	0.10	0.01	0.13		0.47											
Mn	0.09	0.14	0.75			-0.35	0.47	0.30	-0.39	-0.01	-0.23	-0.01		-0.02	-0.33										
Na	0.77	-0.44	-0.03			-0.34	0.03	-0.41	**0.95**	-0.16	-0.35	0.10		0.51	**0.96**	-0.34									
Ni																									
P																									
Pb	-0.65	0.17	-0.47			**0.97**			-0.07	**0.98**							-0.31								
S	0.71	0.24	0.31			**-0.85**	0.08	-0.04	-0.07	-0.01	-0.28	0.16		0.54	0.15	0.37	0.20			-0.72					
Se	-0.56	0.32	-0.49			**1.00**			0.11	**0.96**							-0.14			**0.97**	**-0.81**				
Si	0.03	-0.02	**0.91**			-0.44	0.33	0.32	-0.26	-0.12	-0.16	0.45		-0.26	-0.15	0.73	-0.22			-0.42	0.24	-0.46			
Ti	0.05	-0.38	**0.83**			-0.44	0.22	0.33	-0.02	0.02	0.15	0.44		-0.10	0.14	0.69	-0.06				0.11		**0.90**		
V																									
Zn	0.07	0.09	0.03			0.35	0.52	-0.41	0.31	0.42	0.62	0.54		0.40	0.37	-0.23	0.28			0.43	0.08	0.44	-0.03	0.05	

Tab. 14.17: Tartu: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.70																								
Al	0.35	0.36																							
As	0.65	0.61	0.38																						
Bi																									
Br	-0.48	-0.59	-0.61																						
Ca	-0.24	0.00	0.76			-0.54																			
Cd	-0.09	0.25	0.42			-0.19	0.34																		
Cl	0.03	0.25	0.44	0.67		-0.28	0.43	**0.80**																	
Co	-0.31	0.23	-0.20			0.27	-0.06	0.56	0.33																
Cu	-0.06	0.20	0.26			-0.17	0.40	0.41	**0.89**	0.46															
Fe	0.37	0.42	0.78	0.22		-0.42	0.58	0.43	0.70	0.07	0.69														
Ga																									
K	0.69	0.74	0.50	0.34		-0.38	0.14	0.02	0.16	0.10	0.12	0.53													
Mg	0.17	0.31	0.60	**0.91**		-0.65	0.67	0.49	0.55	0.14	0.60	0.56		0.07											
Mn	0.35	0.28	-0.04	0.46		0.01	-0.40	-0.07	-0.14	-0.19	-0.05	0.07		0.30	-0.25										
Na	0.11	0.08	0.12	0.71		-0.05	0.18	0.35	0.38	0.16	0.54	0.17		-0.19	0.75	-0.12									
Ni																									
P	0.56	0.65	0.40			-0.45	0.03	0.07	-0.12	**-0.80**	0.15	0.72		0.70	0.03	0.44	-0.07								
Pb	-0.06	0.05	-0.27			0.74	-0.26	-0.22	0.11	0.73	0.21	0.06		0.22	-0.13	0.05	-0.04		0.06						
S	**0.90**	0.51	0.16	0.70		-0.38	-0.31	-0.05	-0.12	-0.36	-0.16	0.16		0.53	0.12	0.29	0.20		0.46	-0.20					
Se																									
Si	0.24	0.34	**0.96**	0.42		-0.56	**0.85**	0.55	0.52	-0.14	0.36	0.77		0.48	0.63	0.01	0.13		0.39	-0.24	0.03				
Ti	0.29	0.42	**0.94**	0.48		-0.62	0.77	0.51	0.60	-0.04	0.49	**0.81**		0.51	0.65	-0.13	0.19		0.50	0.02	0.11		**0.93**		
V	0.26	0.20	0.09			-0.23	0.20	0.38	-0.31		0.52	0.11		0.28	0.41	0.13	0.30		0.12		0.44		0.09	0.26	
Zn	0.41	0.35	0.48	-0.14		-0.10	0.04	0.00	0.67	-0.01	0.61	0.68		0.36	0.23	0.16	0.21		0.25	0.12	0.20		0.43	0.49	-0.06

Tab. 14.18: Turin: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.32																								
Al	0.26	0.47																							
As	0.24	0.16	0.58																						
Bi	-0.09	-0.23	0.62																						
Br	0.44	0.31	0.10	0.11	0.52																				
Ca	0.25	0.59	**0.92**	0.59	0.30	0.10																			
Cd	0.54	0.34	0.35	-0.33		0.46	0.27																		
Cl	0.59	0.37	0.11	0.01	-0.52	0.48	0.20	0.74																	
Co	0.23	0.01	0.39			0.71	0.36		-0.16																
Cu	0.29	0.31	0.24	0.20	**0.91**	0.55	0.29	0.23	-0.01	0.49															
Fe	0.18	0.58	0.78	0.54	0.11	0.27	**0.85**	0.18	0.28	0.31	0.39														
Ga	0.31	0.03	0.31			0.45	-0.03		-0.14		0.75	-0.16													
K	0.63	-0.06	0.30	0.43	0.46	0.30	0.18	0.05	0.05	0.72	0.27	0.03	0.44												
Mg	0.49	0.36	0.74	0.45	0.06	-0.01	0.78	-0.03	0.18	0.16	0.13	0.55	-0.41	0.43											
Mn	0.49	0.64	0.33	0.41	-0.62	0.43	0.45	0.53	0.52	0.43	0.32	0.61	0.20	0.18	0.19										
Na	0.53	0.35	0.33	0.10	-0.46	0.02	0.47	0.03	0.34	0.27	0.04	0.30	-0.56	0.36	**0.81**	0.23									
Ni	-0.21	-0.10	0.11			-0.04	-0.26		-0.05		-0.11	-0.03	0.16	-0.25	-0.75	-0.08	-0.79								
P	0.20	0.64	0.55	0.34	0.29	0.38	0.65	0.06	0.15	0.63	0.38	0.73	0.08	0.10	0.33	0.67	0.16	-0.29							
Pb	0.35	0.18	0.04	0.03	**0.93**	**0.93**	-0.01	0.40	0.26	0.79	0.66	0.14	0.76	0.39	-0.13	0.33	-0.13	0.09	0.27						
S	**0.81**	-0.01	0.27	0.15	0.35	0.19	0.20	0.14	0.15	0.37	0.27	-0.01	0.30	**0.82**	0.60	0.09	0.57	-0.32	-0.03	0.22					
Se	0.28	0.28	0.52		**0.95**	0.79	0.26	0.38	-0.13		**0.80**	0.19	0.70	0.47	0.15	0.15	-0.16	-0.36	0.37	**0.97**	0.37				
Si	0.18	0.47	**0.98**	0.58	0.55	0.07	**0.92**	0.35	0.11	0.33	0.19	0.77	0.27	0.20	0.72	0.29	0.31	0.16	0.51	0.01	0.18	0.48			
Ti	0.17	0.44	**0.94**	0.62	0.55	0.21	**0.88**	0.43	0.13	0.38	0.28	0.73	0.29	0.19	0.66	0.28	0.25	0.00	0.53	0.15	0.15	0.55	**0.95**		
V	**0.87**	0.19	0.23	0.23	-0.09	0.16	0.33	0.41	0.38	0.39	0.16	0.10	0.01	0.60	0.65	0.32	0.71	-0.37	0.04	0.05	**0.86**	0.25	0.19	0.15	
Zn	0.53	0.47	0.37	0.34	-0.10	0.43	0.34	0.59	0.55	-0.03	0.33	0.47	0.49	0.24	0.17	0.69	0.16	0.10	0.26	0.42	0.20	0.33	0.35	0.29	0.26

Tab. 14.19: Umea: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.33																								
Al	0.16	0.26																							
As																									
Bi																									
Br	-0.10	-0.08	-0.34																						
Ca																									
Cd																									
Cl	-0.22	-0.13	0.66			-0.30																			
Co	-0.39	-0.78	-0.10			0.06																			
Cu	-0.10	0.13	-0.29			0.10																			
Fe	-0.25	0.14	0.64			-0.19			0.44	0.78	-0.01														
Ga	-0.46	0.63	-0.66			0.24						0.76													
K	0.43	0.44	0.53			-0.16			-0.21	-0.50		0.28													
Mg	0.19	0.50	0.65						0.69			-0.04		0.37											
Mn	0.29	0.20	0.41			-0.40			0.25			0.60		0.58	0.11										
Na	0.51	0.31	0.59			-0.02			0.45	-0.37	-0.22	0.22		0.49	**0.88**	0.34									
Ni																									
P	0.21	0.00	0.66						0.16			0.65		0.51		0.76	-0.07								
Pb	-0.63	-0.46	-0.69			0.79			-0.50			0.07		-0.58		-0.50	-0.49								
S	**0.90**	0.27	0.05			0.04			-0.24	-0.32	-0.03	-0.22	-0.41	0.36	0.15	0.20	0.52		0.27	-0.42					
Se																									
Si	0.07	0.43	**0.89**			-0.22			0.44	-0.06		0.72		0.66	0.46	0.75	0.43		0.64	-0.59	-0.02				
Ti	0.00	0.30	**0.92**			0.41			0.58			0.62		0.46	0.64	0.45	0.53		0.44	-0.46	-0.08		**0.85**		
V	-0.05	0.39	0.13			0.72						0.11		0.13		-0.06	0.45			0.13	-0.09		0.40		
Zn	0.27	0.30	-0.03			0.08			-0.33		0.41	0.33	-0.10	0.29	-0.46	0.39	-0.17		0.69	0.12	0.33		0.25	-0.06	-0.25

Tab. 14.20: Uppsala: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.37																								
Al	0.20	0.20																							
As																									
Bi																									
Br	0.67	0.53	0.40																						
Ca	0.36	-0.17	0.65			0.13																			
Cd																									
Cl	0.13	-0.50	0.04			-0.34	0.43																		
Co																									
Cu	0.08	0.07	0.00			-0.16	0.29		0.00																
Fe	0.02	0.40	0.59			0.32	-0.12		-0.21		0.41														
Ga	-0.09	-0.25	0.12			0.03			-0.17		0.42	-0.01													
K	0.16	0.17	0.60			0.27	0.07		0.21		-0.13	0.45	0.06												
Mg	0.28	-0.45	0.22			-0.13	0.55		**0.95**		0.08	-0.13	0.06	0.24											
Mn	0.24	0.56	0.73			0.51			-0.13		-0.12	0.67	0.21	0.79	0.22										
Na	0.21	-0.49	0.15			-0.18	0.45		**0.97**		-0.02	-0.17	-0.05	0.22	**0.98**	-0.09									
Ni																									
P	0.72	0.76	0.50			0.75			-0.18		0.10	**0.84**	-0.19	0.36	-0.06	0.71	-0.16								
Pb	0.04	0.04	0.10			0.37	-0.15		-0.24		-0.15	0.12	-0.40	-0.10	-0.19	-0.07	-0.16		-0.10						
S	**0.84**	0.45	0.17			0.73	0.00		-0.08		-0.25	0.05	-0.12	0.25	0.08	0.33	0.06		0.75	0.15					
Se	-0.31	-0.53	-0.50						-0.64		-0.74	-0.68					0.05			0.06	-0.09				
Si	0.03	0.25	**0.97**			0.35	0.53		-0.07		0.10	0.70	0.12	0.60	0.09	0.75	0.01		0.52	0.14	0.05	-0.50			
Ti	-0.01	0.30	**0.92**			0.35	0.39		-0.15		-0.05	0.73	-0.25	0.52	-0.03	0.74	-0.06		0.60	0.12	0.08	-0.41	**0.94**		
V	0.78	0.55	0.45			0.70			0.09		0.06	0.28		0.21	0.52	0.54	0.09		0.45	0.03	0.70		0.38	0.27	
Zn	0.54	0.36	0.08			0.65	-0.13		-0.27		0.10	0.24	-0.23	0.15	-0.16	0.25	-0.16		0.50	0.48	0.47	-0.45	0.05	0.06	0.53

Tab. 14.21: Verona: Summer within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS																									
Al																									
As																									
Bi																									
Br																									
Ca																									
Cd																									
Cl																									
Co																									
Cu																									
Fe																									
Ga																									
K																									
Mg																									
Mn																									
Na																									
Ni																									
P																									
Pb																									
S																									
Se																									
Si																									
Ti																									
V																									
Zn																									

Tab. 15.1: Antwerp City: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.70																								
Al	0.79	0.69																							
As	0.76	0.76	0.68																						
Bi	0.03	-0.02	0.11																						
Br	**0.83**	0.54	0.69	0.74	**0.82**																				
Ca	**0.80**	0.72	**0.81**	0.77	0.08	0.74																			
Cd	-0.14	0.06	-0.11	0.11	0.22	0.12	0.14																		
Cl	**0.80**	0.40	0.60	0.67	0.07	**0.84**	0.69	0.11																	
Co	0.27	0.35	0.19		**0.86**	0.71	0.20	0.33	0.07																
Cu	0.67	0.58	0.71	0.71	0.73	**0.83**	0.72	0.23	0.61	0.69															
Fe	**0.82**	**0.91**	**0.83**	0.74	0.04	0.69	**0.82**	-0.03	0.58	0.31	0.68														
Ga	-0.01	-0.32	-0.14	0.34	0.77	0.31	-0.08	-0.07	0.06	**0.84**	0.35	-0.16													
K	**0.92**	0.73	**0.80**	**0.83**	0.08	**0.87**	**0.81**	0.08	**0.81**	0.28	0.78	**0.85**	-0.06												
Mg	0.38	0.11	0.32	0.50	-0.13	0.44	0.50	0.29	0.75	-0.05	0.31	0.25	0.00	0.39											
Mn	**0.86**	**0.83**	0.78	0.78	0.05	0.75	0.77	-0.07	0.68	0.23	0.66	**0.92**	-0.14	**0.89**	0.28										
Na	0.15	-0.09	0.08	0.31	-0.06	0.30	0.31	0.30	0.63	-0.09	0.16	0.02	0.07	0.20	**0.94**	0.09									
Ni	0.00	-0.04	0.00	-0.14	0.28	0.18	0.16	-0.06	0.17	0.27	0.22	0.08	0.46	-0.01	0.38	-0.03	0.37								
P	**0.83**	0.57	0.66	**0.82**	0.16	0.76	0.66	0.00	0.74	0.02	0.69	0.72	0.16	**0.83**	0.38	**0.81**	0.20	0.17							
Pb	0.78	0.68	0.68	**0.86**	0.64	**0.89**	0.78	0.29	0.66	0.75	**0.84**	0.75	0.30	**0.84**	0.30	0.78	0.14	0.19	0.70						
S	**0.90**	0.56	0.69	0.63	-0.12	0.62	0.59	-0.14	0.60	0.13	0.49	0.66	0.02	0.74	0.23	0.67	-0.03	-0.09	0.68	0.58					
Se	0.17	0.45	0.18	0.35	0.63	0.30	0.22	0.67	0.09	**0.86**	0.36	0.37	0.61	0.24	0.08	0.28	0.01	0.42	0.17	0.49	0.10				
Si	0.62	0.70	**0.93**	0.55	0.08	0.51	0.73	-0.13	0.36	0.19	0.63	0.78	-0.20	0.64	0.15	0.65	-0.09	0.01	0.49	0.56	0.53	0.25			
Ti	**0.86**	0.76	**0.92**	0.68	0.16	0.75	**0.85**	-0.04	0.65	0.21	0.76	**0.88**	-0.07	**0.86**	0.30	**0.83**	0.08	0.13	0.72	0.77	0.73	0.24	**0.83**		
V	0.38	0.08	0.22	0.07	0.03	0.22	0.23	-0.10	0.42	-0.20	0.09	0.20	0.17	0.23	0.33	0.25	0.29	0.04	0.35	0.11	0.41	-0.08	0.06	0.34	
Zn	**0.89**	0.75	0.74	0.78	0.23	**0.82**	0.75	-0.02	0.76	0.43	0.72	**0.84**	-0.03	**0.91**	0.32	**0.89**	0.15	-0.03	0.79	**0.82**	0.73	0.26	0.60	**0.80**	0.16

Tab. 15.2: Albacete: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.58																								
Al	0.30	-0.05																							
As	0.16	0.01	-0.47																						
Bi	-0.12	-0.24	0.11																						
Br	0.26	0.13	0.26	-0.49	**0.80**																				
Ca	0.34	0.16	0.58	-0.56	0.02	0.22																			
Cd	-0.16	0.32	-0.11		-0.45	-0.30	0.10																		
Cl	0.28	0.31	-0.20	0.42	0.21	0.13	-0.19	0.45																	
Co	-0.06	-0.34	0.34		**0.93**	**0.80**	0.29	-0.51	0.07																
Cu	0.22	0.27	-0.01	0.75	0.34	0.67	0.24	-0.46	0.45	0.42															
Fe	0.30	-0.03	**0.93**	-0.30	0.38	0.33	0.60	-0.03	-0.16	0.50	0.11														
Ga	0.02	-0.35	0.04		**0.98**	**0.89**	0.21	-0.76	-0.08	**0.85**	**0.94**	0.18													
K	0.54	0.57	0.08	-0.22	-0.36	-0.03	0.07	0.22	0.30	-0.34	0.02	0.08	-0.56												
Mg	0.32	-0.09	0.79	-0.43	0.34	0.36	**0.81**	0.02	-0.17	0.54	0.19	0.78	0.30	-0.05											
Mn	0.29	0.04	0.58	-0.45	0.27	0.46	0.45	-0.03	-0.08	0.37	0.38	0.64	0.37	0.07	0.60										
Na	0.15	-0.15	0.25	0.02	0.62	0.51	0.38	-0.12	0.04	0.76	0.54	0.32	0.68	-0.20	0.65	0.44									
Ni	-0.17	-0.24	-0.19			-0.21	-0.26		-0.34	-0.67	-0.38	0.02	-0.35	-0.30	-0.36	-0.14	-0.39								
P	0.51	0.30	0.63	-0.42	-0.20	0.16	0.53	-0.04	-0.23	-0.14	-0.05	0.59	-0.26	0.35	0.53	0.37	0.11	0.22							
Pb	0.05	0.02	0.14	-0.41	**0.82**	**0.88**	0.08	-0.45	0.20	0.78	**0.82**	0.27	**0.88**	-0.13	0.20	0.34	0.42	-0.22	-0.07						
S	0.62	0.04	0.30	0.15	0.07	0.24	0.34	-0.39	-0.20	0.09	-0.06	0.22	0.38	0.00	0.48	0.23	0.45	0.11	0.43	0.00					
Se	-0.10	-0.22	0.17		**0.97**	**0.84**	0.16	-0.40	0.07	**0.88**	0.51	0.33	**0.94**	-0.35	0.26	0.33	0.49	-0.44	-0.16	**0.88**	-0.04				
Si	0.27	-0.05	**0.98**	-0.50	0.11	0.20	0.57	-0.12	-0.22	0.34	-0.03	**0.91**	0.03	0.06	0.79	0.57	0.24	-0.23	0.60	0.12	0.28	0.16			
Ti	0.32	-0.02	**0.99**	-0.35	0.09	0.22	0.54	-0.08	-0.17	0.31	-0.01	**0.92**	0.00	0.08	0.77	0.59	0.24	-0.27	0.61	0.12	0.28	0.11	**0.98**		
V	0.62	0.30	0.36	0.79	-0.09	0.09	0.23	-0.18	0.13	-0.12	-0.04	0.33	-0.05	0.13	0.32	0.23	0.18	-0.22	0.46	-0.05	0.58	-0.10	0.36	0.38	
Zn	0.19	-0.03	0.09	0.14	0.07	0.04	0.30	0.31	0.17	0.09	0.39	0.19	-0.09	0.19	0.25	0.34	0.15	-0.31	-0.01	0.06	-0.03	0.38	0.10	0.08	0.07

Tab. 15.3: Antwerp South: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.93**																								
Al	0.75	0.78																							
As	**0.83**	**0.83**	**0.86**																						
Bi	-0.08	-0.11	0.22	0.71																					
Br	0.70	0.62	0.64	**0.88**	0.50																				
Ca	0.66	0.63	0.53	0.51	**0.85**	0.55																			
Cd	-0.28	-0.32	-0.07	0.04	-0.13	-0.12	-0.55																		
Cl	0.70	0.62	0.55	0.79	-0.14	0.71	0.49	-0.22																	
Co	-0.10	-0.01	0.10		**0.95**	0.07	0.28		-0.30																
Cu	0.68	0.65	0.65	**0.90**	0.70	**0.83**	0.60	-0.46	0.59	0.33															
Fe	**0.80**	**0.87**	0.76	0.68	-0.20	0.53	0.62	-0.39	0.57	0.02	0.59														
Ga	0.11	0.13	0.20	0.68	0.77	0.36	0.24		-0.14	0.62	0.59	0.07													
K	**0.83**	**0.86**	0.79	**0.91**	0.00	0.70	0.66	-0.08	0.74	-0.04	0.75	**0.81**	0.07												
Mg	0.21	0.10	0.14	0.26	-0.23	0.27	0.06	-0.15	0.65	-0.43	0.11	0.08	-0.31	0.22											
Mn	0.66	0.75	0.68	0.69	-0.08	0.50	0.45	-0.10	0.45	0.11	0.56	**0.85**	0.09	0.75	0.05										
Na	0.13	0.02	0.05	0.24	-0.21	0.28	0.09	-0.09	0.62	-0.44	0.11	-0.02	-0.31	0.19	**0.96**	-0.06									
Ni	-0.06	-0.08	0.08		0.15	0.09	-0.23		-0.18	-0.10	0.26	-0.01	0.38	-0.14	-0.27	-0.12	-0.33								
P	**0.81**	0.77	0.67	**0.86**	-0.13	0.65	0.54	-0.33	0.68	-0.25	0.64	0.68	0.20	0.74	0.36	0.57	0.29	0.09							
Pb	0.67	0.65	0.69	**0.93**	0.49	**0.89**	0.55	-0.23	0.70	0.25	**0.88**	0.54	0.44	0.77	0.22	0.51	0.21	0.02	0.59						
S	**0.81**	0.72	0.56	0.62	-0.03	0.51	0.54	-0.15	0.41	-0.05	0.42	0.53	0.12	0.53	0.02	0.39	-0.09	0.01	0.58	0.47					
Se	0.04	0.13	0.22	0.12	0.62	0.26	-0.27	-0.21	-0.04	0.42	0.12	0.09	0.68	-0.01	-0.07	0.12	-0.11	0.24	0.00	0.16	0.02				
Si	0.34	0.38	0.57	0.33	0.14	0.30	0.27	0.19	0.10	0.28	0.40	0.36	0.22	0.35	-0.07	0.27	-0.13	0.00	0.27	0.38	0.27	0.15			
Ti	0.72	0.76	0.79	**0.81**	-0.17	0.48	0.55	-0.18	0.57	-0.07	0.59	0.77	0.06	**0.82**	0.15	0.66	0.11	-0.05	0.70	0.59	0.49	-0.06	0.53		
V	0.73	0.66	0.54	0.76	-0.24	0.55	0.32	-0.04	0.69	-0.41	0.45	0.50	0.13	0.63	0.36	0.39	0.29	-0.12	**0.83**	0.51	0.55	-0.04	0.13	0.52	
Zn	0.78	**0.81**	0.73	**0.89**	-0.10	0.73	0.64	-0.33	0.69	0.00	**0.81**	0.77	0.11	**0.93**	0.16	0.77	0.15	-0.12	0.72	**0.81**	0.44	-0.01	0.32	0.75	0.53

Tab. 15.4: Barcelona: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.83**																								
Al	0.54	0.51																							
As	0.74	**0.86**	0.44																						
Bi	-0.28	-0.33	0.38	0.67																					
Br	**0.83**	**0.85**	0.44	**0.84**	-0.13																				
Ca	0.53	0.64	0.71	0.65	0.17	0.52																			
Cd	0.69	0.61	0.47	0.62		0.62	0.49																		
Cl	**0.82**	0.64	0.40	0.60	-0.19	**0.81**	0.35	0.61																	
Co	0.11	-0.18	0.69			0.21	0.64		0.10																
Cu	0.57	0.63	0.32	0.55	0.37	0.48	0.45	0.50	0.34	0.79															
Fe	0.78	**0.87**	0.74	**0.81**	-0.12	**0.81**	**0.85**	0.67	0.60	0.30	0.57														
Ga	0.22	0.12	0.22	0.23	**0.84**	0.18	0.11	-0.51	0.19	0.77	0.32	0.15													
K	**0.88**	**0.82**	0.61	**0.83**	-0.33	**0.83**	0.67	0.51	0.74	-0.04	0.49	**0.86**	0.10												
Mg	0.55	0.44	0.72	0.42	0.55	0.42	0.46	-0.12	0.50	0.40	0.29	0.52	0.31	0.50											
Mn	0.61	0.79	0.35	0.69	-0.21	0.74	0.62	0.44	0.44	-0.05	0.45	0.79	0.01	0.65	0.22										
Na	0.49	0.44	0.41	0.48	0.68	0.44	0.29	-0.26	0.40	0.32	0.31	0.37	0.36	0.39	**0.85**	0.26									
Ni	-0.10	-0.26	-0.22	-0.25	0.27	-0.17	-0.42	-0.53	-0.09		0.14	-0.19	0.50	-0.26	0.04	-0.21	0.01								
P	**0.83**	0.78	0.57	0.73	-0.03	**0.80**	0.68	0.58	0.72	0.36	0.47	**0.84**	0.19	**0.84**	0.43	0.65	0.33	-0.16							
Pb	0.77	**0.84**	0.44	**0.89**	0.20	**0.91**	0.56	0.62	0.63	0.49	0.58	**0.82**	0.37	0.76	0.34	0.75	0.39	-0.05	0.76						
S	0.51	0.17	0.38	0.08	0.14	0.08	0.10	-0.40	0.21	0.17	0.30	0.21	0.34	0.29	0.52	0.00	0.41	0.29	0.22	0.10					
Se	0.05	-0.07	0.31	0.45	**0.99**	0.12	0.27	-0.14	0.00	0.79	0.24	0.09	**0.83**	0.00	0.52	-0.06	0.59	0.00	0.18	0.38	0.17				
Si	0.48	0.51	**0.97**	0.41	0.35	0.41	0.74	0.50	0.30	0.74	0.34	0.75	0.17	0.56	0.66	0.45	0.38	-0.23	0.55	0.43	0.30	0.30			
Ti	0.72	0.57	0.58	0.55	-0.03	0.66	0.50	0.40	0.77	0.53	0.39	0.66	0.18	0.73	0.52	0.37	0.35	-0.22	0.68	0.53	0.23	0.22	0.52		
V	0.63	0.44	0.48	0.46	0.70	0.33	0.35	-0.08	0.35	0.73	0.48	0.45	0.51	0.44	0.54	0.22	0.49	-0.06	0.41	0.44	0.64	0.70	0.43	0.36	
Zn	0.66	0.79	0.39	**0.80**	0.37	0.72	0.54	0.63	0.57	0.34	0.56	0.71	0.51	0.62	0.42	0.63	0.48	0.03	0.69	**0.81**	0.06	0.52	0.39	0.51	0.41

Tab. 15.5: Basel: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.75																								
Al	0.25	0.56																							
As	0.30	0.61	**0.85**																						
Bi	-0.41	-0.31	-0.31																						
Br	0.46	0.58	0.61	0.68	0.66																				
Ca	0.16	0.52	0.52	0.55	-0.44	0.44																			
Cd	-0.26	-0.25	-0.58		0.22	0.65	-0.06																		
Cl	0.78	0.70	0.44	0.65	-0.17	0.60	0.31	0.17																	
Co	-0.35	-0.20	-0.06	-0.23	**0.97**	0.08	-0.07	0.09	-0.21																
Cu	0.13	0.43	0.38	0.56	0.71	0.37	0.33	0.09	0.18	0.59															
Fe	0.63	**0.86**	0.62	0.60	-0.48	0.57	0.64	-0.43	0.56	-0.23	0.43														
Ga	-0.05	-0.07	-0.06	-0.10	**0.89**	0.14	-0.23		-0.13	**0.84**	0.61	-0.08													
K	**0.89**	**0.80**	0.46	0.60	-0.52	0.64	0.34	-0.02	**0.86**	-0.31	0.26	0.73	-0.20												
Mg	0.27	0.41	0.31	0.59	-0.45	0.28	0.35	-0.36	0.59	-0.32	0.09	0.44	-0.31	0.39											
Mn	0.67	**0.83**	0.62	0.69	-0.42	0.67	0.46	-0.01	0.74	-0.21	0.31	0.76	-0.14	0.78	0.38										
Na	0.21	0.39	0.33	0.70	-0.03	0.41	0.47	0.02	0.51	-0.14	0.33	0.46	-0.04	0.39	**0.81**	0.45									
Ni	0.09	-0.02	-0.29	-0.45		0.22	-0.58		0.06	-0.32	0.06	0.25	0.32	0.08	0.13	-0.16	0.21								
P	0.56	**0.81**	0.41	0.41	0.19	0.51	0.71	0.18	0.64	0.07	0.33	0.66	-0.27	0.63	0.58	0.70	0.55	-0.24							
Pb	0.27	0.35	0.31	0.76	0.71	0.56	0.19	0.55	0.26	0.52	0.62	0.27	0.47	0.32	-0.08	0.31	0.30	0.07	0.37						
S	**0.87**	0.57	0.15	0.17	-0.57	0.25	0.05	-0.64	0.50	-0.27	0.00	0.51	-0.02	0.67	0.07	0.49	0.03	0.05	0.29	0.18					
Se	-0.36	-0.35	-0.26	**0.95**	**0.95**	0.39	-0.25	0.50	-0.27	**0.91**	0.62	-0.47	0.70	-0.32	-0.36	-0.45	-0.09	-0.22	0.01	**0.81**	-0.42				
Si	0.18	0.48	0.75	0.56	-0.43	0.33	0.56	-0.56	0.16	-0.08	0.32	0.65	-0.09	0.29	0.27	0.46	0.23	-0.21	0.24	0.09	0.21	-0.28			
Ti	0.50	0.70	0.74	0.73	-0.71	0.47	0.50	-0.54	0.49	-0.33	0.36	0.69	-0.26	0.66	0.30	0.72	0.31	-0.27	0.39	0.17	0.44	-0.46	0.77		
V	0.62	0.42	0.20	0.25	-0.26	0.25	0.21	-0.30	0.61	-0.30	0.08	0.42	0.22	0.61	0.39	0.44	0.31	0.12	0.27	-0.03	0.44	-0.29	0.17	0.44	
Zn	0.66	**0.82**	0.51	0.70	-0.19	0.60	0.49	0.18	0.62	-0.14	0.52	0.74	-0.13	0.79	0.27	**0.80**	0.44	-0.07	0.71	0.53	0.49	-0.01	0.39	0.66	0.24

Tab. 15.6: Erfurt: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.82**																								
Al	0.51	0.57																							
As	0.78	0.70	0.50																						
Bi	-0.39	-0.40	-0.42																						
Br	0.45	0.22	0.10	0.73	0.56																				
Ca	0.51	0.71	0.65	0.61		0.24																			
Cd	-0.54	-0.47	-0.48			0.07																			
Cl	0.74	0.60	0.25	**0.83**	-0.69	0.50	0.44	0.51																	
Co	0.01	-0.15	-0.27			**0.82**	-0.50		-0.15																
Cu	0.43	0.44	0.44	0.45	0.51	0.51	0.42	-0.13	0.31	**0.88**															
Fe	0.71	**0.88**	0.71	0.59	-0.51	0.16	0.79	-0.52	0.46	-0.19	0.51														
Ga	-0.23	-0.21	-0.02	-0.21		0.32	-0.42		-0.22		0.71	-0.05													
K	**0.89**	**0.81**	0.53	**0.87**	-0.32	0.49	0.61	-0.46	**0.82**	-0.02	0.45	0.68	-0.16												
Mg	0.61	0.53	0.53	0.66	-0.47	0.33	0.46	0.55	0.67	-0.31	0.25	0.52	-0.20	0.62											
Mn	0.77	**0.82**	0.69	0.62	-0.21	0.31	0.75	-0.62	0.53	0.28	0.58	**0.86**	-0.05	0.78	0.52										
Na	0.41	0.24	0.12	0.57	-0.31	0.52	0.31	0.50	0.70	0.18	0.23	0.25	0.04	0.45	0.78	0.26									
Ni	-0.18	-0.02	-0.13	-0.50		-0.35	-0.48		-0.29		0.25	0.21	0.29	-0.25	-0.34	-0.05	-0.25								
P	**0.89**	**0.83**	0.58	0.76	-0.43	0.30	0.65	-0.28	0.67	-0.43	0.40	**0.82**	-0.26	**0.86**	0.75	**0.84**	0.48	-0.08							
Pb	0.68	0.60	0.19	**0.90**	0.04	0.74	0.41	-0.34	0.79	0.72	0.53	0.44	0.12	0.76	0.42	0.52	0.54	-0.36	0.54						
S	**0.83**	0.52	0.46	0.43	-0.36	0.40	0.17	-0.63	0.46	0.05	0.33	0.53	-0.10	0.60	0.47	0.58	0.27	-0.17	0.74	0.40					
Se	0.00	-0.19	-0.17	0.53	**0.95**	**0.84**	0.14	-0.18	0.06	**0.95**	0.61	-0.21	0.71	0.05	-0.05	0.14	0.32	-0.07	-0.12	0.50	0.00				
Si	0.44	0.60	**0.95**	0.47	-0.36	0.06	0.75	-0.48	0.20	-0.17	0.42	0.74	-0.04	0.50	0.51	0.68	0.09	-0.17	0.55	0.15	0.34	-0.17			
Ti	0.66	0.75	**0.91**	0.63	-0.37	0.17	**0.80**	-0.61	0.44	-0.25	0.44	**0.84**	-0.13	0.71	0.58	**0.83**	0.20	-0.09	0.78	0.38	0.51	-0.11	**0.91**		
V	0.41	0.38	0.21	0.30		0.34	-0.36		0.38		0.15	0.01	-0.02	0.23	0.42	0.42	0.22		0.21	0.16	0.40		0.06	-0.02	
Zn	0.79	0.77	0.34	**0.93**	-0.43	0.43	0.51	-0.36	**0.83**	-0.05	0.39	0.65	-0.22	**0.83**	0.58	0.63	0.52	-0.22	0.72	**0.87**	0.46	0.03	0.31	0.53	0.38

Tab. 15.7: Galdakao: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.65																								
Al	0.60	0.51																							
As	0.48	0.76	0.46																						
Bi	-0.21	-0.25	-0.31																						
Br	0.33	0.56	0.15	0.72	**0.87**																				
Ca	0.52	0.67	0.67	0.41	-0.18	0.21																			
Cd	0.30	0.34	0.33	-0.10		-0.28	0.15																		
Cl	-0.01	0.23	0.13	0.73	0.37	0.34	0.11	0.10																	
Co	0.69	0.70	0.45			0.53	0.19		0.52																
Cu	0.54	0.64	0.31	0.66	0.23	0.60	0.35	-0.02	0.26	**0.88**															
Fe	0.58	**0.89**	0.57	**0.82**	-0.52	0.58	0.71	0.22	0.33	0.48	0.70														
Ga	0.22	0.20	0.06	0.43	0.33	0.69	0.10		0.05	0.63	0.38	0.22													
K	0.76	0.69	0.65	0.49	-0.12	0.39	0.79	0.23	0.09	0.18	0.55	0.72	0.22												
Mg	0.37	0.19	0.45	0.45	0.01	0.06	0.20	0.07	0.56	-0.02	0.27	0.23	0.14	0.29											
Mn	0.57	**0.84**	0.47	**0.85**	-0.33	0.57	0.63	0.24	0.30	0.43	0.77	**0.93**	0.25	0.71	0.22										
Na	0.41	0.36	0.42	0.57	0.19	0.26	0.34	0.09	0.67	0.56	0.46	0.44	0.30	0.41	**0.88**	0.43									
Ni	0.22	0.08	0.31	-0.03	-0.62	0.19	0.29	-0.24	-0.02		0.23	0.14	0.22	0.42	0.24	0.08	0.25								
P	0.42	0.50	0.20	0.70	-0.43	0.33	0.21	-0.26	0.20	-0.03	0.69	0.56	-0.13	0.32	0.13	0.57	0.26	0.30							
Pb	0.40	0.62	0.27	**0.88**	**0.82**	0.76	0.35	0.06	0.30	0.53	**0.80**	0.70	0.47	0.49	0.21	0.77	0.38	0.05	0.51						
S	**0.89**	0.28	0.42	0.06	-0.18	0.03	0.24	0.29	-0.23	0.58	0.28	0.19	0.18	0.52	0.30	0.19	0.26	0.28	0.19	0.08					
Se	-0.23	-0.11	-0.43	-0.11	0.37	0.44	-0.30	-0.17	-0.22	0.70	0.16	-0.16	0.77	-0.16	-0.18	0.00	-0.13	0.35	-0.09	0.27	-0.21				
Si	0.61	0.51	**0.94**	0.53	-0.26	0.13	0.58	0.38	0.13	0.69	0.37	0.56	0.12	0.57	0.49	0.50	0.42	0.19	0.20	0.31	0.45	-0.42			
Ti	0.59	0.68	**0.92**	0.52	-0.11	0.34	0.76	0.40	0.18	0.50	0.46	0.74	0.13	0.75	0.35	0.64	0.40	0.22	0.32	0.41	0.33	-0.39	**0.86**		
V	0.69	0.55	0.53	0.40	-0.32	0.29	0.55	0.02	0.01	0.66	0.70	0.61	0.01	0.76	0.33	0.59	0.45	0.44	0.51	0.50	0.51	-0.13	0.49	0.59	
Zn	0.60	0.76	0.59	**0.80**	-0.39	0.51	0.66	0.26	0.34	0.61	0.75	**0.88**	0.23	0.70	0.37	**0.89**	0.56	0.15	0.61	0.73	0.27	-0.16	0.57	0.67	0.67

Tab. 15.8: Grenoble: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.85**																								
Al	0.25	0.11																							
As	**0.82**	0.64	0.16																						
Bi	0.02	0.01	0.29																						
Br	0.73	0.57	0.16	**0.84**	**0.85**																				
Ca	0.05	-0.09	0.45	0.44	0.34	0.22																			
Cd	-0.17	-0.12	-0.33	-0.11		-0.30	-0.31																		
Cl	**0.88**	0.72	0.08	**0.83**	-0.31	0.75	0.02	0.17																	
Co	-0.05	-0.15	0.00	-0.10	**0.87**	0.50	0.30	-0.08	-0.25																
Cu	0.46	0.45	0.08	0.64	**0.91**	0.36	0.10	0.05	0.47	0.08															
Fe	0.75	**0.80**	0.44	0.65	0.26	0.54	0.09	-0.28	0.75	-0.21	0.45														
Ga	0.30	0.16	0.33	0.67		0.52	0.29	-0.43	0.39	0.60	0.48	0.42													
K	**0.92**	0.76	0.19	**0.82**	-0.05	0.78	-0.01	-0.24	**0.83**	-0.07	0.36	0.63	0.28												
Mg	0.37	0.21	**0.82**	0.51	-0.05	0.27	0.23	-0.14	0.38	-0.27	0.27	0.60	0.35	0.34											
Mn	0.72	0.70	0.16	0.76	0.02	0.55	-0.03	-0.24	0.78	0.12	0.43	**0.86**	0.39	0.66	0.39										
Na	**0.86**	0.75	0.19	**0.81**	-0.04	0.71	-0.04	0.19	**0.93**	-0.20	0.49	**0.80**	0.37	**0.82**	0.45	**0.83**									
Ni	0.15	0.24	-0.05	-0.10		0.03	-0.01	-0.19	0.13		0.12	0.26	0.19	0.03	-0.12	0.04	0.11								
P	0.79	**0.86**	0.27	0.70	0.59	0.55	0.05	-0.22	0.73	0.01	0.45	**0.83**	0.24	0.68	0.44	0.75	0.72	0.15							
Pb	0.76	0.65	0.11	**0.92**	**0.80**	0.71	0.07	0.17	0.76	0.50	0.70	0.65	0.55	0.71	0.22	0.75	0.77	-0.05	0.66						
S	0.54	0.24	0.20	0.47	0.08	0.28	0.02	0.10	0.36	0.39	0.27	0.26	0.40	0.45	0.14	0.28	0.35	0.05	0.16	0.48					
Se	-0.18	-0.27	-0.16	0.49	**0.92**	0.42	0.10	-0.05	-0.14	0.75	0.04	-0.30	0.25	-0.09	-0.27	-0.18	-0.11	-0.35	-0.11	0.24	0.02				
Si	0.10	0.12	0.57	0.09	0.49	0.03	0.24	-0.27	-0.04	0.07	0.53	0.29	0.33	0.01	0.48	0.08	0.03	-0.19	0.22	0.14	0.08	-0.02			
Ti	0.28	0.19	**0.92**	0.19	0.32	0.24	0.68	-0.34	0.15	0.10	0.16	0.50	0.40	0.20	0.77	0.18	0.20	0.07	0.34	0.14	0.16	-0.11	0.59		
V	0.51	0.37	0.19	0.64	-0.54	0.37	0.42	-0.17	0.48	-0.43	0.47	0.37	0.32	0.41	0.33	0.34	0.47	-0.01	0.44	0.39	0.44	-0.12	0.42	0.27	
Zn	**0.81**	0.78	0.06	0.73	0.20	0.64	-0.02	-0.08	**0.91**	-0.09	0.50	**0.82**	0.41	0.70	0.29	**0.83**	**0.93**	0.17	0.75	0.75	0.29	-0.11	0.02	0.14	0.46

Tab. 15.9: Gothenburg: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.39																								
Al	0.42	0.32																							
As	0.50	0.46	0.44																						
Bi																									
Br	0.48	0.26	0.41	0.21																					
Ca	0.40	0.25	0.46	-0.10		0.44																			
Cd																									
Cl	0.08	-0.16	-0.09	0.09		0.30	0.48																		
Co	-0.28	0.35	0.67	0.05		0.63			-0.10																
Cu	-0.02	0.63	0.21	0.35		0.02	-0.09		-0.16	0.74															
Fe	0.13	**0.86**	0.46	0.38		0.11	0.30		-0.17	0.39	0.72														
Ga	0.10	0.25	0.03	0.29		-0.02	-0.14		-0.26	-0.61	0.45	0.28													
K	0.63	0.42	0.26	0.41		0.38	0.20		0.04	-0.26	0.09	0.20	0.17												
Mg	-0.08	-0.22	-0.10	0.00		0.11	0.52		0.55	-0.16	-0.22	-0.18	-0.16	0.37											
Mn	0.32	0.74	0.44	0.54		0.36	0.38		0.03	0.33	0.36	0.74	-0.08	0.23	-0.14										
Na	0.07	-0.23	-0.02	0.04		0.24	0.44		**0.92**	-0.11	-0.19	-0.21	-0.30	-0.05	0.51	-0.01									
Ni	-0.05	0.19	0.02	0.19		-0.23	-0.23		-0.16	-0.70	0.72	0.48	0.77	-0.09	-0.23	-0.06	-0.25								
P	0.67	0.73	0.57	0.55		0.47	0.53		0.07	0.12	0.45	0.70	0.01	0.55	0.09	0.64	0.06	0.09							
Pb	0.44	0.35	0.49	0.51		0.72	0.23		-0.02	**0.94**	0.17	0.26	0.13	0.31	-0.25	0.39	-0.13	-0.05	0.47						
S	**0.80**	0.13	0.48	0.41		0.35	0.15		-0.13	-0.28	-0.14	-0.03	0.04	0.42	-0.13	0.12	-0.06	-0.10	0.51	0.29					
Se	-0.15	0.14	0.13	0.73		0.36	-0.17		-0.31	0.79	0.31	0.32	0.65	-0.17	-0.45	0.49	-0.32	0.17	-0.10	0.75	-0.27				
Si	0.21	0.46	**0.90**	0.44		0.31	0.32		-0.20	**0.82**	0.40	0.64	-0.04	0.20	-0.20	0.54	-0.15	0.01	0.58	0.54	0.22	0.36			
Ti	0.28	0.69	0.77	0.42		0.37	0.55		-0.12	0.67	0.47	**0.80**	0.00	0.24	-0.16	0.74	-0.10	-0.01	0.74	0.41	0.19	0.19	**0.84**		
V	0.18	-0.05	0.23	-0.06		0.20	0.35		0.19	-0.22	-0.08	-0.04	-0.19	0.05	0.25	0.09	0.31	-0.11	0.20	-0.04	0.29	-0.21	0.12	0.08	
Zn	0.45	0.79	0.29	0.71		0.22	0.21		-0.10	-0.07	0.65	0.65	0.28	0.46	-0.22	0.63	-0.16	0.21	0.65	0.29	0.23	-0.08	0.36	0.55	-0.05

Tab. 15.10: Huelva: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.69																								
Al	0.18	0.13																							
As	0.33	0.04	0.02																						
Bi	-0.03	-0.25	0.12	0.65																					
Br	0.64	0.70	0.04	0.21	0.44																				
Ca	0.38	0.34	0.72	0.45	0.14	0.24																			
Cd	0.15	0.46	0.25	0.25		0.01	0.60																		
Cl	-0.03	-0.19	-0.08	0.41	0.38	-0.04	0.25	0.07																	
Co	0.12	0.05	0.27	0.26	**0.86**	0.65	-0.04		-0.21																
Cu	0.24	0.02	0.06	**0.88**	0.42	0.18	0.45	0.14	0.43	0.50															
Fe	0.28	0.26	**0.95**	0.08	0.11	0.17	0.78	0.31	-0.08	0.42	0.14														
Ga	0.31	0.11	0.08	0.23	0.69	0.52	0.03		-0.25	**0.95**	0.40	0.18													
K	0.69	0.76	0.23	0.05	-0.34	0.60	0.45	0.52	-0.16	-0.18	0.03	0.36	0.07												
Mg	0.16	-0.23	0.36	0.35	0.29	-0.02	0.45	0.16	0.58	0.01	0.38	0.30	0.07	-0.16											
Mn	0.44	0.37	0.40	-0.04	-0.06	0.34	0.40	-0.21	-0.01	0.52	0.05	0.54	0.16	0.37	0.05										
Na	0.11	-0.20	-0.13	0.33	0.14	0.02	0.17	0.11	0.62	-0.07	0.39	-0.14	0.07	-0.17	**0.83**	-0.14									
Ni	0.08	0.23	0.21	-0.09	0.44	0.43	0.12		-0.26	**0.82**	0.16	0.34	**0.82**	0.17	-0.04	0.37	-0.12								
P	0.36	0.07	0.02	0.78	0.28	0.18	0.42	0.17	0.48	0.32	**0.90**	0.10	0.32	0.09	0.39	0.05	0.50	0.08							
Pb	0.35	0.43	0.05	0.75	0.36	0.46	0.41	0.38	0.19	0.36	0.67	0.14	0.45	0.21	0.13	0.06	0.15	0.29	0.60						
S	0.78	0.34	0.10	0.24	0.07	0.39	0.10	0.11	-0.29	0.30	0.17	0.14	0.66	0.31	0.16	0.27	0.12	0.11	0.31	0.17					
Se	0.11	-0.20	0.08	0.67	0.63	0.31	0.42	-0.09	0.41	0.68	**0.81**	0.24	0.63	-0.20	0.59	0.21	0.56	0.24	0.68	0.60	0.19				
Si	0.34	0.10	**0.88**	0.34	0.19	0.05	0.76	0.23	0.13	0.19	0.35	**0.85**	0.10	0.18	0.55	0.39	0.09	0.11	0.36	0.23	0.27	0.42			
Ti	0.10	0.13	0.16	0.12	-0.08	0.03	0.21	0.58	-0.02	0.08	0.22	0.23	-0.17	0.09	0.01	0.06	0.00	-0.23	0.20	0.24	0.08	0.14	0.20		
V	0.63	0.36	0.06	0.04	0.04	0.43	0.15	0.21	-0.26	0.36	0.20	0.14	0.56	0.48	0.00	0.37	0.02	0.18	0.23	0.20	0.65	0.30	0.16	0.16	
Zn	0.30	0.10	0.07	**0.94**	0.40	0.19	0.53	0.39	0.44	0.18	**0.89**	0.18	0.18	0.11	0.34	0.17	0.30	-0.04	**0.81**	0.69	0.17	0.70	0.38	0.24	0.13

Tab. 15.11: Ipswich: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.84**																								
Al	0.58	0.48																							
As	0.62	0.55	**0.95**																						
Bi	-0.02	0.10	0.31	-0.38																					
Br	0.74	0.72	**0.81**	**0.90**	-0.01																				
Ca	-0.20	-0.28	-0.28	-0.45	-0.05	-0.31																			
Cd	0.51	0.65	0.57	0.76	0.66	0.56																			
Cl	0.66	0.54	**0.80**	**0.88**	-0.33	**0.83**	-0.15	0.60																	
Co	-0.23	-0.22	-0.15		**0.94**	0.02	-0.12		-0.25																
Cu	0.51	0.46	**0.90**	**0.94**	0.57	**0.84**	-0.38	0.64	0.72	0.22															
Fe	0.61	0.75	0.13	0.04	0.27	0.31	0.05	0.20	0.18	-0.17	0.12														
Ga	0.35	0.24	0.65	**0.91**		0.67	-0.33		0.49	0.57	**0.87**	-0.03													
K	0.56	0.49	**0.98**	**0.96**	0.47	**0.82**	-0.26	0.58	**0.83**	-0.14	**0.90**	0.11	0.67												
Mg	0.34	0.21	0.78	**0.84**	-0.22	0.69	-0.06	0.59	**0.88**	-0.16	0.74	-0.13	0.58	**0.80**											
Mn	0.40	0.42	0.20	0.09	0.76	0.26	0.37	0.37	0.14	0.01	0.24	0.49	0.34	0.23	0.07										
Na	-0.07	-0.19	0.20	0.30	-0.13	0.23	0.28	0.41	0.52	-0.13	0.25	-0.28	0.24	0.23	0.75	-0.06									
Ni	0.45	0.33	0.22	0.11	**0.96**	0.29	0.07		-0.05	0.27	0.30	0.63	0.37	0.39	-0.20	0.49	-0.21								
P	**0.85**	0.79	0.58	0.60	0.24	0.62	-0.08	0.65	0.57	-0.42	0.49	0.66	0.38	0.57	0.30	0.54	-0.14	0.46							
Pb	0.57	0.49	**0.97**	**0.97**	0.22	**0.86**	-0.35	0.63	**0.82**	-0.07	**0.94**	0.07	0.73	**0.98**	**0.82**	0.14	0.27	0.36	0.58						
S	0.74	0.47	0.22	0.19	0.14	0.30	-0.06	0.32	0.18	-0.04	0.14	0.46	0.24	0.17	-0.07	0.42	-0.30	0.29	0.69	0.17					
Se	-0.15	-0.14	0.05	0.55	0.44	0.39	-0.33	-0.64	-0.11	**0.91**	**0.82**	-0.12	**0.87**	-0.03	-0.01	0.08	0.14	-0.01	-0.23	0.63	-0.05				
Si	0.52	0.47	0.49	0.48	0.49	0.55	-0.02	0.48	0.38	-0.38	0.44	0.44	0.30	0.40	0.23	0.40	-0.02	0.02	0.60	0.41	0.42	0.12			
Ti	0.52	0.45	**0.97**	**0.94**	0.37	0.78	-0.27	0.56	**0.80**	-0.10	**0.90**	0.06	0.69	**0.99**	**0.80**	0.20	0.22	0.39	0.55	**0.97**	0.13	0.00	0.37		
V	0.46	0.34	0.34	-0.02	0.30	0.06	-0.14	0.34	-0.12	-0.16	-0.01	0.37	0.00	0.24	-0.37	0.40	-0.41	0.26	0.72	0.22	0.69	-0.21	0.36	0.21	
Zn	0.79	0.72	**0.87**	**0.92**	0.09	**0.92**	-0.25	0.59	**0.85**	-0.18	**0.82**	0.38	0.59	**0.88**	0.66	0.34	0.14	0.57	0.74	**0.89**	0.37	0.06	0.52	**0.85**	0.17

Tab. 15.12: Norwich: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.77																								
Al	0.55	0.56																							
As	0.12	0.33	-0.02																						
Bi	0.36	0.22	0.62																						
Br	0.67	0.70	0.54	0.20	**0.80**																				
Ca	0.00	0.31	0.32	0.16	-0.30	0.22																			
Cd	0.17	-0.02	-0.29			-0.43	-0.65																		
Cl	0.28	0.19	0.18	0.25	-0.47	0.35	0.14	0.00																	
Co	0.40	0.21	0.44			0.72	-0.35		-0.34																
Cu	0.32	0.24	0.25	-0.20	0.79	0.42	-0.09	-0.67	-0.14	**0.84**															
Fe	0.65	0.74	0.71	0.04	0.39	0.50	0.15	-0.17	0.17	0.30	0.16														
Ga	0.07	0.06	0.31	0.34		0.35	-0.10		-0.37	**0.94**	0.61	0.13													
K	0.60	0.69	0.56	0.16	-0.15	0.59	0.25	0.44	0.37	0.03	0.18	0.72	-0.09												
Mg	-0.04	-0.05	0.09	0.03	-0.33	0.13	0.15	0.06	**0.82**	-0.20	-0.11	0.05	-0.33	0.26											
Mn	0.39	0.56	0.68	0.14	0.33	0.49	0.32	-0.38	0.35	0.27	0.03	0.68	0.36	0.57	0.22										
Na	-0.23	-0.25	-0.14	0.04	-0.38	-0.05	0.01	0.07	0.74	-0.23	-0.14	-0.15	-0.34	0.09	**0.96**	-0.03									
Ni	0.18	0.23	0.40	-0.16	**0.83**	-0.06	-0.20	0.12	-0.24		0.21	0.59	0.29	0.35	-0.17	0.42	-0.23								
P	0.78	0.74	0.50	0.09	0.42	0.54	0.01	0.21	0.20	0.42	0.37	0.67	-0.06	0.55	-0.06	0.39	-0.24	0.23							
Pb	0.16	0.31	0.11	**0.98**	0.03	0.27	0.06	-0.61	0.03	**0.87**	0.10	0.07	0.26	0.22	-0.09	0.10	-0.09	-0.09	0.12						
S	0.79	0.43	0.37	0.03	**0.85**	0.43	-0.22	-0.02	-0.03	0.64	0.44	0.42	0.19	0.26	-0.26	0.06	-0.38	0.33	0.64	0.11					
Se	0.06	0.00	0.24	-0.02	**0.95**	0.44	-0.14		-0.30		0.60	-0.07	**0.92**	-0.08	-0.35	0.02	-0.33	0.15	0.00	0.79	0.26				
Si	0.32	0.41	**0.86**	-0.05	**0.80**	0.40	0.38	-0.18	-0.06	0.56	0.20	0.52	0.59	0.39	-0.04	0.61	-0.23	0.38	0.28	0.13	0.19	0.47			
Ti	0.45	0.69	0.58	0.04	**0.86**	0.56	0.28	-0.19	0.18	0.16	0.26	0.64	0.18	0.50	0.15	0.51	-0.03	0.19	0.46	0.10	0.21	0.21	0.58		
V	0.39	0.27	0.29	0.05	0.71	0.33	-0.22	0.07	-0.16	0.77	0.62	0.27	0.43	0.13	-0.26	0.03	-0.31	0.23	0.56	0.27	0.56	0.55	0.32	0.28	
Zn	0.40	0.53	0.39	**0.83**	0.00	0.33	0.09	-0.12	0.23	0.41	0.10	0.46	0.22	0.44	0.07	0.35	-0.03	0.21	0.34	0.79	0.20	0.13	0.35	0.33	0.25

Tab. 15.13: Oviedo: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.48																								
Al	0.62	0.55																							
As	0.48	0.59	0.24																						
Bi	0.10	-0.24	-0.10																						
Br	0.45	0.68	0.47	0.52	0.09																				
Ca	0.35	0.73	0.51	0.49	-0.26	0.53																			
Cd	0.17	0.39	0.30		0.55	0.21	0.32																		
Cl	0.05	0.22	0.00	0.47	-0.46	0.31	0.20	0.43																	
Co	0.05	-0.20	-0.01	0.43	**0.91**	0.15	-0.06	0.03	-0.43																
Cu	0.34	0.26	0.29	0.65	**0.91**	0.34	0.11	-0.25	0.06	0.70															
Fe	0.57	0.29	0.55	0.56	0.24	0.18	0.24	-0.30	0.02	0.36	0.54														
Ga	0.01	-0.08	-0.04	0.20		0.29	-0.10		-0.29	**0.89**	0.57	0.06													
K	0.72	0.29	0.53	0.41	0.08	0.32	0.19	-0.32	-0.12	0.24	0.36	0.70	0.13												
Mg	0.40	0.16	0.39	0.39	0.16	0.16	0.23	0.34	0.47	-0.10	0.35	0.39	-0.03	0.19											
Mn	0.27	0.17	0.40	0.21	0.08	0.04	0.09	-0.25	0.08	0.20	0.22	0.68	0.08	0.29	0.30										
Na	-0.01	-0.22	-0.02	0.15	0.15	-0.05	-0.12	0.13	0.48	0.04	0.22	0.04	0.07	-0.12	**0.80**	0.01									
Ni	0.12	0.22	0.03	0.39	-0.01	0.16	0.22		0.01	-0.01	0.12	0.05	0.39	0.08	0.12	-0.03	0.12								
P	0.55	0.79	0.72	0.54	-0.27	0.47	0.70	0.21	0.12	-0.04	0.38	0.52	-0.13	0.42	0.28	0.25	-0.13	0.22							
Pb	0.41	0.52	0.35	0.72	0.67	0.78	0.38	0.01	0.08	0.46	0.63	0.38	0.62	0.31	0.21	0.13	0.01	0.21	0.43						
S	0.76	-0.06	0.36	0.06	0.23	0.03	-0.09	0.08	-0.32	0.11	0.19	0.42	0.28	0.60	0.26	0.14	0.03	0.01	0.06	0.19					
Se	0.09	-0.14	-0.03	0.55	**0.96**	0.32	-0.10	0.06	-0.19	0.70	0.55	0.09	**0.90**	0.11	-0.01	0.11	0.05	-0.08	-0.20	0.66	0.23				
Si	0.61	0.42	**0.86**	0.27	-0.15	0.32	0.46	0.65	-0.02	-0.13	0.15	0.51	-0.11	0.49	0.41	0.43	-0.01	0.09	0.59	0.25	0.44	-0.08			
Ti	0.66	0.49	**0.96**	0.27	-0.20	0.42	0.48	0.20	0.11	-0.01	0.27	0.59	-0.11	0.59	0.43	0.41	0.04	0.18	0.71	0.30	0.38	-0.06	**0.85**		
V	0.61	0.36	0.51	0.30	0.04	0.34	0.52	0.33	0.15	0.04	0.21	0.36	-0.24	0.52	0.32	0.14	-0.01	0.06	0.47	0.12	0.36	-0.15	0.47	0.53	
Zn	0.65	0.60	0.60	0.65	0.04	0.61	0.44	0.22	0.25	0.03	0.53	0.57	0.04	0.56	0.52	0.36	0.12	0.28	0.66	0.55	0.26	-0.01	0.51	0.60	0.58

Tab. 15.14: Pavia: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.82**																								
Al	0.10	0.08																							
As	**0.83**	0.75	-0.04																						
Bi	0.05	-0.05	-0.12																						
Br	**0.81**	**0.94**	-0.04	0.74	0.69																				
Ca	0.28	0.38	0.59	0.33	0.15	0.34																			
Cd	-0.04	0.04	0.25	-0.58		-0.22	-0.14																		
Cl	**0.89**	0.72	0.09	0.76	-0.12	0.72	0.27	-0.09																	
Co	-0.28	-0.23	-0.23			0.09	-0.23		-0.33																
Cu	0.37	0.35	-0.09	0.45	**0.89**	0.36	0.24	-0.26	0.32	0.59															
Fe	0.67	0.70	0.52	0.60	0.00	0.60	0.71	0.01	0.61	-0.09	0.45														
Ga	-0.05	-0.10	-0.06	0.07		-0.01	-0.01	0.34	-0.04	0.73	0.69	0.07													
K	**0.85**	**0.88**	0.03	**0.83**	0.18	**0.85**	0.34	0.12	0.78	-0.14	0.29	0.63	-0.11												
Mg	0.53	0.43	0.61	0.44	-0.30	0.40	0.66	-0.06	0.58	-0.22	0.11	0.70	-0.24	0.42											
Mn	0.68	0.59	0.18	0.73	0.07	0.54	0.57	-0.18	0.73	-0.19	0.36	0.72	-0.04	0.66	0.55										
Na	0.48	0.33	0.31	0.44	0.10	0.36	0.38	-0.21	0.57	-0.30	0.13	0.50	-0.29	0.37	**0.88**	0.45									
Ni	0.08	0.08	-0.07	-0.16		0.10	-0.26	0.29	0.18		0.35	0.22	0.53	-0.01	0.04	-0.10	0.17								
P	0.76	0.79	0.19	0.72	-0.10	0.71	0.46	-0.19	0.71	-0.39	0.39	0.77	-0.17	0.79	0.53	0.73	0.44	0.09							
Pb	**0.82**	**0.88**	0.05	0.79	**0.83**	**0.92**	0.40	-0.27	0.75	0.39	0.52	0.67	0.15	**0.84**	0.42	0.65	0.34	0.10	0.79						
S	0.63	0.42	0.25	0.48	-0.03	0.34	0.12	-0.11	0.48	-0.39	0.15	0.43	-0.08	0.50	0.54	0.35	0.49	0.17	0.52	0.35					
Se	-0.11	-0.17	0.04	0.26	**0.85**	0.04	0.09	-0.31	-0.12		0.63	-0.01	0.73	-0.20	-0.09	-0.10	-0.08	0.10	-0.09	0.28	-0.07				
Si	0.01	0.02	**0.93**	-0.08	0.09	-0.10	0.70	0.27	0.02	0.11	0.00	0.51	0.04	-0.04	0.55	0.26	0.22	-0.24	0.20	0.04	0.10	0.17			
Ti	0.10	0.07	0.42	0.07	0.25	0.04	0.52	-0.08	0.09	-0.33	0.24	0.35	0.07	0.07	0.35	0.32	0.12	-0.11	0.28	0.12	0.25	0.13	0.52		
V	0.40	0.42	0.14	0.21	0.06	0.38	0.12	-0.14	0.26	0.26	0.06	0.33	0.01	0.47	0.34	0.11	0.29	0.15	0.31	0.31	0.58	-0.06	0.02	-0.08	
Zn	**0.83**	0.63	0.10	**0.86**	0.28	0.61	0.36	-0.50	**0.83**	-0.24	0.43	0.69	-0.03	0.75	0.52	**0.84**	0.50	-0.01	0.77	0.75	0.47	-0.03	0.07	0.11	0.21

Tab. 15.15: Paris: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.70																								
Al	0.37	0.27																							
As	0.69	0.65	0.30																						
Bi	-0.16	0.13	-0.26																						
Br	0.64	0.55	0.14	0.45	0.15																				
Ca	0.57	0.53	0.64	0.45	-0.12	0.38																			
Cd	-0.30	-0.37	-0.35	0.12	-0.54	0.03	-0.32																		
Cl	0.46	0.16	0.10	0.36	-0.42	0.75	0.21	0.61																	
Co	-0.33	-0.30	0.09		**0.88**	0.54	0.02	0.16	0.29																
Cu	0.38	0.48	0.09	0.36	0.41	0.41	0.32	-0.17	0.21	**0.80**															
Fe	0.78	0.79	0.59	0.67	0.00	0.50	**0.83**	-0.37	0.21	0.08	0.47														
Ga	-0.02	-0.30	0.11	0.40	0.06	0.19	0.09	0.43	0.31		0.28	-0.01													
K	**0.86**	0.69	0.45	0.58	-0.14	0.73	0.63	-0.34	0.56	-0.21	0.37	0.74	0.04												
Mg	-0.03	-0.26	0.16	-0.03	-0.37	0.21	0.08	0.51	0.62	0.10	-0.01	-0.09	0.49	0.03											
Mn	0.50	0.33	0.69	0.30	-0.18	0.42	0.69	-0.34	0.24	0.13	0.17	0.61	0.13	0.58	0.00										
Na	-0.13	-0.31	-0.07	-0.16	-0.15	0.19	-0.03	0.60	0.56	0.16	0.00	-0.21	0.58	-0.08	**0.94**	-0.16									
Ni	0.14	-0.21	0.34	-0.04	-0.38	0.17	0.16	**0.81**	0.34		0.15	0.08	0.79	0.18	0.51	0.12	0.53								
P	0.66	0.70	0.51	0.57	-0.25	0.49	0.59	-0.38	0.33	0.46	0.44	0.72	-0.03	0.69	-0.01	0.40	-0.13	0.11							
Pb	0.55	0.54	0.20	0.75	0.73	0.74	0.45	0.15	0.42	0.56	0.46	0.54	0.40	0.65	0.00	0.37	0.01	0.24	0.47						
S	0.78	0.44	0.40	0.54	-0.01	0.27	0.45	-0.32	0.10	-0.15	0.23	0.64	-0.03	0.53	-0.09	0.41	-0.20	0.17	0.44	0.27					
Se	-0.28	0.02	-0.38	0.06	**0.94**	0.18	-0.25	-0.05	-0.20	0.74	0.61	-0.19	0.43	-0.20	-0.17	-0.16	0.08	-0.05	-0.12	0.53	-0.30				
Si	0.24	0.21	**0.96**	0.30	-0.18	0.04	0.61	-0.36	0.00	0.05	0.07	0.53	0.13	0.32	0.16	0.58	-0.04	0.30	0.42	0.17	0.29	-0.30			
Ti	0.54	0.45	**0.84**	0.51	-0.19	0.22	**0.80**	-0.53	0.07	0.09	0.26	0.77	0.02	0.59	0.07	0.62	-0.11	0.21	0.61	0.30	0.53	-0.35	**0.83**		
V	0.26	0.15	-0.03	0.26	-0.45	-0.10	-0.09	0.31	0.03	-0.20	0.16	0.15	-0.28	0.11	-0.15	-0.05	-0.15	0.18	0.19	0.07	0.43	-0.41	-0.06	0.02	
Zn	0.56	0.51	0.47	0.61	0.23	0.48	0.51	-0.21	0.22	0.14	0.21	0.63	0.10	0.63	-0.21	0.63	-0.23	0.06	0.48	0.65	0.42	0.03	0.40	0.47	0.18

Tab. 15.16: Reykjavik: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	-0.03																								
Al	0.29	-0.08																							
As	-0.17	0.05	-0.16																						
Bi																									
Br	0.12	-0.04	-0.18																						
Ca	0.24	0.06	0.66			-0.04																			
Cd	0.16	-0.61	0.37																						
Cl	0.69	-0.26	0.04	-0.14		0.17	0.17	0.23																	
Co	-0.31	-0.05	-0.22			**0.98**	-0.27	0.65	-0.11																
Cu	-0.21	0.08	-0.10	-0.33		0.73	-0.34	0.31	-0.19	**0.94**															
Fe	0.13	0.12	0.77	-0.33		-0.30	0.44	-0.57	-0.03	-0.22	0.04														
Ga	-0.32	-0.07	-0.33			0.75	-0.34		-0.21	**0.90**	**0.86**	0.06													
K	0.64	-0.07	-0.01	0.16		0.06	0.04	-0.12	0.39	-0.30	-0.07	0.09	0.02												
Mg	0.76	-0.23	0.16	-0.21		0.19	0.32	0.53	**0.96**	-0.14	-0.16	0.05	-0.23	0.41											
Mn	0.37	0.23	**0.81**			-0.15	0.70	-0.18	-0.07	-0.22	-0.08	0.61	-0.41	0.10	0.14										
Na	0.70	-0.21	0.06	-0.13		0.16	0.14	0.14	**0.98**	-0.15	-0.18	0.02	-0.20	0.44	**0.96**	-0.08									
Ni	0.10	-0.02	-0.04			-0.20	-0.18		0.27	-0.22	0.15	0.51	0.36	0.31	-0.09	-0.30	0.36								
P																									
Pb	-0.27	-0.06	-0.21			**0.94**	-0.51		-0.16	**0.99**	**0.94**	-0.24	**0.89**	-0.21	-0.37	-0.17	-0.11	-0.16							
S	0.45	0.16	-0.07	0.20		0.42	-0.13	-0.04	0.13	0.10	0.04	-0.09	0.23	0.56	0.16	-0.14	0.25	0.01		0.40					
Se	-0.16	-0.19	-0.11			**0.96**			0.21	**0.97**	**0.88**	-0.54		-0.39	0.15	-0.09	0.01			**0.96**	0.20				
Si	0.20	-0.01	**0.96**	-0.25		-0.19	0.56	0.32	-0.09	-0.30	-0.03	0.77	-0.40	-0.06	-0.01	0.77	-0.07	0.15		-0.19	-0.06	-0.09			
Ti	0.43	0.04	**0.90**	-0.21		-0.09	0.75	-0.09	0.19	-0.18	0.08	**0.80**	-0.39	0.20	0.41	**0.86**	0.17	0.04		-0.09	-0.08	-0.11	**0.90**		
V																									
Zn	-0.25	0.26	-0.25	-0.51		0.13	-0.43	-0.38	-0.15	0.31	0.40	0.29	0.44	-0.08	-0.18	-0.26	-0.13	0.50		0.28	-0.01	0.16	-0.11	-0.05	

Tab. 15.17: Tartu: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.86**																								
Al	0.18	0.02																							
As	0.64	0.58	0.30																						
Bi	0.10	0.14	0.07																						
Br	0.23	0.31	-0.05	0.52	0.47																				
Ca	-0.03	-0.13	**0.89**	0.19	-0.02	-0.14																			
Cd	-0.25	-0.32	0.16		0.70	-0.08	0.45																		
Cl	0.65	0.72	-0.12	0.46	-0.01	0.19	-0.24	-0.25																	
Co	-0.12	0.02	-0.16		**0.86**	0.66	-0.22	0.66	-0.02																
Cu	-0.04	0.02	0.16	0.37	0.74	0.34	0.14	0.37	-0.07	0.72															
Fe	0.26	0.05	**0.95**	0.29	0.64	-0.02	**0.87**	0.38	-0.07	0.06	0.37														
Ga	-0.08	-0.02	-0.05	0.29		0.49	0.01		-0.13	0.44	0.65	0.14													
K	**0.81**	**0.83**	0.31	0.53	-0.04	0.33	0.18	-0.10	0.58	0.03	0.09	0.33	-0.12												
Mg	0.24	0.06	**0.87**	0.30	-0.07	-0.11	**0.86**	0.11	0.09	-0.29	0.12	**0.86**	-0.15	0.33											
Mn	0.56	0.41	0.59	0.42	0.15	0.20	0.46	0.07	0.29	0.00	0.17	0.62	-0.11	0.61	0.48										
Na	0.15	0.11	-0.02	0.12	0.16	0.21	0.01	0.01	0.45	0.23	0.06	0.03	0.11	0.07	0.35	-0.01									
Ni	-0.21	-0.21	0.50	-0.30		-0.07	**0.82**		-0.23	0.32	0.47	0.60	0.35	-0.15	0.57	0.01	0.31								
P	0.14	0.10	0.39	0.42	0.05	0.03	0.29	0.13	-0.02	-0.16	0.43	**0.82**	0.23	0.26	0.24	0.38	-0.10	-0.16							
Pb	0.38	0.41	0.31	0.69	**0.90**	0.73	0.08	-0.16	0.25	0.72	0.56	0.44	0.53	0.38	0.17	0.48	0.15	0.09	0.29						
S	0.78	0.45	0.04	0.29	0.16	0.14	-0.18	-0.21	0.29	-0.07	-0.04	0.16	0.07	0.46	0.07	0.33	0.10	-0.27	0.09	0.24					
Se	-0.26	-0.21	0.11		**0.97**	0.38	0.10	0.78	-0.28	**0.84**	0.76	0.62	0.47	-0.36	-0.14	-0.01	0.00	0.24	0.03	0.76	-0.17				
Si	0.14	0.00	**1.00**	0.29	0.08	-0.05	**0.91**	0.16	-0.14	-0.17	0.23	**0.94**	-0.03	0.28	**0.86**	0.59	-0.04	0.57	0.40	0.33	0.00	0.16			
Ti	0.16	0.01	**0.99**	0.33	0.09	-0.07	**0.89**	0.33	-0.12	-0.10	0.19	**0.94**	0.00	0.33	**0.89**	0.56	-0.01	0.52	0.43	0.33	0.00	0.19	**1.00**		
V	0.18	0.10	-0.03	0.48		0.15	-0.33	0.45	0.24	0.18	0.08	0.00	-0.15	0.11	0.15	-0.01	0.27	-0.29	0.23	0.15	0.19	0.03	-0.18	-0.12	
Zn	0.77	**0.86**	0.08	0.58	0.37	0.31	-0.04	-0.09	0.75	0.14	0.23	0.16	0.10	**0.81**	0.13	0.48	0.20	0.03	0.22	0.43	0.42	-0.06	0.06	0.08	0.03

Tab. 15.18: Turin: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.81**																								
Al	0.42	0.57																							
As	0.75	0.79	0.43																						
Bi	-0.41	-0.24	0.14																						
Br	**0.83**	**0.95**	0.47	0.76	-0.20																				
Ca	0.40	0.58	**0.84**	0.50	-0.03	0.46																			
Cd	0.55	0.04	0.36	0.05		0.47	0.20																		
Cl	**0.91**	0.72	0.32	0.70	-0.39	0.78	0.32	0.76																	
Co	-0.37	-0.13	0.05	0.14		-0.14	-0.10	0.28	-0.36																
Cu	0.53	0.69	0.62	0.60	0.36	0.63	0.69	0.15	0.43	-0.06															
Fe	0.74	**0.90**	0.75	0.70	-0.22	**0.86**	0.78	0.15	0.65	-0.19	0.79														
Ga	0.05	-0.04	0.19	0.15	0.53	0.06	0.05		0.12	0.08	0.16	0.06													
K	**0.90**	**0.84**	0.50	0.76	-0.34	**0.89**	0.52	0.13	**0.90**	-0.30	0.58	**0.84**	0.11												
Mg	0.63	0.65	**0.81**	0.54	-0.23	0.57	**0.85**	0.06	0.52	-0.37	0.75	**0.81**	0.12	0.66											
Mn	0.74	**0.83**	0.55	0.65	-0.42	**0.81**	0.51	0.33	0.62	-0.23	0.61	**0.85**	0.22	0.75	0.63										
Na	0.79	0.72	0.51	0.55	-0.48	0.72	0.50	0.01	**0.80**	-0.42	0.51	0.74	0.15	**0.81**	0.73	0.70									
Ni	-0.26	-0.30	-0.11	-0.14	0.15	-0.18	-0.36		-0.24	0.19	-0.15	-0.21	0.47	-0.22	-0.30	0.03	-0.43								
P	**0.85**	**0.92**	0.65	0.75	-0.24	**0.90**	0.63	0.00	0.76	-0.08	0.71	**0.92**	0.00	**0.88**	0.73	**0.85**	0.75	-0.27							
Pb	0.78	**0.93**	0.51	**0.80**	0.05	**0.96**	0.53	0.41	0.73	0.09	0.71	**0.85**	0.21	**0.86**	0.59	0.79	0.67	-0.12	**0.87**						
S	0.62	0.37	0.36	0.34	-0.34	0.38	0.18	0.29	0.43	-0.45	0.31	0.37	0.25	0.48	0.53	0.48	0.53	0.08	0.49	0.36					
Se	-0.17	-0.12	0.01	0.32	**0.96**	-0.04	-0.16		-0.20	0.78	0.10	-0.17	0.43	-0.20	-0.19	-0.14	-0.30	0.03	-0.15	0.13	-0.03				
Si	0.32	0.47	**0.96**	0.36	0.23	0.36	**0.87**	0.33	0.22	0.08	0.61	0.71	0.14	0.42	**0.81**	0.49	0.43	-0.13	0.56	0.42	0.28	0.03			
Ti	0.52	0.68	**0.92**	0.49	0.32	0.62	**0.82**	0.51	0.43	0.13	0.66	**0.85**	0.11	0.63	**0.80**	0.65	0.58	-0.19	0.76	0.64	0.36	0.12	**0.90**		
V	**0.83**	0.64	0.42	0.53	-0.49	0.63	0.43	0.62	0.75	-0.30	0.34	0.63	0.07	0.74	0.58	0.67	0.77	-0.25	0.75	0.56	0.64	-0.23	0.35	0.50	
Zn	0.79	**0.85**	0.56	0.66	-0.33	**0.85**	0.52	0.39	0.71	-0.34	0.60	**0.87**	0.21	**0.84**	0.63	**0.91**	0.78	-0.08	**0.84**	**0.84**	0.45	-0.14	0.48	0.67	0.69

Tab. 15.19: Umea: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.50																								
Al	0.08	0.08																							
As	0.08	0.14	-0.28																						
Bi	-0.45	-0.35	0.04																						
Br	0.22	-0.10	0.33	-0.22	**0.84**																				
Ca																									
Cd	0.46	0.28	-0.27		-0.50	**-0.84**																			
Cl	-0.08	-0.08	0.06	-0.46	-0.21	0.14		-0.02																	
Co	-0.26	-0.49	-0.18		**0.84**	0.48			**0.84**																
Cu	-0.03	-0.11	0.13	0.22		0.72			-0.08	**0.93**															
Fe	0.06	0.39	0.61	0.02	0.29	0.20		-0.19	0.00	0.38	0.33														
Ga	-0.11	-0.27	-0.02	0.54		0.76			-0.34	**0.98**	**0.94**	0.31													
K	0.70	0.45	0.14	0.12	-0.32	0.22		-0.14	-0.24	-0.29	-0.12	0.23	-0.03												
Mg	0.30	0.07	0.19	-0.54	-0.74	0.09		0.17	0.78	**-0.88**	-0.21	-0.09	-0.39	0.08											
Mn	0.42	0.45	0.23	-0.14	0.43	0.23		-0.11	-0.04	0.63	0.34	0.57	0.36	0.40	-0.22										
Na	0.28	-0.05	0.18	-0.46	-0.19	0.20		0.28	0.77	-0.30	-0.01	0.03	-0.18	0.04	**0.93**	0.09									
Ni	-0.39	-0.36	-0.29			0.41			-0.33		0.75	-0.03	**0.85**	-0.39	-0.46	0.08	0.09								
P	0.23	0.74	0.35	-0.02		-0.30			-0.37		0.19	0.75	0.53	0.66	-0.70	0.77	-0.36								
Pb	-0.07	-0.17	0.25		**0.95**	**0.84**		-0.67	-0.26	**0.86**	**0.92**	0.37	**0.95**	0.08	-0.31	0.39	-0.07	0.64	0.24						
S	**0.87**	0.20	0.01	0.21	-0.14	0.34		0.33	-0.16	-0.15	0.11	0.03	0.13	0.69	0.14	0.43	0.26	-0.09	0.36	0.09					
Se	-0.05	-0.10	0.28		**0.90**	**0.83**			0.72			0.56		-0.22		0.41	-0.08			**0.90**	0.01				
Si	-0.10	0.06	**0.90**	-0.37	0.04	0.29		-0.25	0.00	-0.17	0.07	0.58	-0.14	0.10	0.07	0.14	0.06	-0.40	0.20	0.22	-0.16	0.25			
Ti	-0.10	0.00	0.75		-0.04	0.24		-0.30	-0.04	-0.24	0.05	0.43	-0.28	0.11	0.08	-0.07	0.04	-0.52	0.24	0.13	-0.12	0.25	0.78		
V	0.49	**0.80**	0.62			0.36			-0.20		0.60	0.72	0.57	0.69	-0.14	0.79	0.15		0.79	0.50	0.48		0.52	0.45	
Zn	0.57	0.49	-0.01	0.26	0.59	0.41		-0.38	-0.23	0.42	0.51	0.47	0.44	0.69	-0.21	0.65	-0.04	0.31	0.73	0.46	0.61	0.42	-0.05	-0.03	0.73

Tab. 15.20: Uppsala: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.61																								
Al	0.16	0.10																							
As	0.49	0.60	0.14																						
Bi																									
Br	0.39	0.37	0.18	0.19																					
Ca	0.20	0.30	0.04			-0.17																			
Cd	-0.38	-0.21	0.28			0.39																			
Cl	0.03	-0.20	-0.04	0.36		-0.02	-0.06	-0.36																	
Co	0.02	0.07	0.36			**0.96**			-0.34																
Cu	0.09	0.31	0.13	0.17		0.70	0.45	0.60	-0.13	**0.97**															
Fe	0.10	0.56	0.40	0.23		0.07	0.40	-0.32	-0.14	-0.07	0.35														
Ga	0.21	0.20	0.21	0.40		0.74	0.52		-0.28	**0.91**	**0.84**	0.08													
K	0.56	0.55	0.32	0.36		0.41	0.03	-0.03	-0.07	0.17	0.27	0.31	0.31												
Mg	0.04	-0.23	0.17	0.21		-0.11	-0.14	-0.36	**0.88**	-0.51	-0.19	-0.13	-0.30	-0.05											
Mn	0.50	0.69	0.45	0.47		0.43	0.35	0.00	0.12	0.17	0.38	0.59	0.24	0.74	0.20										
Na	0.12	-0.16	0.18	0.33		0.09	-0.08	-0.32	**0.89**	0.21	-0.07	-0.19	-0.17	0.08	**0.97**	0.19									
Ni	0.07	0.13	0.02			-0.01			0.09		0.16	0.34	0.11	-0.02	-0.41	0.32	-0.36								
P	0.55	0.68	0.20	0.20		0.26	0.55	0.19	-0.12	-0.37	0.10	0.63	-0.08	0.41	-0.17	0.50	-0.18	-0.45							
Pb	0.11	0.18	0.09	0.64		**0.83**	0.11	0.59	-0.10	**0.98**	**0.80**	0.00	0.79	0.32	-0.21	0.28	-0.02	-0.20	-0.02						
S	**0.83**	0.42	0.18	0.24		0.39	0.12	-0.34	-0.09	0.24	0.07	-0.06	0.18	0.43	-0.04	0.30	0.08	-0.09	0.29	0.15					
Se	0.29	0.35	0.06			**0.97**			-0.23		**0.96**	-0.27	**0.93**			0.34	0.61			**0.99**	0.38				
Si	-0.02	0.07	**0.94**	-0.04		0.11	-0.01	0.28	-0.15	0.36	0.17	0.48	0.21	0.31	0.05	0.43	0.04	-0.10	0.19	0.13	-0.01	0.11			
Ti	0.05	0.18	**0.89**	0.15		0.09	0.11	0.20	-0.16	0.31	0.21	0.62	0.19	0.26	0.01	0.47	-0.02	0.03	0.33	0.08	0.07	0.00	**0.90**		
V	0.44	0.04	0.27	-0.02		0.24	-0.41	-0.78	0.06	0.30	-0.11	-0.24	-0.01	0.16	0.30	-0.01	0.38	-0.54	-0.12	0.10	0.64		0.16	0.06	
Zn	0.52	0.65	0.15	0.51		0.65	0.46	0.08	-0.05	**0.85**	0.54	0.56	0.53	0.54	-0.17	0.60	-0.07	0.28	0.58	0.41	0.37	**0.87**	0.07	0.21	0.11

Tab. 15.21: Verona: Weekday within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.83**																								
Al	0.42	0.38																							
As	**0.81**	**0.92**	0.24																						
Bi																									
Br	**0.83**	**0.85**	0.47	0.76																					
Ca	0.59	0.68	0.54	0.70		0.48																			
Cd	0.57	0.78	0.62			0.78	0.57																		
Cl	0.76	0.70	0.24	**0.82**		0.64	0.52	**0.98**																	
Co																									
Cu	0.77	**0.84**	0.36	0.79		**0.86**	0.61	0.10	0.58																
Fe	**0.81**	**0.88**	0.55	0.78		**0.91**	0.70	0.61	0.59		**0.92**														
Ga	0.21	0.22	0.08	-0.02		0.45	-0.05		0.09		0.52	0.48													
K	**0.90**	0.78	0.40	0.79		0.68	0.66	0.60	**0.87**		0.69	0.72	0.21												
Mg	0.43	0.29	**0.83**	0.31		0.30	0.59		0.33		0.25	0.40	-0.08	0.49											
Mn	0.56	0.57	0.07	0.72		0.47	0.49	0.43	0.70		0.60	0.55	-0.02	0.63	0.12										
Na	0.31	0.19	0.64	0.17		0.17	0.40	0.00	0.39		0.19	0.24	-0.06	0.45	**0.89**	0.20									
Ni																									
P	**0.88**	**0.89**	0.42	**0.87**		0.79	0.68	0.61	0.79		**0.84**	**0.85**	0.27	**0.90**	0.38	0.66	0.32								
Pb	**0.84**	**0.88**	0.34	**0.81**		**0.93**	0.56	0.20	0.65		**0.97**	**0.93**	0.53	0.73	0.23	0.57	0.17		**0.85**						
S	0.68	0.44	0.37	0.35		0.37	0.40	0.38	0.22		0.46	0.47	0.04	0.54	0.42	0.31	0.28		0.50	0.46					
Se	-0.19	-0.11	-0.23	-0.36		-0.08	-0.24		-0.27		0.20	-0.11	0.08	-0.17	-0.27	-0.23	0.12		-0.18	0.12	-0.06				
Si	0.38	0.39	0.40	0.43		0.35	0.31	0.59	0.45		0.31	0.41	0.01	0.50	0.42	0.40	0.42		0.53	0.31	0.08	-0.16			
Ti	0.60	0.65	**0.91**	0.53		0.69	0.70	0.76	0.42		0.62	0.79	0.23	0.58	0.71	0.26	0.48		0.66	0.60	0.36	-0.22	0.54		
V	0.23	0.09	0.20	-0.26		0.06	0.04		-0.39		0.13	0.12	0.03	-0.02	0.17	-0.27	0.10		0.06	0.10	0.78	0.04	-0.13	0.10	
Zn	0.57	0.59	0.00	0.70		0.45	0.57	-0.25	0.68		0.74	0.57	0.15	0.65	0.09	**0.81**	0.22		0.70	0.68	0.31	0.21	0.22	0.22	-0.20

Tab. 16.1: Antwerp City: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.89**																								
Al	0.35	0.61																							
As	**0.98**	**0.95**	0.42																						
Bi																									
Br	**0.94**	**0.90**	0.30	**0.98**																					
Ca	0.31	0.59	**0.90**	0.42		0.36																			
Cd																									
Cl	**0.99**	**0.89**	0.32	**0.99**		**0.95**	0.31																		
Co	-0.13	0.49	-0.35			**0.98**	0.29		-0.13																
Cu	0.34	0.65	0.42	0.73		0.56	0.56		0.35	**0.85**															
Fe	0.53	**0.82**	**0.88**	0.64		0.54	**0.81**		0.52	-0.13	0.59														
Ga																									
K	**0.93**	**0.96**	0.64	**0.97**		**0.89**	0.57		**0.92**	-0.12	0.49	0.76													
Mg	0.44	0.56	0.51	0.49		0.46	0.68		0.46	-0.19	0.29	0.58		0.53											
Mn	**0.81**	**0.87**	0.69	**0.87**		**0.81**	0.72		0.79	-0.09	0.47	**0.80**		**0.91**	0.73										
Na	0.47	0.51	0.25	0.52		0.53	0.50		0.52	0.04	0.24	0.41		0.47	**0.93**	0.67									
Ni																									
P	0.73	**0.83**	0.60	0.79		0.79	0.60		0.73	0.18	0.58	0.75		**0.82**	0.28	0.76	0.23								
Pb	**0.87**	**0.89**	0.27	**0.98**		**0.97**	0.35		**0.89**	**0.92**	0.68	0.53		**0.85**	0.45	0.76	0.54		0.70						
S	**0.90**	0.74	0.21	**0.84**		**0.84**	0.22		**0.85**	0.06	0.33	0.37		0.79	0.47	0.75	0.47		0.56	**0.81**					
Se	**0.95**	**0.92**	0.32	**0.98**		**0.99**	0.37		**0.96**	0.69	0.54	0.56		**0.90**	0.55	**0.82**	0.60		0.73	**0.96**	**0.88**				
Si	0.06	0.37	**0.95**	0.12		0.01	**0.87**		0.03	-0.24	0.33	0.76		0.38	0.41	0.48	0.14		0.42	0.00	-0.04	0.03			
Ti	0.55	0.76	**0.92**	0.66		0.54	**0.82**		0.55	-0.47	0.44	**0.87**		**0.80**	0.57	**0.80**	0.37		0.70	0.49	0.39	0.56	0.76		
V	0.61	0.47	-0.03	0.66		0.76	0.12		0.65	0.26	0.25	0.14		0.53	0.18	0.56	0.37		0.59	0.69	0.55	0.67	-0.25	0.24	
Zn	**0.84**	**0.99**	0.58	**0.93**		**0.89**	0.58		**0.84**	0.53	0.72	**0.83**		**0.92**	0.56	**0.87**	0.52		**0.81**	**0.91**	0.72	**0.90**	0.34	0.72	0.48

Tab. 16.2: Albacete: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.75																								
Al	0.14	-0.20																							
As																									
Bi																									
Br	0.68	0.63	0.14																						
Ca	-0.03	-0.05	**0.83**			0.18																			
Cd																									
Cl	0.56	0.75	-0.37			0.38	-0.17																		
Co	-0.32	-0.64	-0.37			0.03	-0.36		-0.30																
Cu	-0.21	0.24	-0.48			0.14	-0.22		0.37																
Fe	0.29	-0.05	**0.98**			0.21	**0.83**		-0.26	-0.39	-0.52														
Ga																									
K	0.68	**0.92**	-0.11			0.70	0.02		0.56	-0.55	0.19	0.00													
Mg	-0.08	-0.25	**0.89**			0.12	**0.89**		-0.41	-0.38	-0.41	**0.89**		-0.14											
Mn	0.30	-0.07	**0.94**			0.24	0.79		-0.23	-0.30	-0.54	**0.97**		0.06	**0.82**										
Na	-0.23	-0.33	-0.06			-0.07	0.02		-0.15	0.43	-0.54	-0.04		-0.32	0.25	-0.02									
Ni																									
P	0.46	0.59	0.45			0.58	0.52		0.08	**-0.87**	-0.04	0.52		0.65	0.47	0.47	-0.34								
Pb	0.30	0.55	-0.30			0.77	-0.11		0.47	0.10	0.72	-0.26		0.62	-0.26	-0.23	-0.19		0.28						
S	0.54	0.09	0.39			0.31	0.10		0.01	-0.09	-0.47	0.42		-0.09	0.24	0.30	0.10		0.22	-0.19					
Se																									
Si	0.10	-0.25	**0.99**			0.10	**0.82**		-0.42	-0.41	-0.45	**0.98**		-0.15	**0.89**	**0.93**	-0.07		0.46	-0.32	0.36				
Ti	0.22	-0.17	**0.99**			0.10	0.77		-0.34	-0.43	-0.50	**0.97**		-0.10	**0.84**	**0.94**	-0.08		0.44	-0.35	0.42		**0.98**		
V	0.67	0.07	0.57			0.26	0.18		-0.07	-0.06	-0.57	0.56		0.02	0.19	0.56	-0.44		0.23	-0.27	**0.81**		0.55	0.64	
Zn	0.67	0.42	0.21			0.27	0.11		0.54	-0.45	-0.35	0.52		0.34	0.06	0.45	-0.09		0.26	-0.06	0.25		0.19	0.28	0.42

Tab. 16.3: Antwerp South: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.69																								
Al	0.00	0.15																							
As	0.62	0.53	-0.53																						
Bi																									
Br	0.57	**0.83**	0.24	0.29																					
Ca	0.20	0.31	**0.94**			0.54																			
Cd	-0.03	0.54	0.13			0.77																			
Cl	0.58	0.63	-0.13	0.26		0.72	-0.02	0.33																	
Co																									
Cu	0.43	0.11	0.28	-0.50		0.34			0.39																
Fe	-0.11	0.29	**0.88**	-0.44		0.38	**0.90**	0.41	-0.14		0.20														
Ga																									
K	0.53	**0.83**	0.46	0.21		0.74	0.46	0.25	0.58		0.23	0.53													
Mg	-0.34	-0.46	0.40	**-0.84**		-0.26	0.18	-0.03	-0.14		0.01	0.29		0.03											
Mn	-0.07	0.25	0.55	0.01		0.37	0.66	0.24	0.01		-0.08	0.68		0.63	0.49										
Na	-0.53	-0.57	-0.08	-0.48		-0.30	-0.42	-0.30	0.03		0.17	-0.05		-0.16	0.75	0.27									
Ni																									
P	0.34	0.60	0.13	0.28		0.60	0.37	**0.85**	0.35		-0.15	0.32		0.42	-0.15	0.10	-0.36								
Pb	0.39	0.75	0.56	0.02		0.76	0.65	0.13	0.51		0.31	0.56		**0.83**	-0.19	0.49	-0.30		0.20						
S	0.45	0.08	0.05	0.33		-0.18	-0.03	-0.34	-0.39		0.13	0.01		-0.01	-0.21	-0.14	-0.50		0.14	-0.23					
Se	0.25	0.43	0.68	-0.10		0.29	0.71	0.24	-0.15		0.23	0.62		0.37	-0.30	0.09	-0.68		0.40	0.51	0.44				
Si	-0.15	0.10	**0.97**	-0.53		0.21	**0.96**	0.22	-0.20		0.12	**0.90**		0.42	0.47	0.65	0.00		0.12	0.52	-0.05	0.59			
Ti	0.06	0.31	**0.96**	-0.37		0.39	**0.95**	0.38	-0.06		0.11	**0.89**		0.55	0.35	0.63	-0.17		0.35	0.60	0.04	0.70	**0.96**		
V	0.45	0.40	-0.23	0.61		-0.06	-0.45	-0.04	0.12		-0.52	-0.23		0.35	-0.06	0.03	-0.27		0.22	-0.06	0.41	-0.04	-0.25	-0.13	
Zn	0.11	0.56	0.68	-0.06		0.56	0.77	0.03	0.22		0.26	0.76		**0.80**	0.07	0.72	-0.07		0.09	**0.88**	-0.17	0.49	0.69	0.69	-0.08

Tab. 16.4: Barcelona: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.79																								
Al	0.61	0.63																							
As	0.74	0.78	**0.94**																						
Bi																									
Br	0.67	0.69	0.09	0.33																					
Ca	0.45	0.38	0.54	0.50		0.35																			
Cd																									
Cl	0.67	0.42	0.50	0.64		0.52	0.21																		
Co																									
Cu	0.63	0.76	**0.88**	**0.90**		0.18	0.38		0.45																
Fe	**0.81**	**0.88**	0.62	0.75		0.78	0.68		0.52		0.66														
Ga	0.52	0.72	**0.92**	**0.90**		0.06	0.30		0.63		**0.91**	0.63													
K	0.59	0.64	**0.99**	**0.96**		0.09	0.46		0.52		**0.88**	0.59	**0.94**												
Mg	0.55	0.51	**0.98**	**0.91**		0.02	0.47		0.58		**0.83**	0.52	**0.92**	**0.98**											
Mn	0.74	**0.91**	0.64	**0.80**		0.67	0.39		0.51		0.64	**0.83**	**0.81**	0.68	0.55										
Na	0.13	-0.14	0.53	0.38		-0.23	0.20		0.59		0.30	0.01	0.78	0.50	0.67	-0.07									
Ni																									
P	0.69	0.70	**0.94**	**0.93**		0.25	0.68		0.49		**0.88**	0.77	**0.90**	**0.92**	**0.89**	0.71	0.38								
Pb	0.71	**0.81**	**0.95**	**0.98**		0.37	0.54		0.59		**0.88**	0.78	**0.93**	**0.95**	**0.91**	**0.82**	0.38		**0.92**						
S	0.78	0.57	0.78	0.70		0.22	0.47		0.43		0.68	0.62	0.78	0.73	0.75	0.49	0.41		0.78	0.72					
Se	0.41	0.55	0.27	0.28		0.56	0.53		0.42		0.33	0.56	0.54	0.22	0.25	0.40	0.36		0.28	0.41	0.36				
Si	0.55	0.52	**0.86**	0.72		0.04	0.70		0.21		0.75	0.59	0.79	0.79	**0.80**	0.43	0.42		**0.86**	0.77	**0.86**	0.48			
Ti	0.56	0.63	**0.98**	**0.94**		0.07	0.44		0.49		**0.87**	0.58	**0.95**	**0.99**	**0.97**	0.67	0.49		**0.90**	**0.94**	0.71	0.21	0.78		
V	0.73	0.53	0.73	0.35		0.47	0.37		0.03		0.38	0.62	0.01	0.05	-0.08	0.26	-0.28		0.62	0.40	**0.87**	0.41	0.67	-0.17	
Zn	0.71	**0.82**	**0.92**	**0.96**		0.34	0.47		0.54		**0.87**	0.74	**0.90**	**0.94**	**0.87**	**0.82**	0.31		**0.88**	**0.98**	0.70	0.30	0.72	**0.93**	0.30

Tab. 16.5: Basel: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.90**																								
Al	-0.09	0.09																							
As	0.45	0.30	0.18																						
Bi																									
Br	0.71	0.67	-0.09	0.56																					
Ca	-0.18	0.00	0.72	-0.52		-0.64																			
Cd																									
Cl	0.57	0.40	0.16	0.72		0.66	-0.36																		
Co																									
Cu	-0.13	-0.02	-0.30	0.18		0.26	-0.55		-0.14																
Fe	0.42	0.71	0.42	-0.21		0.25	0.54		-0.20		-0.04														
Ga																									
K	0.79	**0.87**	0.22	0.65		0.64	0.01		0.65		-0.17	0.49													
Mg	-0.34	-0.31	0.70	-0.03		-0.32	0.61		0.12		-0.62	-0.03		-0.01											
Mn	0.62	0.66	0.31	0.57		0.34	0.05		0.38		-0.32	0.50		0.56	-0.01										
Na	-0.45	-0.43	0.46	0.19		-0.22	0.16		0.38		-0.33	-0.44		-0.04	0.73	-0.10									
Ni																									
P	0.62	0.68	0.04	-0.68		0.41	0.02		0.15		-0.23	0.59		0.41	-0.12	0.79	-0.33								
Pb	0.05	0.14	-0.24	0.40		0.41	-0.68		0.09		**0.90**	-0.02		0.02	-0.57	0.01	-0.22		0.02						
S	0.52	0.63	-0.04	-0.65		0.22	0.10		-0.12		-0.10	0.66		0.34	-0.20	0.72	-0.51		**0.88**	0.13					
Se	-0.68	-0.60	-0.47			0.27			-0.42		**0.97**	-0.43		-0.61	-0.51	**-0.90**	0.01		-0.69	**0.99**	**-0.86**				
Si	0.04	0.21	0.59	-0.58		-0.10	**0.86**		-0.26		-0.20	0.62		0.10	0.47	0.05	-0.12		0.25	-0.25	0.32	-0.47			
Ti	0.12	0.32	0.60	-0.15		-0.06	0.69		-0.13		-0.39	0.68		0.36	0.58	0.30	-0.01		0.30	-0.37	0.45	-0.56	0.76		
V	0.66	0.34	-0.54	0.53		0.61	-0.75		0.62		0.06	-0.42		0.27	-0.54	0.40	-0.22		0.25	0.27	0.06	-0.05	-0.67	-0.68	
Zn	0.77	0.71	0.02	-0.14		0.62	-0.21		0.63		-0.07	0.27		0.62	-0.12	0.66	-0.09		0.78	0.23	0.58	-0.48	0.10	0.08	0.53

Tab. 16.6: Erfurt: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.97**																								
Al	0.58	0.53																							
As	**0.95**	**0.99**	0.72																						
Bi																									
Br	0.68	0.66	0.53	0.75																					
Ca	0.77	**0.82**	0.73	**0.88**		0.64																			
Cd																									
Cl	**0.86**	**0.80**	0.35	0.77		0.64	0.48																		
Co																									
Cu	0.79	**0.87**	0.59	**0.93**		0.53	**0.92**		0.47																
Fe	**0.81**	**0.90**	0.64	**0.94**		0.59	**0.93**		0.55		**0.94**														
Ga	0.70	0.79	0.73			0.53			0.45		**0.88**	**0.84**													
K	**0.94**	**0.96**	0.59	**0.95**		0.59	**0.82**		0.77		**0.81**	**0.90**	**0.82**												
Mg	0.61	0.55	0.53	0.51		0.58	0.45		0.73		0.31	0.40	0.48	0.63											
Mn	**0.92**	**0.96**	0.62	**0.95**		0.72	**0.90**		0.66		**0.90**	**0.94**	0.77	**0.94**	0.50										
Na	0.71	0.67	0.23	0.62		0.64	0.39		**0.88**		0.42	0.42	0.50	0.66	**0.86**	0.56									
Ni																									
P	**0.97**	**0.95**	0.53	**0.92**		0.66	0.79		**0.80**		0.73	**0.80**	0.62	**0.94**	0.62	**0.94**	0.68								
Pb	**0.93**	**0.96**	0.60	**0.98**		0.77	**0.87**		0.79		**0.88**	**0.91**	0.79	**0.93**	0.60	**0.95**	0.70		**0.89**						
S	0.72	0.64	**0.86**	0.66		0.43	0.70		0.46		0.61	0.60	0.64	0.69	0.59	0.69	0.37		0.73	0.61					
Se	-0.14	-0.14	0.22			0.43			-0.25		0.20	-0.03		-0.24	-0.05	0.01	-0.03		-0.16	-0.03	0.15				
Si	0.41	0.44	**0.92**	0.63		0.42	0.75		0.13		0.58	0.68	0.72	0.52	0.37	0.57	0.04		0.39	0.51	0.70	0.25			
Ti	0.62	0.63	**0.93**	0.77		0.55	**0.84**		0.35		0.71	**0.80**	**0.82**	0.71	0.48	0.74	0.25		0.60	0.68	0.79	0.21	**0.96**		
V	0.15	0.01	0.35	-0.02		0.42	-0.18		0.37		-0.23	-0.12		0.01	0.58	0.01	0.34		0.17	0.05	0.36		0.20	0.22	
Zn	**0.94**	**0.98**	0.46	**0.98**		0.67	**0.81**		**0.82**		**0.84**	**0.89**	**0.80**	**0.95**	0.57	**0.94**	0.72		**0.91**	**0.98**	0.53	-0.18	0.39	0.59	-0.03

Tab. 16.7: Galdakao: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.61																								
Al	0.36	0.29																							
As	0.41	0.41	0.08																						
Bi																									
Br	0.43	0.23	-0.46	-0.16																					
Ca	0.10	0.22	0.78	-0.15		-0.33																			
Cd																									
Cl	-0.53	-0.54	-0.43	-0.18		0.06	-0.53																		
Co																									
Cu	0.14	-0.13	-0.26	0.54		0.15	-0.25		0.25																
Fe	0.05	-0.12	0.10	0.44		-0.08	0.15		0.22		**0.89**														
Ga																									
K	**0.97**	0.50	0.31	0.22		0.53	0.07		-0.46		0.10	0.01													
Mg	0.28	-0.35	0.54	0.14		-0.22	0.22		0.18		0.29	0.46		0.31											
Mn	0.05	-0.09	-0.02	0.57		-0.06	0.02		0.23		**0.94**	**0.98**		-0.02	0.38										
Na	-0.03	-0.46	-0.17	0.28		0.08	-0.19		0.54		**0.85**	**0.84**		-0.01	0.59	**0.83**									
Ni	-0.17	-0.28	-0.48	0.54		-0.33	-0.06		0.09		0.60	0.58		-0.25	0.23	0.62	0.61								
P	-0.01	-0.13	-0.17	0.51		-0.05	-0.09		0.21		**0.96**	**0.94**		-0.06	0.25	**0.96**	**0.80**	0.65							
Pb	0.28	0.26	-0.10	**0.90**		-0.07	-0.09		-0.19		0.75	0.64		0.11	0.04	0.77	0.44	0.65	0.75						
S	**0.96**	0.47	0.33	0.29		0.42	0.06		-0.56		0.01	-0.11		**0.96**	0.29	-0.11	-0.12	-0.23	-0.16	0.15					
Se	0.04	-0.12	-0.15	0.21		0.19	0.17		0.12		0.72	0.77		0.05	0.23	0.76	0.70	0.48	0.77	0.50	-0.11				
Si	0.21	0.11	**0.98**	0.00		-0.57	0.78		-0.35		-0.25	0.12		0.17	0.59	-0.01	-0.10	-0.20	-0.15	-0.15	0.20	-0.16			
Ti	0.39	0.29	**0.99**	0.12		-0.45	**0.83**		-0.51		-0.19	0.16		0.33	0.54	0.04	-0.13	-0.21	-0.09	-0.02	0.35	-0.05	**0.97**		
V	0.20	0.24	0.16	**0.81**		-0.36	0.03		-0.35		0.15	0.10		-0.02	0.04	0.25	-0.04	0.45	0.14	0.70	0.19	-0.07	0.13	0.19	
Zn	0.13	-0.08	-0.01	0.66		-0.08	0.00		0.14		**0.93**	**0.95**		0.04	0.40	**0.98**	**0.83**	0.72	**0.95**	**0.83**	-0.02	0.74	0.00	0.06	0.35

Tab. 16.8: Grenoble: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.72																								
Al	0.17	0.43																							
As	**0.82**	0.76	0.29																						
Bi																									
Br	0.67	**0.80**	0.47	0.64																					
Ca	-0.01	0.49	**0.85**	0.36		0.36																			
Cd																									
Cl	0.73	0.72	0.03	0.78		0.33	0.21																		
Co																									
Cu	0.65	**0.95**	0.73	0.76		0.76	0.73		0.59																
Fe	0.70	**0.92**	0.41	**0.84**		**0.84**	0.45		0.69		**0.85**														
Ga																									
K	0.76	0.65	0.20	**0.97**		0.59	0.29		0.76		0.59	0.77													
Mg	0.15	0.29	**0.86**	0.23		0.15	0.69		0.10		0.77	0.22		0.12											
Mn	0.74	0.69	0.13	**0.97**		0.61	0.23		0.74		0.68	**0.83**		**0.85**	0.05										
Na	0.40	0.73	0.31	0.65		0.29	0.55		**0.81**		0.66	0.67		0.62	0.41	0.54									
Ni																									
P	0.63	0.78	0.52	**0.91**		0.71	0.54		0.55		**0.80**	**0.86**		**0.84**	0.38	0.78	0.62								
Pb	0.69	0.59	0.07	**0.95**		0.63	0.14		0.55		0.62	0.69		0.79	-0.07	**0.89**	0.34		0.72						
S	0.67	0.19	0.25	0.54		0.45	-0.15		0.15		0.20	0.33		0.48	0.27	0.49	-0.13		0.44	0.52					
Se																									
Si	-0.16	0.09	0.05	-0.13		-0.11	0.07		-0.15		0.26	-0.16		-0.33	-0.01	-0.26	-0.09		-0.09	-0.31	-0.42				
Ti	0.23	0.54	0.48	0.10		0.26	0.40		0.45		0.37	0.41		0.13	0.44	0.05	0.59		0.22	-0.01	-0.17		-0.12		
V	0.31	0.51	0.18	0.35		0.03	0.29		0.53		0.58	0.27		0.15	0.28	0.21	0.50		0.26	0.05	-0.20		0.68	0.33	
Zn	0.40	0.75	0.02	0.49		0.29	0.31		**0.80**		0.68	0.62		0.46	0.09	0.48	**0.89**		0.44	0.34	-0.30		0.07	0.59	0.59

Tab. 16.9: Gothenburg: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.30																								
Al	0.69	0.22																							
As																									
Bi																									
Br	0.63	0.46	0.58																						
Ca																									
Cd																									
Cl	0.02	0.21	0.26			0.67																			
Co																									
Cu	-0.36	0.34	0.12			0.08			0.35																
Fe	0.13	**0.86**	0.40			0.44			0.33		0.67														
Ga	-0.26	-0.52	-0.69			-0.27			0.43		-0.21	-0.59													
K	**0.85**	0.50	0.72			0.66			0.02		-0.25	0.37	-0.59												
Mg	0.14	0.26	0.44			0.71			**0.94**		0.49	0.43	-0.16	0.09											
Mn	0.78	0.63	0.72			**0.80**			0.22		0.15	0.64	-0.41	**0.85**	0.35										
Na	0.04	0.03	0.44			0.63			**0.94**		0.34	0.26	-0.16	0.04	**0.98**	0.22									
Ni																									
P	0.59	0.11	0.61			0.34			-0.22		0.02	0.17	-0.44	0.69	-0.17	0.60	-0.15								
Pb	**0.87**	0.57	**0.87**			0.75			0.14		0.05	0.50	-0.59	**0.92**	0.30	**0.92**	0.17		0.69						
S	**0.86**	0.12	0.72			0.36			-0.22		-0.46	-0.02	-0.66	**0.83**	-0.08	0.57	-0.10		0.65	**0.81**					
Se																									
Si	0.41	0.30	**0.91**			0.61			0.52		0.46	0.59	-0.69	0.48	0.67	0.63	0.66		0.41	0.68	0.39				
Ti	0.00	0.23	0.08			0.10			-0.14		0.23	0.28	-0.15	-0.04	-0.11	0.21	-0.14		0.08	0.07	-0.04		0.19		
V	0.16	0.10	0.38			0.48			0.43		0.23	0.25	-0.18	0.03	0.58	0.34	0.53		-0.16	0.22	0.03		0.54	0.65	
Zn	0.68	0.64	0.67			**0.93**			0.51		0.10	0.62	-0.45	**0.83**	0.56	**0.91**	0.48		0.46	**0.87**	0.47		0.64	0.00	0.29

Tab. 16.10: Huelva: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.19																								
Al	0.48	0.18																							
As	0.62	0.25	0.11																						
Bi																									
Br	0.69	0.59	0.42	0.30																					
Ca	0.40	0.19	**0.80**	0.25		0.51																			
Cd																									
Cl	-0.18	-0.04	-0.54	-0.14		0.08	-0.28																		
Co																									
Cu	0.61	0.07	0.51	0.74		0.46	0.75		-0.18																
Fe	0.44	0.32	**0.94**	0.15		0.48	0.78		-0.48		0.52														
Ga	0.42	-0.03	0.47	0.55		0.32	0.70		-0.11		0.79	0.70													
K	0.26	**0.89**	0.49	0.17		0.60	0.52		-0.13		0.21	0.57	0.05												
Mg	0.47	-0.55	0.26	0.33		0.18	0.41		0.13		0.64	0.13	0.48	-0.38											
Mn	**0.80**	0.40	0.75	0.39		**0.87**	0.71		-0.17		0.66	0.75	0.49	0.54	0.42										
Na	0.16	-0.56	-0.18	0.26		0.02	0.17		0.44		0.45	-0.28	0.22	-0.49	**0.87**	0.09									
Ni																									
P	0.77	-0.27	0.48	0.59		0.38	0.61		-0.17		**0.85**	0.38	0.60	-0.07	**0.83**	0.62	0.57								
Pb	**0.81**	0.33	0.33	0.71		0.74	0.32		-0.10		0.64	0.36	0.42	0.28	0.39	0.74	0.21		0.57						
S	**0.90**	-0.21	0.47	0.58		0.36	0.34		-0.34		0.61	0.35	0.48	-0.09	0.65	0.60	0.30		**0.87**	0.66					
Se	**0.80**	-0.34	0.39	0.44		0.50	0.53		-0.23		**0.83**	0.27		-0.23	**0.81**	0.69	0.54		**0.97**	0.65	**0.85**				
Si	**0.83**	-0.08	0.73	0.40		0.62	0.67		-0.30		0.74	0.66	0.60	0.12	0.69	**0.85**	0.31		**0.87**	0.70	**0.84**	**0.93**			
Ti	0.65	-0.04	0.65	0.49		0.09	0.38		-0.44		0.46	0.55	0.42	0.16	0.29	0.44	-0.09		0.61	0.36	0.76	0.39	0.58		
V	**0.86**	-0.20	0.39	0.71		0.37	0.38		-0.29		0.72	0.28	0.44	-0.11	0.72	0.59	0.45		**0.91**	0.74	**0.96**	**0.89**	**0.82**	0.67	
Zn	0.66	0.23	0.34	**0.84**		0.55	0.49		-0.21		**0.84**	0.36	0.62	0.23	0.51	0.65	0.38		0.67	**0.88**	0.60	0.66	0.65	0.33	0.75

Tab. 16.11: Ipswich: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.88**																								
Al	0.71	0.69																							
As	0.28	0.27	0.61																						
Bi																									
Br	0.76	**0.95**	0.69	0.20																					
Ca	0.16	-0.12	0.51	0.79		-0.31																			
Cd																									
Cl	0.68	**0.88**	0.62	0.04		**0.96**	-0.47																		
Co																									
Cu	0.65	0.61	0.49	0.32		0.43	0.38		0.23																
Fe	0.77	0.58	0.66	0.44		0.46	0.47		0.28		**0.80**														
Ga	0.29	0.34	0.16	-0.33		0.38	-0.31		0.33		0.67	0.32													
K	**0.90**	**0.93**	0.64	0.31		**0.84**	0.06		0.73		0.72	0.75	0.36												
Mg	0.58	0.62	0.74	0.30		0.64	-0.07		0.71		0.11	0.29	0.06	0.44											
Mn	0.71	0.49	0.38	0.24		0.35	0.35		0.26		0.49	0.75	-0.02	0.76	0.06										
Na	-0.19	-0.14	-0.13	-0.51		-0.04	-0.61		0.16		-0.47	-0.46	-0.06	-0.36	0.48	-0.56									
Ni	-0.40	-0.37	-0.20	-0.29		-0.23	-0.25		-0.27		0.29	0.06	0.69	-0.20	-0.28	-0.30	0.02								
P	**0.92**	**0.94**	**0.80**	0.09		**0.87**	-0.04		0.75		0.69	0.70	0.34	**0.90**	0.54	0.51	-0.10	-0.25							
Pb	**0.89**	**0.97**	0.70	0.29		**0.94**	-0.13		**0.86**		0.60	0.67	0.41	**0.93**	0.60	0.53	-0.17	-0.27	**0.95**						
S	**0.83**	0.50	0.53	0.36		0.38	0.41		0.24		0.52	**0.81**	0.15	0.62	0.32	0.69	-0.25	-0.30	0.60	0.60					
Se	0.46	0.76	0.33			0.79			**0.81**		0.52	0.22	0.68	**0.83**	0.32	0.28	-0.04	0.38	0.62	0.76	-0.15				
Si	0.29	0.19	0.73	0.69		0.09	0.77		0.01		0.45	0.55	-0.05	0.24	0.44	0.21	-0.22	0.08	0.38	0.17	0.27	-0.16			
Ti	0.61	0.48	0.58	0.45		0.39	0.52		0.33		0.39	0.67	-0.14	0.71	0.24	**0.90**	-0.52	-0.31	0.49	0.48	0.49	0.31	0.47		
V	0.42	0.01	0.10	0.30		-0.19	0.47		-0.32		0.23	0.56	-0.64	0.20	-0.12	0.60	-0.34	-0.44	0.13	0.07	0.76	-0.66	0.20	0.38	
Zn	0.78	0.61	0.43	0.13		0.47	0.11		0.51		0.31	0.49	0.16	0.63	0.67	0.54	0.17	-0.38	0.44	0.63	0.64	0.29	0.19	0.45	0.32

Tab. 16.12: Norwich: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.80**																								
Al	0.53	0.66																							
As	**0.92**	**0.88**	0.64																						
Bi																									
Br	0.55	**0.89**	0.64	0.76																					
Ca	-0.10	-0.07	0.13	-0.51		-0.13																			
Cd																									
Cl	0.44	**0.81**	0.60	0.67		**0.89**	-0.09																		
Co																									
Cu	0.34	0.45	0.24	**0.91**		0.58	-0.33		0.26																
Fe	**0.83**	**0.84**	0.52	**0.84**		0.61	-0.06		0.44		0.48														
Ga																									
K	**0.94**	**0.88**	0.55	**0.89**		0.68	0.09		0.57		0.37	**0.85**													
Mg	0.16	0.28	0.39	0.58		0.27	-0.16		0.59		-0.06	-0.12		0.13											
Mn	0.57	0.75	0.42	0.50		0.53	0.25		0.51		0.24	**0.84**		0.75	-0.11										
Na	-0.20	-0.22	-0.08	0.08		-0.19	-0.31		0.16		-0.26	-0.52		-0.32	**0.84**	-0.55									
Ni																									
P	**0.93**	**0.91**	0.68	**0.97**		**0.80**	-0.08		0.69		0.41	**0.84**		**0.95**	0.23	0.65	-0.22								
Pb	**0.87**	0.66	0.48	**0.84**		0.52	0.03		0.28		0.60	0.79		**0.87**	-0.02	0.57	-0.38		**0.82**						
S	**0.86**	0.51	0.30	0.77		0.27	-0.25		0.04		0.48	0.65		0.72	-0.04	0.24	-0.20		0.69	**0.83**					
Se	0.43	0.50	0.52						0.37			0.48		0.43	0.59	0.16	0.56		0.47	0.72	0.52				
Si	0.08	-0.05	0.63	-0.12		-0.26	0.36		-0.18		-0.31	0.07		0.01	0.06	0.01	-0.09		0.06	0.08	0.06	0.06			
Ti	0.65	0.41	0.39	0.48		-0.01	0.12		0.02		-0.08	0.70		0.63	-0.16	0.68	-0.41		0.54	0.59	0.51	-0.09	0.44		
V	0.77	0.26	0.04	0.55		-0.03	-0.14		-0.18		0.22	0.54		0.60	-0.14	0.21	-0.18		0.52	0.76	**0.88**	0.24	0.04	0.61	
Zn	**0.97**	0.66	0.43	**0.83**		0.39	-0.08		0.24		0.33	0.77		**0.87**	0.03	0.45	-0.24		**0.85**	**0.88**	**0.93**	0.41	0.12	0.64	**0.88**

Tab. 16.13: Oviedo: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.68																								
Al	0.57	0.27																							
As	0.51	0.65	0.25																						
Bi																									
Br	0.76	**0.91**	0.38	0.62																					
Ca	0.59	0.74	0.57	0.61		0.69																			
Cd																									
Cl	0.32	0.65	-0.16	0.27		0.51	0.32																		
Co																									
Cu	0.32	-0.13	0.28	-0.15		0.00	-0.06		-0.56																
Fe	0.49	0.08	**0.87**	-0.13		0.14	0.42		-0.27		0.50														
Ga	0.57	0.18	0.45	-0.12		0.48	0.47		-0.12		0.47	0.35													
K	0.78	0.27	**0.80**	0.00		0.36	0.42		-0.10		0.61	**0.89**	0.54												
Mg	0.13	-0.05	0.52	-0.13		-0.14	0.33		0.08		-0.06	0.52	-0.08	0.41											
Mn	0.59	0.12	**0.86**	0.08		0.23	0.41		-0.18		0.46	**0.95**	0.35	**0.90**	0.57										
Na	-0.28	-0.29	-0.19	-0.55		-0.41	-0.26		0.32		-0.47	-0.04	-0.43	-0.08	0.58	0.02									
Ni	0.28	-0.14	0.46	-0.42		-0.03	0.02		-0.30		0.50	0.30	0.57	0.42	0.48	0.27	-0.17								
P	0.76	0.64	0.72	0.42		0.74	0.63		0.04		0.46	0.66	0.46	0.76	0.09	0.72	-0.40	0.11							
Pb	0.62	0.76	0.36	0.39		0.79	0.74		0.21		0.26	0.29	0.43	0.45	0.01	0.34	-0.26	-0.08	**0.81**						
S	0.56	-0.09	0.66	-0.20		0.03	0.05		-0.38		0.74	0.76	0.44	**0.87**	0.40	0.79	-0.06	0.70	0.51	0.17					
Se	0.42	0.30	0.50	0.58		0.44	0.44		-0.35		0.29	0.41	0.25	0.46	0.38	0.50	-0.41	0.03	0.52	0.53	0.41				
Si	0.47	0.12	**0.97**	0.20		0.23	0.50		-0.27		0.27	**0.84**	0.47	0.74	0.53	**0.80**	-0.21	0.52	0.59	0.21	0.64	0.41			
Ti	0.56	0.25	**1.00**	0.17		0.35	0.54		-0.16		0.26	**0.87**	0.44	**0.80**	0.52	**0.85**	-0.18	0.46	0.69	0.31	0.66	0.48	**0.97**		
V	0.59	0.13	0.65	0.03		0.25	0.37		-0.25		0.59	**0.84**	0.37	**0.84**	0.25	**0.88**	-0.08	0.13	0.76	0.49	0.73	0.42	0.57	0.62	
Zn	0.61	0.54	0.39	0.16		0.48	0.44		0.19		0.40	0.59	0.06	0.68	0.15	0.62	0.03	-0.24	0.78	0.71	0.43	0.36	0.22	0.37	0.75

Tab. 16.14: Pavia: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.92**																								
Al	0.42	0.32																							
As	0.68	**0.84**	0.48																						
Bi	-0.41	-0.34	-0.12																						
Br	0.79	**0.94**	0.28	**0.83**	-0.38																				
Ca	0.50	0.51	**0.82**	0.51	-0.20	0.44																			
Cd																									
Cl	**0.91**	**0.97**	0.32	0.79	-0.24	**0.89**	0.58																		
Co																									
Cu	0.51	0.68	0.40	**0.81**	0.38	0.70	0.58		0.68																
Fe	**0.82**	**0.91**	0.59	**0.92**	-0.16	**0.87**	0.71		**0.89**		**0.84**														
Ga	-0.62	-0.51	-0.20	0.38		-0.47	-0.15		-0.48		0.30	-0.18													
K	0.74	**0.86**	0.42	**0.88**	-0.43	0.77	0.55		**0.80**		0.69	**0.89**	-0.33												
Mg	0.55	0.39	**0.88**	0.41	-0.23	0.34	**0.81**		0.44		0.48	0.62	-0.28	0.44											
Mn	0.79	**0.87**	0.40	0.69	-0.16	0.78	0.69		**0.92**		0.61	**0.80**	-0.57	0.77	0.45										
Na	0.60	0.44	0.63	0.33	-0.24	0.37	0.65		0.53		0.53	0.59	-0.25	0.41	**0.90**	0.43									
Ni	-0.65	-0.30	-0.75			-0.31	-0.74		-0.35		0.29	-0.46		-0.39	**-0.84**	-0.46	-0.70								
P	0.66	**0.87**	0.28	0.77	-0.30	**0.90**	0.53		**0.82**		0.71	**0.83**	-0.17	0.71	0.24	0.72	0.26	0.14							
Pb	**0.80**	**0.95**	0.37	**0.89**	-0.07	**0.96**	0.54		**0.93**		**0.80**	**0.93**	-0.37	**0.83**	0.40	**0.86**	0.42	-0.26	**0.86**						
S	0.19	-0.13	0.61	-0.18	-0.32	-0.23	0.27		-0.15		-0.11	0.05	-0.44	-0.02	0.68	-0.15	0.53	**-0.82**	-0.33	-0.21					
Se	0.02	0.03	0.15	0.23	**0.86**	0.10	0.15		0.10		0.47	0.14	0.49	-0.19	0.14	0.12	0.18	0.53	0.04	0.21	-0.13				
Si	0.61	0.45	**0.91**	0.55	-0.16	0.34	**0.83**		0.49		0.35	0.65	-0.24	0.46	**0.85**	0.52	0.64	**-0.80**	0.32	0.44	0.56	0.13			
Ti	0.59	0.52	**0.84**	0.53	-0.11	0.38	**0.85**		0.51		0.51	0.70	-0.18	0.58	0.75	0.59	0.52	-0.67	0.44	0.48	0.47	0.15	**0.89**		
V	0.13	-0.10	0.53	-0.01	0.05	-0.05	0.28		-0.08		0.18	0.13	0.13	-0.10	0.72	-0.11	0.66	-0.52	-0.26	-0.04	0.75	0.40	0.46	0.35	
Zn	0.77	**0.85**	0.44	**0.82**	0.18	0.72	0.66		**0.89**		**0.82**	**0.90**	-0.18	**0.86**	0.50	**0.87**	0.53	-0.14	0.69	**0.86**	-0.08	0.24	0.55	0.65	-0.01

Tab. 16.15: Paris: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.60																								
Al	0.06	0.20																							
As	0.72	0.60	0.02																						
Bi																									
Br	0.72	0.58	-0.45	0.38																					
Ca	0.01	0.20	**0.84**	0.07		-0.45																			
Cd																									
Cl	0.42	-0.04	-0.48	0.18		0.65	-0.62																		
Co																									
Cu	0.25	0.79	0.01	0.26		0.50	-0.20		-0.06																
Fe	0.53	**0.84**	0.59	0.58		0.23	0.55		-0.36		0.53														
Ga	0.12	0.41	-0.10	0.70		0.19	-0.04		-0.36		0.65	0.29													
K	0.78	0.67	0.46	0.61		0.44	0.46		0.15		0.22	0.68	-0.08												
Mg	-0.45	-0.61	0.03	-0.15		-0.39	0.05		0.18		-0.66	-0.36	-0.43	-0.34											
Mn	0.75	0.28	0.28	0.75		0.26	0.36		-0.03		-0.13	0.54	0.33	0.63	-0.16										
Na	-0.53	-0.66	-0.28	-0.27		-0.28	-0.21		0.31		-0.62	-0.57	-0.43	-0.47	**0.94**	-0.35									
Ni																									
P	0.47	0.71	0.60	0.35		0.29	0.52		0.04		0.43	0.68	-0.24	**0.80**	-0.22	0.21	-0.38								
Pb	0.51	0.68	-0.22	0.52		0.72	-0.22		0.07		0.70	0.48	0.57	0.29	-0.59	0.18	-0.52		0.27						
S	0.57	0.27	0.43	0.64		0.09	0.62		-0.26		-0.19	0.60	0.37	0.59	-0.07	**0.92**	-0.31		0.30	0.13					
Se	-0.15	0.30	-0.48	0.39		0.14	-0.28		-0.28		0.35	0.08	**0.84**	-0.38	-0.48	-0.29	-0.28		-0.30	0.66	-0.26				
Si	-0.07	0.17	**0.97**	-0.06		-0.56	0.78		-0.59		0.08	0.57	-0.08	0.34	-0.05	0.15	-0.32		0.50	-0.23	0.28	-0.39			
Ti	0.23	0.28	**0.94**	0.17		-0.33	**0.91**		-0.50		-0.06	0.69	-0.02	0.61	-0.04	0.52	-0.35		0.60	-0.10	0.67	-0.44	**0.88**		
V	**0.94**	0.39	-0.12	0.72		0.68	-0.16		0.66		0.01	0.35	0.10	0.54	-0.16	0.78	-0.30		0.23	0.37	0.56	-0.10	-0.30	0.03	
Zn	**0.88**	0.67	0.29	**0.93**		0.56	0.33		0.10		0.28	0.76	0.34	0.79	-0.33	**0.83**	-0.51		0.59	0.54	**0.81**	-0.13	0.12	0.48	**0.84**

Tab. 16.16: Reykjavik: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	-0.09																								
Al	0.30	0.30																							
As																									
Bi																									
Br	**0.84**	0.28	0.01																						
Ca	0.78	-0.42	0.50			0.62																			
Cd																									
Cl	**0.80**	-0.09	-0.14			**0.84**	0.53																		
Co																									
Cu	0.40	-0.29	0.58			-0.03			0.19																
Fe	0.12	0.37	**0.87**			0.15			-0.23		0.59														
Ga																									
K	0.75	0.26	0.18			0.71	0.39		0.72		0.03	-0.05													
Mg	**0.88**	-0.07	0.05			**0.87**	0.61		**0.97**		0.24	-0.06		**0.80**											
Mn	0.23	0.06	0.69			0.11	0.63		-0.10		0.31	0.53		-0.07	-0.02										
Na	0.74	-0.13	-0.16			**0.80**	0.35		**0.95**		0.07	-0.26		0.78	**0.95**	-0.18									
Ni																									
P																									
Pb																									
S	0.30	0.33	**0.85**			0.05	0.09		-0.14		0.21	0.72		0.37	0.05	0.51	-0.02								
Se																									
Si	-0.15	0.38	**0.91**			-0.27	0.14		-0.41		0.22	**0.92**		-0.14	-0.26	0.64	-0.44				0.72				
Ti	-0.14	0.23	0.75			-0.13	0.30		-0.40		0.14	**0.93**		-0.36	-0.30	0.73	-0.45				0.51		**0.90**		
V																									
Zn	0.40	0.13	0.61			-0.01	0.21		0.05		0.79	0.40		0.31	0.18	-0.08	-0.01				0.47		0.27	0.05	

Tab. 16.17: Tartu: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.93**																								
Al	0.74	0.58																							
As	**0.91**	**0.93**	0.59																						
Bi																									
Br	**0.82**	0.77	0.58	0.69																					
Ca	0.13	0.09	0.48	0.48		-0.06																			
Cd	0.57	**0.80**	0.29																						
Cl	0.61	0.69	0.08	**0.80**		0.49	-0.41	0.79																	
Co																									
Cu	0.59	0.70	0.13	0.66		0.55	-0.16	0.59	0.78																
Fe	0.76	0.57	**0.95**	0.52		0.71	0.39		0.19		0.25														
Ga	0.63	0.72	0.40			0.51			**0.91**		**0.87**														
K	**0.95**	**0.91**	0.65	**0.93**		**0.81**	0.09	0.68	0.57		0.51	0.65	0.44												
Mg	0.26	0.41	0.04	**0.89**		0.32	0.05	0.77	0.55		0.39	0.04	-0.02	0.33											
Mn	**0.96**	**0.86**	**0.82**	**0.87**		**0.86**	0.15	0.56	0.51		0.44	**0.84**	0.49	**0.95**	0.29										
Na	0.06	0.10	-0.18	**0.80**		0.29	-0.44	0.56	0.48		0.09	-0.09	-0.28	0.15	0.75	0.13									
Ni																									
P	**0.94**	**0.87**	0.69	**0.83**		**0.90**	0.02		0.54		0.36	0.72		**0.92**	0.55	**0.97**	0.67								
Pb	**0.90**	**0.86**	0.52	**0.85**		0.79	-0.18		0.76		0.66	0.63	**0.84**	**0.82**	0.11	**0.84**	0.14		**0.84**						
S	**0.86**	0.78	0.69	0.68		0.61	0.13	0.75	0.33		0.27	0.66	0.39	0.79	-0.09	**0.82**	-0.12		**0.82**	0.77					
Se	0.41	0.65	0.01			0.55	-0.06		0.72		**0.85**	0.15		0.31	0.44	0.28	0.12			0.49	0.23				
Si	0.68	0.51	**0.97**	0.52		0.51	0.62	0.29	-0.09		0.04	**0.90**	0.24	0.62	-0.01	0.76	-0.30		0.62	0.38	0.64	-0.10			
Ti	**0.91**	**0.80**	**0.92**	0.72		0.76	0.42	0.38	0.24		0.64	**0.93**		**0.83**	0.05	**0.90**	-0.20		**0.81**	0.72	0.77		**0.95**		
V	0.55	0.62	0.07	0.52		0.58	-0.23		0.53		0.36	0.30		0.50	0.29	0.46	0.75		0.54	0.68	0.74		-0.04	0.25	
Zn	**0.92**	**0.93**	0.53	**0.93**		**0.87**	-0.11	0.63	0.75		0.74	0.58	**0.80**	**0.89**	0.34	**0.88**	0.16		**0.90**	**0.93**	0.74	0.67	0.44	0.77	0.60

Tab. 16.18: Turin: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.60																								
Al	**0.83**	0.77																							
As	0.28	0.63	0.58																						
Bi																									
Br	0.77	**0.93**	**0.82**	0.41																					
Ca	0.55	0.74	0.59	0.29		0.68																			
Cd																									
Cl	**0.84**	**0.84**	0.72	0.33		**0.92**	**0.82**																		
Co																									
Cu	0.44	0.37	0.54	0.48		0.35	0.30		0.33																
Fe	0.78	**0.88**	0.77	0.29		**0.93**	**0.87**		**0.97**		0.34														
Ga	0.11	-0.09	0.11	0.08		0.00	-0.29		-0.18		0.09	-0.13													
K	0.61	**0.82**	0.68	0.31		**0.85**	**0.87**		**0.87**		0.31	**0.90**	-0.07												
Mg	0.59	0.63	0.73	0.31		0.67	0.79		0.70		0.14	0.75	-0.35	**0.82**											
Mn	**0.86**	0.72	**0.80**	0.52		0.72	0.73		**0.82**		0.65	**0.81**	-0.06	0.63	0.54										
Na	0.59	0.55	0.60	0.12		0.61	**0.85**		0.71		0.12	0.75	-0.35	0.77	**0.92**	0.54									
Ni	0.68	-0.02	0.45	-0.22		0.25	-0.20		0.16		0.52	0.17	0.65	-0.12	-0.20	0.36	-0.15								
P	0.71	**0.96**	**0.85**	0.59		**0.93**	0.76		**0.88**		0.47	**0.92**	-0.11	**0.85**	0.69	**0.81**	0.57	0.09							
Pb	0.71	**0.94**	**0.83**	0.54		**0.94**	0.74		**0.87**		0.51	**0.90**	0.15	**0.89**	0.65	0.77	0.57	0.19	**0.95**						
S	0.17	-0.37	0.07	-0.27		-0.23	-0.07		-0.19		-0.05	-0.19	0.52	-0.06	0.17	-0.09	0.27	0.36	-0.34	-0.17					
Se	0.00	-0.42	-0.11	-0.10		-0.36	-0.28		-0.37		0.00	-0.35	**0.91**	-0.21	-0.24	-0.17	-0.16	0.46	-0.45	-0.20	**0.96**				
Si	0.59	0.73	0.67	0.44		0.63	**0.91**		0.72		0.40	**0.80**	-0.15	0.70	0.67	**0.81**	0.75	-0.01	0.72	0.72	0.00	-0.17			
Ti	0.36	**0.80**	0.75	0.64		0.70	0.56		0.55		0.19	0.63	-0.12	0.70	0.73	0.45	0.47	-0.21	**0.82**	0.74	-0.26	-0.36	0.51		
V	**0.81**	0.21	0.58	0.12		0.41	0.36		0.52		0.15	0.44	0.21	0.39	0.58	0.53	0.64	0.64	0.29	0.35	0.65	0.40	0.40	0.11	
Zn	0.78	**0.86**	**0.83**	0.55		**0.82**	**0.86**		**0.88**		0.51	**0.91**	0.00	**0.84**	0.71	**0.92**	0.66	0.17	**0.92**	**0.90**	-0.09	-0.15	**0.86**	0.68	0.48

Tab. 16.19: Umea: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	0.63																								
Al	0.13	0.09																							
As																									
Bi																									
Br	0.04	0.18	-0.18																						
Ca																									
Cd																									
Cl	-0.50	-0.22	0.30			-0.46																			
Co																									
Cu	-0.64	-0.31	-0.28			0.19			0.59																
Fe	0.31	0.56	0.78			-0.03			-0.01		-0.12														
Ga																									
K	0.79	0.68	0.42			-0.14			-0.16		-0.77	0.44													
Mg																									
Mn	0.49	0.44	0.72			0.15			0.61		-0.16	0.68		0.52											
Na	-0.16	-0.13	0.53			-0.38			**0.95**		-0.26	0.16		0.22		0.70									
Ni																									
P	0.52	-0.20	-0.17			0.07			-0.09			-0.31		0.13		0.14	0.66								
Pb	-0.50	-0.34	-0.40			**0.82**			0.00		0.22	-0.51		-0.53		-0.32	-0.38		-0.31						
S	**0.91**	0.38	0.26			0.11			-0.66		-0.71	0.33		0.64		0.52	-0.29		0.50	-0.47					
Se																									
Si	-0.07	-0.03	**0.98**			-0.39			0.30		-0.18	0.76		0.27		0.72	0.49		-0.31	-0.49	0.09				
Ti	0.10	0.08	0.69			0.25			-0.11		-0.59	0.54		0.42		0.56	0.06		-0.36	-0.19	0.29		0.71		
V	-0.08	-0.03	0.61			-0.02			-0.18		-0.43	0.53		0.09		0.29	-0.15		-0.52	-0.07	0.19		0.70	**0.93**	
Zn	**0.85**	**0.80**	0.05			0.30			-0.41		-0.44	0.41		0.67		0.29	-0.21		0.25	-0.30	0.71		-0.12	-0.06	-0.14

Tab. 16.20: Uppsala: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.86**																								
Al	0.79	0.66																							
As	**0.98**	**0.81**	**0.88**																						
Bi																									
Br	0.61	0.39	**0.86**	**0.86**																					
Ca	0.53	0.79	0.63			0.35																			
Cd																									
Cl	0.54	0.39	0.38	0.40		0.56	-0.10																		
Co																									
Cu	0.48	0.64	0.73	0.36		0.69	**0.85**		0.41																
Fe	0.53	0.79	0.61			0.39	**0.98**		0.14		**0.83**														
Ga	-0.04	0.06	-0.39			-0.47	-0.49		0.41		-0.23	-0.35													
K	**0.95**	**0.91**	0.73	**0.92**		0.54	0.57		0.57		0.53	0.58	0.00												
Mg	**0.80**	0.52	0.73	**0.84**		0.76	0.30		0.56		0.44	0.27	0.00	0.65											
Mn	**0.93**	**0.93**	0.78	**0.87**		0.57	0.67		0.59		0.64	0.72	0.02	**0.97**	0.64										
Na	0.45	0.12	0.37	0.72		0.65	-0.19		0.47		0.14	-0.24	-0.22	0.33	0.77	0.23									
Ni																									
P	**0.86**	**0.84**	0.79	**0.85**		**0.80**	0.71		0.45		0.61	0.76	-0.45	**0.85**	0.61	**0.90**	0.32								
Pb	**0.80**	0.56	**0.97**	**0.89**		**0.87**	0.55		0.42		0.62	0.49	-0.40	0.70	0.79	0.74	0.45		0.77						
S	**0.93**	0.68	0.71	**0.96**		0.61	0.24		0.48		0.29	0.23	-0.06	**0.82**	**0.86**	0.75	0.66		0.68	0.73					
Se	-0.25	-0.30	0.32			0.47			-0.33		0.39	-0.10		-0.28	-0.06	-0.28	0.24		-0.18	0.23	-0.09				
Si	0.71	0.64	**0.98**	**0.82**		**0.82**	0.69		0.28		0.75	0.65	-0.45	0.70	0.62	0.75	0.26		0.78	**0.93**	0.61	0.38			
Ti	0.78	0.74	**0.93**			0.72	0.76		0.32		0.69	0.76	-0.57	0.79	0.59	**0.86**	0.07		**0.92**	**0.87**	0.60	0.11	**0.94**		
V	**0.80**	0.60	0.60			0.45	0.37		0.29		0.21	0.14		0.74	0.75	0.61	0.60		0.45	0.61	**0.90**	0.05	0.49	0.42	
Zn	**0.84**	**0.95**	0.65	0.72		0.47	0.77		0.54		0.72	0.77	0.19	**0.89**	0.62	**0.92**	0.24		0.76	0.58	0.66	-0.38	0.60	0.67	0.60

Tab. 16.21: Verona: Weekend within-city Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS																									
Al																									
As																									
Bi																									
Br																									
Ca																									
Cd																									
Cl																									
Co																									
Cu																									
Fe																									
Ga																									
K																									
Mg																									
Mn																									
Na																									
Ni																									
P																									
Pb																									
S																									
Se																									
Si																									
Ti																									
V																									
Zn																									

Tab. 17.1: Annual mean concentrations: Across cities Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.91**																								
Al	0.42	0.51																							
As	0.78	0.75	0.66																						
Bi	-0.07	-0.15	0.07	0.13																					
Br	**0.89**	**0.84**	0.58	**0.80**	-0.18																				
Ca	0.14	0.33	**0.84**	0.38	0.11	0.29																			
Cd	0.11	0.05	-0.15	0.20	-0.41	0.14	-0.40																		
Cl	0.61	0.49	0.18	0.60	0.32	0.59	-0.08	-0.04																	
Co	0.02	0.07	0.36	0.00	0.58	0.01	0.43	-0.68	0.11																
Cu	0.56	0.63	0.72	**0.88**	0.03	0.61	0.49	0.25	0.34	0.04															
Fe	**0.80**	**0.88**	0.58	0.78	-0.12	**0.83**	0.42	0.17	0.41	0.06	0.74														
Ga	**0.82**	**0.84**	0.67	**0.84**	-0.10	**0.93**	0.41	0.13	0.43	0.09	0.74	**0.87**													
K	0.70	0.74	0.69	0.64	-0.12	0.71	0.52	-0.03	0.21	0.11	0.60	0.59	0.74												
Mg	0.44	0.40	0.67	0.75	0.35	0.53	0.50	-0.19	0.63	0.32	0.70	0.46	0.58	0.38											
Mn	0.53	0.62	0.33	0.63	-0.01	0.49	0.41	0.19	0.20	-0.12	0.63	**0.80**	0.55	0.41	0.30										
Na	0.13	0.17	0.38	0.57	0.47	0.14	0.32	-0.09	0.53	0.17	0.63	0.25	0.22	0.05	**0.84**	0.30									
Ni	0.63	0.59	0.57	0.66	-0.16	0.70	0.43	-0.03	0.50	-0.02	0.60	0.67	0.66	0.54	0.68	0.54	0.41								
P	0.26	0.20	0.56	0.64	0.34	0.22	0.29	0.09	0.26	0.21	0.76	0.26	0.34	0.32	0.70	0.17	0.72	0.36							
Pb	**0.84**	**0.86**	0.60	**0.94**	0.00	**0.88**	0.41	0.16	0.56	0.01	**0.80**	**0.89**	**0.90**	0.69	0.62	0.76	0.39	0.67	0.39						
S	**0.83**	0.77	0.52	**0.84**	0.20	0.69	0.36	-0.01	0.43	0.15	0.67	0.73	0.74	0.62	0.59	0.63	0.40	0.56	0.52	**0.83**					
Se	0.27	0.26	0.13	0.38	0.70	0.07	0.13	-0.23	0.37	0.59	0.29	0.26	0.15	0.01	0.41	0.31	0.50	0.04	0.45	0.33	0.54				
Si	0.30	0.42	0.79	0.51	0.04	0.31	0.63	0.05	0.10	0.20	0.74	0.45	0.40	0.60	0.44	0.33	0.39	0.39	0.62	0.42	0.35	0.09			
Ti	0.39	0.45	0.79	0.78	0.06	0.54	0.56	0.13	0.34	0.08	0.79	0.43	0.64	0.61	0.75	0.27	0.58	0.50	0.70	0.65	0.52	0.18	0.63		
V	0.32	0.39	0.44	0.69	0.41	0.33	0.51	-0.01	0.39	0.13	0.61	0.47	0.42	0.28	0.70	0.64	0.75	0.40	0.46	0.65	0.65	0.59	0.28	0.59	
Zn	0.33	0.51	0.27	0.46	0.00	0.22	0.33	0.24	0.08	-0.14	0.62	0.60	0.31	0.39	0.12	**0.81**	0.30	0.25	0.22	0.54	0.39	0.21	0.59	0.24	0.46

Tab. 17.2: Winter mean concentrations: Across cities Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.90**																								
Al	0.49	0.62																							
As	**0.81**	**0.83**	0.73																						
Bi	-0.18	-0.19	0.01	0.04																					
Br	**0.89**	**0.86**	0.61	**0.82**	-0.19																				
Ca	0.12	0.39	0.74	0.37	-0.09	0.32																			
Cd	0.09	0.08	-0.09	0.15	-0.40	0.12	-0.23																		
Cl	0.76	0.66	0.44	0.76	0.07	0.69	0.11	0.10																	
Co	-0.01	-0.05	-0.31	-0.15	0.58	-0.14	-0.26	-0.44	0.15																
Cu	0.59	0.68	0.77	**0.83**	0.04	0.66	0.37	0.16	0.51	-0.15															
Fe	**0.87**	**0.90**	0.63	**0.81**	-0.23	**0.89**	0.29	0.23	0.67	-0.07	0.75														
Ga	**0.83**	**0.80**	0.54	**0.80**	0.11	**0.90**	0.14	0.09	0.64	0.11	0.73	**0.83**													
K	**0.84**	0.76	0.54	0.67	-0.19	0.74	0.17	-0.14	0.53	-0.17	0.60	0.68	0.67												
Mg	0.52	0.45	0.58	0.70	0.15	0.59	0.33	0.11	**0.85**	0.04	0.57	0.53	0.55	0.32											
Mn	0.78	**0.84**	0.48	0.76	-0.26	0.77	0.27	0.36	0.56	-0.19	0.66	**0.89**	0.68	0.62	0.34										
Na	0.23	0.27	0.38	0.49	0.24	0.22	0.15	0.32	0.70	0.14	0.51	0.33	0.28	0.04	**0.81**	0.24									
Ni	0.54	0.57	0.49	0.46	0.07	0.65	0.37	-0.12	0.47	0.12	0.45	0.57	0.65	0.35	0.53	0.42	0.25								
P	0.34	0.34	0.65	0.69	0.21	0.31	0.27	0.05	0.40	-0.10	**0.81**	0.38	0.40	0.39	0.58	0.28	0.56	0.22							
Pb	**0.90**	**0.91**	0.64	**0.93**	-0.08	**0.95**	0.33	0.16	0.75	-0.09	0.76	**0.91**	**0.90**	0.74	0.61	**0.86**	0.34	0.55	0.43						
S	**0.94**	**0.87**	0.39	**0.80**	-0.07	**0.81**	0.07	0.04	0.67	0.11	0.56	0.79	**0.80**	0.76	0.42	0.72	0.18	0.44	0.37	**0.85**					
Se	0.30	0.33	0.10	0.43	0.28	0.14	0.01	-0.19	0.50	0.50	0.26	0.31	0.21	0.05	0.37	0.25	0.43	0.17	0.40	0.30	0.44				
Si	0.41	0.52	**0.92**	0.68	0.03	0.47	0.60	0.00	0.35	-0.33	**0.85**	0.57	0.45	0.52	0.50	0.48	0.42	0.41	0.78	0.54	0.32	0.08			
Ti	0.48	0.62	0.75	**0.81**	0.06	0.67	0.52	0.11	0.51	-0.30	**0.80**	0.58	0.65	0.45	0.58	0.57	0.43	0.49	0.57	0.75	0.46	0.14	0.70		
V	0.51	0.68	0.55	0.77	0.26	0.55	0.47	-0.08	0.60	0.19	0.62	0.56	0.56	0.34	0.53	0.58	0.50	0.41	0.49	0.70	0.61	0.65	0.45	0.71	
Zn	0.46	0.59	0.41	0.46	-0.06	0.31	0.11	0.27	0.38	-0.11	0.56	0.59	0.34	0.49	0.13	0.68	0.37	0.09	0.27	0.48	0.37	0.13	0.54	0.34	0.34

Tab. 17.3: Summer mean concentrations: Across cities Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.86**																								
Al	0.48	0.38																							
As	0.76	0.56	0.57																						
Bi	0.33	0.15	0.25	0.27																					
Br	0.75	0.70	0.73	0.62	0.48																				
Ca	0.28	0.24	0.79	0.27	0.28	0.47																			
Cd	-0.20	-0.10	-0.18	0.11	-0.11	-0.17	-0.26																		
Cl	-0.19	-0.27	-0.25	0.00	0.21	-0.17	-0.32	0.29																	
Co	0.14	0.14	0.49	0.07	0.70	0.59	0.48	-0.20	0.12																
Cu	0.62	0.54	0.65	**0.87**	0.31	0.62	0.46	0.24	-0.07	0.25															
Fe	0.79	0.78	0.59	0.59	0.26	0.75	0.43	-0.13	-0.21	0.31	0.65														
Ga	0.60	0.69	0.64	0.56	0.47	0.76	0.48	0.06	0.01	0.62	0.75	0.75													
K	0.54	0.54	0.73	0.62	-0.02	0.52	0.58	-0.04	-0.17	0.06	0.65	0.56	0.60												
Mg	0.60	0.38	**0.82**	0.75	0.44	0.69	0.59	-0.11	0.14	0.47	0.71	0.52	0.67	0.65											
Mn	0.60	0.44	0.24	0.51	0.22	0.31	0.38	-0.12	-0.09	0.02	0.51	0.72	0.39	0.37	0.34										
Na	0.51	0.20	0.49	0.74	0.56	0.41	0.33	0.10	0.36	0.32	0.74	0.41	0.56	0.39	**0.83**	0.47									
Ni	0.62	0.55	0.55	0.61	0.40	0.62	0.54	-0.21	-0.05	0.34	0.73	0.63	0.67	0.58	0.62	0.55	0.59								
P	0.33	0.10	0.49	0.71	0.40	0.39	0.24	0.17	0.00	0.31	0.73	0.21	0.40	0.19	0.65	0.13	0.74	0.40							
Pb	**0.83**	0.74	0.64	**0.86**	0.36	0.78	0.46	0.00	-0.04	0.33	**0.85**	**0.82**	**0.81**	0.74	0.74	0.68	0.65	0.75	0.46						
S	**0.92**	0.66	0.61	**0.82**	0.40	0.71	0.41	-0.25	-0.20	0.22	0.71	**0.80**	0.57	0.54	0.71	0.70	0.67	0.63	0.52	**0.84**					
Se	0.48	0.25	0.39	0.53	0.75	0.49	0.36	-0.03	0.15	0.66	0.59	0.43	0.60	0.10	0.62	0.47	0.76	0.51	0.69	0.60	0.64				
Si	0.33	0.28	0.78	0.51	0.31	0.55	0.74	0.12	-0.30	0.41	0.72	0.39	0.52	0.48	0.57	0.16	0.42	0.55	0.61	0.51	0.45	0.44			
Ti	0.45	0.30	**0.80**	0.78	0.18	0.56	0.43	0.11	-0.01	0.25	0.78	0.37	0.56	0.68	**0.84**	0.11	0.66	0.50	0.77	0.65	0.57	0.43	0.69		
V	0.61	0.26	0.40	0.70	0.51	0.37	0.29	-0.04	0.19	0.10	0.58	0.40	0.41	0.50	0.73	0.59	**0.85**	0.57	0.45	0.67	0.71	0.59	0.23	0.50	
Zn	0.50	0.42	0.22	0.55	0.20	0.23	0.43	0.12	-0.13	-0.03	0.67	0.60	0.42	0.42	0.27	**0.89**	0.47	0.61	0.25	0.67	0.59	0.46	0.39	0.19	0.51

Tab. 17.4: Weekday mean concentrations: Across cities Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.91**																								
Al	0.35	0.47																							
As	0.74	0.74	0.60																						
Bi	0.35	0.28	0.11	0.24																					
Br	**0.86**	0.79	0.56	0.77	0.28																				
Ca	0.13	0.27	**0.83**	0.38	-0.01	0.29																			
Cd	0.09	-0.04	-0.05	0.18	0.30	0.18	-0.24																		
Cl	0.63	0.48	0.22	0.55	0.19	0.69	-0.01	0.09																	
Co	0.33	0.29	0.00	0.15	0.77	0.26	-0.05	0.01	0.33																
Cu	0.64	0.69	0.59	**0.86**	0.33	0.76	0.47	0.17	0.36	0.18															
Fe	0.79	**0.80**	0.51	**0.82**	0.34	**0.86**	0.37	0.18	0.47	0.23	**0.90**														
Ga	0.76	0.74	0.47	0.73	0.28	**0.90**	0.15	0.09	0.62	0.34	0.71	**0.80**													
K	0.53	0.63	0.65	0.69	-0.01	0.61	0.48	0.16	0.27	-0.04	0.63	0.50	0.55												
Mg	0.36	0.39	0.77	0.75	0.20	0.53	0.61	0.00	0.46	0.14	0.68	0.50	0.48	0.61											
Mn	0.57	0.59	0.30	0.74	0.23	0.51	0.37	0.20	0.29	0.04	0.78	**0.82**	0.42	0.38	0.38										
Na	0.06	0.13	0.46	0.53	0.22	0.13	0.42	-0.05	0.22	0.08	0.55	0.32	0.12	0.19	0.77	0.45									
Ni	0.46	0.34	0.21	0.46	0.07	0.59	0.02	-0.15	0.69	0.10	0.39	0.54	0.69	0.02	0.37	0.34	0.26								
P	0.29	0.27	0.47	0.52	0.40	0.26	0.39	0.01	0.06	0.19	0.60	0.36	0.20	0.23	0.63	0.34	0.75	0.10							
Pb	0.78	0.77	0.57	**0.95**	0.31	**0.86**	0.39	0.25	0.55	0.20	**0.90**	**0.91**	0.78	0.69	0.68	0.79	0.40	0.48	0.40						
S	0.78	0.73	0.45	0.77	0.37	0.56	0.32	-0.04	0.34	0.25	0.61	0.67	0.49	0.42	0.53	0.63	0.39	0.32	0.57	0.71					
Se	0.34	0.39	0.12	0.44	0.60	0.14	0.09	0.04	0.21	0.64	0.29	0.36	0.21	-0.01	0.31	0.43	0.38	0.14	0.35	0.39	0.59				
Si	0.24	0.40	0.52	0.30	0.21	0.24	0.48	0.00	-0.01	-0.04	0.46	0.31	0.09	0.34	0.31	0.29	0.41	-0.19	0.57	0.23	0.22	0.02			
Ti	0.28	0.41	0.77	0.66	0.03	0.48	0.51	0.12	0.27	-0.06	0.56	0.37	0.48	**0.84**	**0.82**	0.23	0.46	0.14	0.33	0.61	0.35	0.07	0.31		
V	0.23	0.29	0.42	0.65	0.10	0.21	0.45	-0.07	0.21	-0.02	0.53	0.43	0.15	0.21	0.61	0.67	0.78	0.30	0.59	0.51	0.61	0.54	0.27	0.35	
Zn	0.23	0.37	0.11	0.47	0.09	0.13	0.27	0.13	-0.01	-0.12	0.59	0.51	0.07	0.25	0.15	**0.83**	0.45	-0.03	0.31	0.45	0.33	0.26	0.50	0.09	0.58

Tab. 17.5: Weekend mean concentrations: Across cities Pearson correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.91**																								
Al	0.35	0.47																							
As	0.74	0.74	0.60																						
Bi	0.35	0.28	0.11	0.24																					
Br	**0.86**	0.79	0.56	0.77	0.28																				
Ca	0.13	0.27	**0.83**	0.38	-0.01	0.29																			
Cd	0.09	-0.04	-0.05	0.18	0.30	0.18	-0.24																		
Cl	0.63	0.48	0.22	0.55	0.19	0.69	-0.01	0.09																	
Co	0.33	0.29	0.00	0.15	0.77	0.26	-0.05	0.01	0.33																
Cu	0.64	0.69	0.59	**0.86**	0.33	0.76	0.47	0.17	0.36	0.18															
Fe	0.79	**0.80**	0.51	**0.82**	0.34	**0.86**	0.37	0.18	0.47	0.23	**0.90**														
Ga	0.76	0.74	0.47	0.73	0.28	**0.90**	0.15	0.09	0.62	0.34	0.71	**0.80**													
K	0.53	0.63	0.65	0.69	-0.01	0.61	0.48	0.16	0.27	-0.04	0.63	0.50	0.55												
Mg	0.36	0.39	0.77	0.75	0.20	0.53	0.61	0.00	0.46	0.14	0.68	0.50	0.48	0.61											
Mn	0.57	0.59	0.30	0.74	0.23	0.51	0.37	0.20	0.29	0.04	0.78	**0.82**	0.42	0.38	0.38										
Na	0.06	0.13	0.46	0.53	0.22	0.13	0.42	-0.05	0.22	0.08	0.55	0.32	0.12	0.19	0.77	0.45									
Ni	0.46	0.34	0.21	0.46	0.07	0.59	0.02	-0.15	0.69	0.10	0.39	0.54	0.69	0.02	0.37	0.34	0.26								
P	0.29	0.27	0.47	0.52	0.40	0.26	0.39	0.01	0.06	0.19	0.60	0.36	0.20	0.23	0.63	0.34	0.75	0.10							
Pb	0.78	0.77	0.57	**0.95**	0.31	**0.86**	0.39	0.25	0.55	0.20	**0.90**	**0.91**	0.78	0.69	0.68	0.79	0.40	0.48	0.40						
S	0.78	0.73	0.45	0.77	0.37	0.56	0.32	-0.04	0.34	0.25	0.61	0.67	0.49	0.42	0.53	0.63	0.39	0.32	0.57	0.71					
Se	0.34	0.39	0.12	0.44	0.60	0.14	0.09	0.04	0.21	0.64	0.29	0.36	0.21	-0.01	0.31	0.43	0.38	0.14	0.35	0.39	0.59				
Si	0.24	0.40	0.52	0.30	0.21	0.24	0.48	0.00	-0.01	-0.04	0.46	0.31	0.09	0.34	0.31	0.29	0.41	-0.19	0.57	0.23	0.22	0.02			
Ti	0.28	0.41	0.77	0.66	0.03	0.48	0.51	0.12	0.27	-0.06	0.56	0.37	0.48	**0.84**	**0.82**	0.23	0.46	0.14	0.33	0.61	0.35	0.07	0.31		
V	0.23	0.29	0.42	0.65	0.10	0.21	0.45	-0.07	0.21	-0.02	0.53	0.43	0.15	0.21	0.61	0.67	0.78	0.30	0.59	0.51	0.61	0.54	0.27	0.35	
Zn	0.23	0.37	0.11	0.47	0.09	0.13	0.27	0.13	-0.01	-0.12	0.59	0.51	0.07	0.25	0.15	**0.83**	0.45	-0.03	0.31	0.45	0.33	0.26	0.50	0.09	0.58

Tab. 18.1: Annual mean concentrations: Across cities Spearman correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.87**																								
Al	0.52	0.66																							
As	**0.82**	0.73	0.64																						
Bi	0.10	-0.08	0.18	0.17																					
Br	**0.80**	0.75	0.68	0.79	0.15																				
Ca	0.35	0.58	**0.88**	0.50	0.17	0.54																			
Cd	-0.01	-0.10	-0.19	0.03	-0.52	-0.14	-0.37																		
Cl	0.62	0.40	0.18	0.60	0.26	0.59	0.12	-0.20																	
Co	0.10	0.11	0.44	0.06	0.64	0.29	0.47	-0.68	0.19																
Cu	0.78	0.76	0.76	**0.83**	0.12	0.71	0.62	0.07	0.33	0.20															
Fe	0.72	**0.86**	0.70	0.75	-0.02	0.69	0.62	0.10	0.26	0.12	**0.89**														
Ga	0.71	0.73	0.78	**0.80**	0.06	**0.85**	0.59	0.00	0.34	0.19	**0.86**	**0.82**													
K	0.60	0.66	**0.82**	0.60	-0.01	0.68	0.65	-0.06	0.19	0.18	0.60	0.52	0.69												
Mg	0.47	0.39	0.54	0.70	0.28	0.69	0.59	-0.28	0.67	0.39	0.60	0.49	0.64	0.38											
Mn	**0.82**	**0.89**	0.62	**0.82**	0.09	0.68	0.53	0.03	0.41	0.05	**0.82**	**0.89**	0.73	0.60	0.43										
Na	0.35	0.26	0.31	0.57	0.40	0.38	0.47	-0.23	0.54	0.24	0.54	0.40	0.36	0.07	0.79	0.42									
Ni	0.30	0.39	0.53	0.59	-0.13	0.50	0.55	-0.10	0.43	0.01	0.51	0.48	0.63	0.43	0.71	0.44	0.52								
P	**0.83**	0.75	0.71	**0.88**	0.26	0.73	0.60	-0.05	0.47	0.31	**0.92**	0.79	0.76	0.64	0.65	**0.83**	0.60	0.48							
Pb	**0.86**	**0.83**	0.70	**0.97**	0.18	0.79	0.59	-0.03	0.55	0.13	**0.88**	**0.84**	**0.82**	0.63	0.67	**0.90**	0.56	0.57	**0.92**						
S	0.76	0.71	0.64	**0.86**	0.22	0.79	0.52	-0.14	0.43	0.26	0.78	0.76	**0.83**	0.53	0.61	0.73	0.39	0.56	**0.81**	**0.88**					
Se	0.61	0.53	0.56	0.65	0.65	0.66	0.53	-0.47	0.45	0.59	0.62	0.54	0.63	0.36	0.61	0.57	0.52	0.36	0.73	0.72	**0.81**				
Si	0.46	0.63	**0.93**	0.51	0.04	0.49	**0.83**	-0.07	0.02	0.36	0.74	0.68	0.66	0.75	0.37	0.58	0.22	0.45	0.66	0.60	0.52	0.44			
Ti	0.67	0.66	**0.90**	0.76	0.24	**0.80**	0.74	-0.13	0.48	0.36	**0.80**	0.67	**0.86**	0.76	0.71	0.66	0.47	0.61	0.76	**0.80**	0.70	0.64	0.78		
V	0.52	0.44	0.44	0.76	0.40	0.61	0.51	-0.11	0.47	0.20	0.61	0.55	0.57	0.32	0.77	0.61	**0.81**	0.47	0.72	0.76	0.66	0.70	0.29	0.58	
Zn	**0.84**	**0.84**	0.60	**0.81**	0.07	0.56	0.49	0.12	0.34	0.02	**0.86**	**0.83**	0.64	0.58	0.36	**0.93**	0.44	0.33	**0.89**	**0.88**	0.70	0.52	0.62	0.62	0.57

Tab. 18.2: Winter mean concentrations: Across cities Spearman correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.92**																								
Al	0.57	0.60																							
As	**0.81**	0.75	0.73																						
Bi	-0.02	-0.10	0.16	0.13																					
Br	**0.85**	**0.83**	0.71	**0.86**	0.00																				
Ca	0.32	0.49	0.75	0.51	-0.06	0.58																			
Cd	0.09	0.08	-0.13	0.09	-0.49	0.00	0.02																		
Cl	0.78	0.62	0.57	0.69	0.20	0.74	0.32	0.05																	
Co	0.03	-0.04	-0.23	-0.25	0.35	-0.07	-0.19	-0.35	0.19																
Cu	0.65	0.65	0.68	**0.82**	0.07	0.68	0.58	0.13	0.48	-0.11															
Fe	0.74	0.79	0.66	0.79	-0.14	0.77	0.59	0.32	0.53	-0.13	**0.86**														
Ga	0.76	0.72	0.42	0.77	0.25	0.71	0.17	-0.02	0.55	0.09	0.71	0.65													
K	0.72	0.67	0.56	0.63	-0.09	0.57	0.34	-0.12	0.45	-0.17	0.59	0.43	0.53												
Mg	0.46	0.38	0.63	0.62	0.27	0.63	0.47	0.07	**0.83**	0.08	0.46	0.46	0.43	0.17											
Mn	**0.80**	**0.84**	0.55	**0.81**	-0.18	**0.81**	0.54	0.33	0.59	-0.16	0.77	**0.93**	0.68	0.50	0.41										
Na	0.43	0.32	0.51	0.56	0.35	0.46	0.39	0.25	0.75	0.08	0.52	0.50	0.34	0.11	**0.84**	0.43									
Ni	0.31	0.46	0.40	0.30	0.19	0.42	0.35	-0.14	0.35	0.07	0.39	0.42	0.53	0.20	0.47	0.34	0.30								
P	**0.80**	0.72	0.68	**0.93**	0.09	0.79	0.52	0.15	0.69	-0.12	**0.92**	**0.83**	0.73	0.60	0.62	**0.81**	0.66	0.30							
Pb	**0.86**	**0.83**	0.68	**0.96**	0.12	**0.86**	0.52	0.13	0.73	-0.13	**0.80**	**0.82**	0.77	0.62	0.58	**0.88**	0.52	0.32	**0.90**						
S	**0.92**	0.79	0.43	0.76	-0.02	0.74	0.09	0.10	0.66	0.05	0.60	0.66	**0.82**	0.64	0.39	0.69	0.32	0.25	0.74	0.77					
Se	0.44	0.41	0.29	0.70	0.27	0.56	0.28	-0.02	0.52	0.12	0.62	0.56	0.66	0.15	0.59	0.59	0.50	0.34	0.72	0.69	0.48				
Si	0.45	0.55	**0.90**	0.61	0.01	0.51	0.78	0.02	0.40	-0.23	0.71	0.70	0.33	0.49	0.48	0.57	0.44	0.40	0.63	0.60	0.31	0.26			
Ti	0.63	0.60	**0.92**	**0.81**	0.27	0.76	0.59	-0.07	0.70	-0.20	0.70	0.64	0.59	0.53	0.74	0.56	0.58	0.45	0.75	0.77	0.55	0.47	0.78		
V	0.67	0.64	0.65	**0.83**	0.35	**0.81**	0.54	-0.03	0.63	-0.01	0.76	0.72	0.65	0.44	0.59	0.73	0.57	0.39	**0.82**	**0.85**	0.60	0.67	0.51	0.72	
Zn	0.78	0.78	0.50	**0.81**	-0.12	0.63	0.35	0.34	0.48	-0.21	0.79	**0.87**	0.67	0.59	0.27	**0.89**	0.40	0.18	**0.82**	**0.85**	0.76	0.55	0.57	0.52	0.64

Tab. 18.3: Summer mean concentrations: Across cities Spearman correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.84**																								
Al	0.62	0.65																							
As	**0.90**	0.68	0.61																						
Bi	0.37	0.19	0.26	0.32																					
Br	0.73	0.64	**0.81**	0.64	0.60																				
Ca	0.50	0.58	**0.88**	0.47	0.32	0.66																			
Cd	-0.15	-0.17	-0.24	-0.01	-0.17	-0.20	-0.34																		
Cl	0.19	-0.07	-0.30	0.18	0.25	-0.02	-0.32	0.38																	
Co	0.19	0.20	0.38	0.04	0.68	0.63	0.44	-0.14	0.08																
Cu	0.74	0.73	0.76	0.79	0.36	0.74	0.66	0.11	0.07	0.35															
Fe	**0.84**	**0.87**	**0.80**	0.72	0.33	0.76	0.70	-0.17	-0.09	0.30	**0.86**														
Ga	0.63	0.71	0.65	0.51	0.45	0.76	0.60	0.09	0.15	0.63	**0.81**	0.78													
K	0.66	0.68	**0.91**	0.66	0.30	0.76	**0.90**	-0.24	-0.30	0.31	0.73	**0.80**	0.60												
Mg	0.68	0.43	0.69	0.60	0.56	0.78	0.60	-0.11	0.35	0.49	0.62	0.63	0.67	0.61											
Mn	**0.87**	**0.84**	0.68	**0.81**	0.27	0.64	0.62	-0.05	0.01	0.11	**0.80**	**0.91**	0.62	0.79	0.54										
Na	0.56	0.29	0.38	0.61	0.60	0.51	0.40	0.10	0.64	0.37	0.64	0.48	0.57	0.39	0.79	0.51									
Ni	0.65	0.59	0.66	0.63	0.37	0.69	0.77	-0.25	0.04	0.43	0.71	0.63	0.68	0.71	0.66	0.61	0.56								
P	**0.84**	**0.80**	0.71	**0.86**	0.42	0.69	0.65	0.03	0.05	0.30	**0.88**	**0.82**	0.74	0.73	0.61	0.78	0.57	0.66							
Pb	**0.89**	0.79	0.75	**0.83**	0.50	**0.85**	0.68	-0.03	0.16	0.50	**0.87**	**0.84**	**0.81**	0.79	0.74	**0.84**	0.65	0.77	**0.88**						
S	**0.93**	0.69	0.67	**0.90**	0.42	0.73	0.54	-0.24	0.12	0.19	0.75	**0.81**	0.57	0.68	0.70	**0.81**	0.62	0.62	**0.81**	**0.83**					
Se	0.54	0.37	0.42	0.45	**0.84**	0.68	0.48	-0.15	0.26	0.75	0.53	0.47	0.58	0.44	0.63	0.39	0.62	0.50	0.58	0.71	0.59				
Si	0.47	0.56	**0.94**	0.53	0.23	0.71	**0.87**	-0.09	-0.35	0.38	0.75	0.71	0.59	**0.87**	0.54	0.60	0.29	0.60	0.67	0.68	0.55	0.44			
Ti	0.66	0.64	**0.90**	0.66	0.37	**0.83**	0.75	-0.04	-0.02	0.41	0.78	0.79	0.73	**0.81**	0.75	0.69	0.51	0.61	0.73	**0.80**	0.70	0.52	**0.88**		
V	0.70	0.40	0.42	0.70	0.57	0.60	0.41	-0.05	0.43	0.21	0.59	0.51	0.45	0.50	0.77	0.60	**0.85**	0.58	0.60	0.69	0.74	0.60	0.27	0.45	
Zn	0.77	**0.80**	0.65	**0.83**	0.28	0.58	0.67	0.07	-0.04	0.16	**0.89**	**0.80**	0.67	0.75	0.44	**0.84**	0.50	0.72	**0.93**	**0.83**	0.73	0.43	0.66	0.65	0.52

Tab. 18.4: Weekday mean concentrations: Across cities Spearman correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.85**																								
Al	0.51	0.62																							
As	**0.89**	0.74	0.64																						
Bi	0.01	-0.15	0.11	0.05																					
Br	0.79	0.73	0.65	0.79	0.09																				
Ca	0.39	0.57	**0.85**	0.52	0.18	0.53																			
Cd	-0.04	-0.08	-0.14	0.01	-0.68	-0.12	-0.38																		
Cl	0.64	0.34	0.19	0.63	0.14	0.49	0.09	-0.17																	
Co	0.10	0.09	0.42	0.11	0.73	0.23	0.47	-0.74	0.11																
Cu	**0.82**	0.75	0.68	**0.86**	-0.01	0.72	0.57	0.15	0.42	0.20															
Fe	0.75	**0.87**	0.69	0.78	-0.08	0.71	0.64	0.08	0.27	0.16	**0.90**														
Ga	0.68	0.60	0.74	0.74	0.16	**0.82**	0.62	-0.07	0.26	0.36	0.76	0.74													
K	0.55	0.60	**0.80**	0.55	0.00	0.64	0.61	-0.06	0.11	0.19	0.51	0.51	0.66												
Mg	0.50	0.30	0.49	0.69	0.24	0.62	0.54	-0.28	0.68	0.32	0.53	0.41	0.60	0.35											
Mn	**0.83**	**0.89**	0.57	**0.80**	0.03	0.67	0.51	-0.01	0.33	0.11	**0.80**	**0.89**	0.65	0.56	0.34										
Na	0.45	0.20	0.22	0.58	0.37	0.37	0.39	-0.23	0.66	0.25	0.53	0.34	0.30	0.02	**0.80**	0.31									
Ni	0.40	0.42	0.71	0.55	-0.15	0.45	0.64	0.03	0.22	0.07	0.49	0.53	0.58	0.66	0.59	0.42	0.30								
P	**0.91**	0.77	0.68	**0.90**	0.13	0.77	0.59	-0.08	0.53	0.32	**0.91**	**0.80**	0.77	0.61	0.58	0.79	0.54	0.49							
Pb	**0.93**	**0.83**	0.68	**0.96**	0.04	**0.80**	0.58	-0.03	0.54	0.15	**0.89**	**0.86**	**0.81**	0.59	0.60	**0.88**	0.49	0.55	**0.92**						
S	0.75	0.65	0.59	**0.82**	0.18	0.74	0.52	-0.24	0.41	0.30	0.68	0.71	**0.83**	0.49	0.60	0.67	0.38	0.58	0.75	**0.86**					
Se	0.53	0.35	0.49	0.54	0.73	0.61	0.48	-0.62	0.36	0.75	0.46	0.40	0.66	0.39	0.55	0.43	0.46	0.30	0.64	0.56	0.72				
Si	0.47	0.62	**0.94**	0.54	-0.03	0.49	**0.81**	-0.04	0.08	0.35	0.66	0.70	0.65	0.75	0.31	0.56	0.10	0.69	0.64	0.62	0.50	0.34			
Ti	0.71	0.64	**0.88**	0.78	0.16	0.78	0.70	-0.10	0.48	0.37	0.77	0.69	**0.82**	0.72	0.66	0.64	0.43	0.66	0.77	**0.81**	0.68	0.60	0.79		
V	0.63	0.42	0.38	0.75	0.35	0.63	0.50	-0.16	0.48	0.23	0.66	0.57	0.63	0.23	0.74	0.58	0.78	0.39	0.71	0.72	0.66	0.63	0.25	0.57	
Zn	**0.84**	**0.83**	0.59	**0.81**	0.00	0.57	0.54	0.06	0.35	0.17	**0.92**	**0.88**	0.63	0.50	0.34	**0.89**	0.42	0.41	**0.90**	**0.88**	0.65	0.41	0.64	0.64	0.59

Tab. 18.5: Weekend mean concentrations: Across cities Spearman correlation of all elements.

	$PM_{2.5}$	BS	Al	As	Bi	Br	Ca	Cd	Cl	Co	Cu	Fe	Ga	K	Mg	Mn	Na	Ni	P	Pb	S	Se	Si	Ti	V
BS	**0.87**																								
Al	0.51	0.62																							
As	0.72	0.67	0.73																						
Bi	0.37	0.28	0.22	0.21																					
Br	**0.81**	0.70	0.72	**0.84**	0.29																				
Ca	0.30	0.57	**0.88**	0.58	0.11	0.53																			
Cd	0.01	0.02	-0.09	-0.03	0.42	-0.08	-0.18																		
Cl	0.58	0.44	0.30	0.49	0.31	0.65	0.17	0.11																	
Co	0.22	0.17	-0.01	-0.02	0.65	0.11	0.08	-0.01	0.30																
Cu	0.60	0.68	0.78	0.76	0.29	0.67	0.72	-0.05	0.20	0.07															
Fe	0.66	0.77	0.72	0.74	0.28	0.69	0.58	0.14	0.23	-0.09	**0.87**														
Ga	0.66	0.60	0.54	0.64	0.12	0.72	0.31	-0.16	0.38	0.04	0.60	0.65													
K	0.57	0.73	0.73	0.59	0.06	0.56	0.77	0.06	0.16	0.03	0.69	0.59	0.42												
Mg	0.37	0.38	**0.81**	0.68	0.22	0.69	0.71	-0.18	0.51	0.18	0.68	0.54	0.50	0.40											
Mn	0.78	**0.83**	0.62	**0.82**	0.30	0.74	0.50	0.11	0.44	-0.04	0.77	**0.90**	0.54	0.51	0.50										
Na	0.26	0.24	0.48	0.51	0.23	0.43	0.38	-0.13	0.49	0.14	0.52	0.37	0.33	0.06	0.76	0.46									
Ni	0.33	0.24	0.23	0.42	0.10	0.54	0.07	-0.14	0.65	0.07	0.25	0.35	0.66	-0.09	0.48	0.40	0.42								
P	0.70	0.67	0.77	**0.85**	0.43	0.74	0.62	-0.03	0.39	0.21	**0.86**	0.74	0.52	0.58	0.72	0.79	0.65	0.27							
Pb	0.73	0.75	**0.80**	**0.95**	0.33	**0.82**	0.66	0.06	0.43	0.01	**0.80**	**0.83**	0.60	0.61	0.69	**0.88**	0.49	0.35	**0.86**						
S	0.76	0.66	0.70	**0.85**	0.50	0.79	0.49	0.05	0.42	0.24	0.70	0.74	0.59	0.48	0.64	0.78	0.43	0.38	**0.87**	**0.89**					
Se	0.55	0.49	0.55	0.63	0.67	0.60	0.41	0.06	0.37	0.35	0.53	0.58	0.38	0.20	0.57	0.65	0.51	0.38	0.75	0.71	**0.86**				
Si	0.41	0.61	**0.85**	0.52	0.31	0.48	**0.83**	0.04	0.14	0.01	0.79	0.68	0.28	0.74	0.57	0.55	0.38	-0.07	0.69	0.63	0.48	0.36			
Ti	0.57	0.61	**0.93**	0.76	0.32	0.78	0.79	-0.05	0.51	0.08	0.79	0.68	0.51	0.65	**0.88**	0.64	0.62	0.31	**0.83**	**0.80**	0.71	0.55	**0.83**		
V	0.39	0.33	0.58	0.73	0.15	0.67	0.47	-0.19	0.40	-0.07	0.52	0.47	0.30	0.23	0.69	0.60	0.70	0.34	0.77	0.67	0.62	0.64	0.41	0.67	
Zn	0.70	**0.80**	0.52	0.78	0.17	0.52	0.49	0.17	0.21	-0.05	0.72	0.76	0.45	0.68	0.28	**0.85**	0.29	0.09	0.73	0.79	0.67	0.49	0.53	0.48	0.41

Tab. 19: Across-city Spearman correlation coefficient between winter and summer mean concentrations and between weekday and weekend mean concentrations, respectively.

	winter vrs. summer		weekday vrs. weekend	
	r_s	significance	r_s	significance
$PM_{2.5}$	**0.66**	0.002	**0.89**	<0.0001
BS	**0.86**	<0.0001	**0.97**	<0.0001
Al	**0.72**	0.0004	**0.87**	<0.0001
As	**0.87**	<0.0001	**0.96**	<0.0001
Bi	**0.16**	0.5	**0.01**	0.96
Br	**0.76**	0.001	**0.94**	<0.0001
Ca	**0.77**	0.0001	**0.94**	<0.0001
Cd	**0.13**	0.6	**0.45**	0.05
Cl	**0.41**	0.08	**0.85**	<0.0001
Co	**-0.02**	0.9	**0.27**	0.2
Cu	**0.86**	<0.0001	**0.88**	<0.0001
Fe	**0.88**	<0.0001	**0.95**	<0.0001
Ga	**0.29**	0.2	**0.44**	0.05
K	**0.61**	0.004	**0.94**	<0.0001
Mg	**0.54**	0.01	**0.86**	<0.0001
Mn	**0.89**	<0.0001	**0.95**	<0.0001
Na	**0.64**	0.002	**0.86**	<0.0001
Ni	**0.38**	0.1	**0.15**	0.5
P	**0.88**	<0.0001	**0.97**	<0.0001
Pb	**0.78**	<0.0001	**0.95**	<0.0001
S	**0.45**	0.046	**0.90**	<0.0001
Se	**0.41**	0.07	**0.69**	0.0008
Si	**0.83**	<0.0001	**0.94**	<0.0001
Ti	**0.76**	0.0001	**0.95**	<0.0001
V	**0.74**	0.0002	**0.96**	<0.0001
Zn	**0.83**	<0.0001	**0.90**	<0.0001

Tab. 20: Validity of elements. Legend for the respective criteria: ++ valid, + mostly valid, - not to be used. ? reflects uncertainty and caution in the interpretation (use not recommended)

	Annual mean	Summer mean	Winter mean	Comparison winter-summer	Comparison weekend-weekday	Within-city correlation	Across-city correlation	Remarks
Al	++	++	++	++	++	++	++	
As	++	++	++	++	++	++	++	
Bi	+?	+?	+?	+?	+?	+	+	close to LoD, just some indications
Br	++	++	++	++	++	++	++	
Ca	++	++	++	++	++	++	++	
Cd	-?	-?	-?	+?	+?	-?	-?	close to LoD, just some indications
Cl	++	++	++	++	++	++	++	
Co	-?	+?	-?	+?	-?	+	+	close to LoD, just some indications
Cr	-	-	-	-	-	-	-	GA has some conc.
Cu	++	++	++	++	++	++	++	
Fe	++	++	++	++	++	++	++	
Ga	+	+	+	+	+	+	+	many concentrations close to LoD
K	++	++	++	++	++	++	++	
Mg	++	++	++	++	++	++	++	
Mn	++	++	++	++	++	++	++	
Na	++	++	++	++	++	++	++	
Ni	+?	+?	+?	+?	+?	+?	+?	close to LoD, just some indications
P	++	++	++	++	++	++	++	
Pb	++	++	++	++	++	++	++	
S	+?	+?	+?	++	++	++	++	Concentrations overestimated by approx. a factor of 2.5 Many concentrations close to LoD
Se	+	+	+	+	+	+	+	many concentrations close to LoD
Si	++	++	++	++	++	++	++	
Ti	++	++	++	++	++	++	++	
V	++	++	++	++	++	++	++	
Zn	++	++	++	++	++	++	++	

Tab. 21: Rough summary of centres with high elemental concentrations with respect to the other ECRHS centre.

Centre	(Markedly) higher concentrations than in other centres	
	mostly anthropogenic sources	mostly geogene matter
AC	Se	
AL		Al, Ca
AS	Se	
BA	As, Br, Cu, Ga, Pb, V	Al, Ca, Mg, Ti
BS		
ER		
GA	Cu, Fe, Pb, S, Se, V, Zn	Ca
GN	Cu, Zn	Si
GO		
HU	As, Cu, Na, P, S, Se, V, Zn	Al, Ca, Mg, Si, Ti
IP		
NO		
OV		Al, Ca
PA	Br, Pb, S	
PS		
RE		
TA		
TU	As, Br, Cu, Fe, Ga, Pb, S	Al, Mg
UM		
UP		
VE		

9 Figures

Fig. 1.1: Boxplots of all concentrations included in the annual mean concentration for Al.

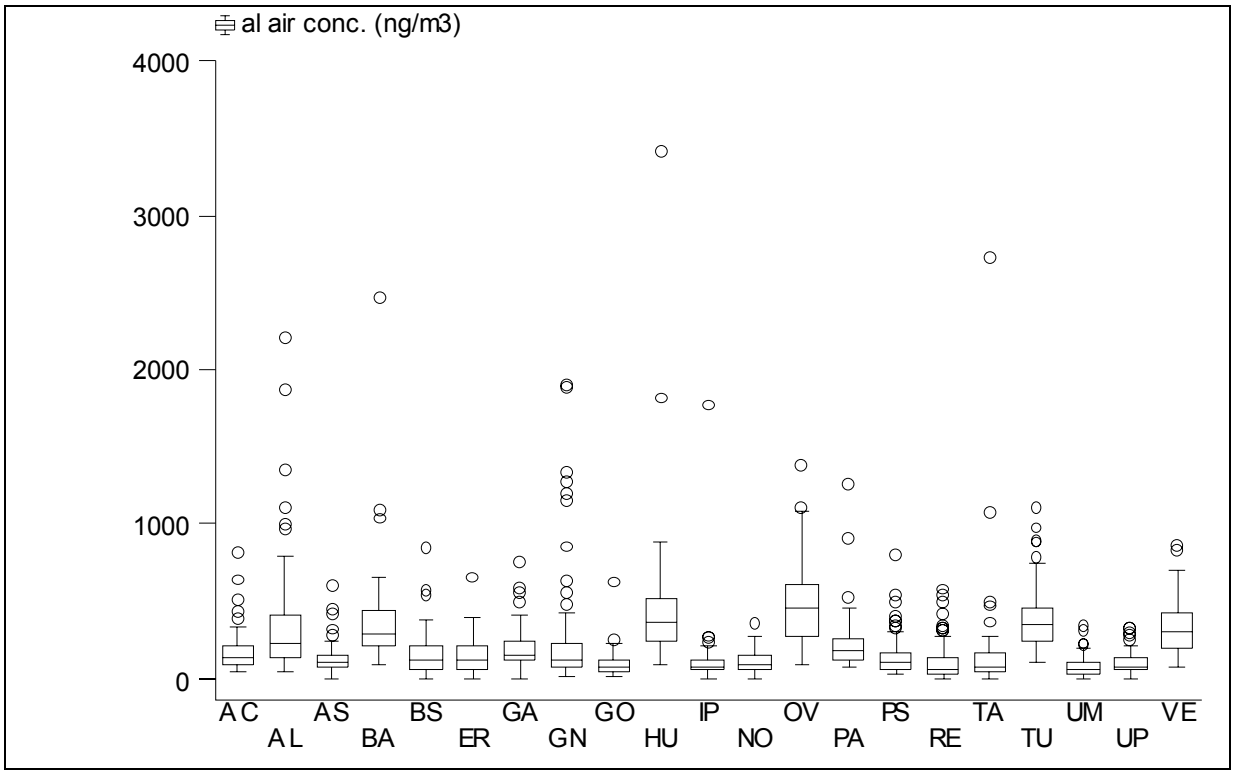


Fig. 1.2: Boxplots of all concentrations included in the annual mean concentration for As.

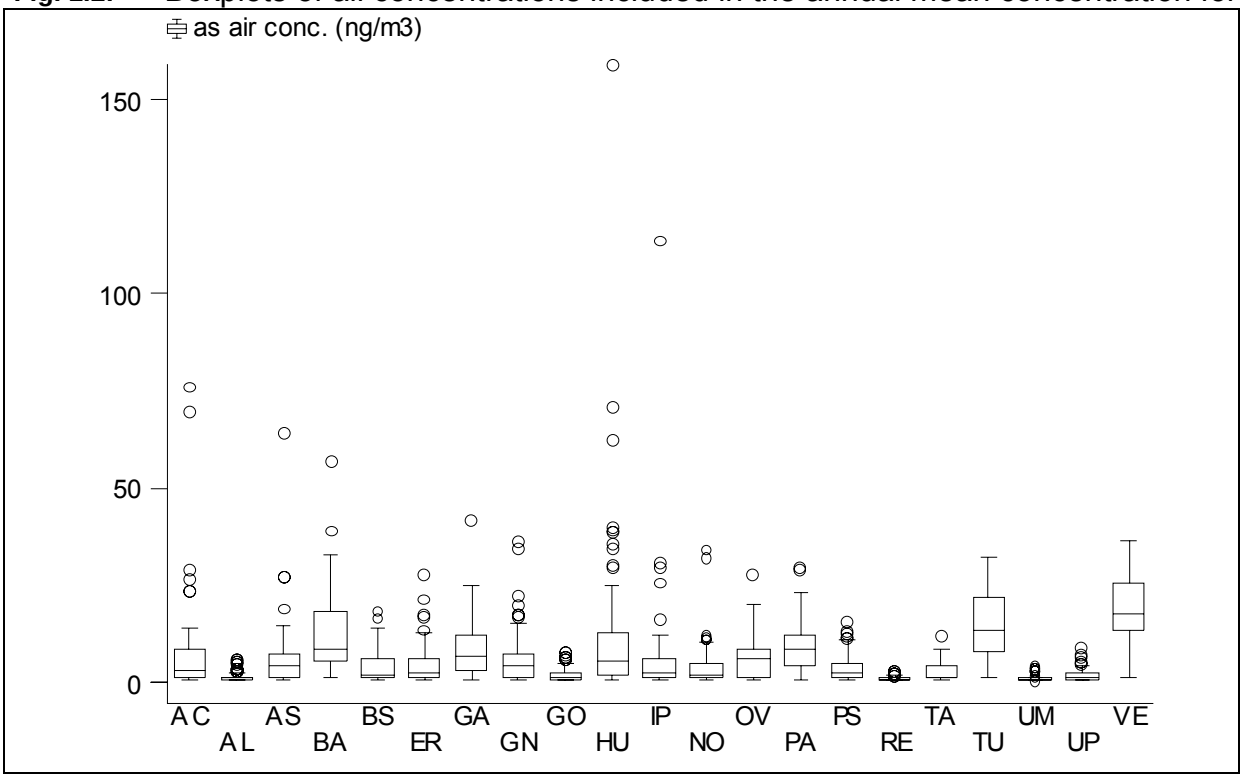


Fig. 1.3: Boxplots of all concentrations included in the annual mean concentration for Bi. Insert: only values >LoD included.

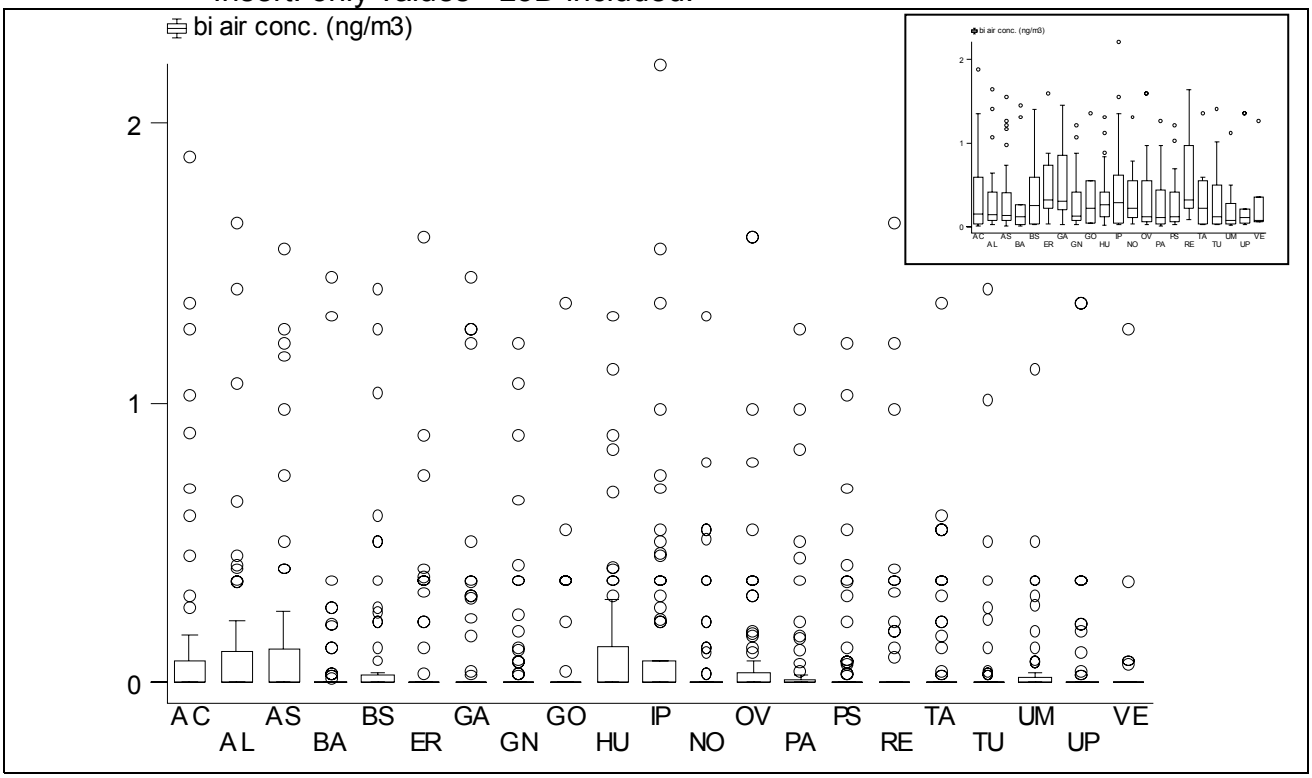


Fig. 1.4: Boxplots of all concentrations included in the annual mean concentration for Br.

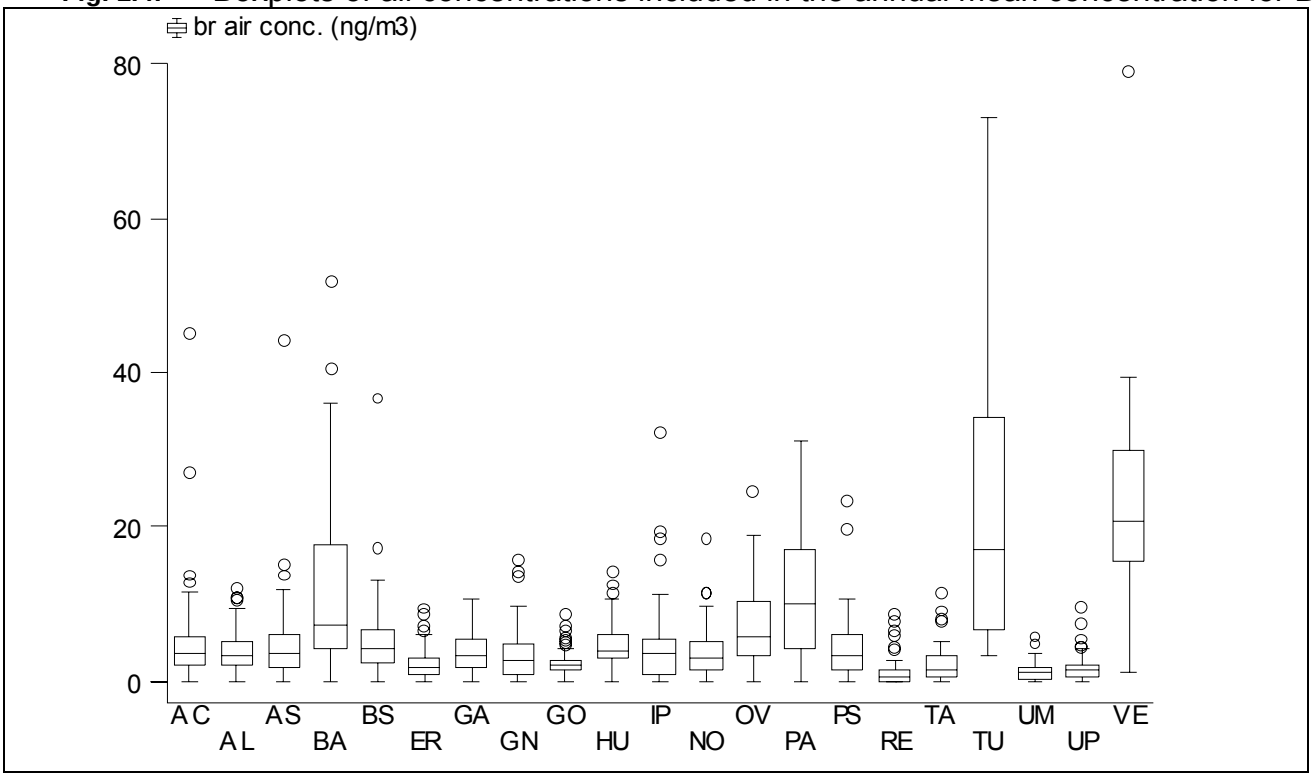


Fig. 1.5: Boxplots of all concentrations included in the annual mean concentration for Ca. Insert: The 2 values >1000 ng/m3 excluded.

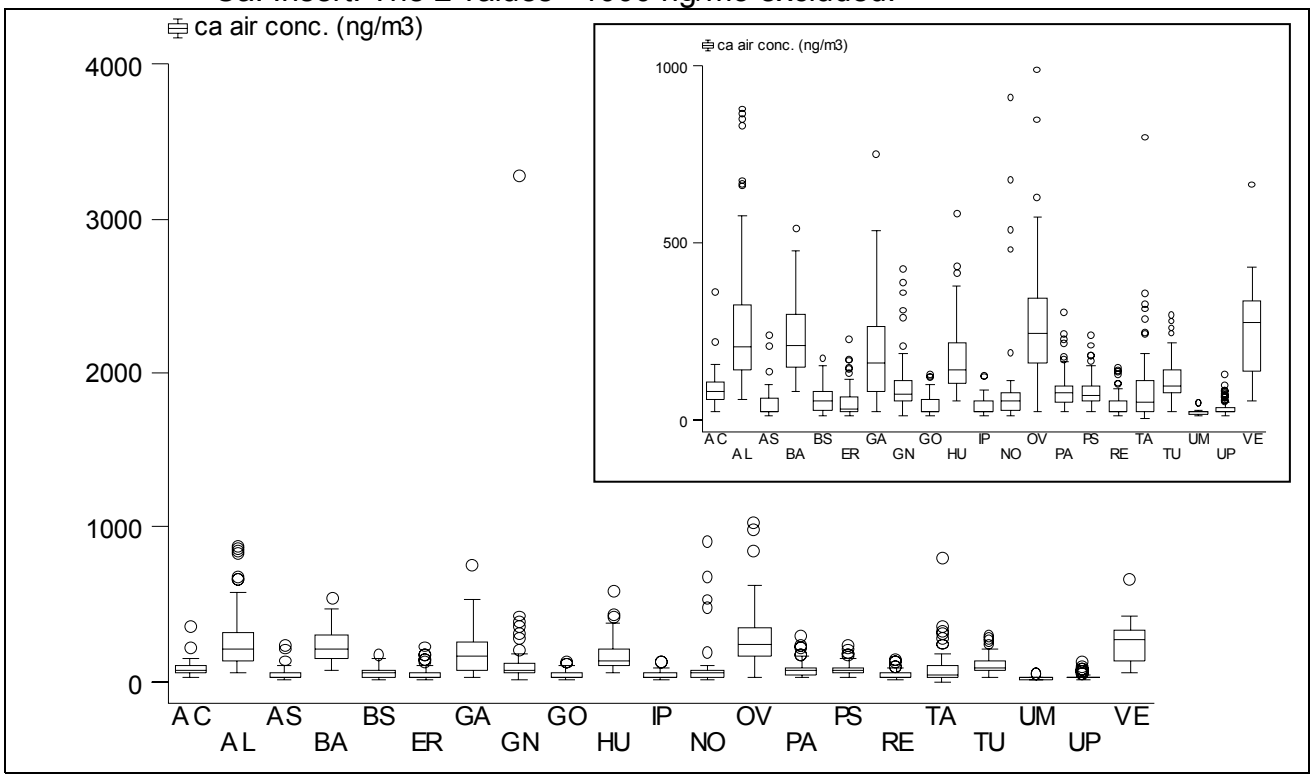


Fig. 1.6: Boxplots of all concentrations included in the annual mean concentration for Cd. Insert: only values >LoD included.

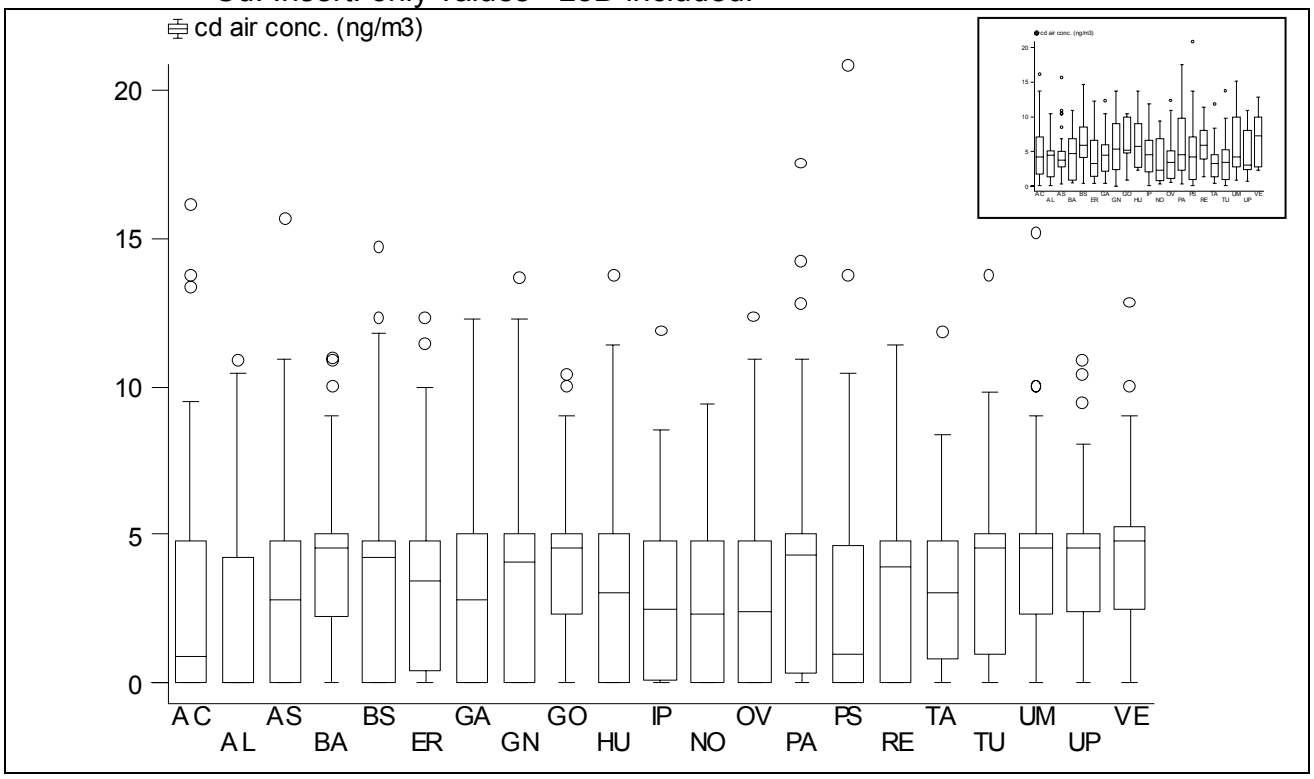


Fig. 1.7: Boxplots of all concentrations included in the annual mean concentration for Cl.

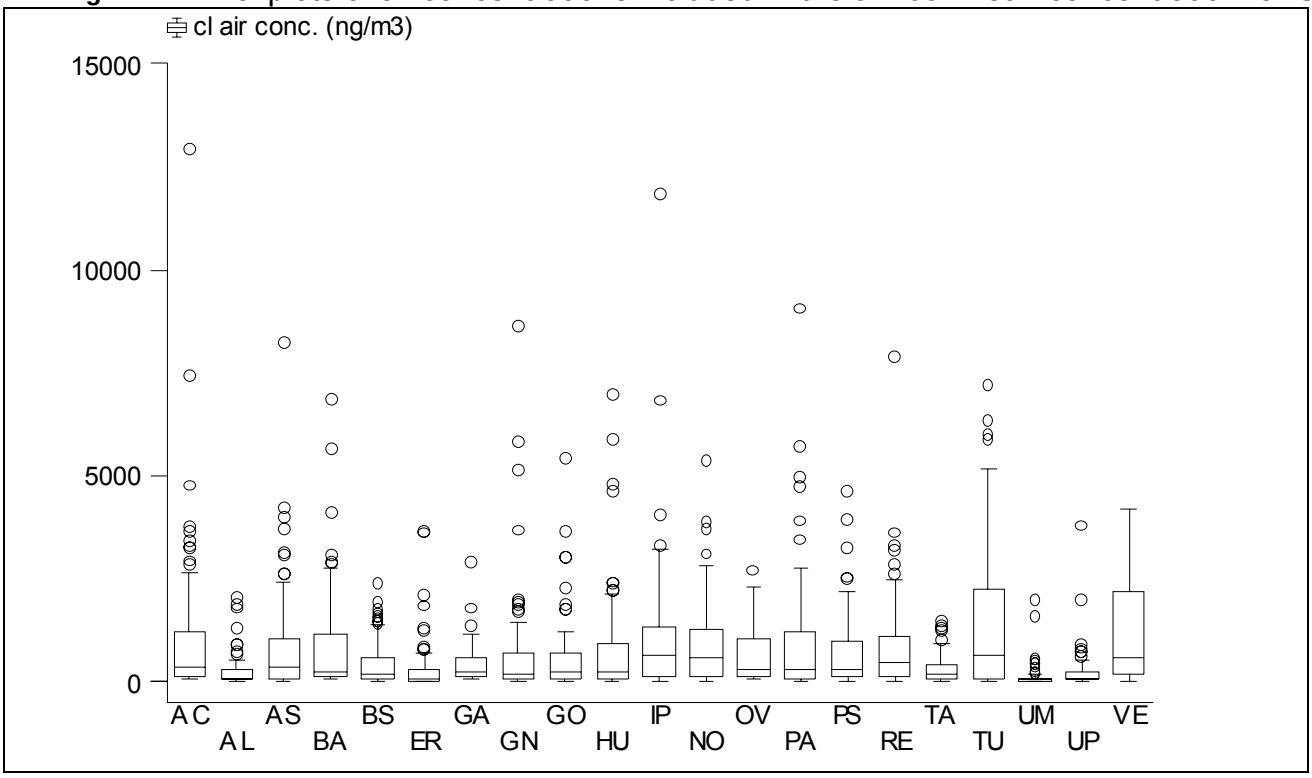


Fig. 1.8: Boxplots of all concentrations included in the annual mean concentration for Co. Insert: only values >LoD included.

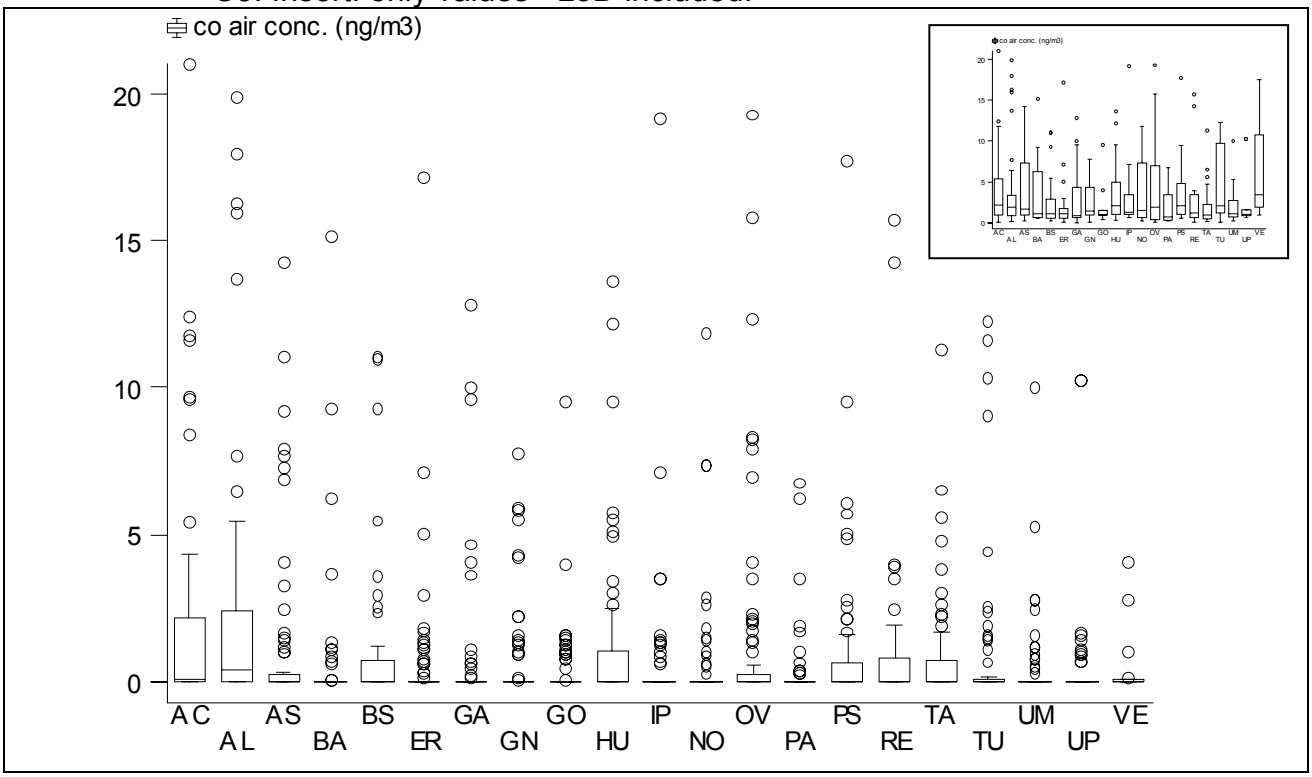


Fig. 1.9: Boxplots of all concentrations included in the annual mean concentration for Cu. Insert: The 6 values >100 ng/m3 excluded.

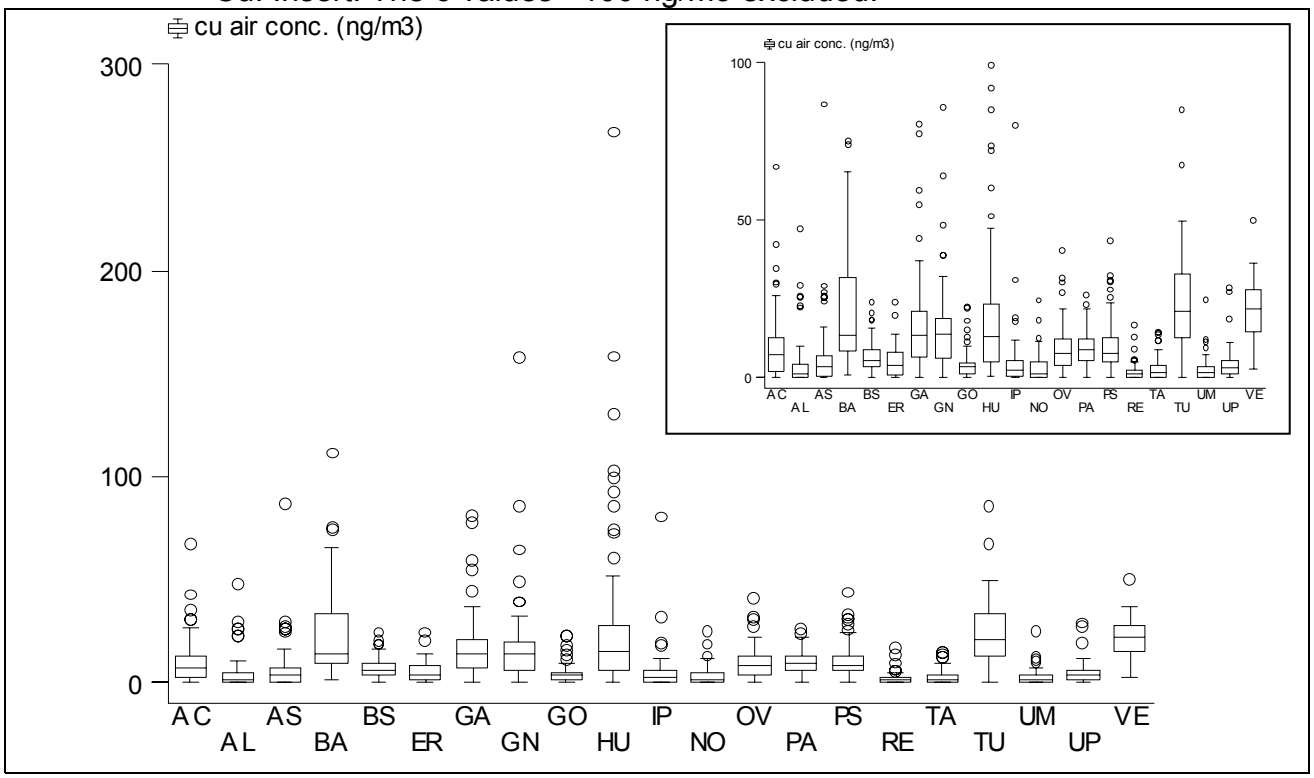


Fig. 1.10: Boxplots of all concentrations included in the annual mean concentration for Fe.

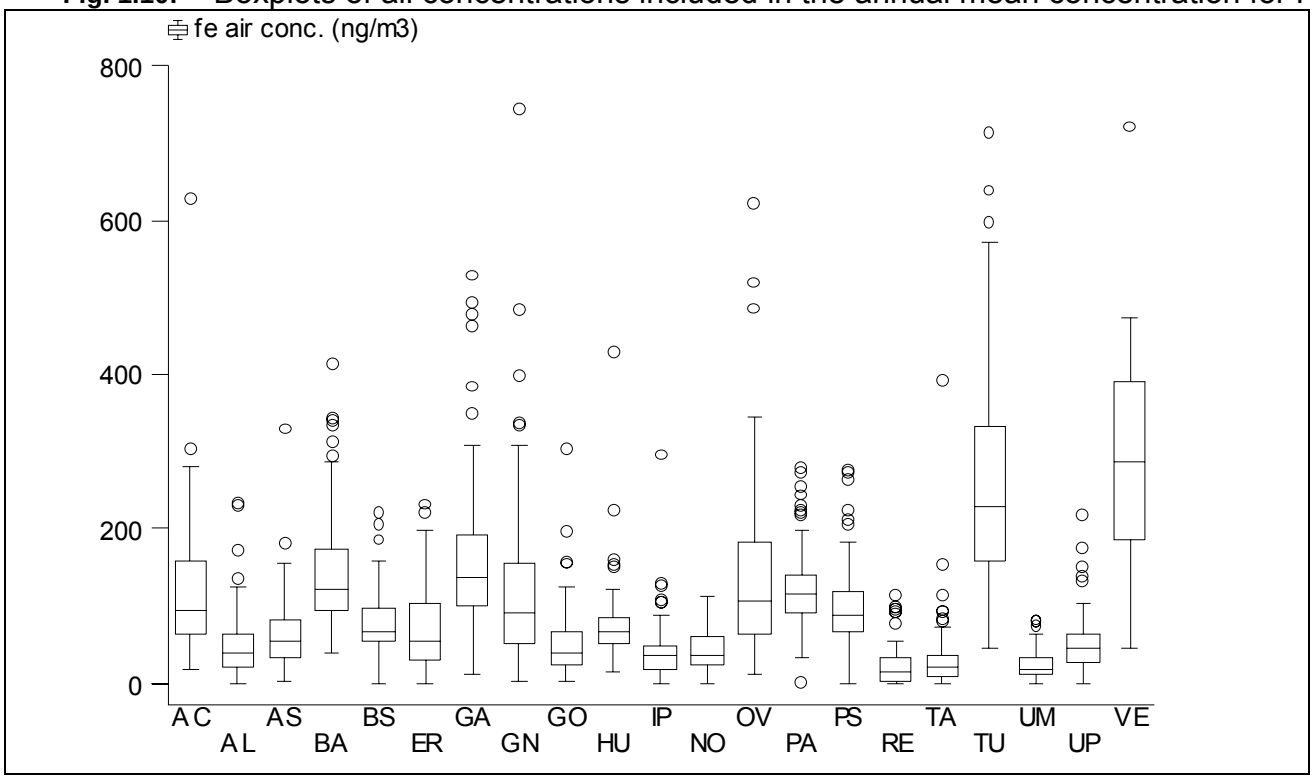


Fig. 1.11: Boxplots of all concentrations included in the annual mean concentration for Ga. Insert: only values >LoD included.

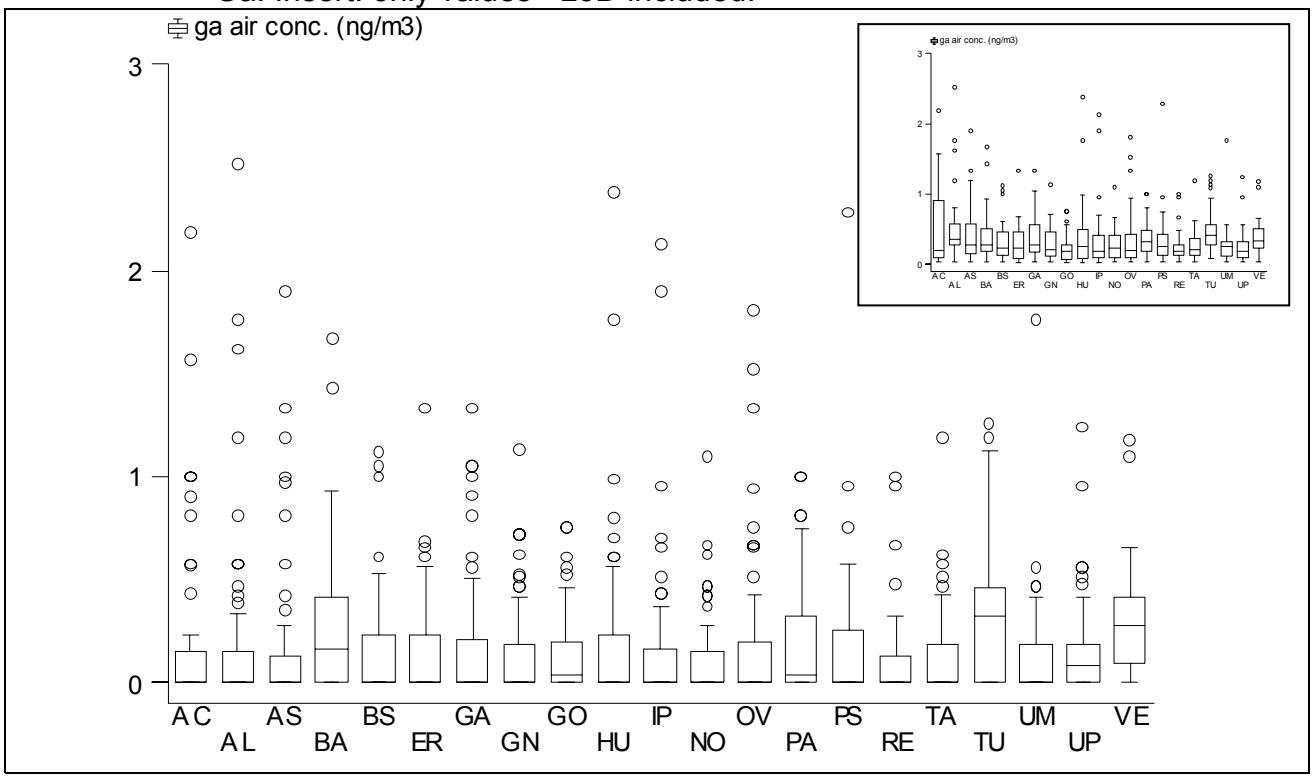


Fig. 1.12: Boxplots of all concentrations included in the annual mean concentration for K. Insert: The 3 values >1500 ng/m3 excluded.

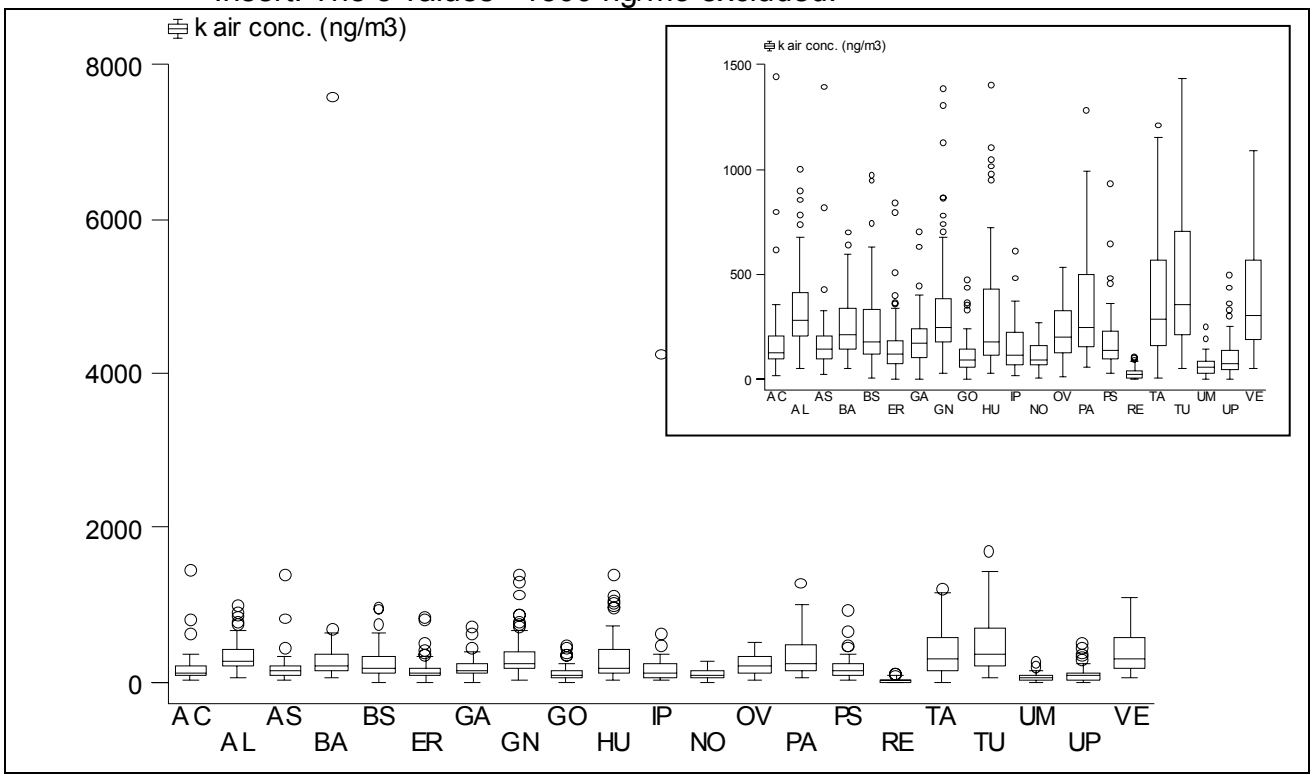


Fig. 1.13: Boxplots of all concentrations included in the annual mean concentration for Mg.

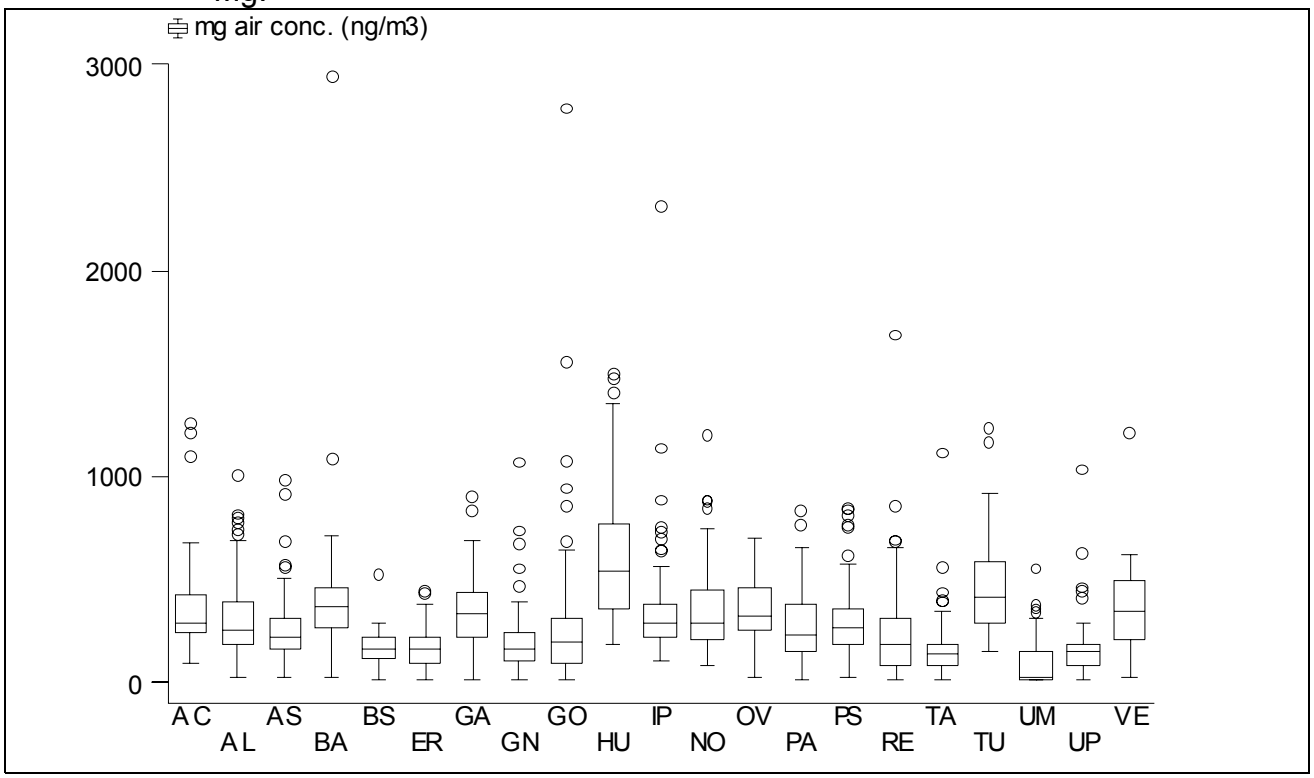


Fig. 1.14: Boxplots of all concentrations included in the annual mean concentration for Mn.

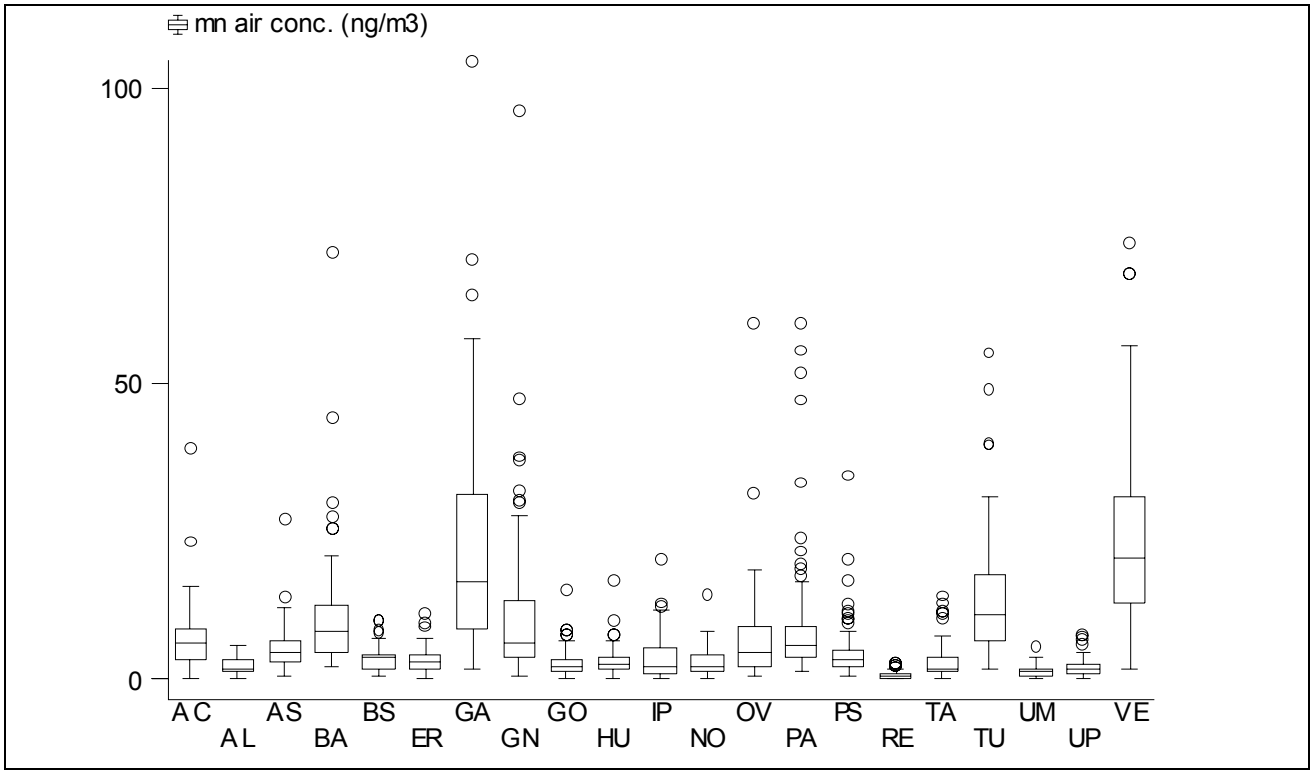


Fig. 1.15: Boxplots of all concentrations included in the annual mean concentration for Na.

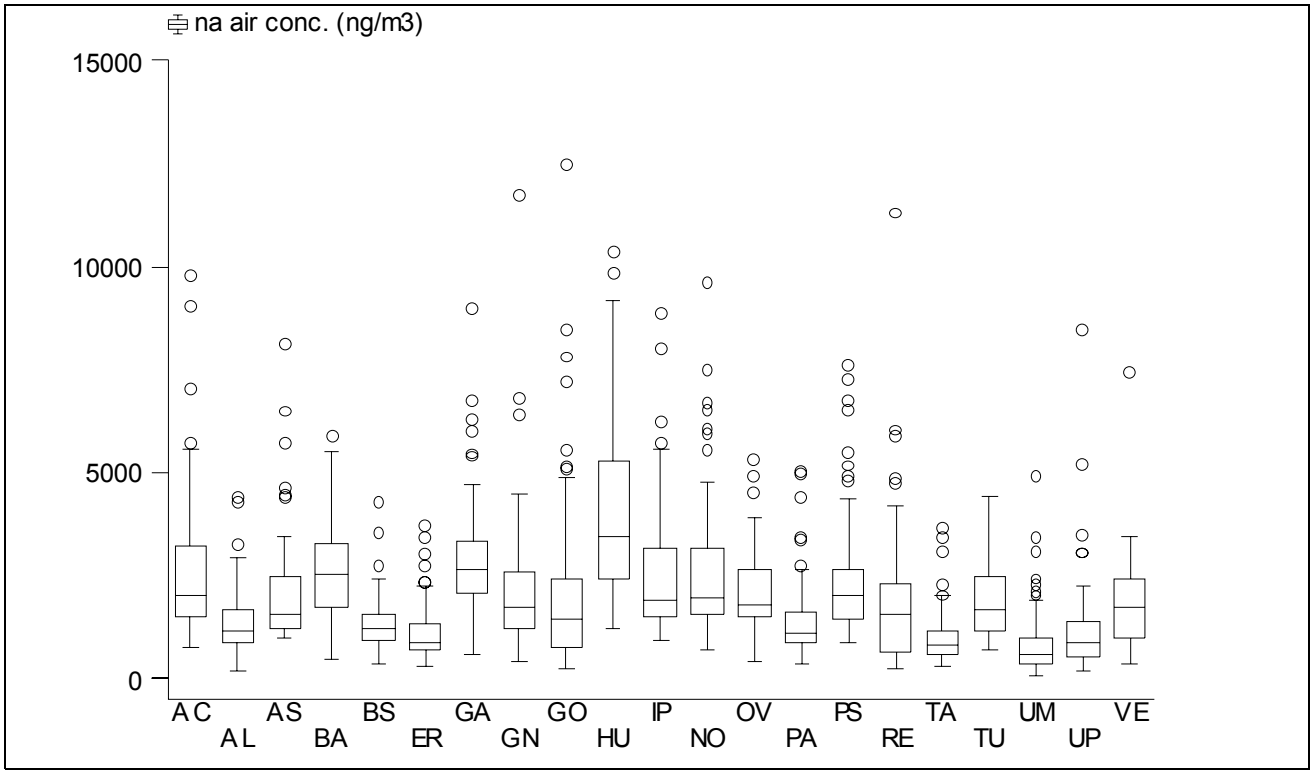


Fig. 1.16: Boxplots of all concentrations included in the annual mean concentration for Ni. Insert: only values >LoD included.

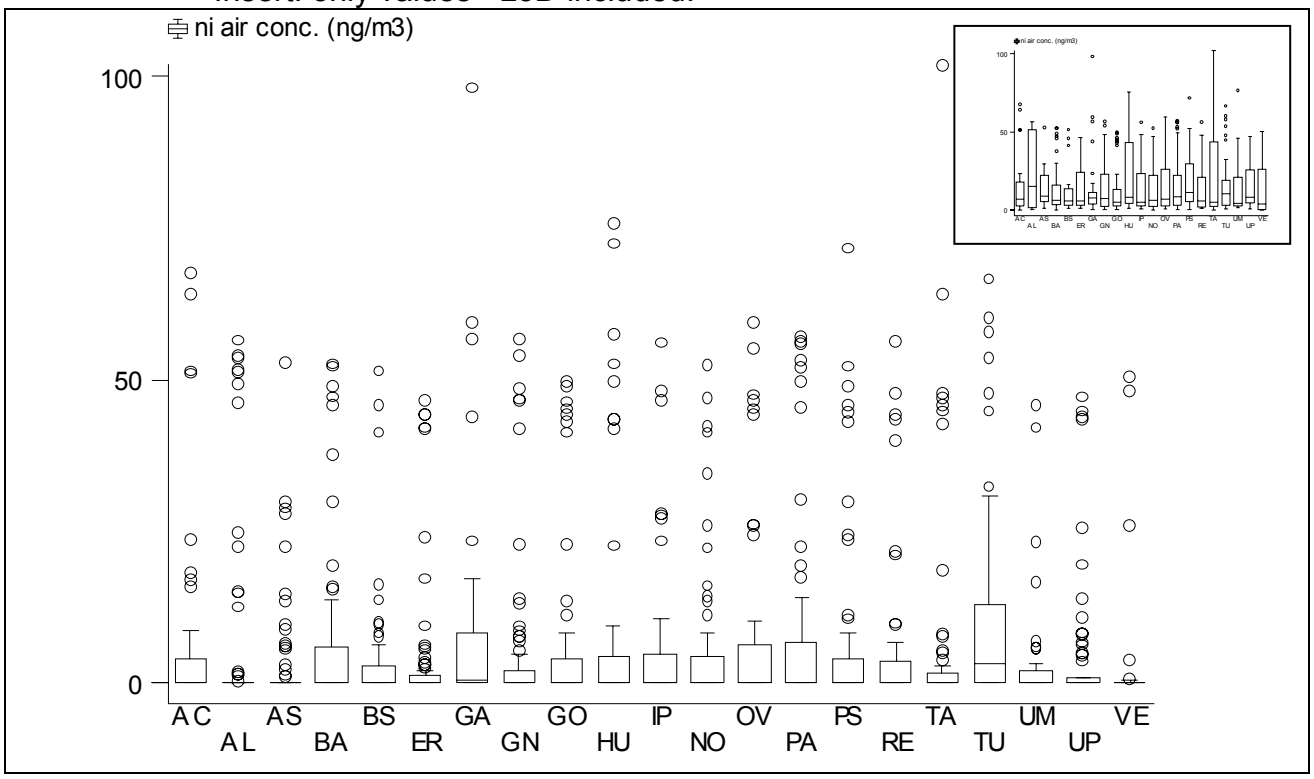


Fig. 1.17: Boxplots of all concentrations included in the annual mean concentration for P. Insert: The 9 values >300 ng/m3 of Huelva excluded.

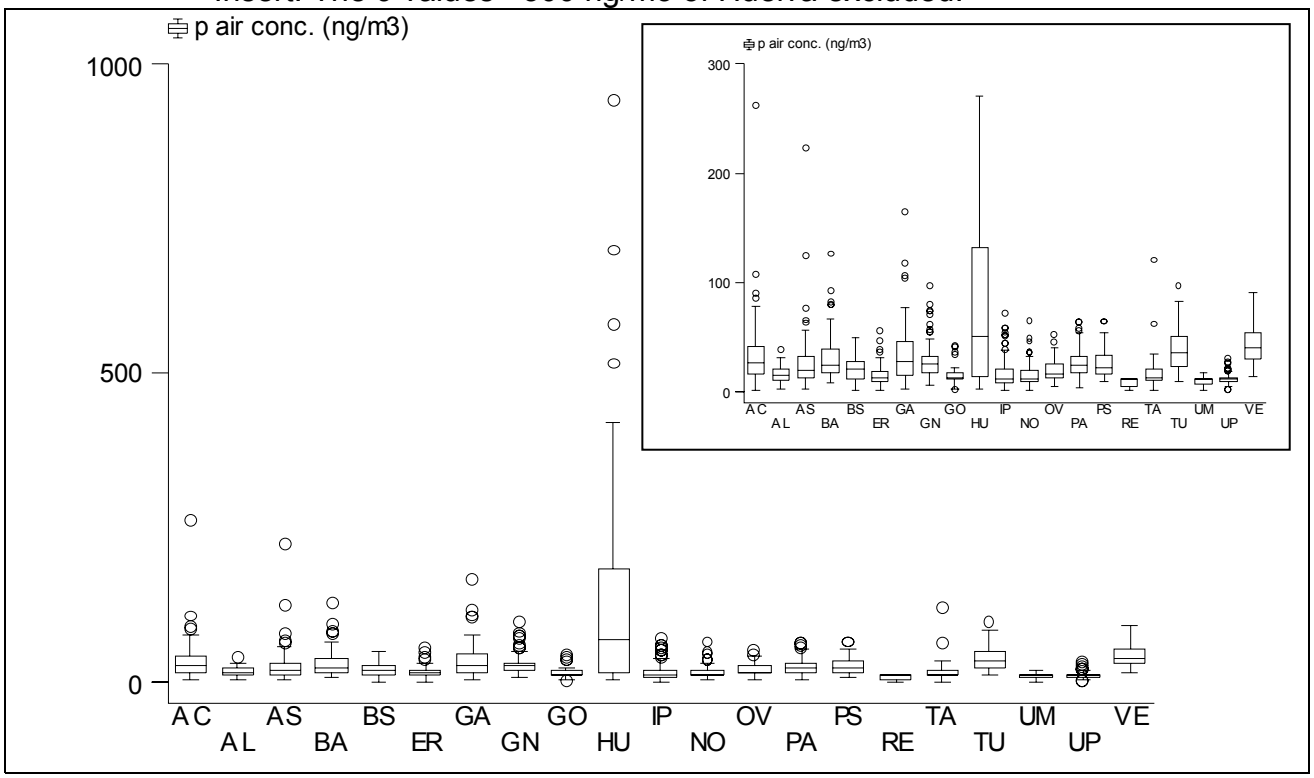


Fig. 1.18: Boxplots of all concentrations included in the annual mean concentration for Pb. Insert: The 5 values >300 ng/m3 excluded.

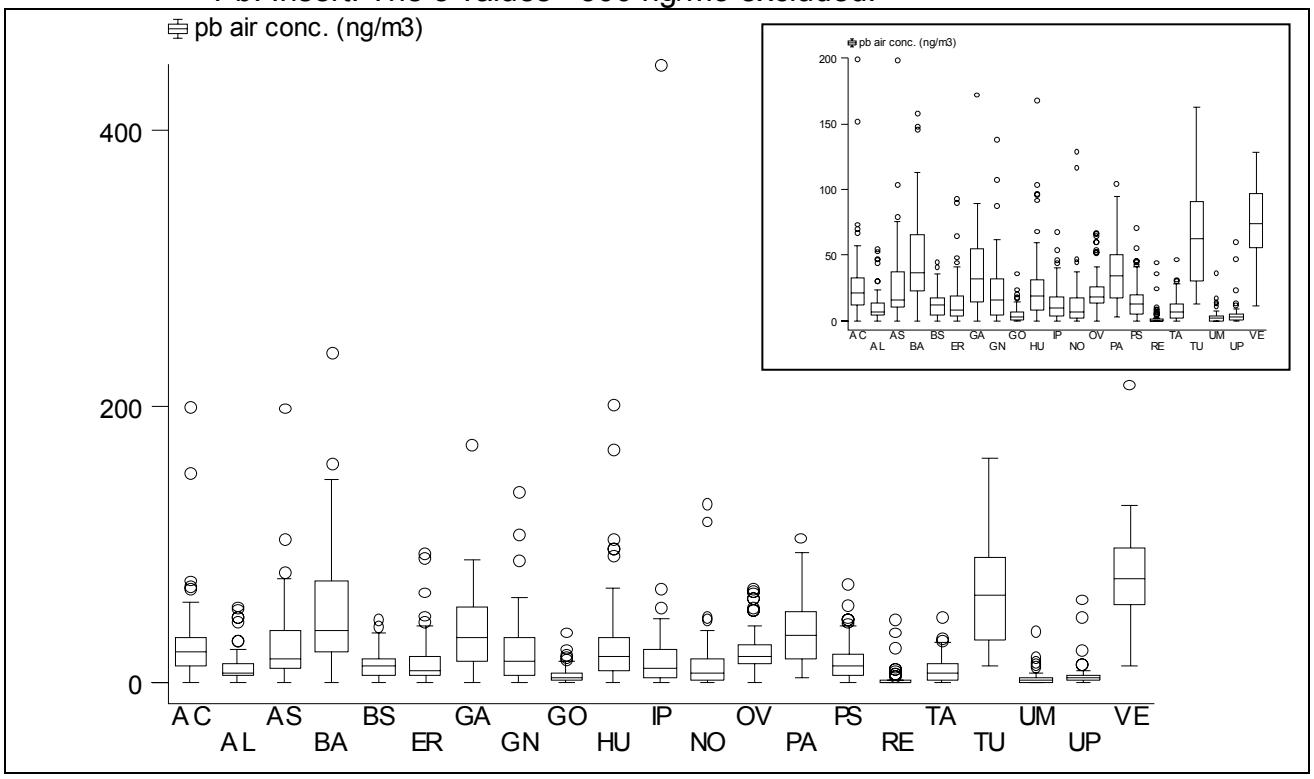


Fig. 1.19: Boxplots of all concentrations included in the annual mean concentration for S.
*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

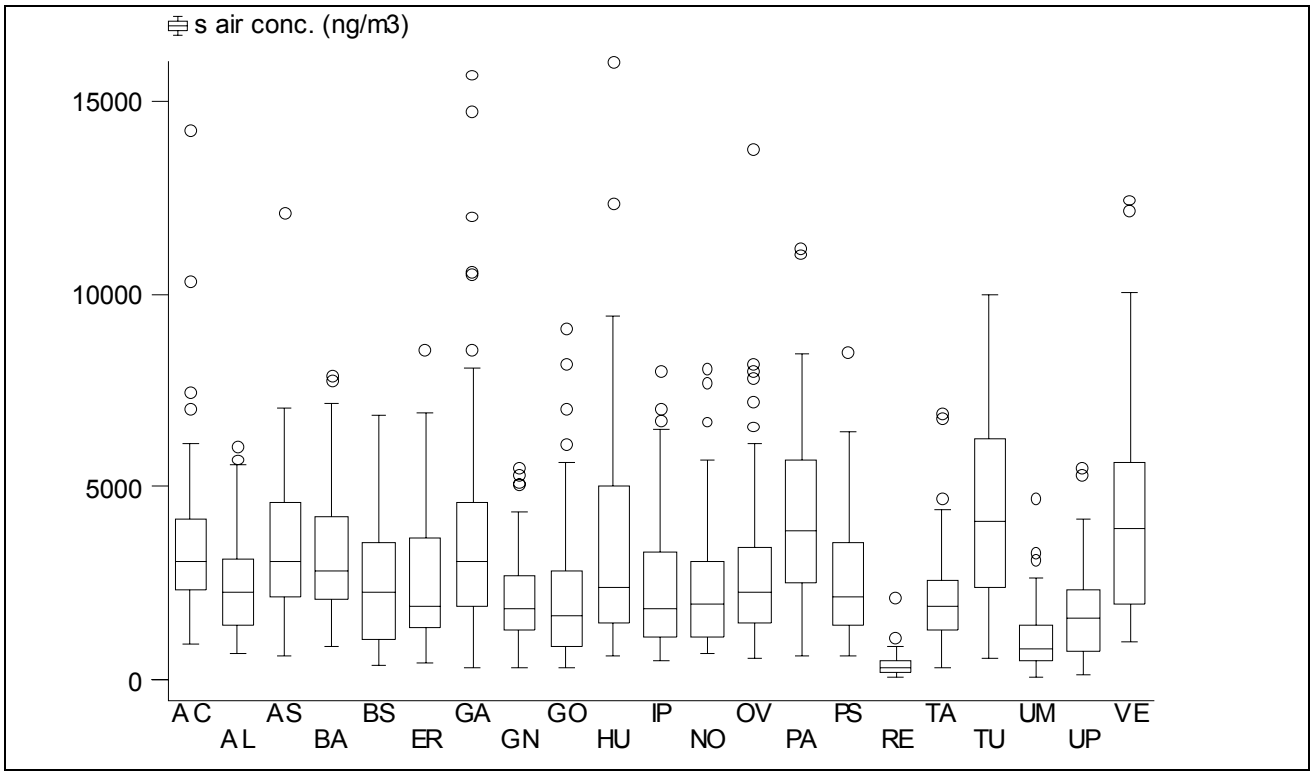


Fig. 1.20: Boxplots of all concentrations included in the annual mean concentration for Se. Insert: The 6 values >50 ng/m3 excluded.

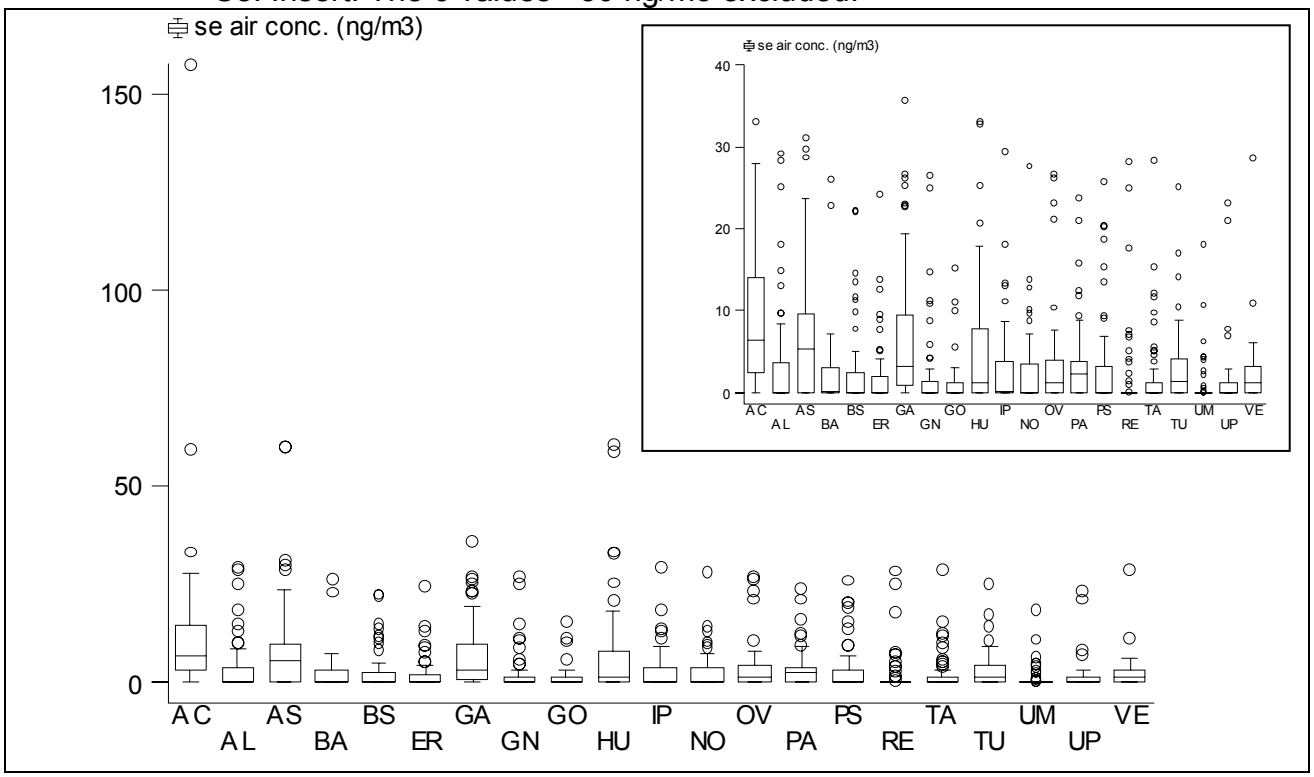


Fig. 1.21: Boxplots of all concentrations included in the annual mean concentration for Si.

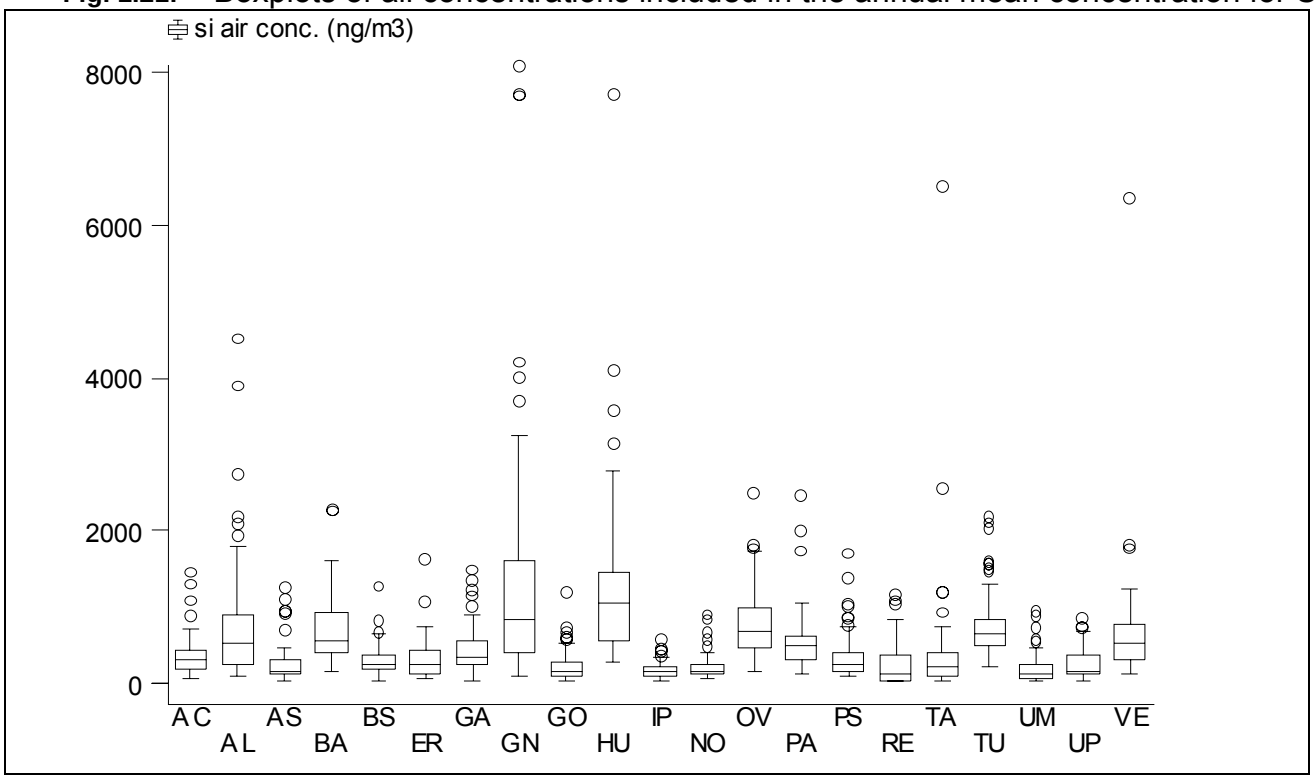


Fig. 1.22: Boxplots of all concentrations included in the annual mean concentration for Ti. Insert: The 5 values >100 ng/m3 excluded.

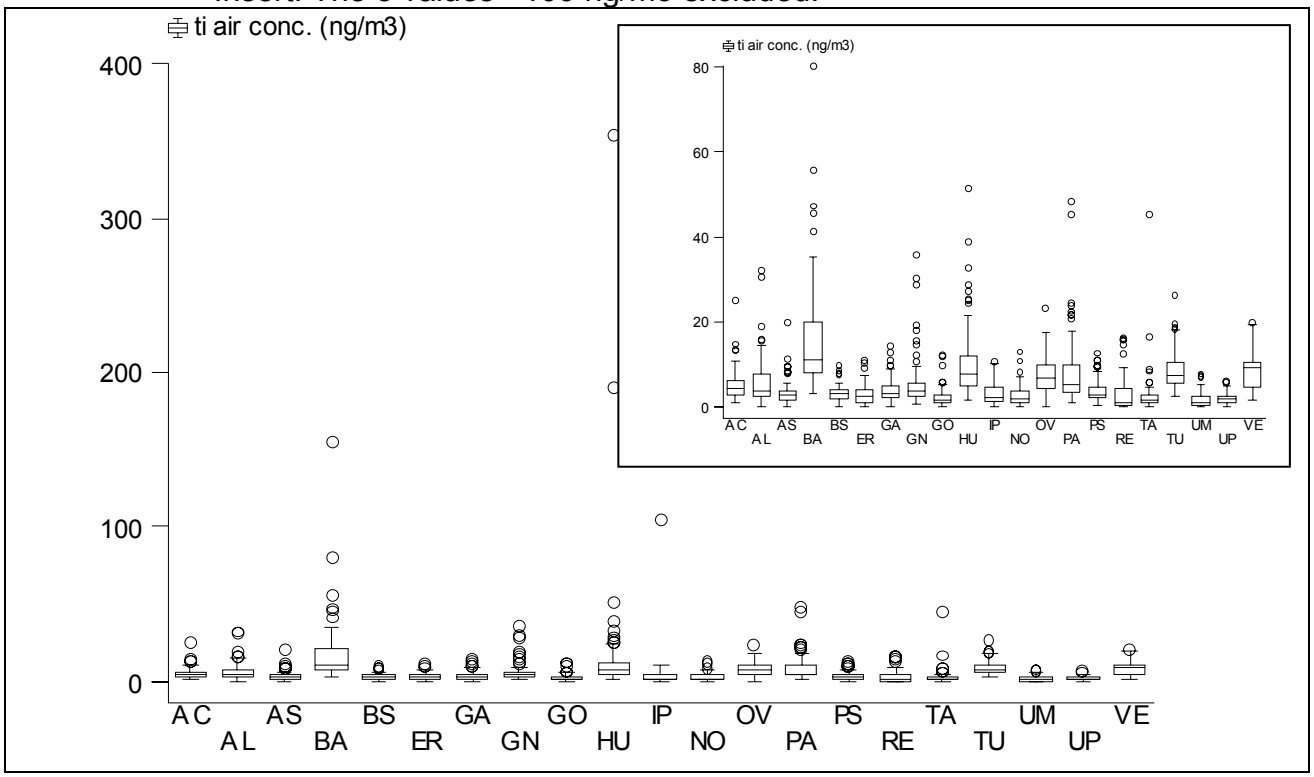


Fig. 1.23: Boxplots of all concentrations included in the annual mean concentration for V.

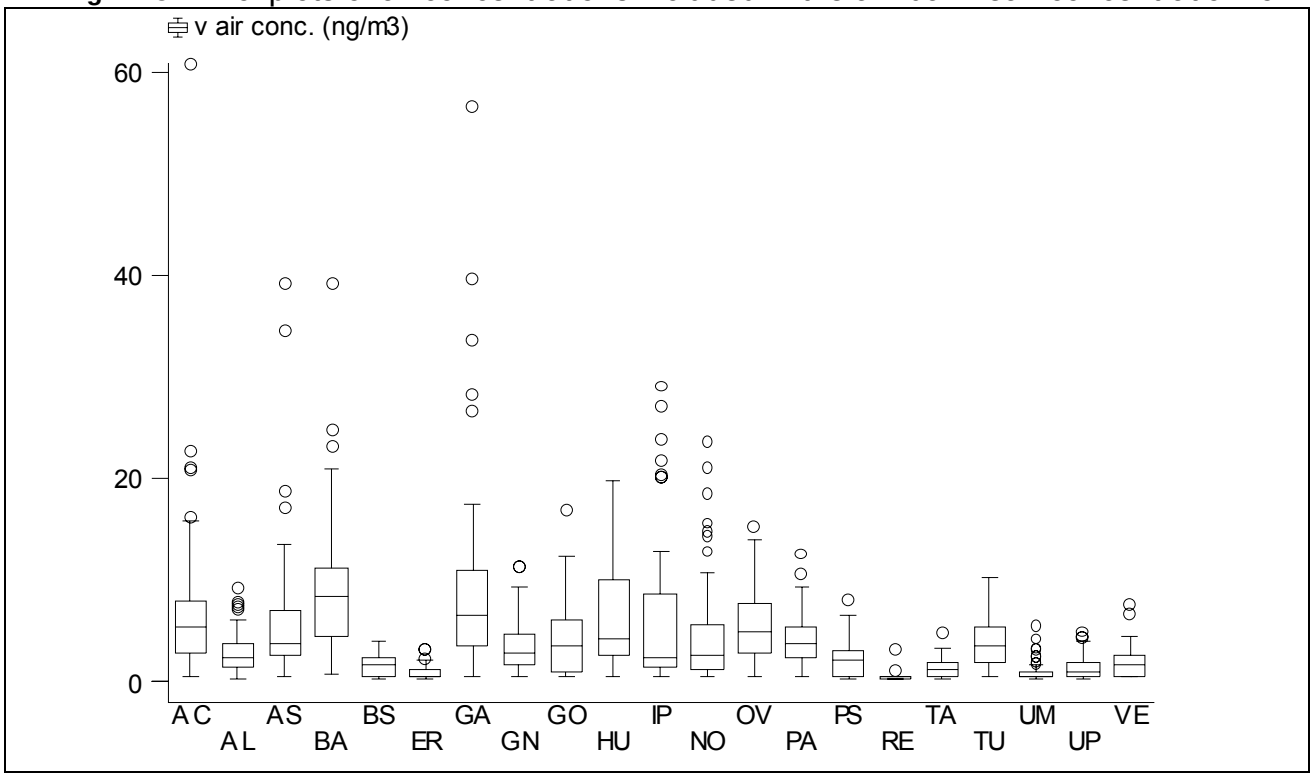


Fig. 1.24: Boxplots of all concentrations included in the annual mean concentration for Zn. The 6 values >500 ng/m3 excluded.

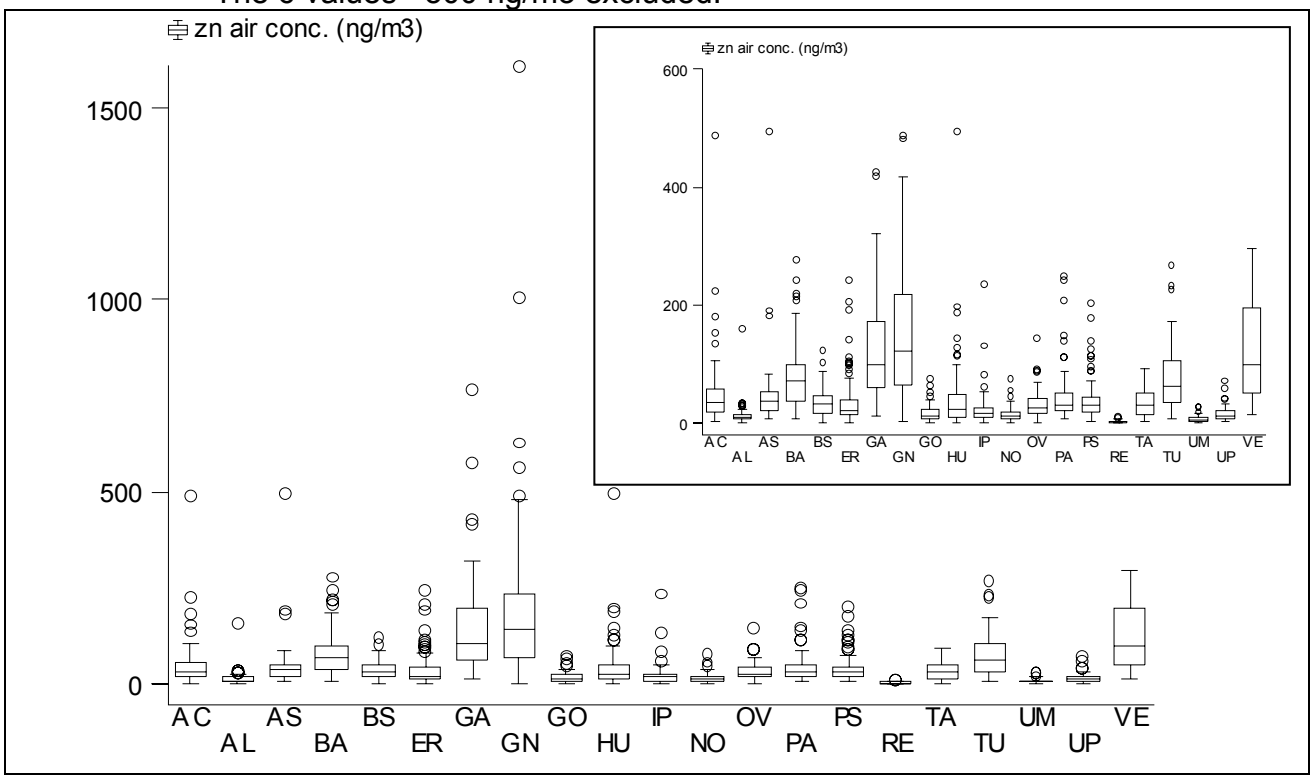


Fig. 2.1: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Al.

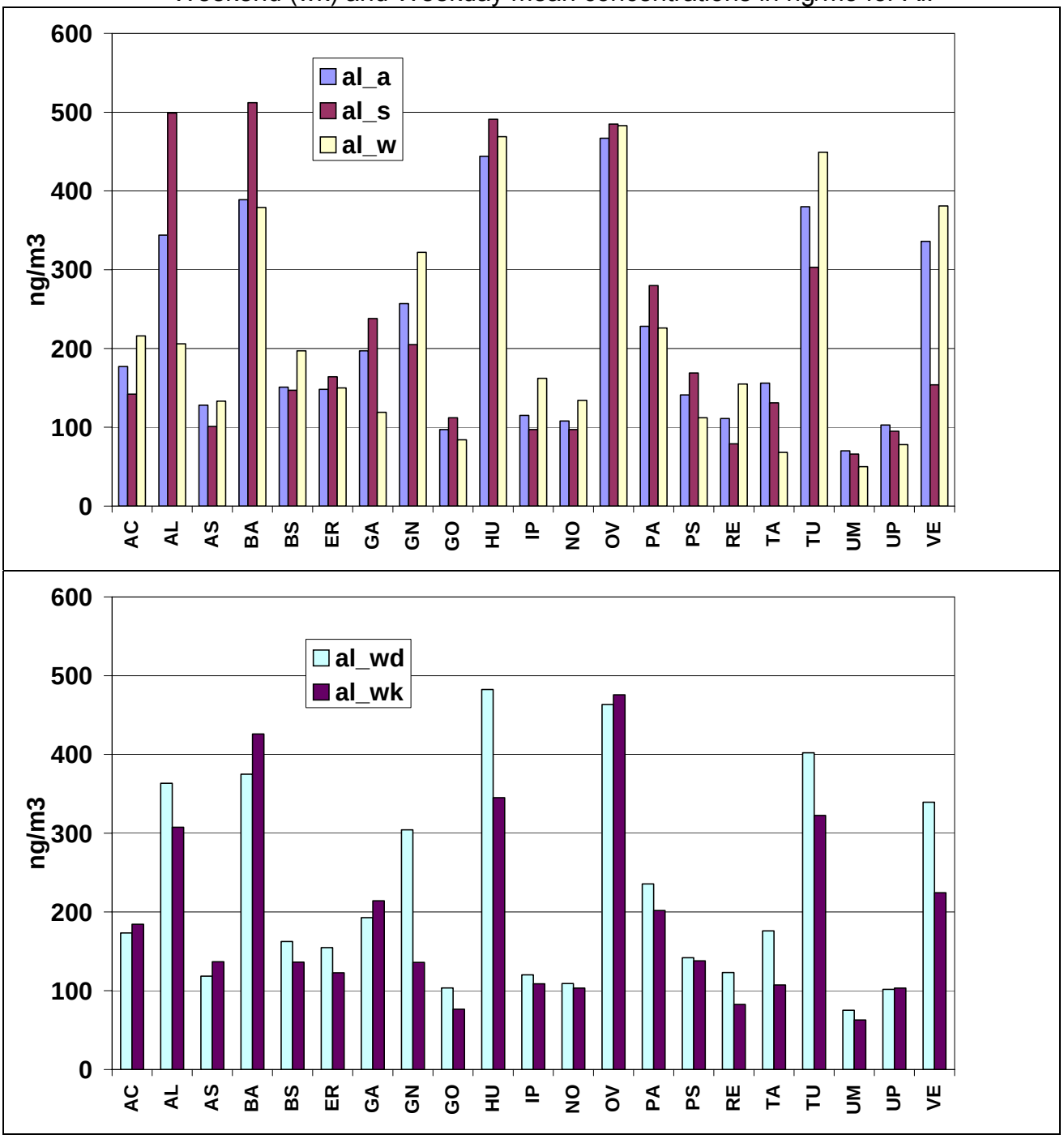


Fig. 2.2: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for As.

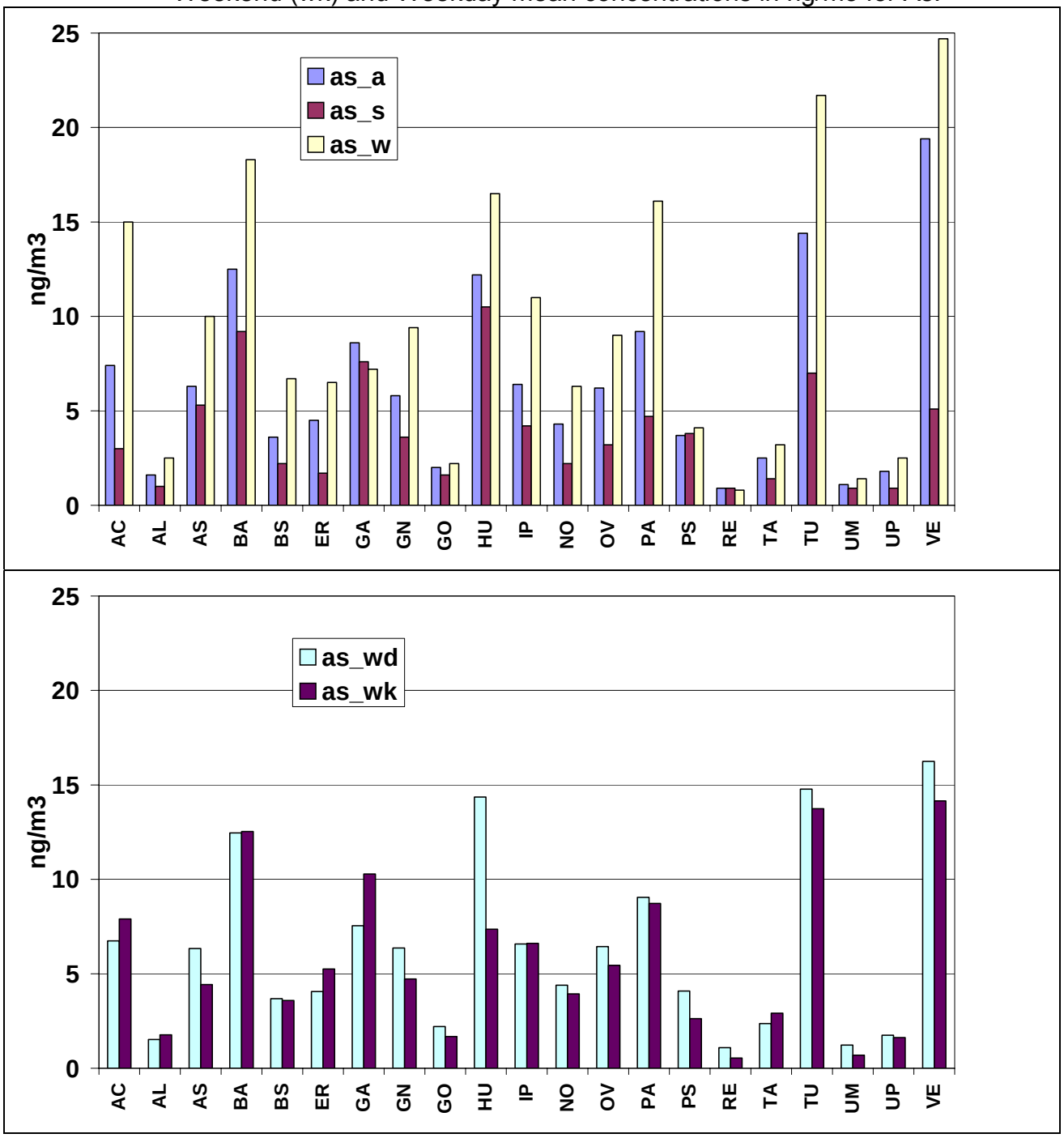


Fig. 2.3: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Bi.

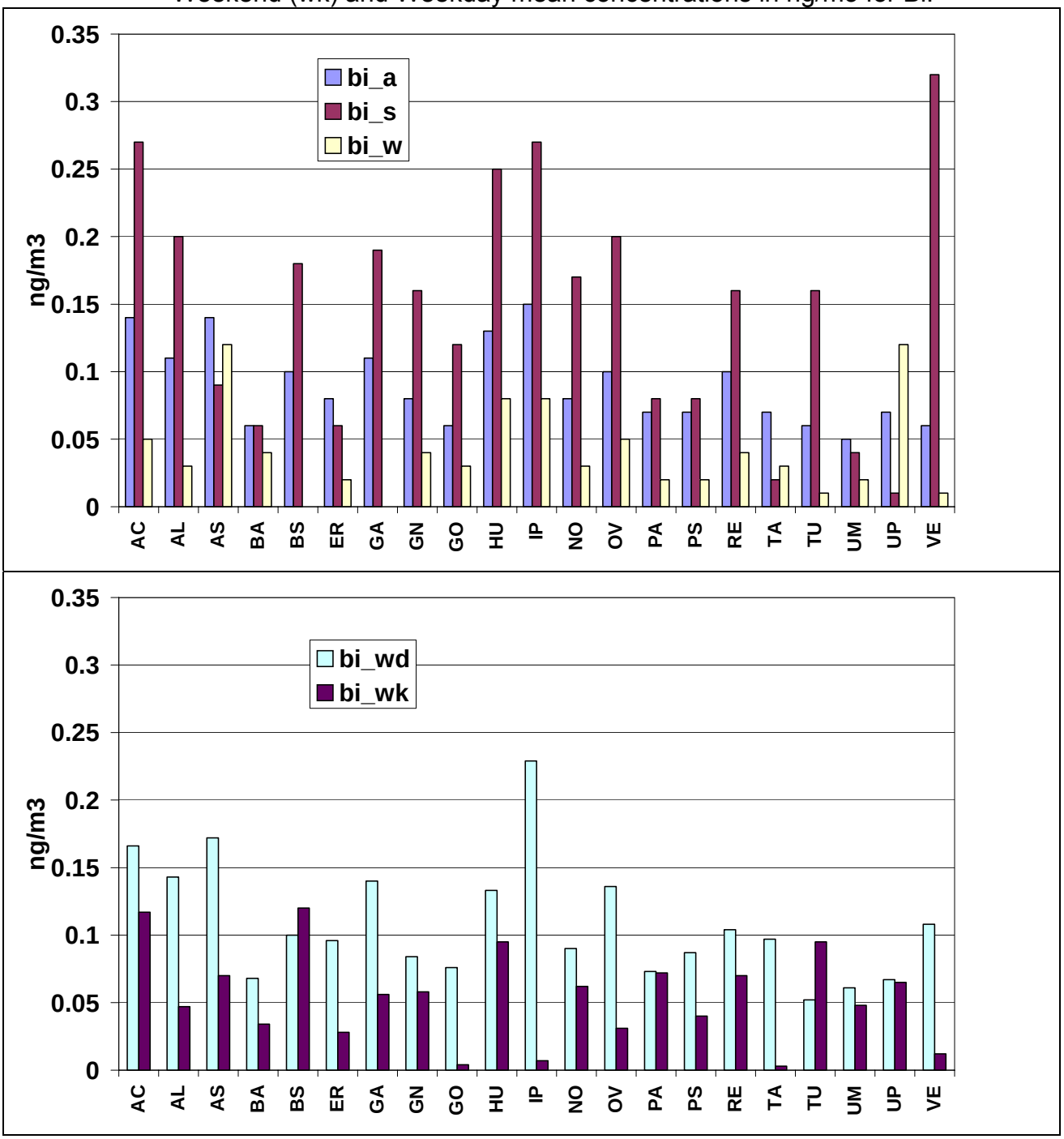


Fig. 2.4: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Br.

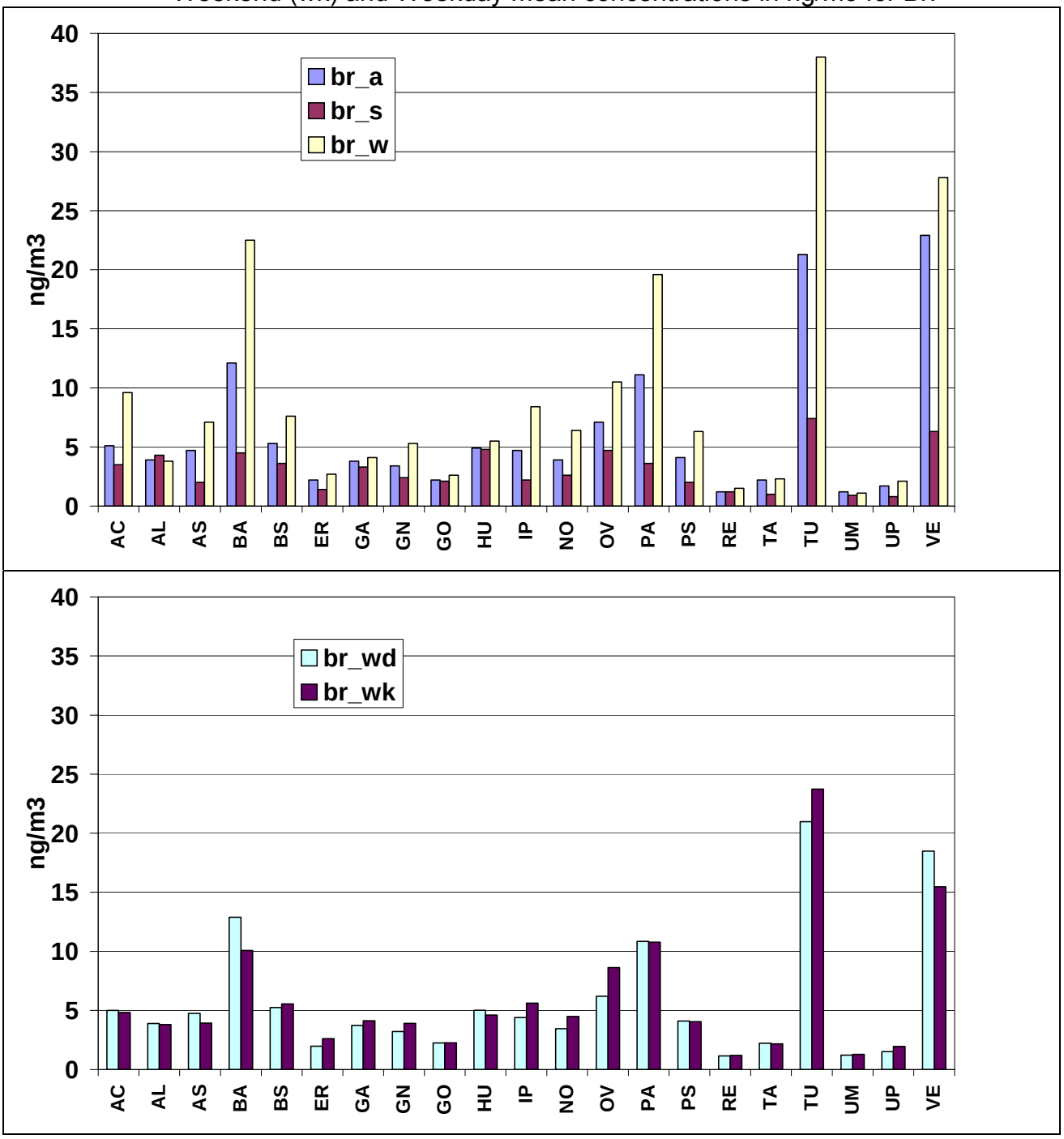


Fig. 2.5: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Ca.

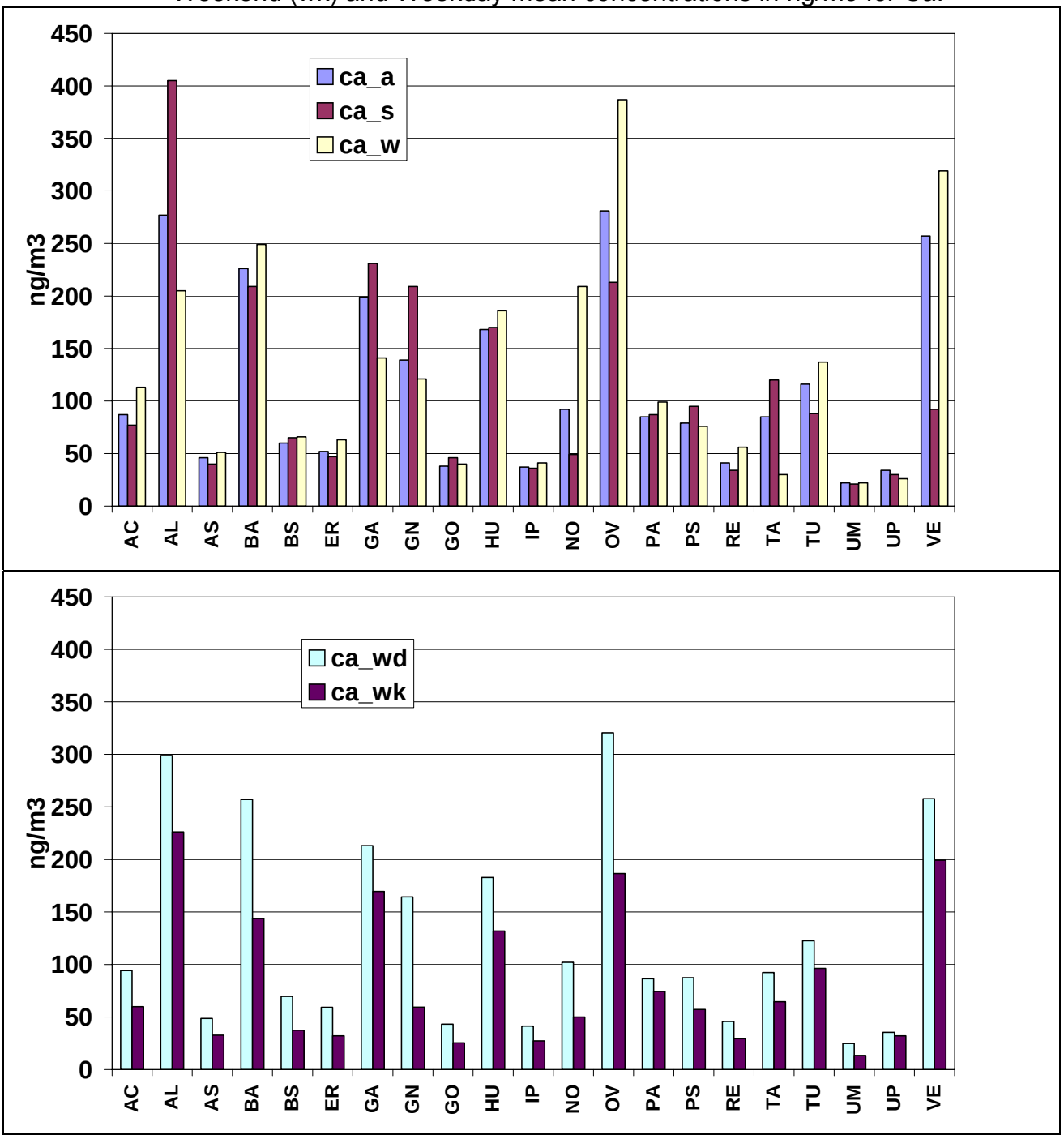


Fig. 2.6: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Cd.

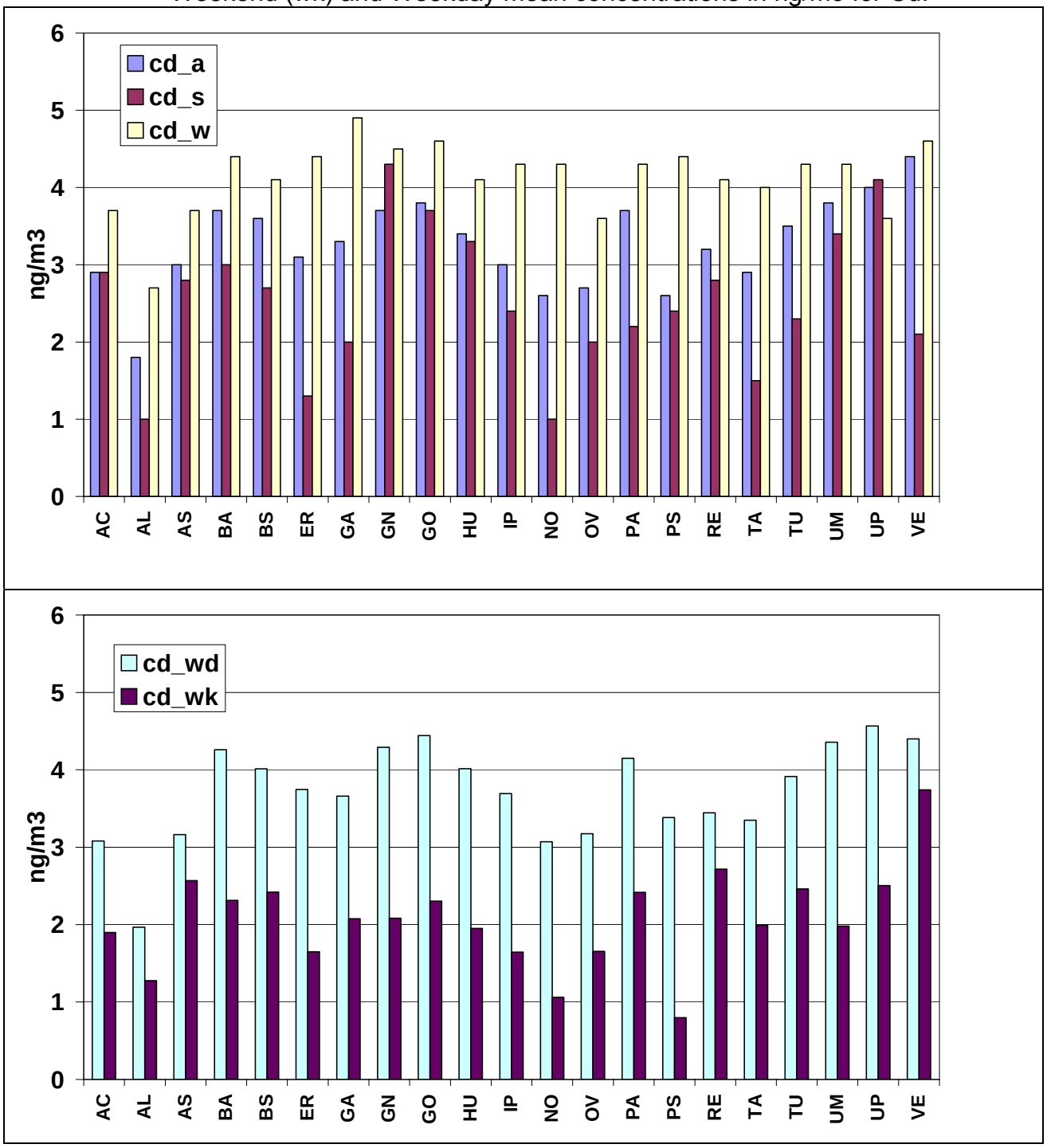


Fig. 2.7: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Cl.

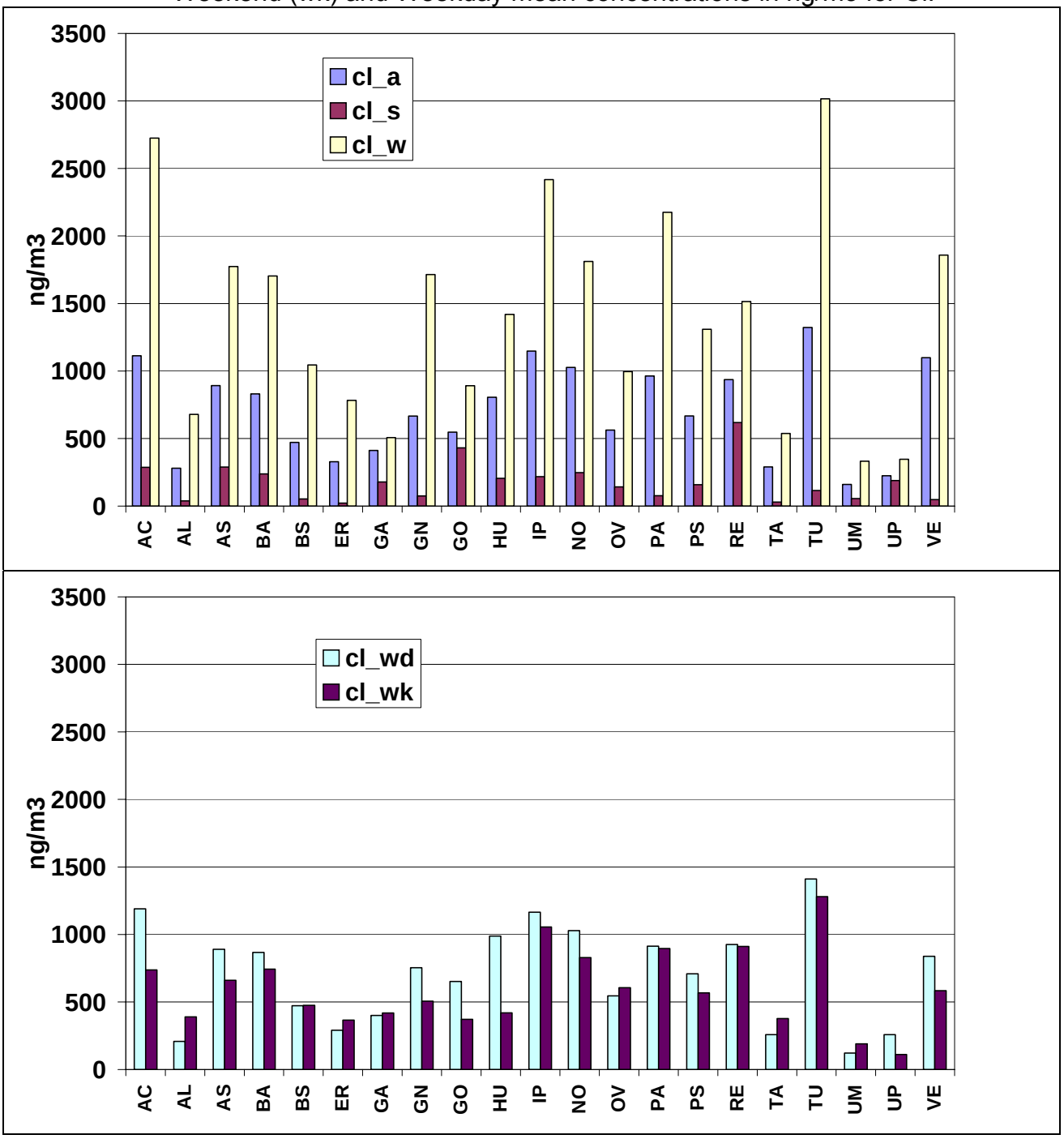


Fig. 2.8: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Co.

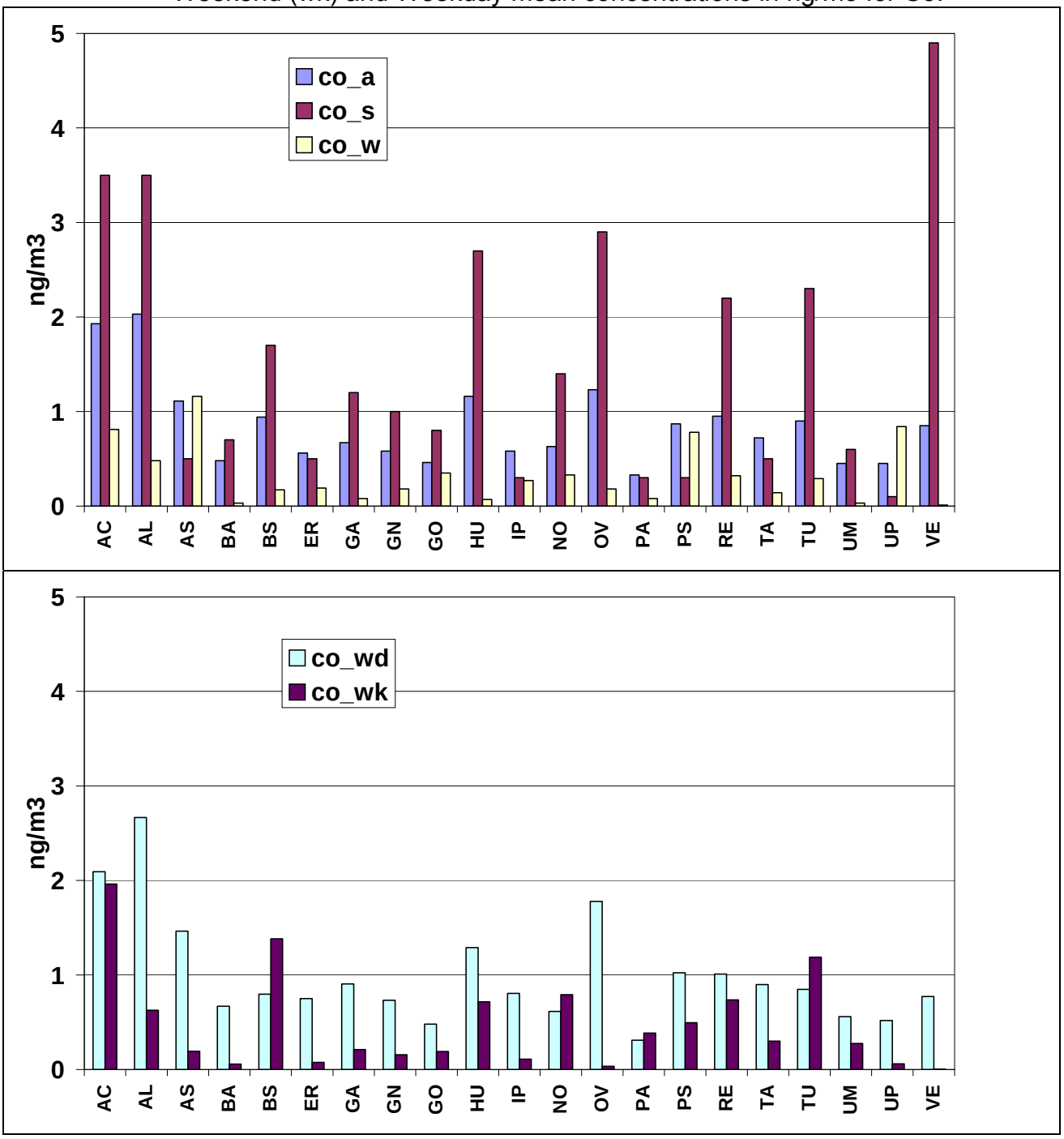


Fig. 2.9: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Cu.

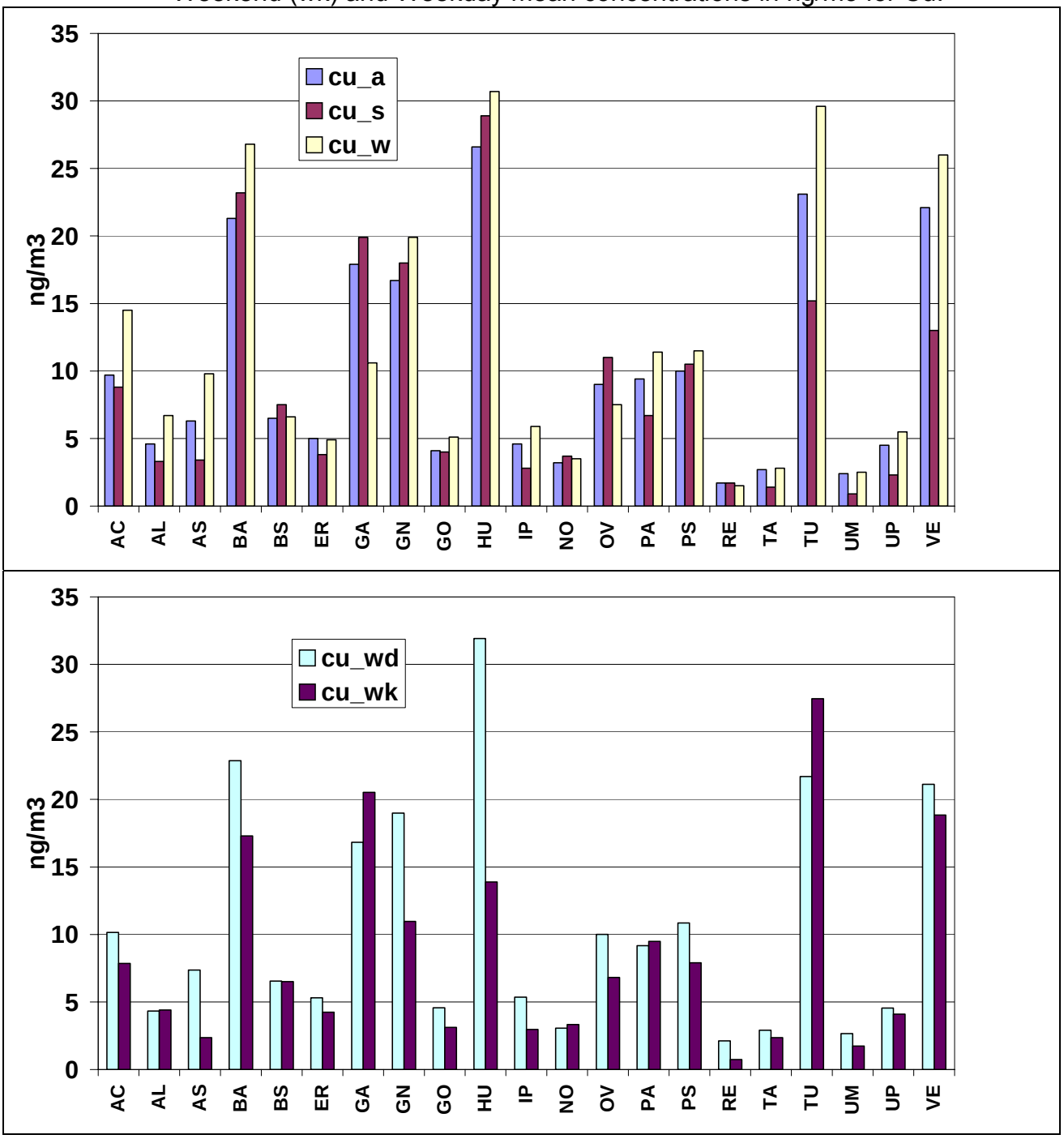


Fig. 2.10: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Fe.

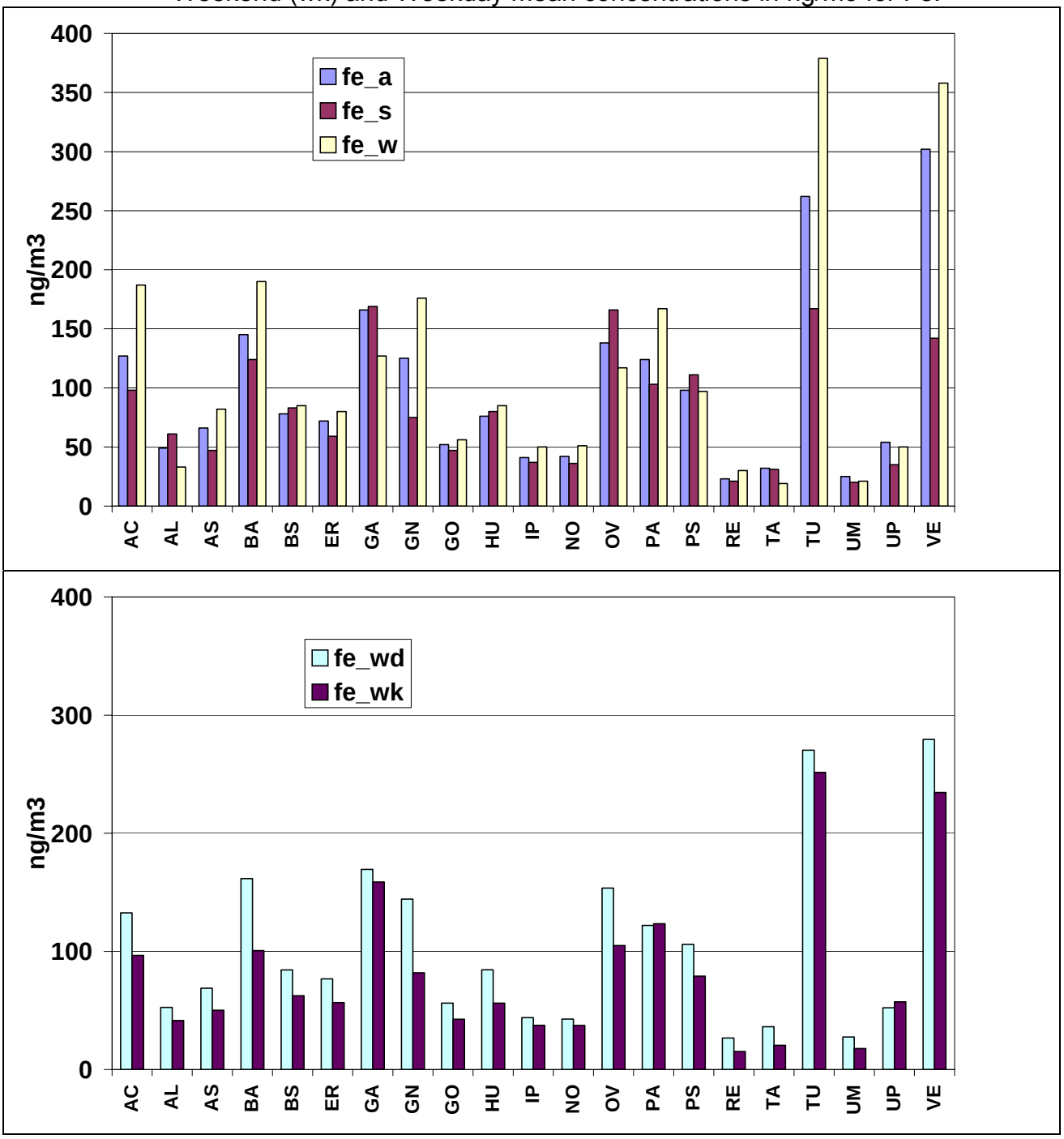


Fig. 2.11: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Ga.

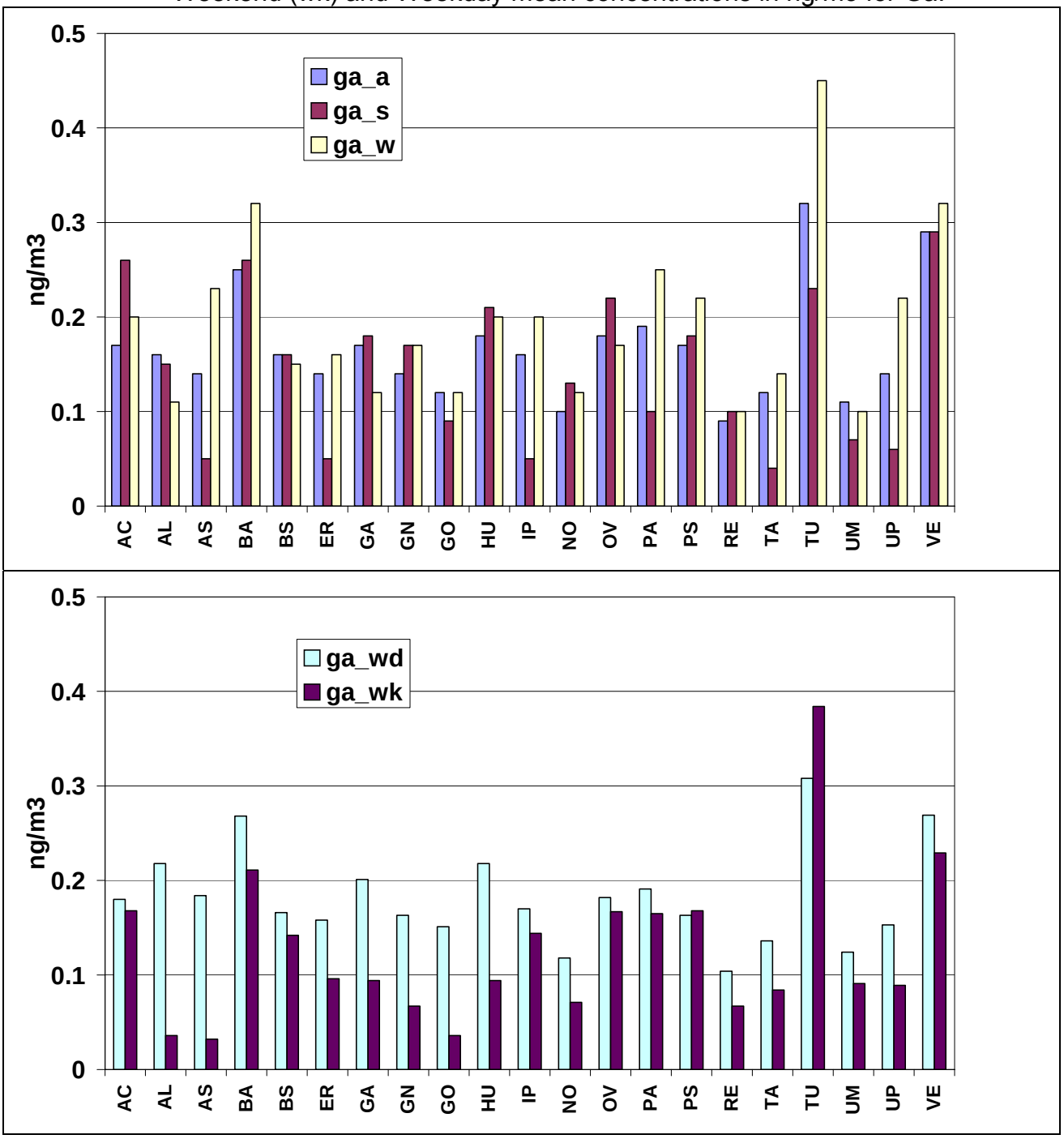


Fig. 2.12: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for K.

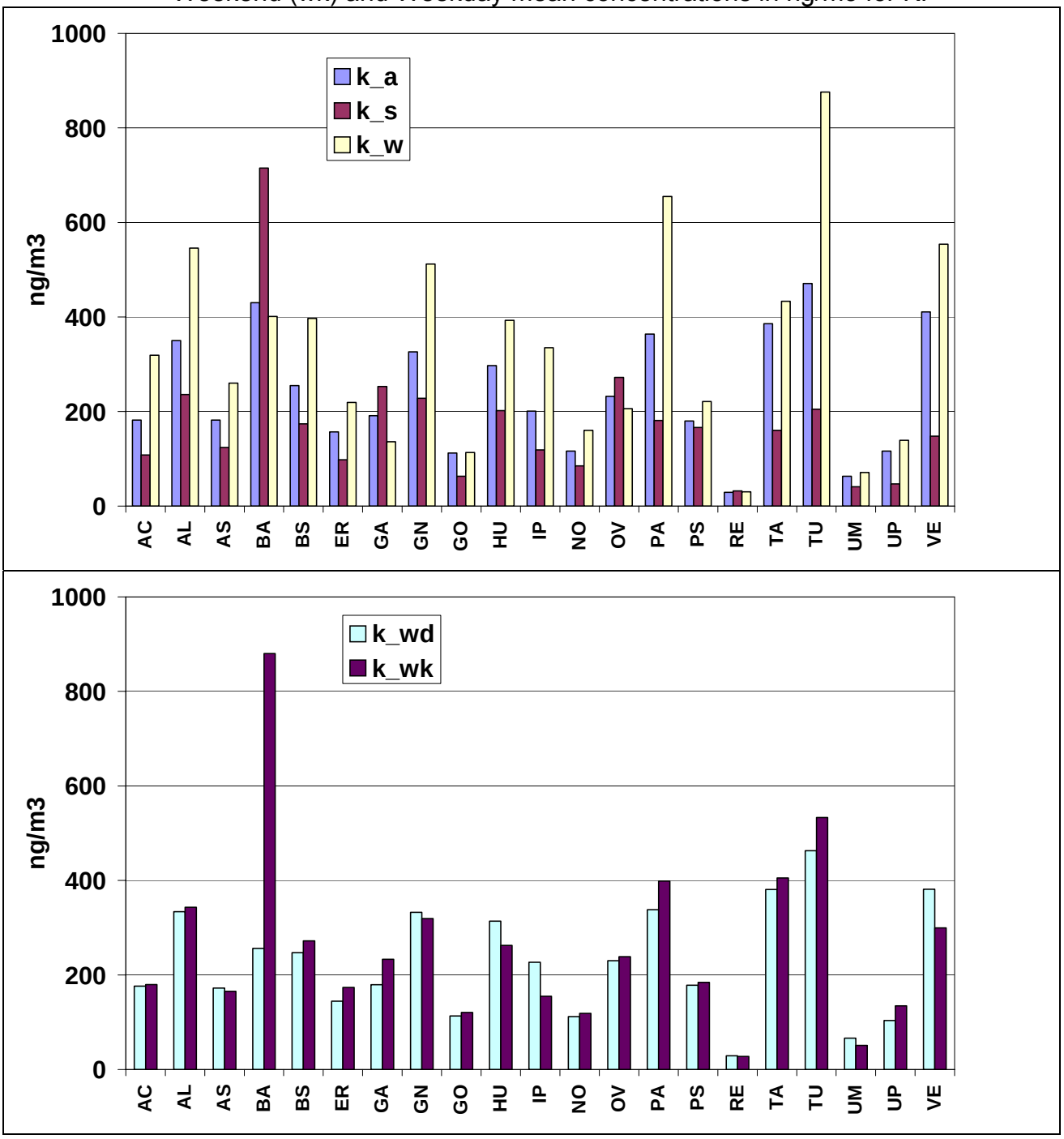


Fig. 2.13: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Mg.

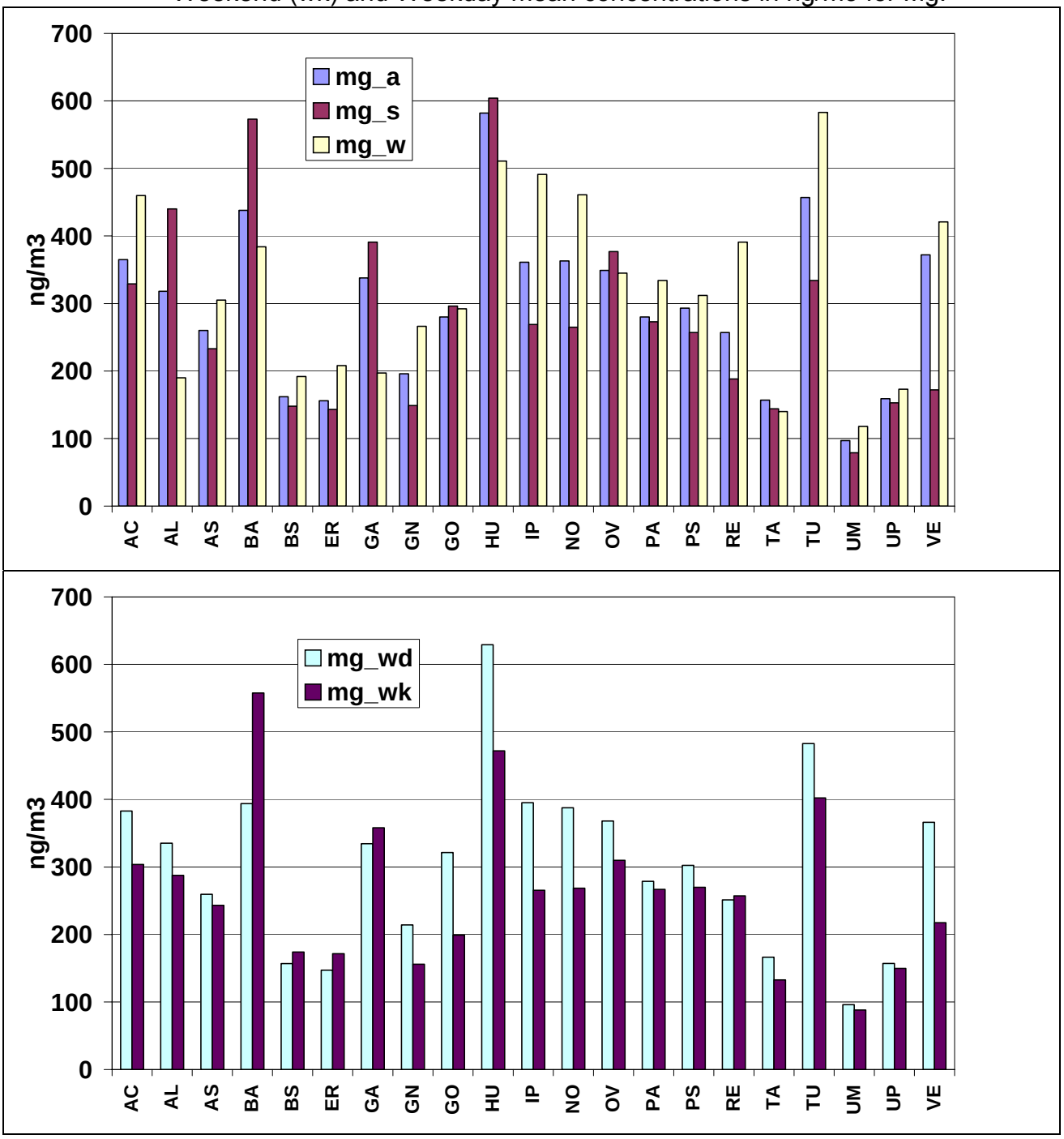


Fig. 2.14: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Mn.

c

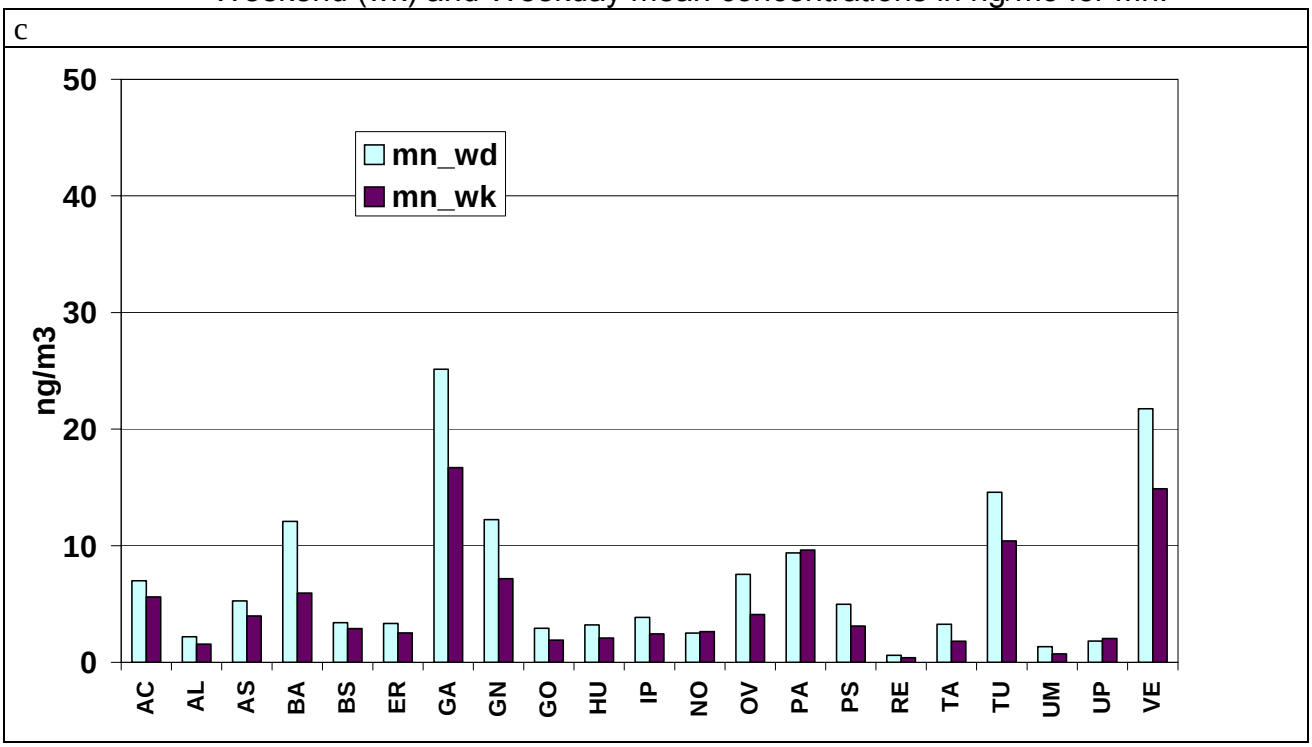


Fig. 2.15: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Na.

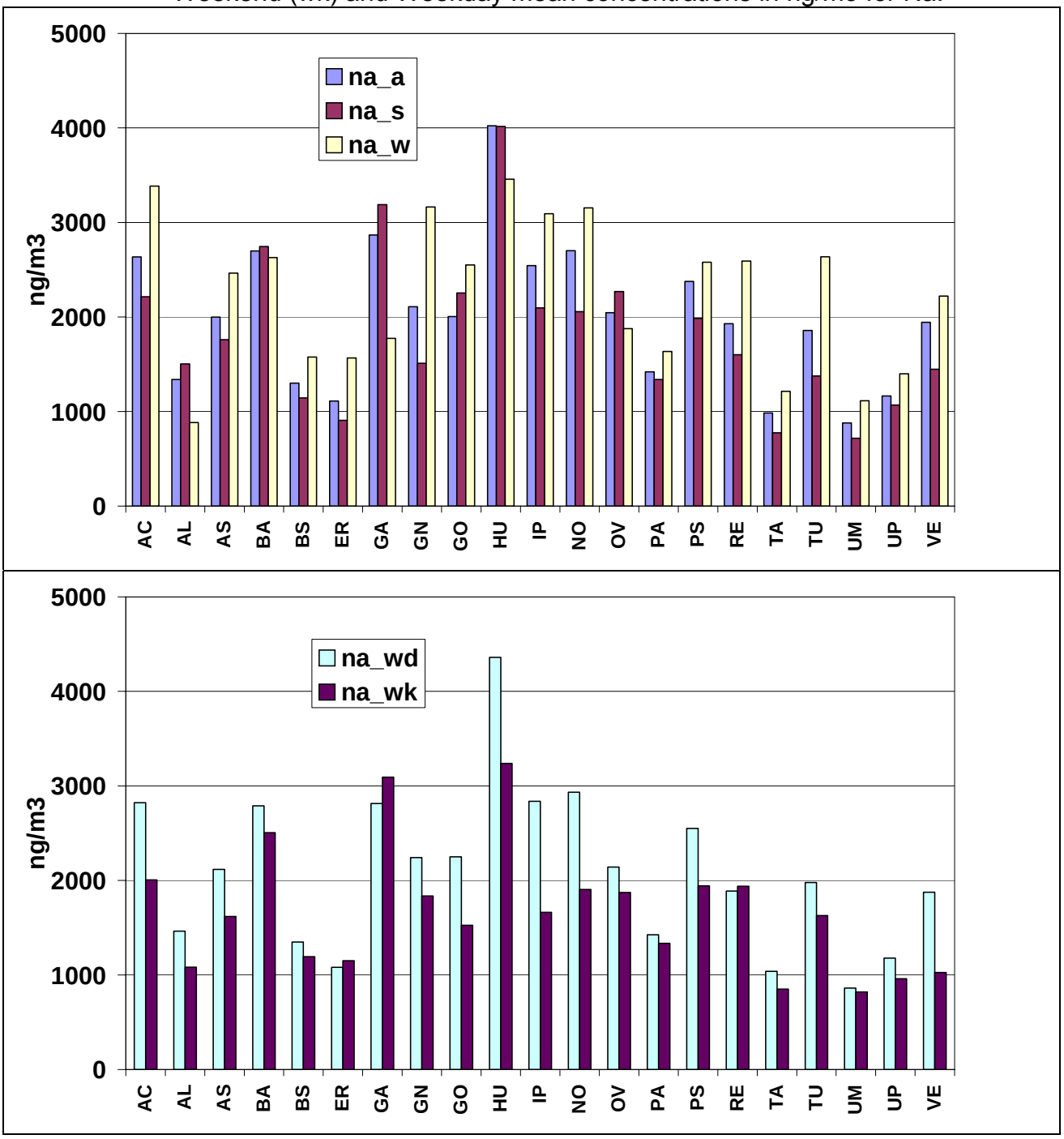


Fig. 2.16: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Ni.

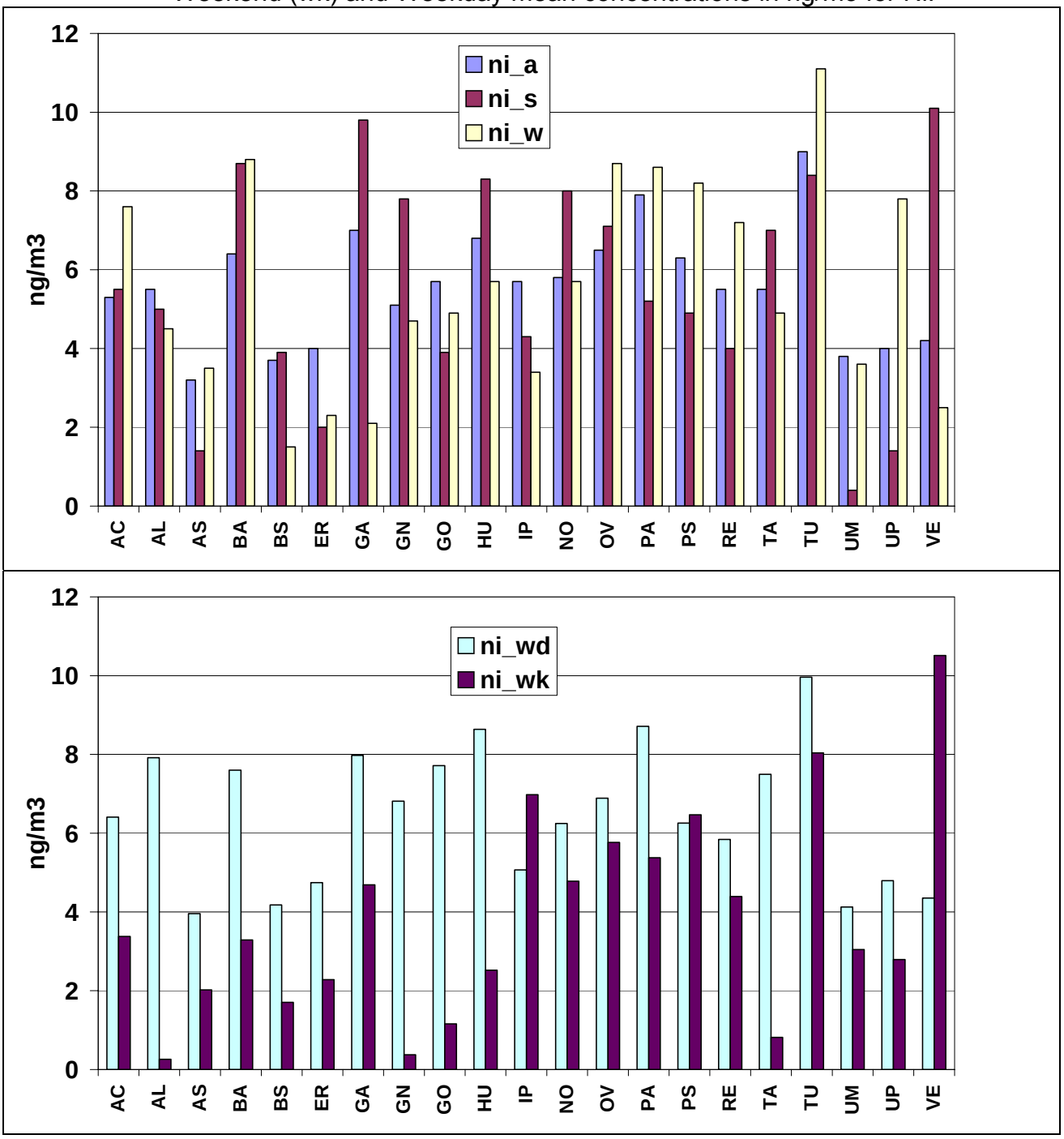
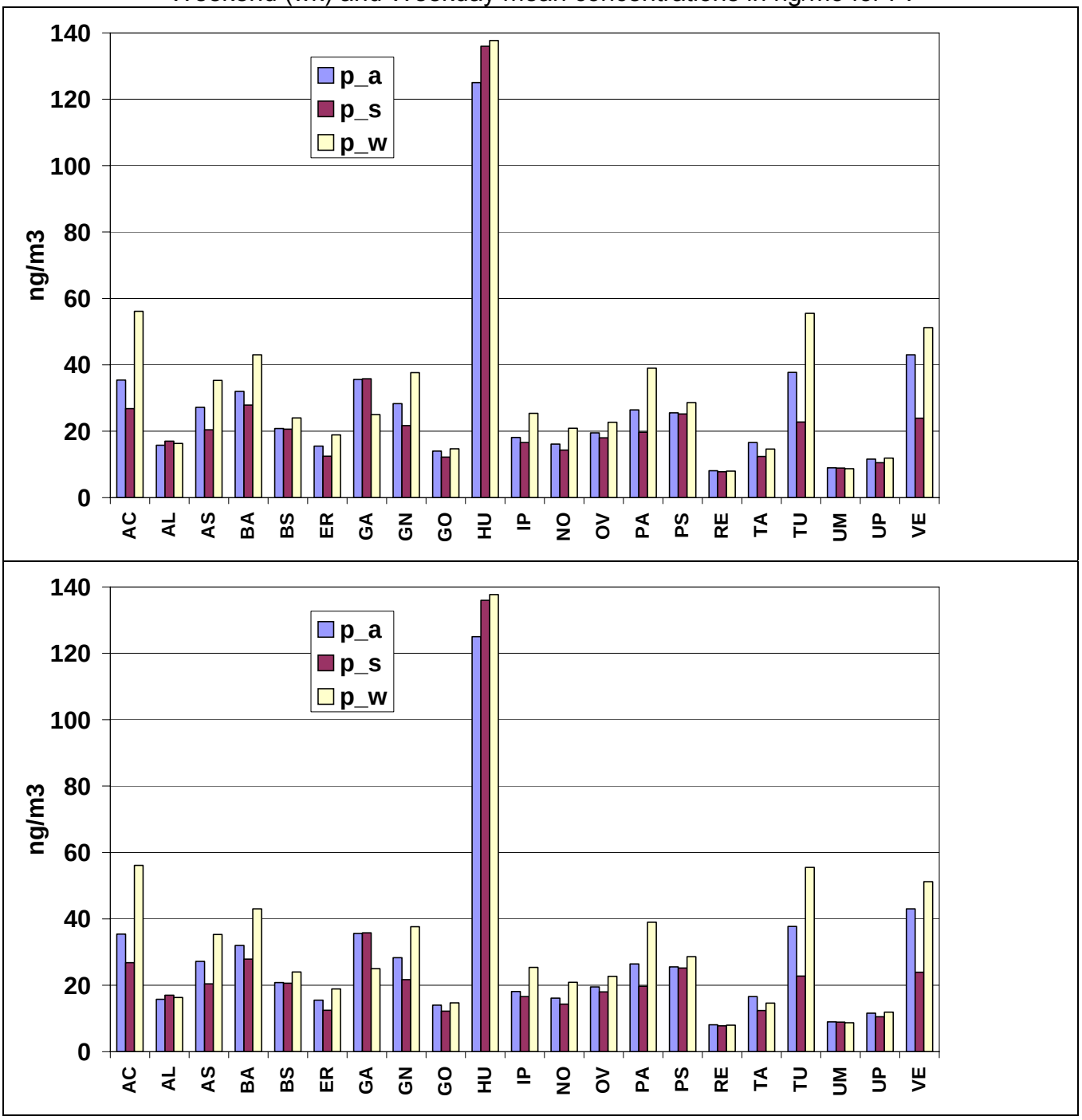


Fig. 2.17: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for P.



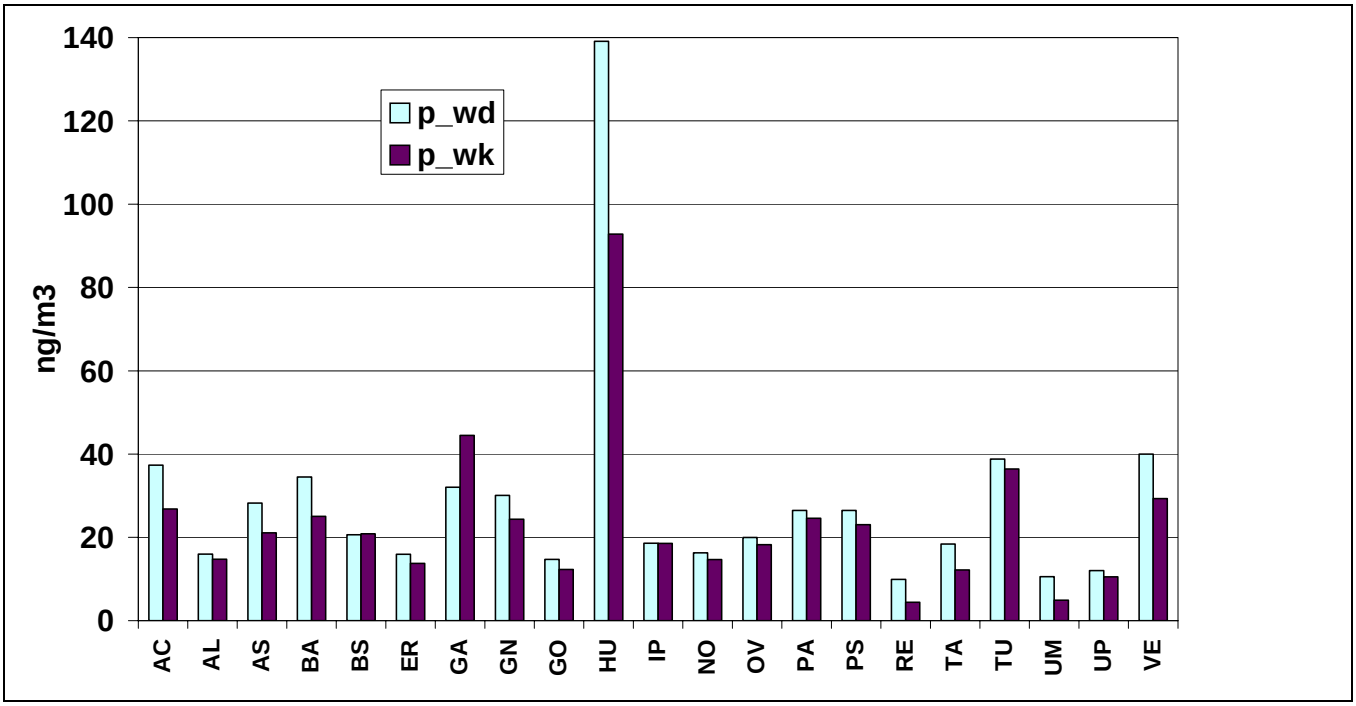

140
120
100
80
60
40
20
0
ng/m3
p_wd
p_wk
AC
AL
AS
BA
BS
ER
GA
GN
GO
HU
IP
NO
OV
PA
PS
RE
TA
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Fig. 2.18: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Pb.

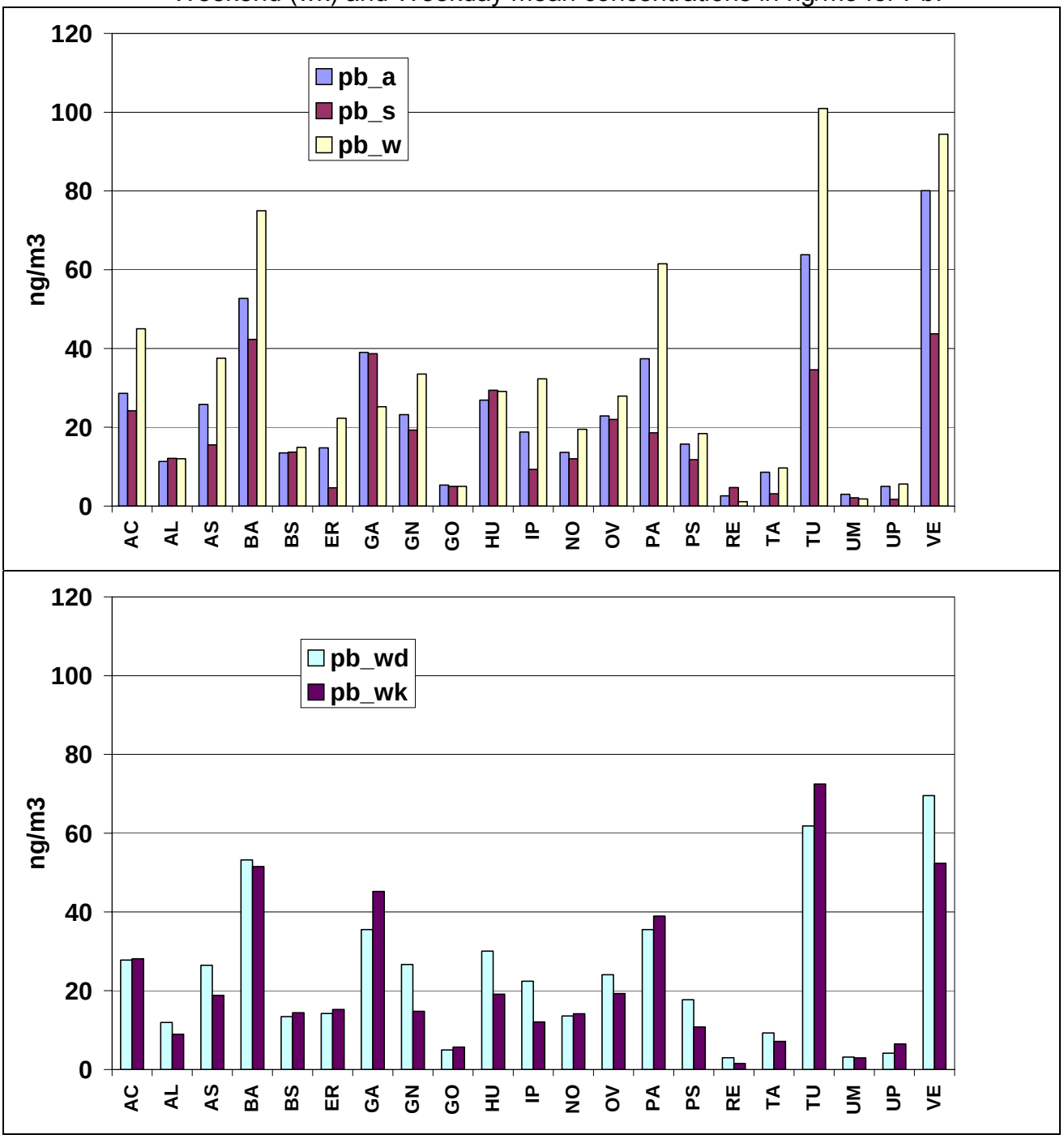

Fig. 2.19: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for S.

*** NOTE: Sulfur levels are overestimated by an approx. factor of 2.5! (see p. 15)**

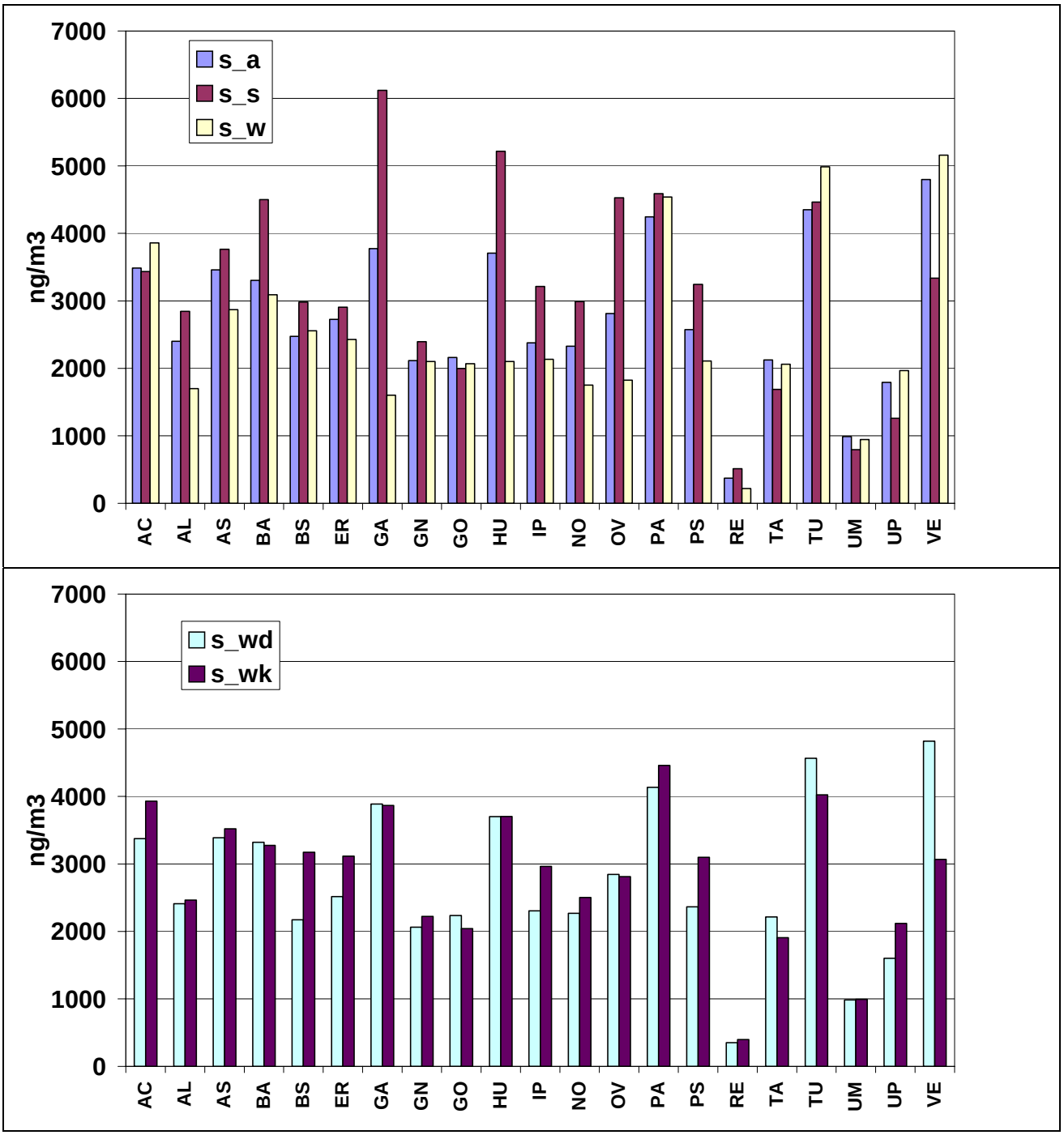

Fig. 2.20: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Se.

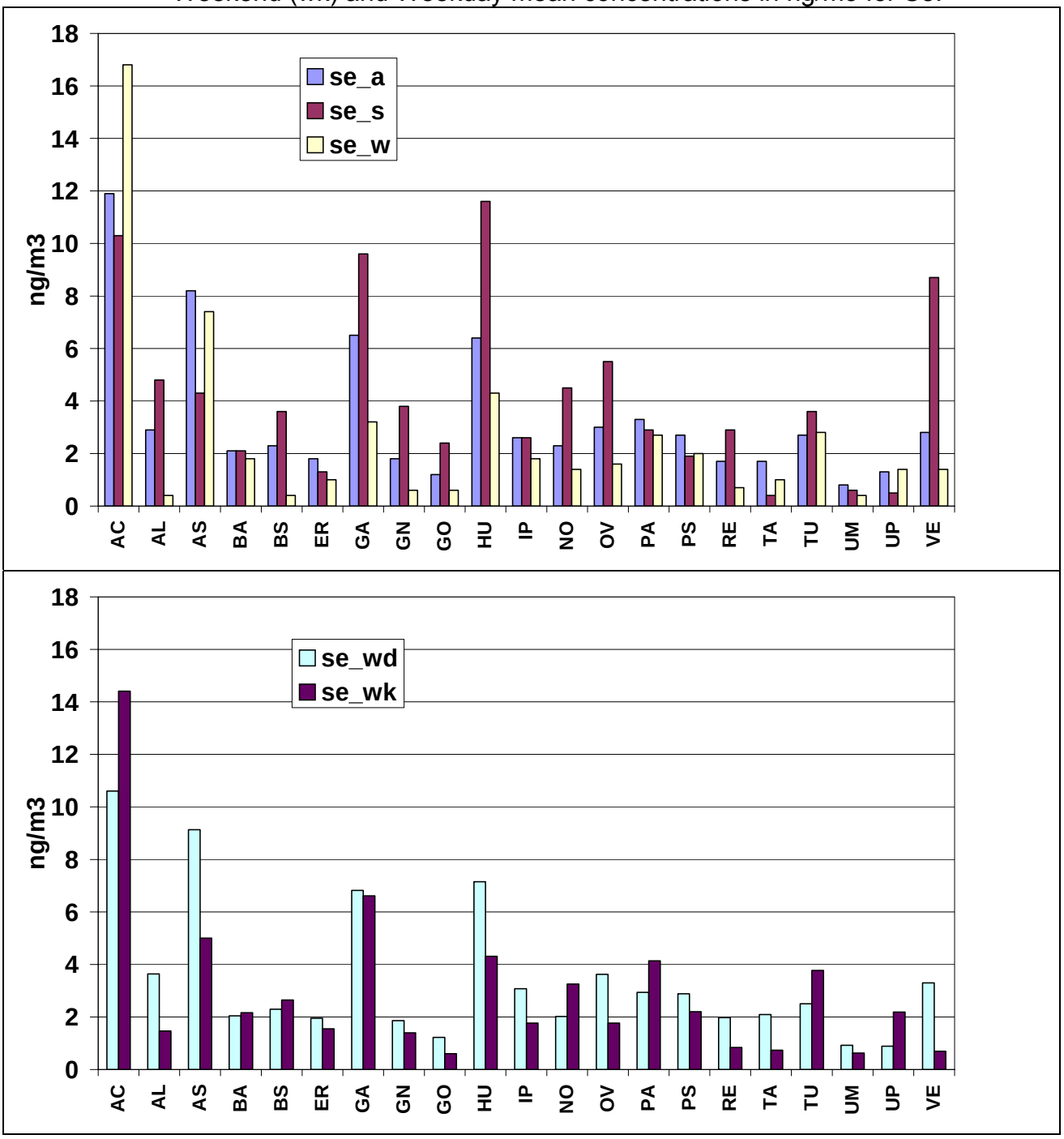

Fig. 2.21: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Si.

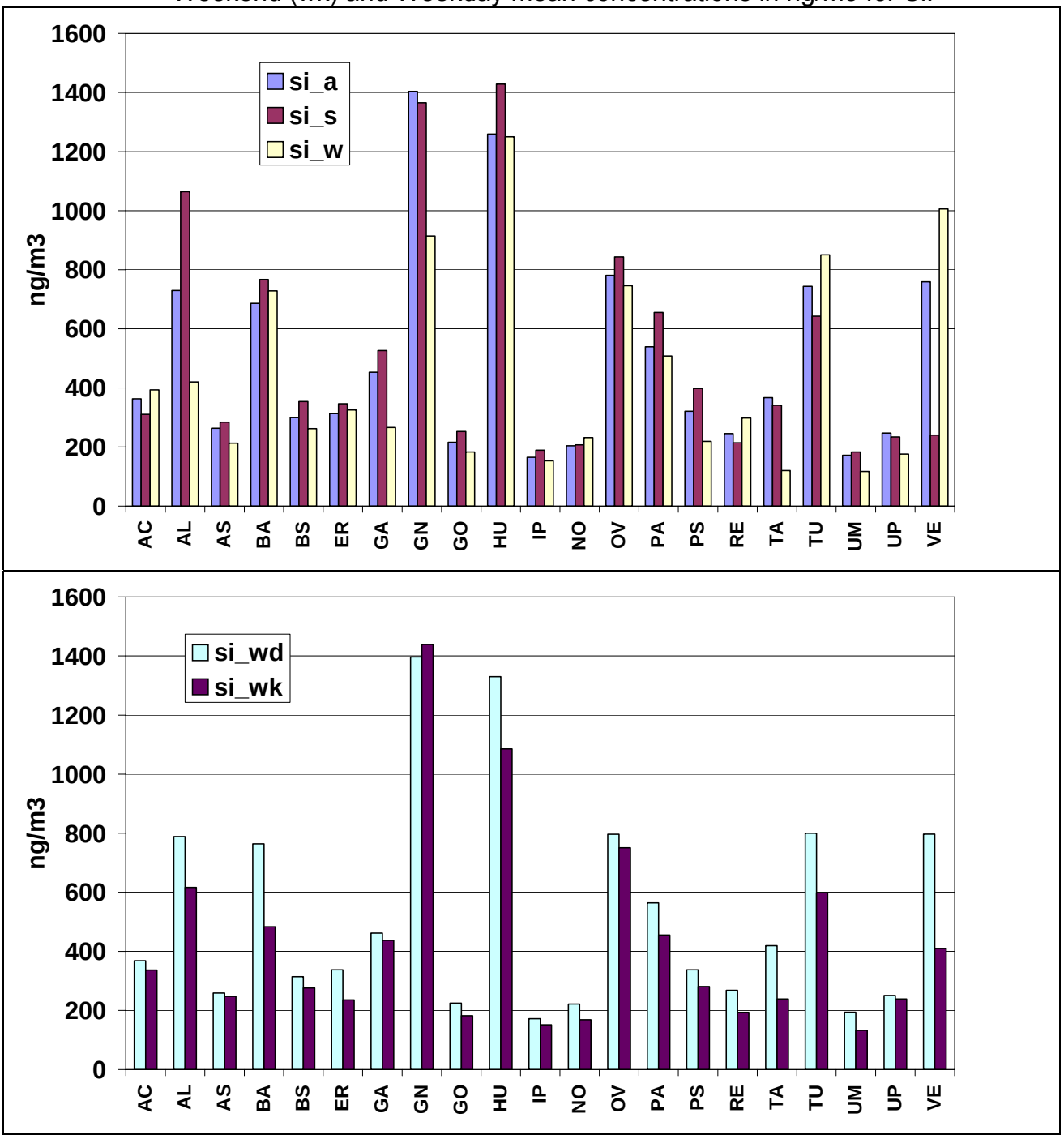

Fig. 2.22: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Ti.

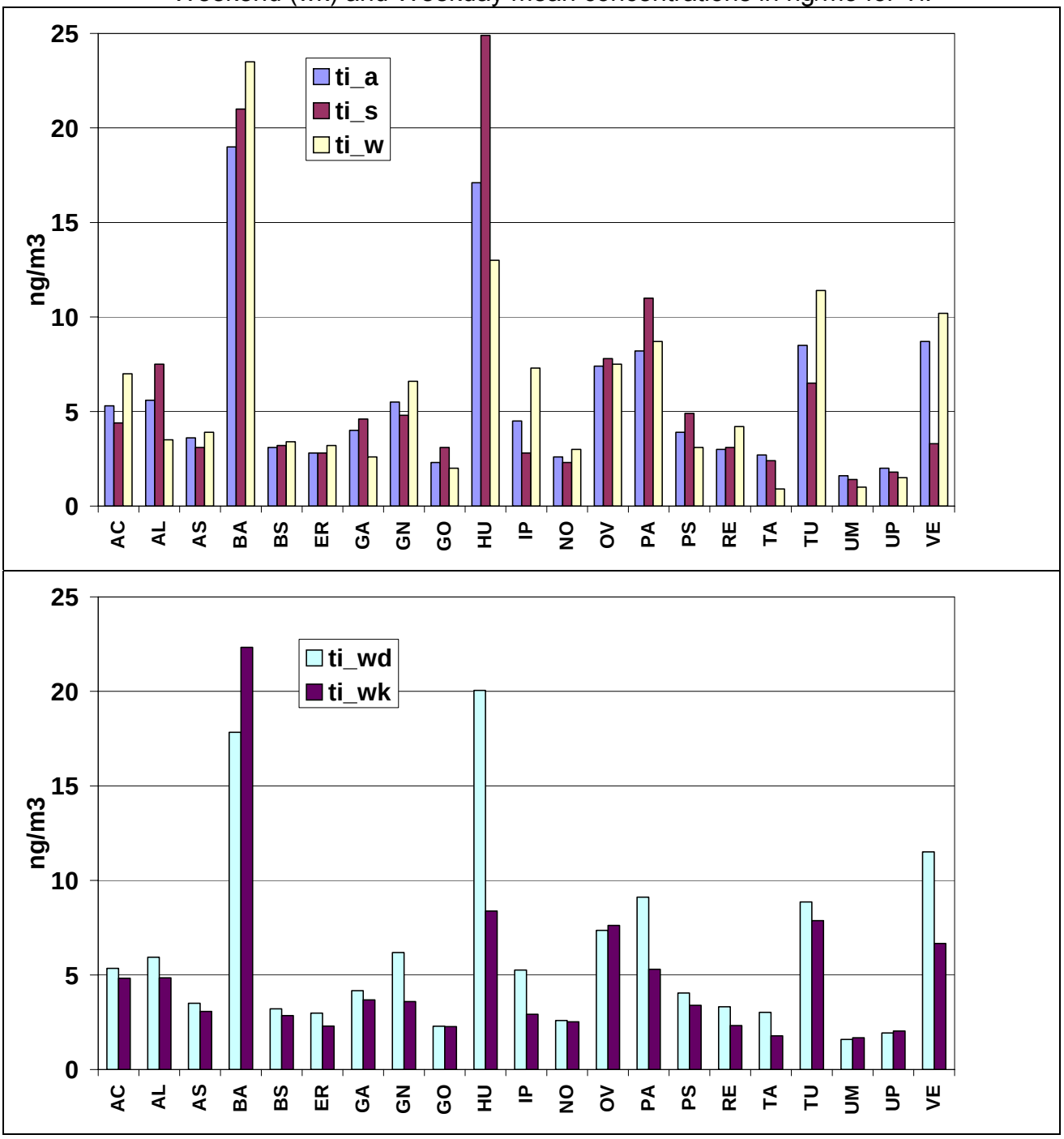

Fig. 2.23: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for V.

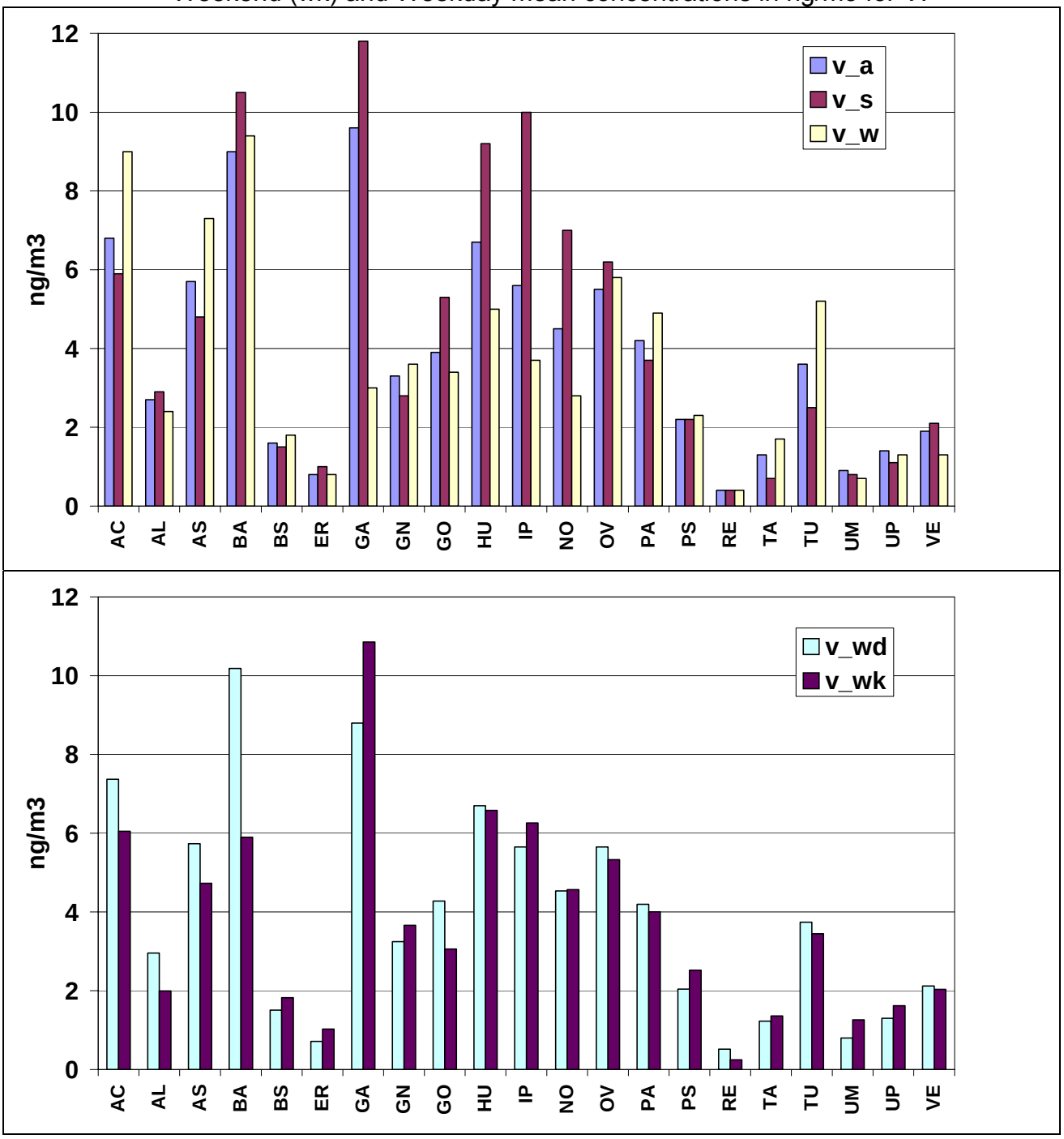

Fig. 2.24: Annual (a), Winter (w) and Summer (s) mean concentrations in ng/m3. Weekend (wk) and Weekday mean concentrations in ng/m3 for Zn.

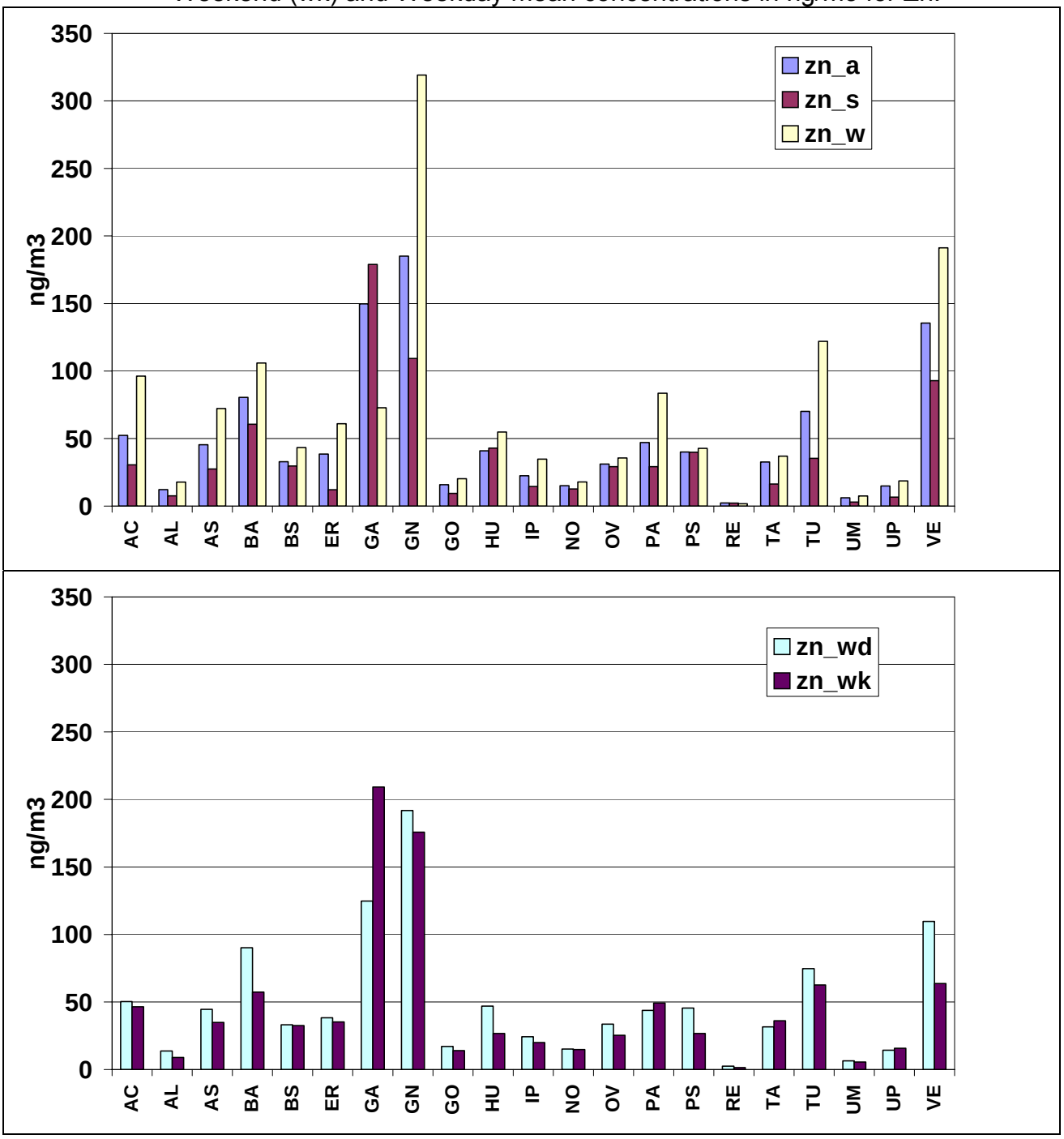

Fig. 3.1: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Al.

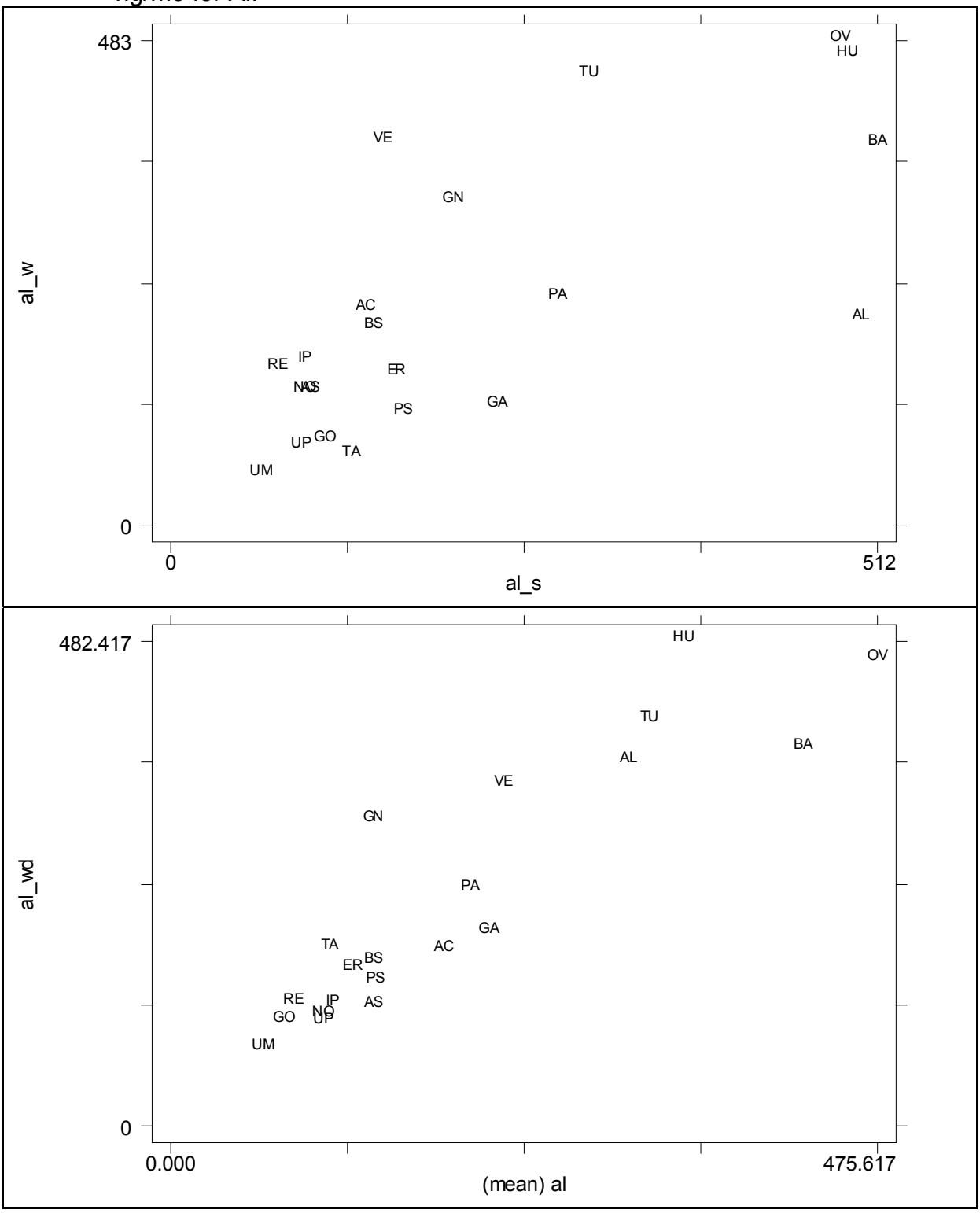

Fig. 3.2: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for As.

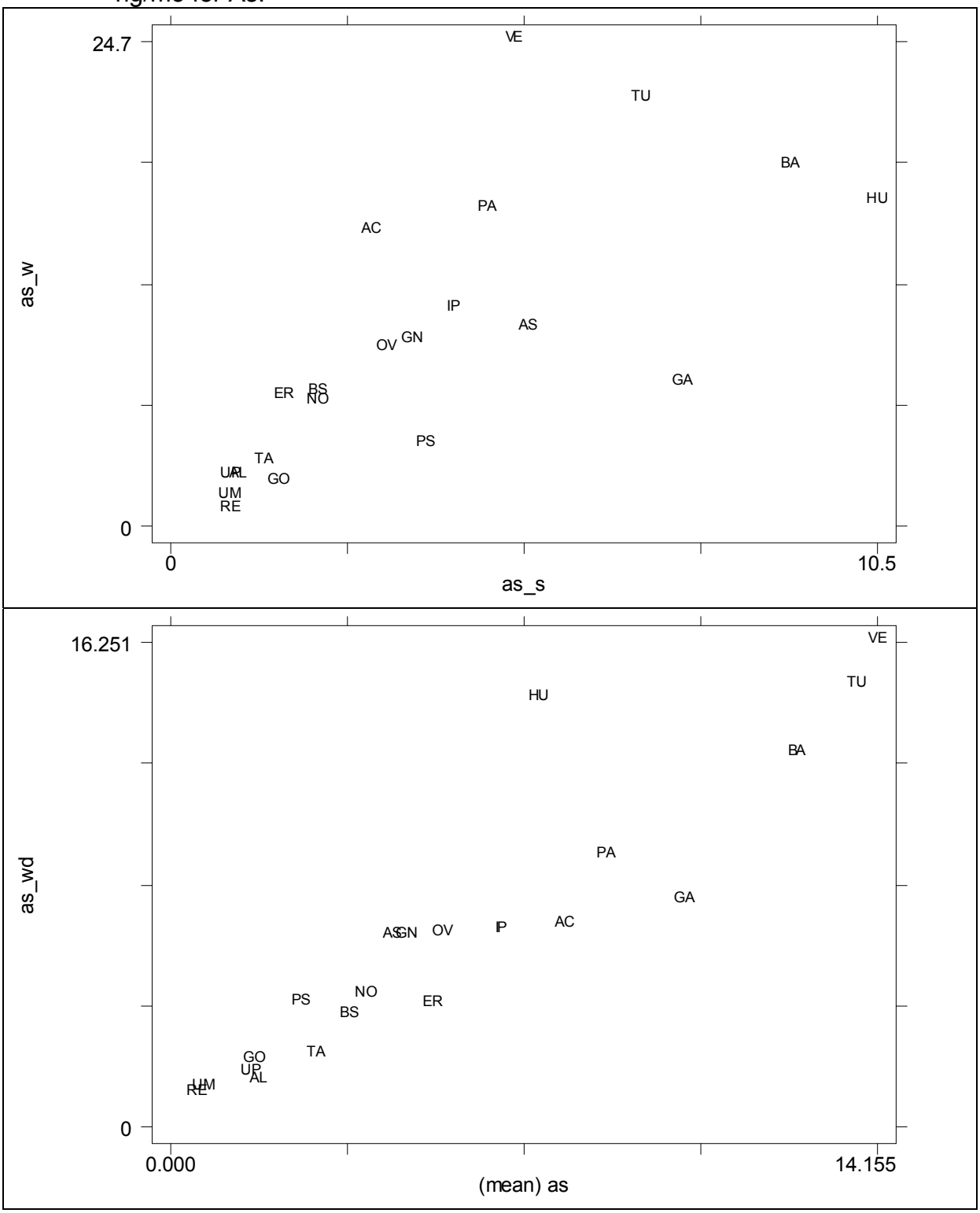

Fig. 3.3: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Bi.

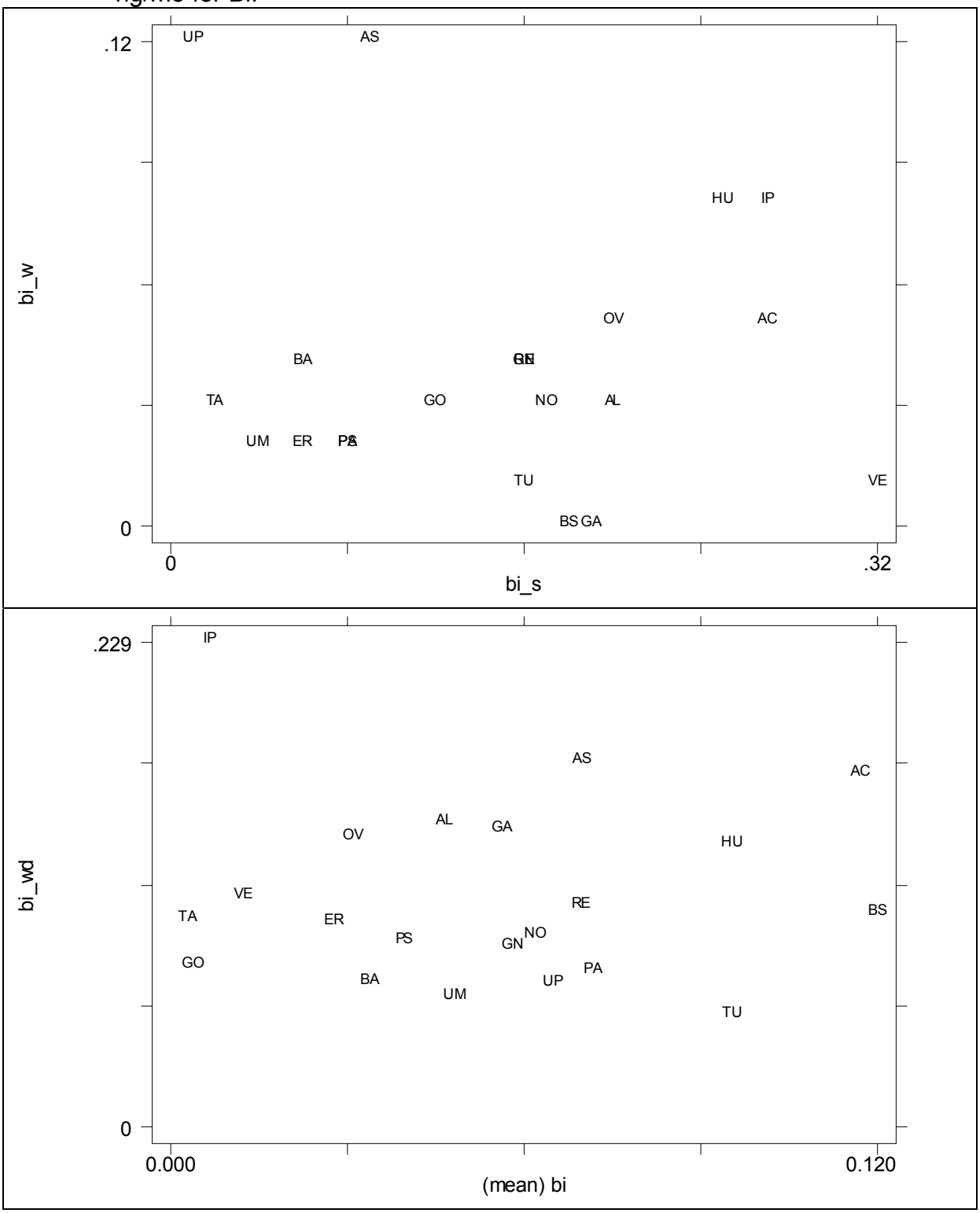

Fig. 3.4: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Br.

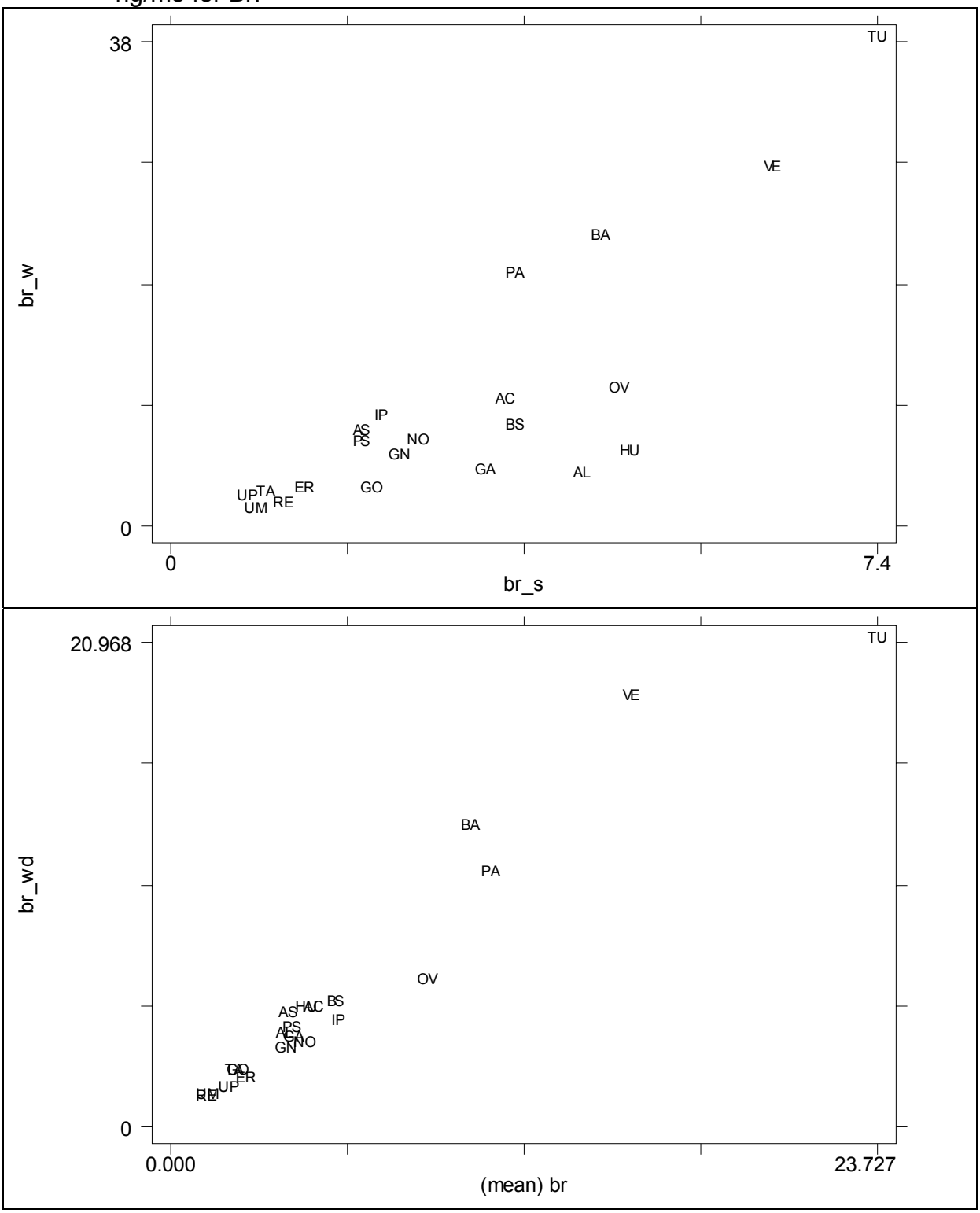

Fig. 3.5: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Ca.

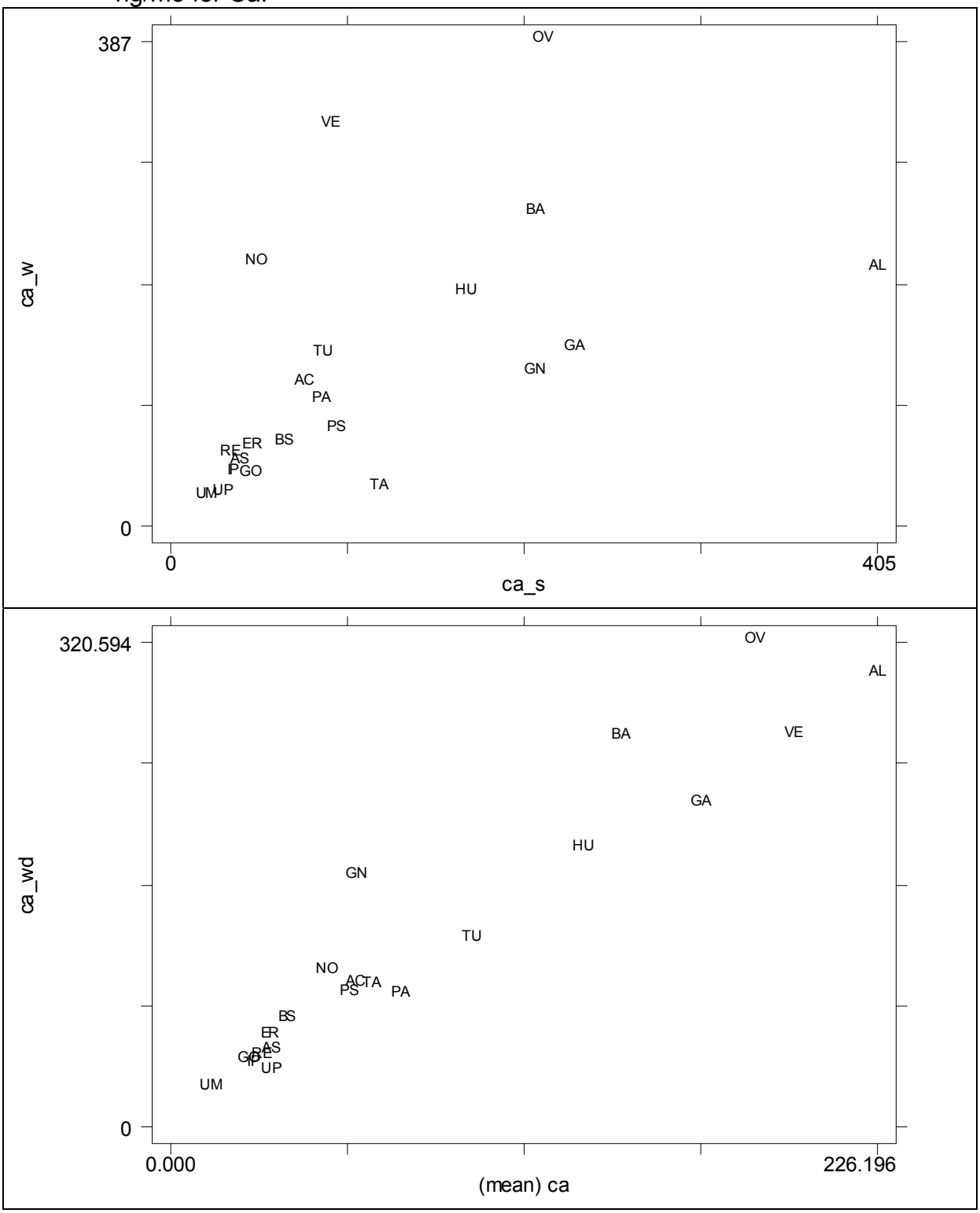

Fig. 3.6: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Cd.

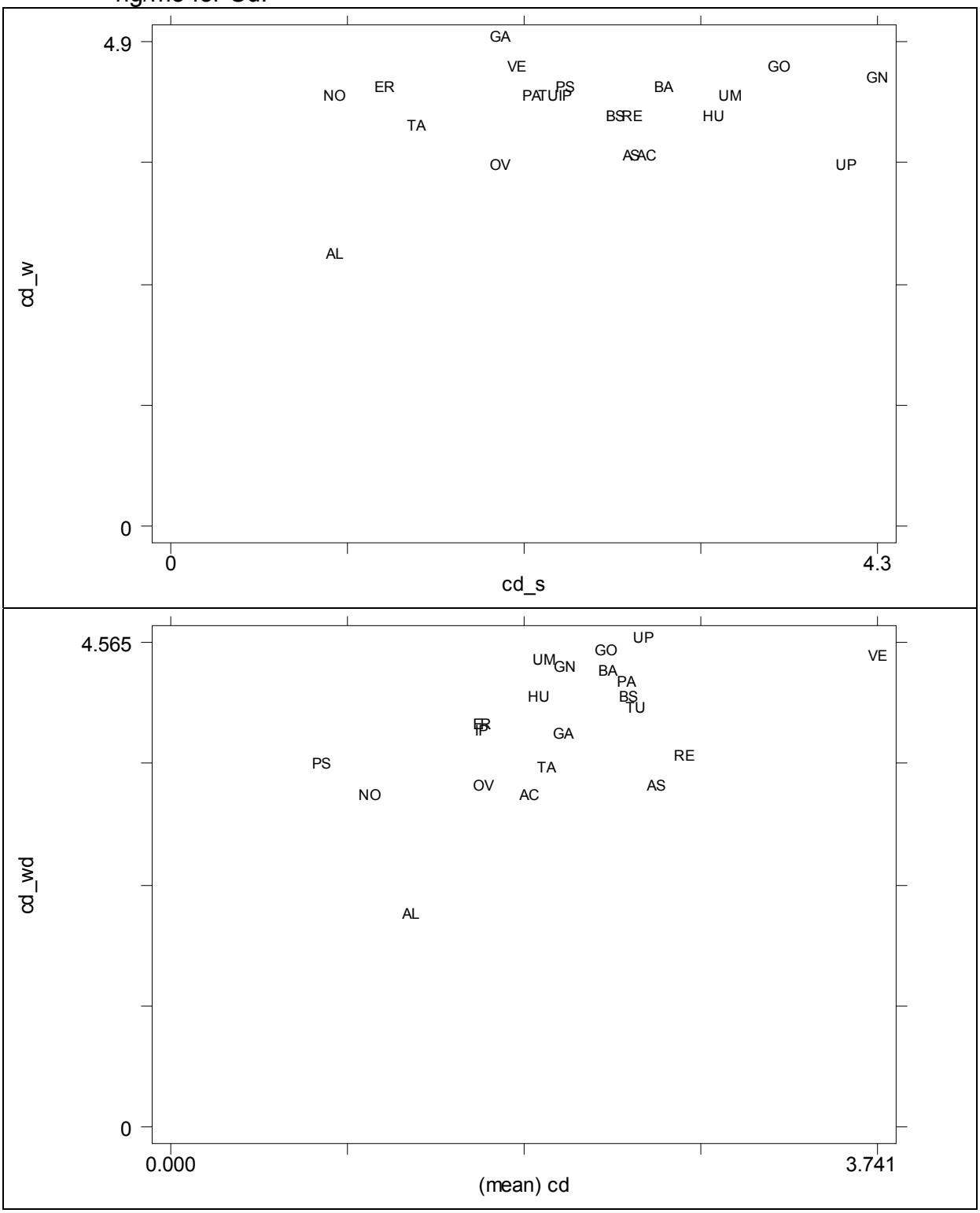

Fig. 3.7: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Cl.

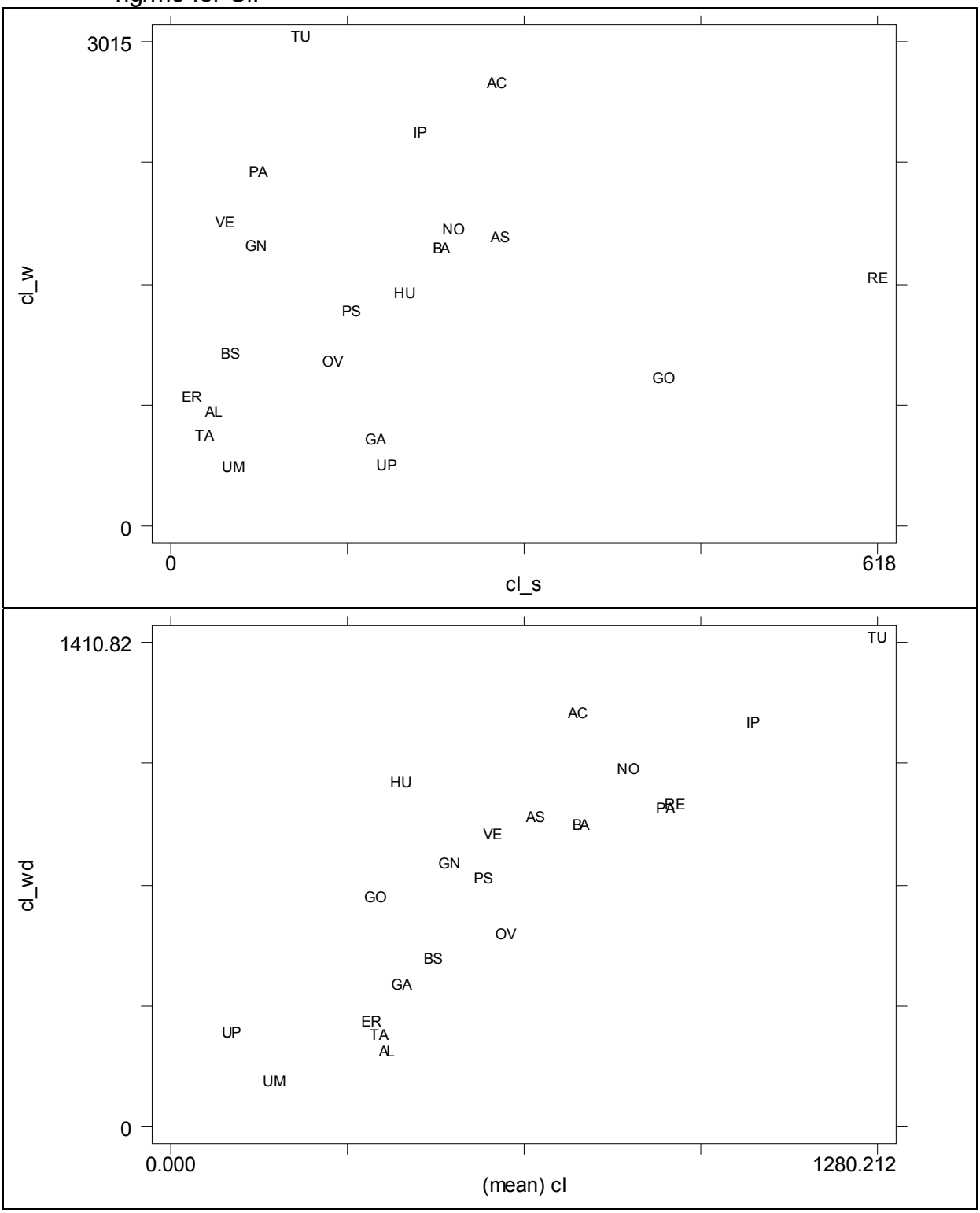

Fig. 3.8: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Co.

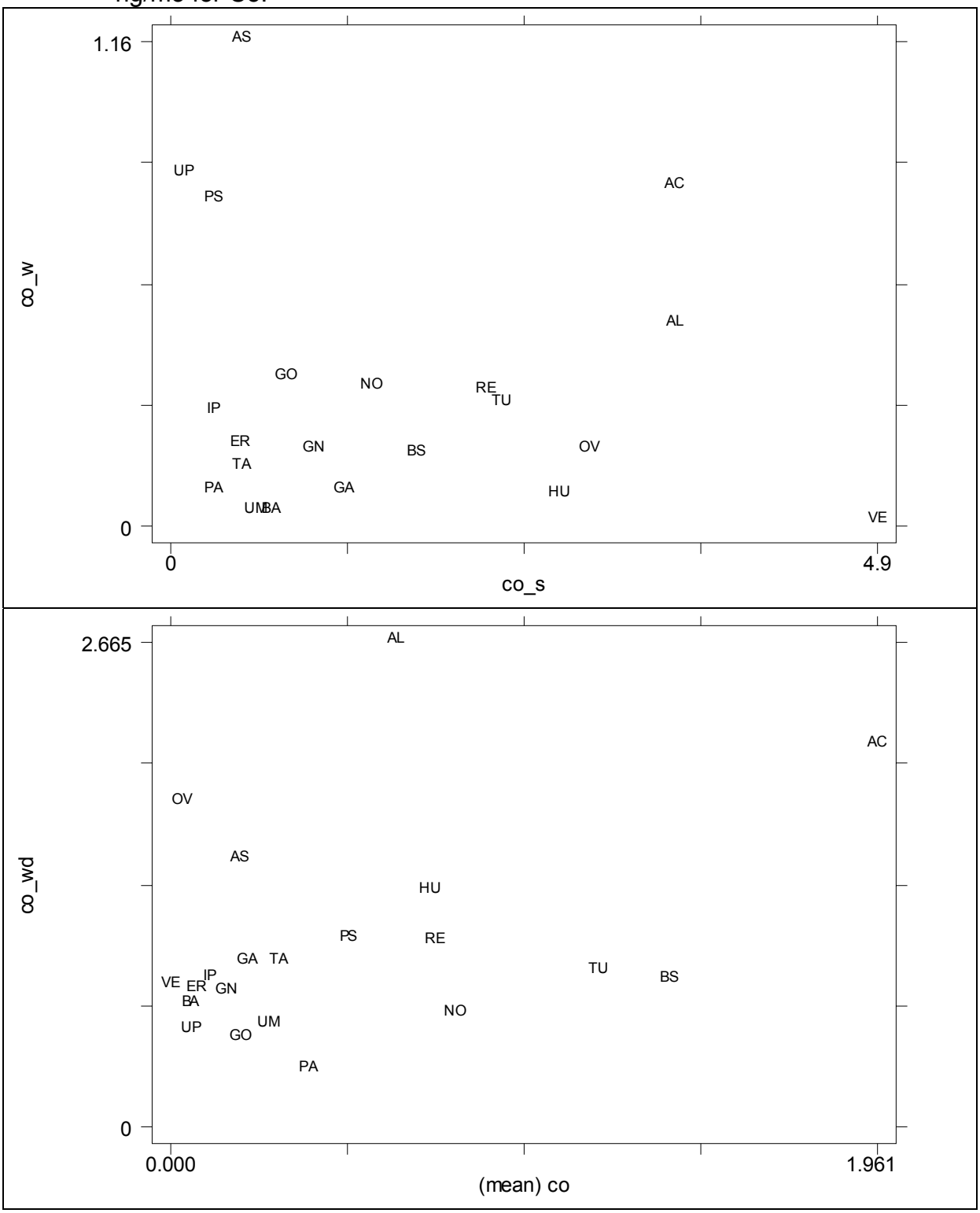

Fig. 3.9: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Cu.

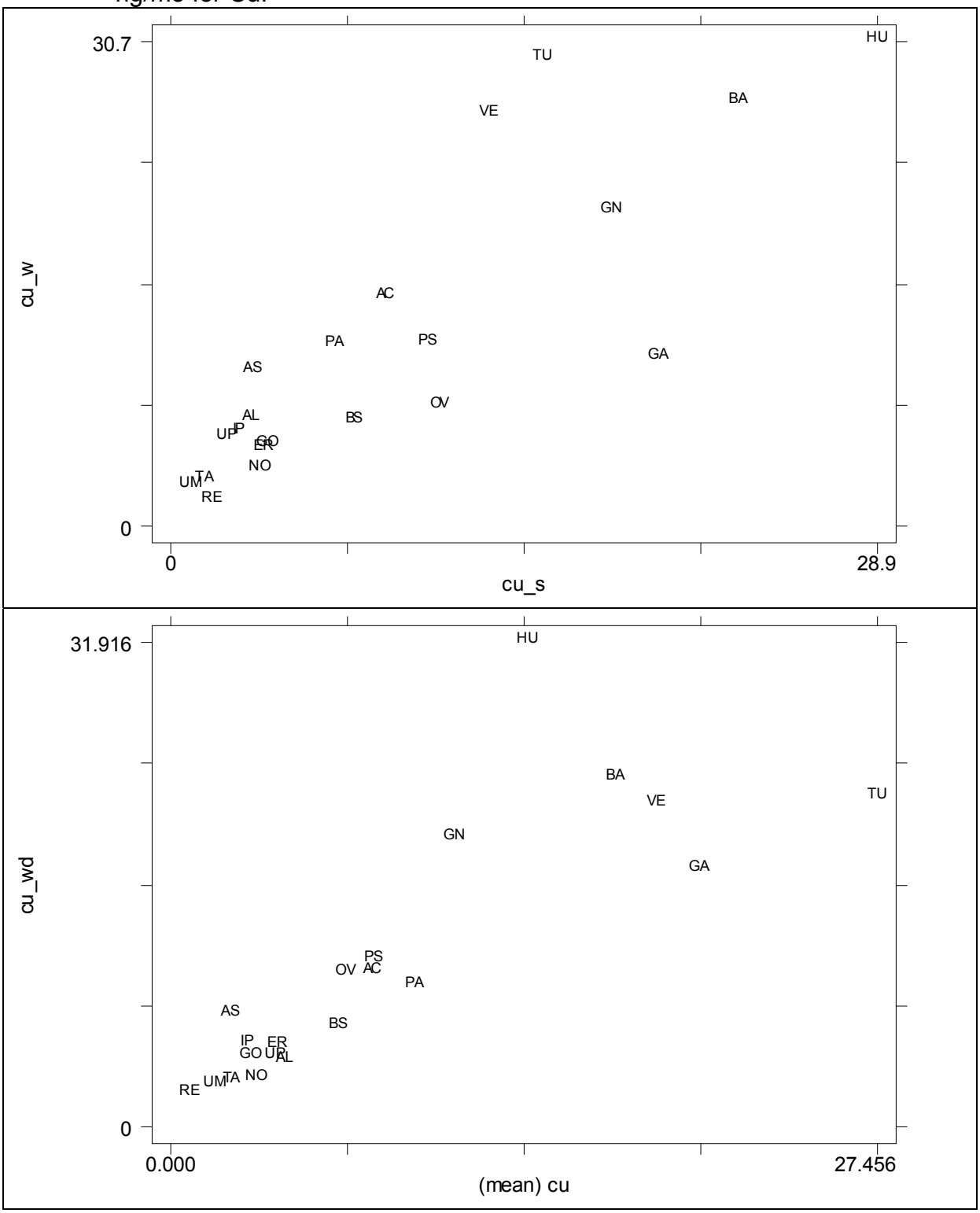

Fig. 3.10: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Fe.

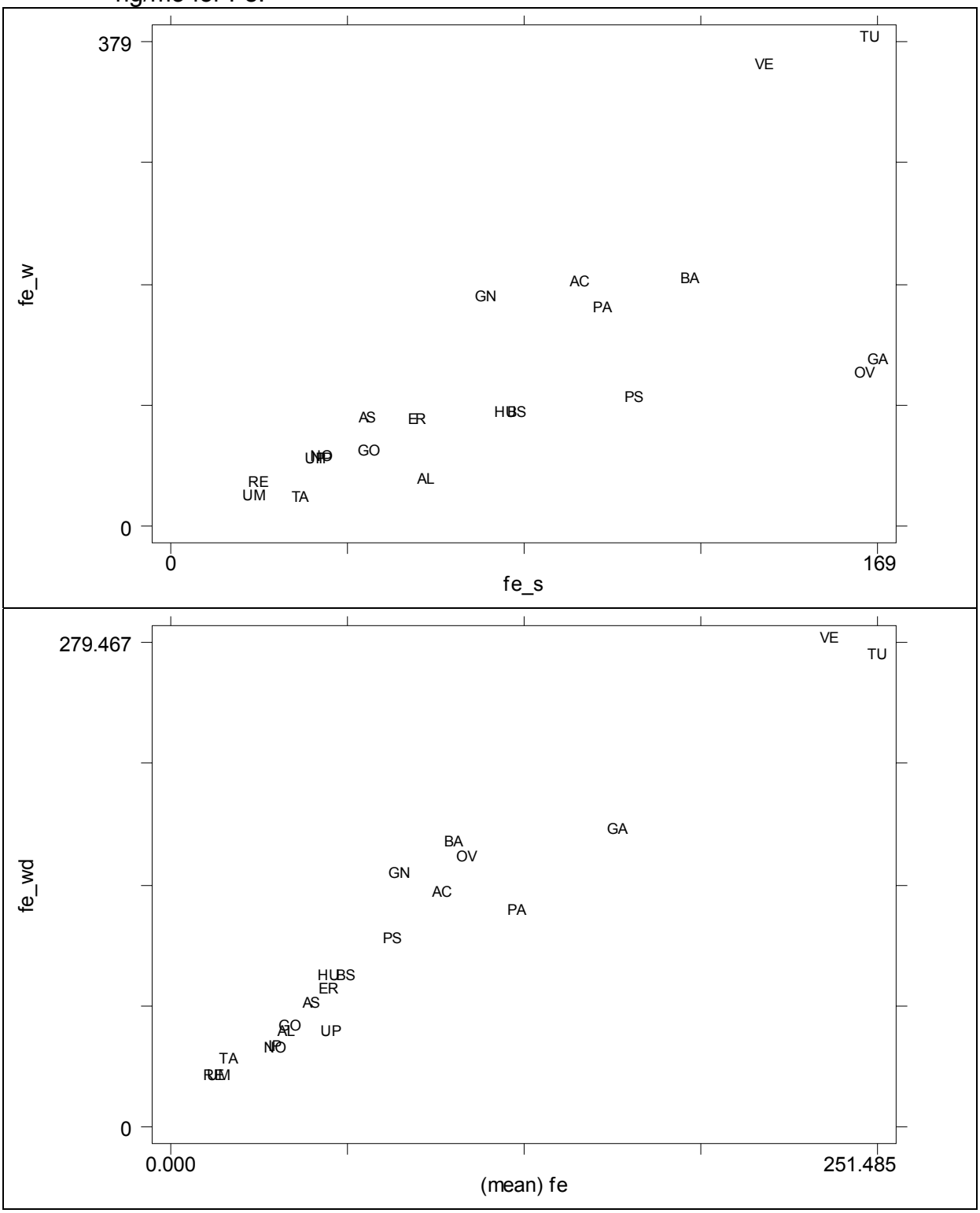

Fig. 3.11: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Ga.

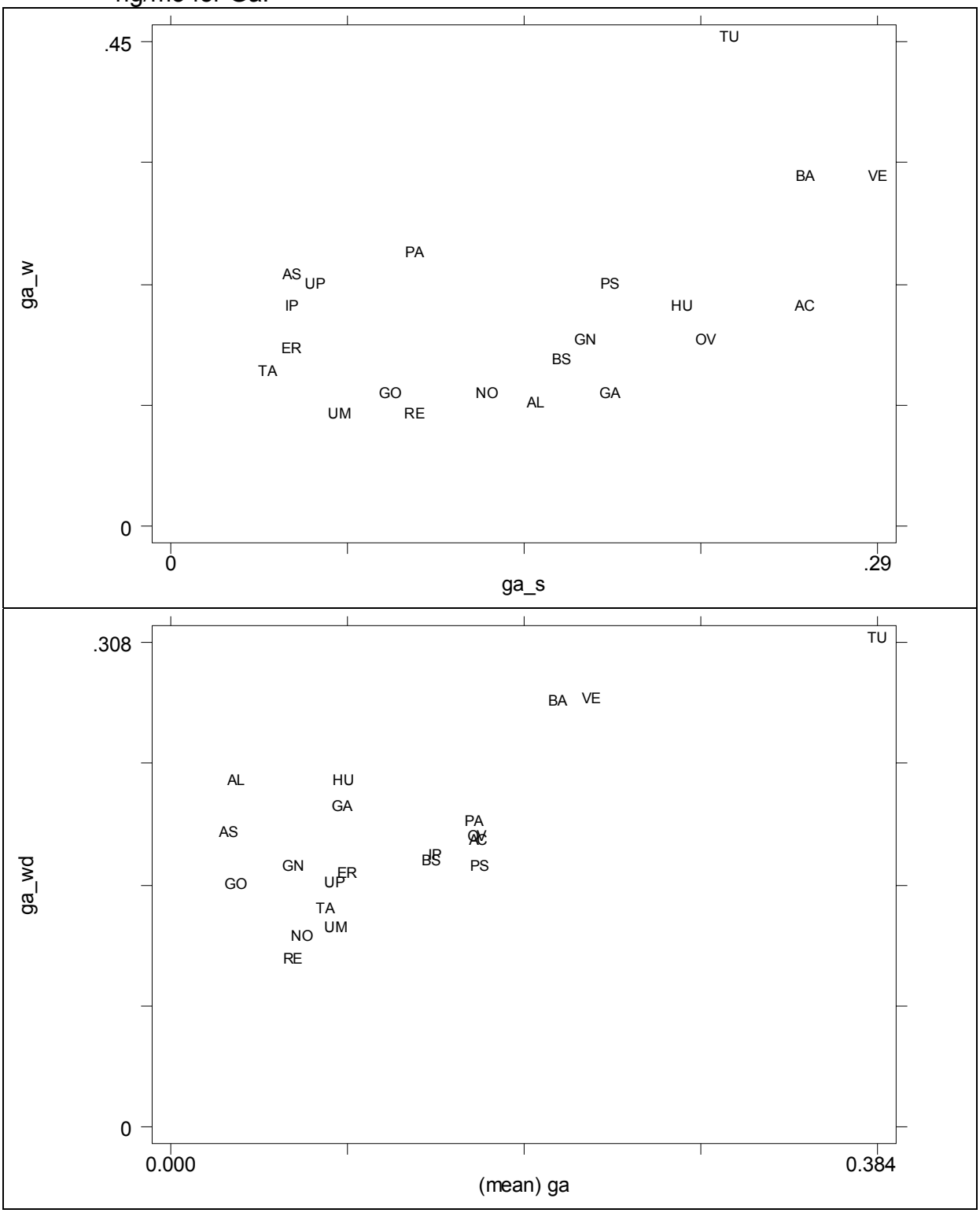

Fig. 3.12: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for K.

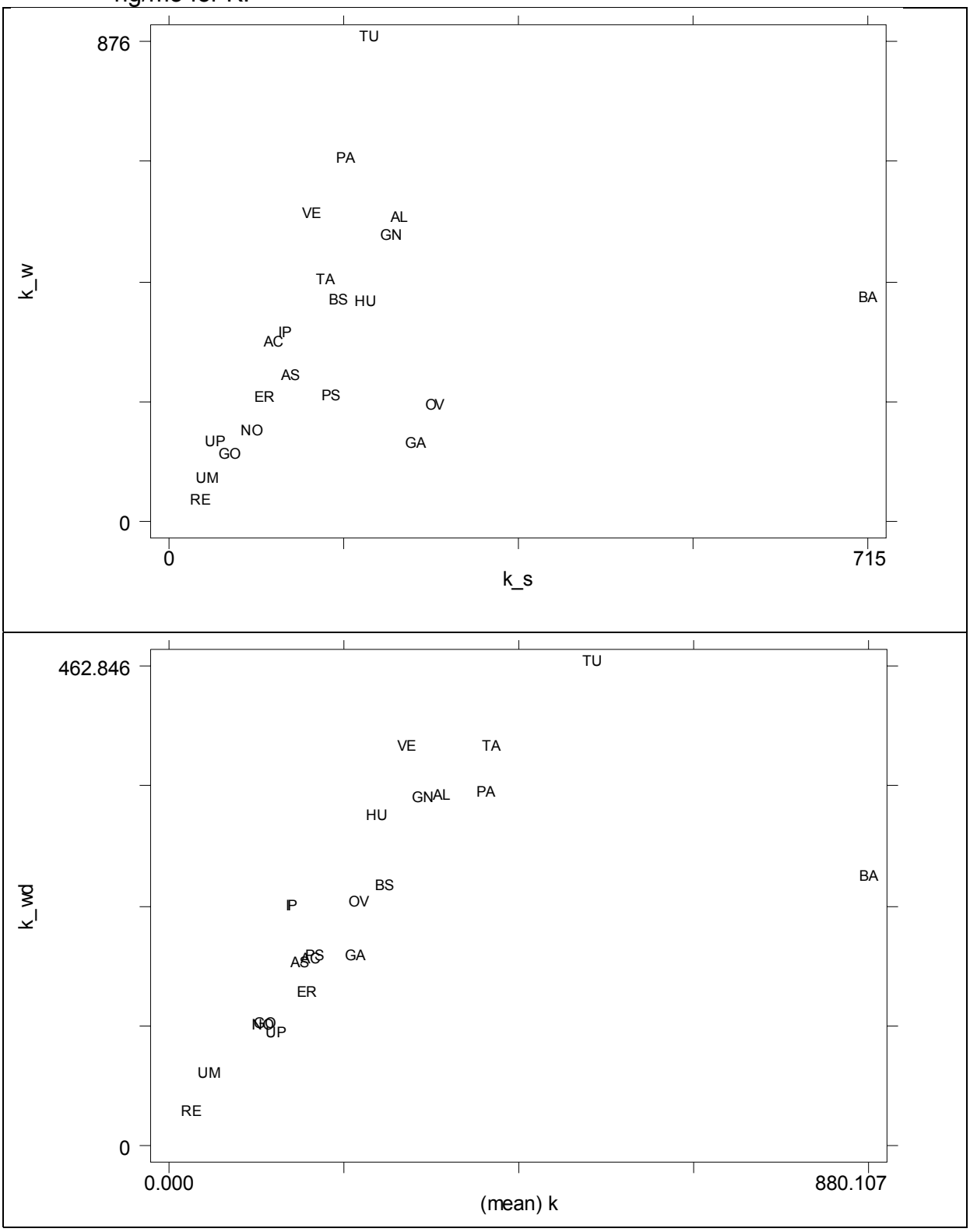

Fig. 3.13: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Mg.

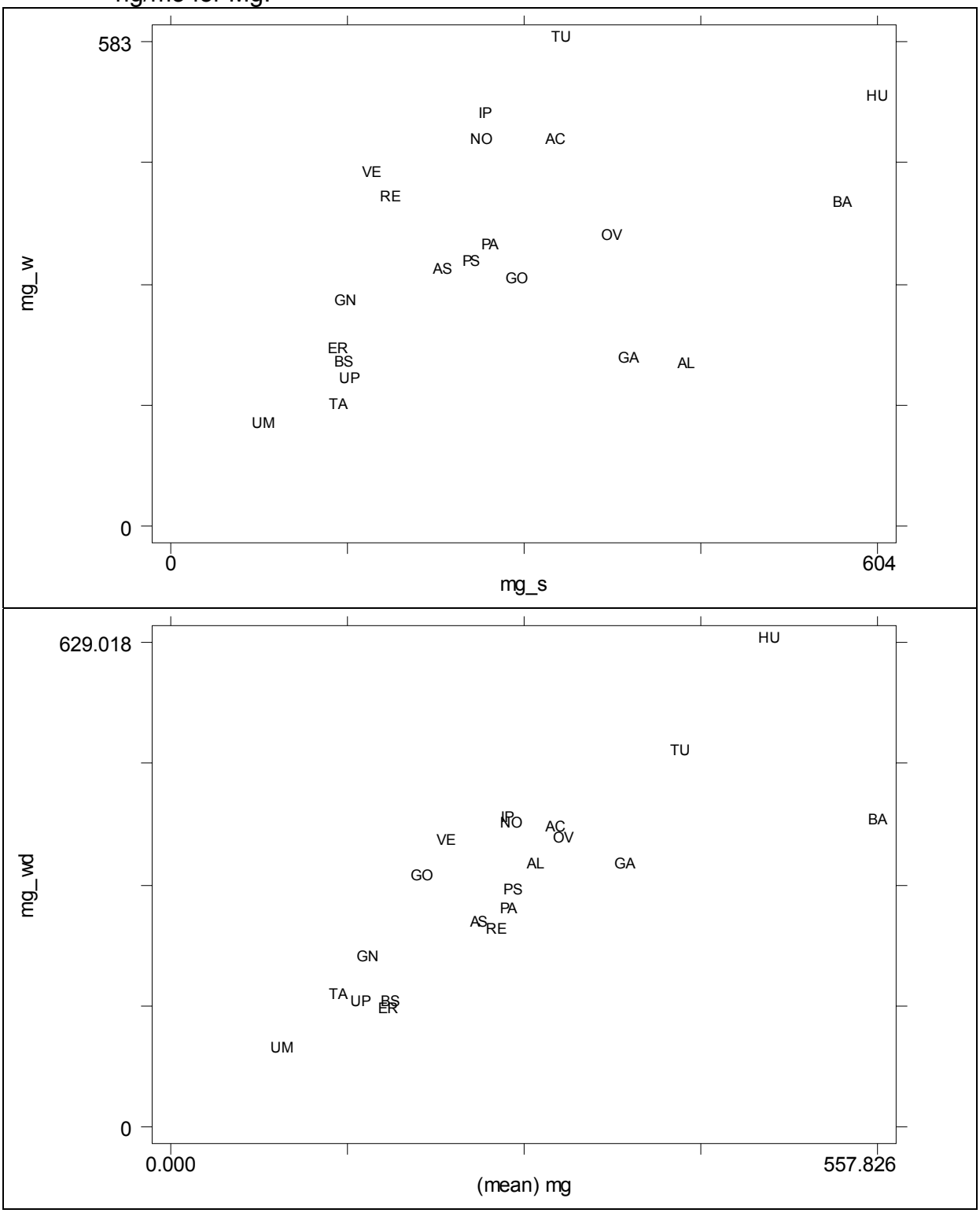

Fig. 3.14: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Mn.

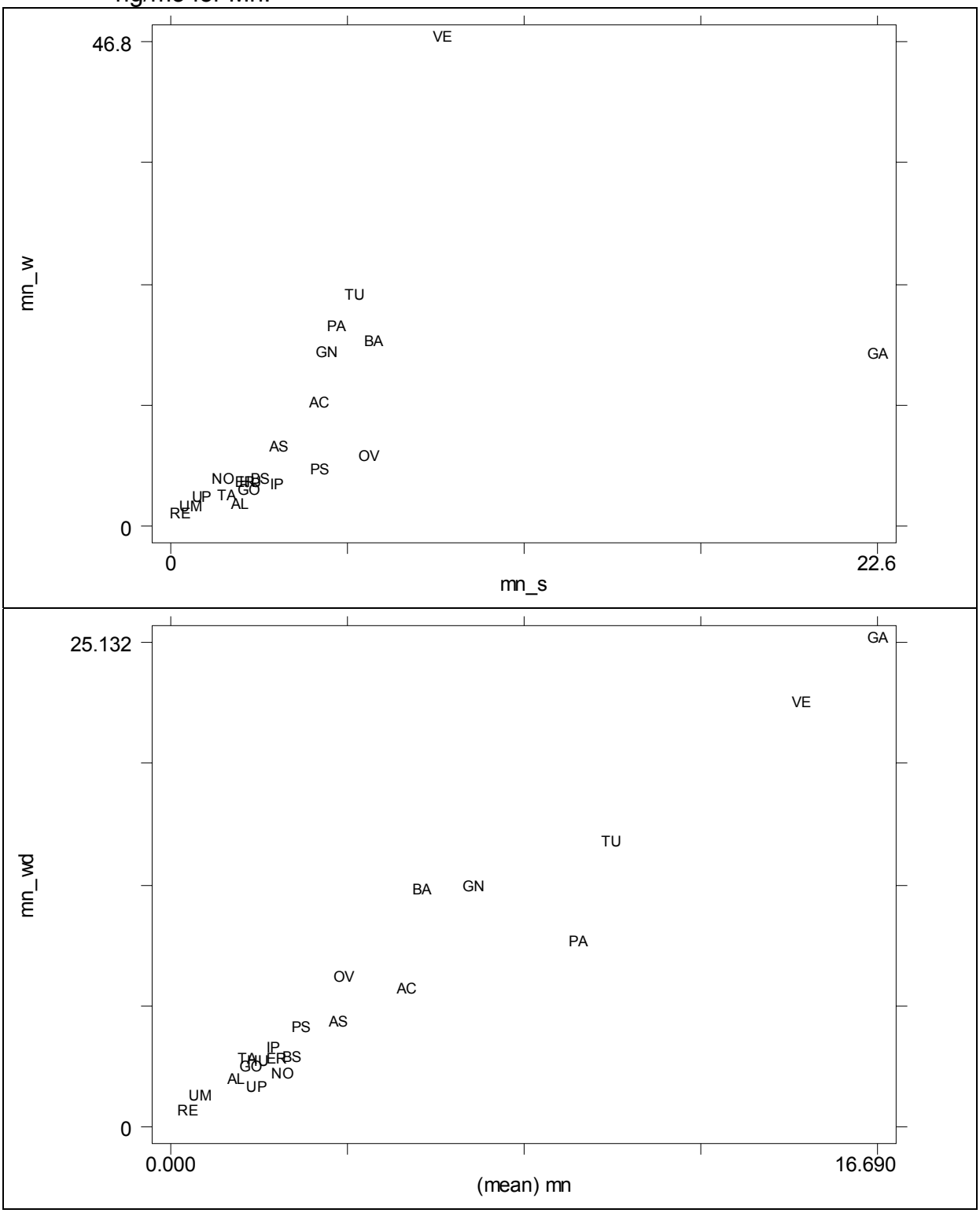

Fig. 3.15: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Na.

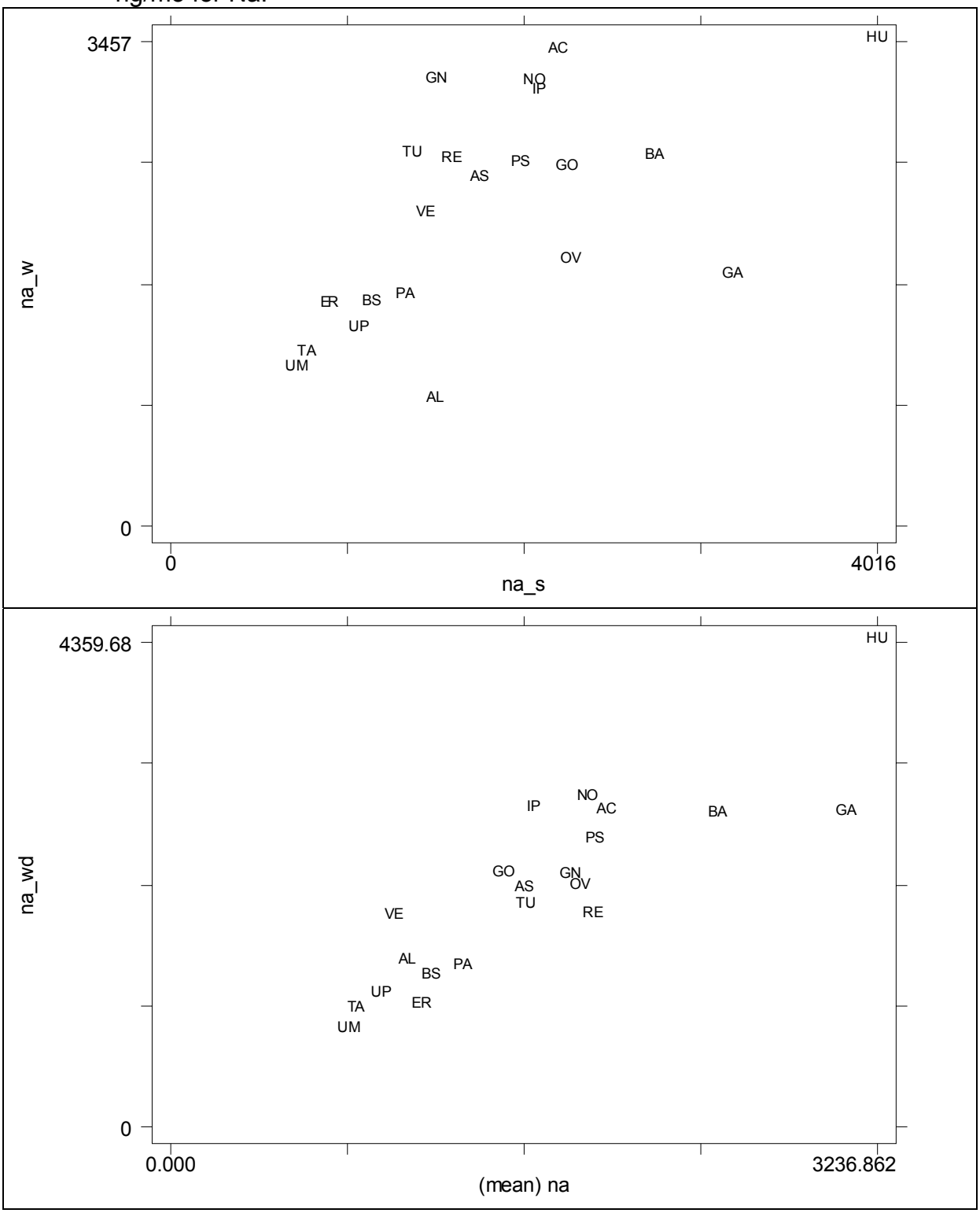

Fig. 3.16: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Ni.

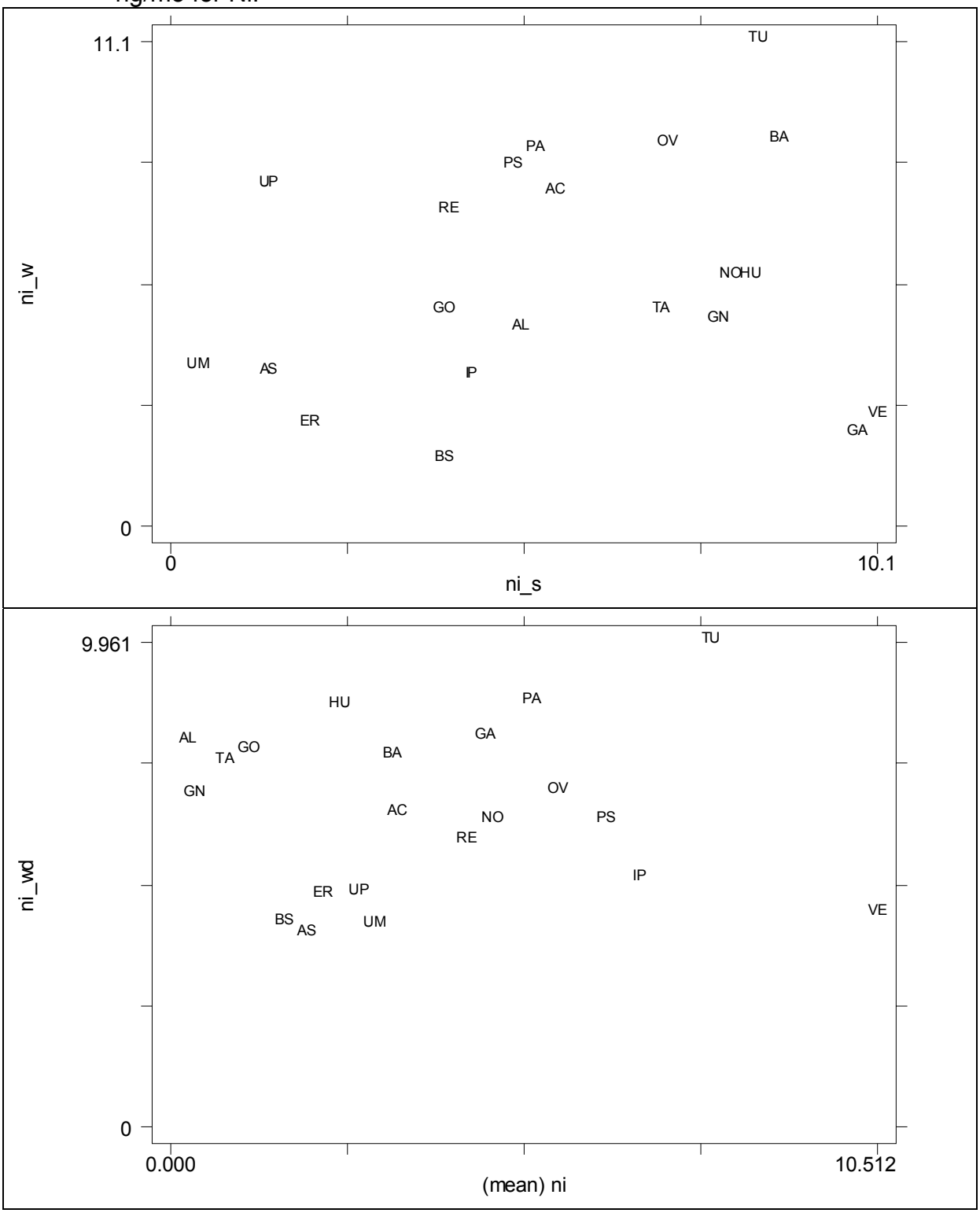

Fig. 3.17: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for P. Insert: Same with Huelva excluded

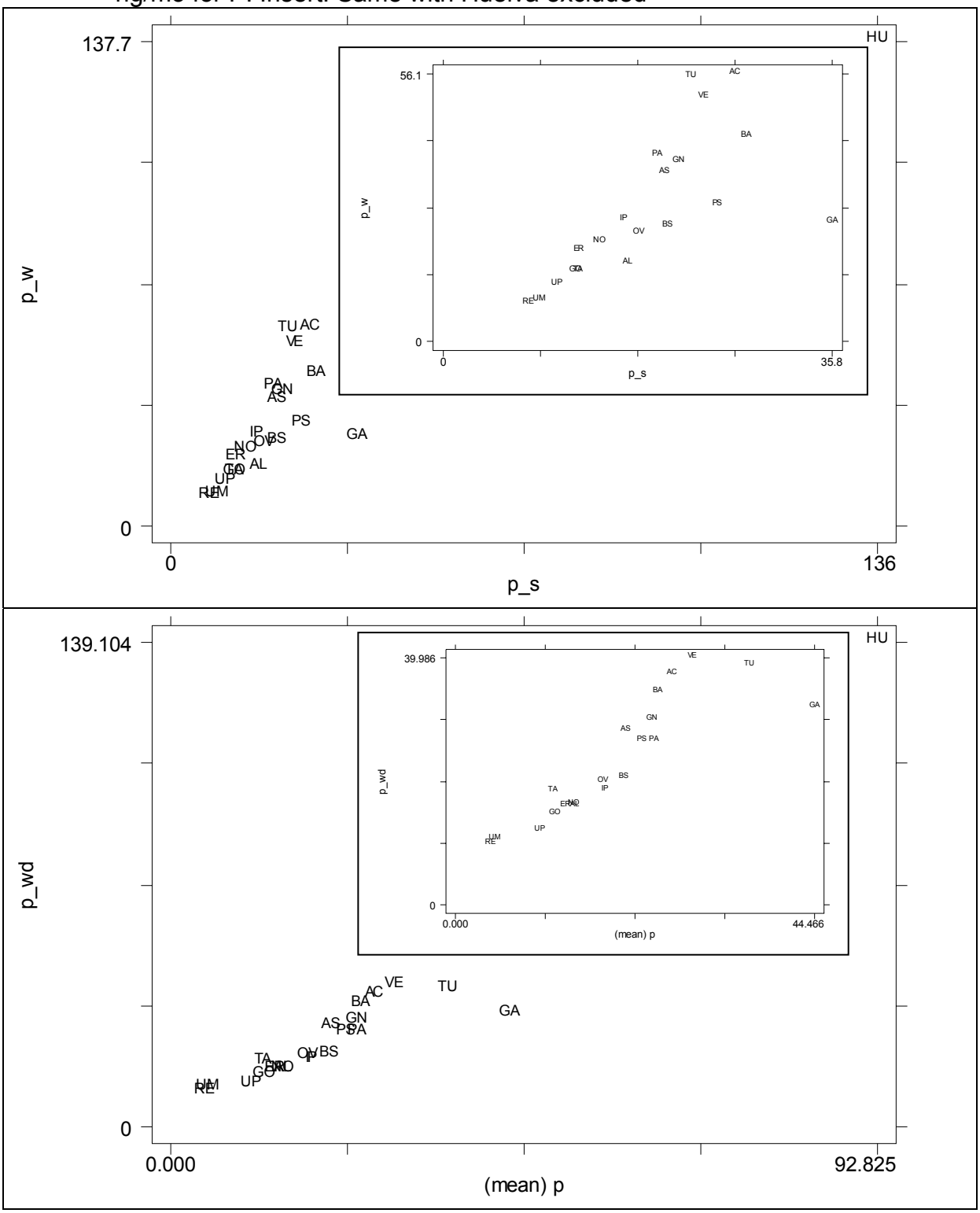

Fig. 3.18: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Pb.

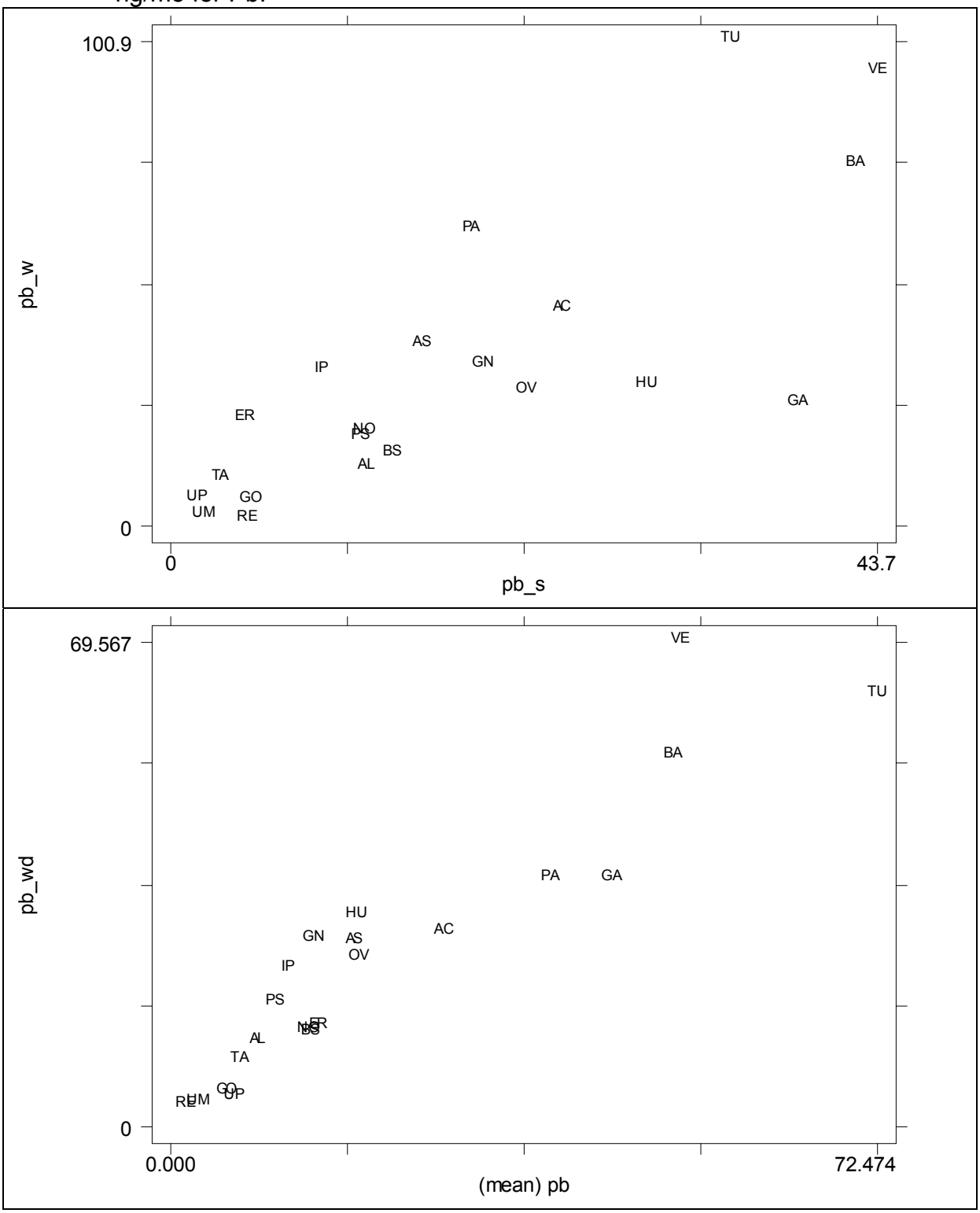

Fig. 3.19: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for S.

* NOTE: Sulfur scale should be reduced by an approx. factor of 2.5! (see p. 15)

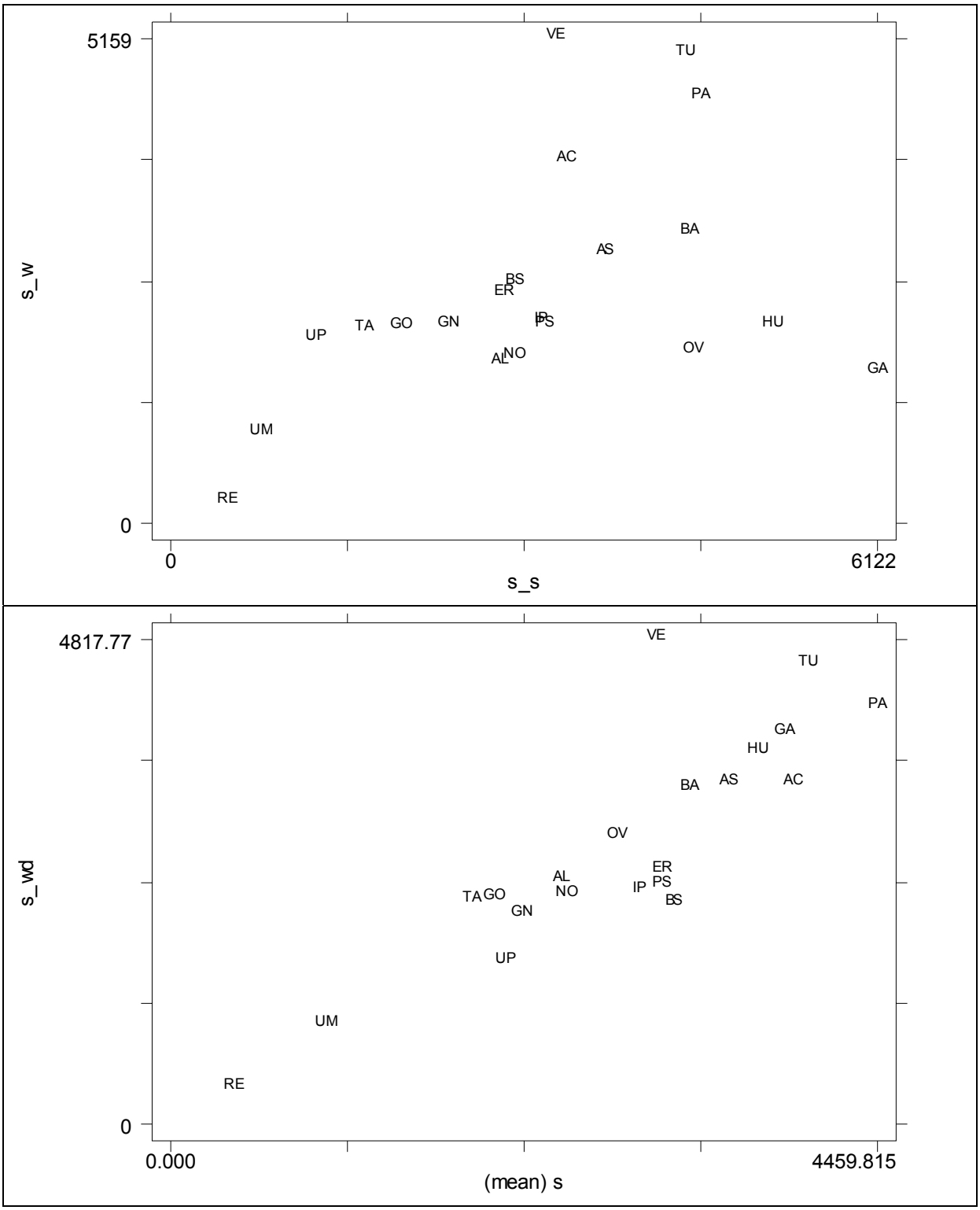

Fig. 3.20: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Se.

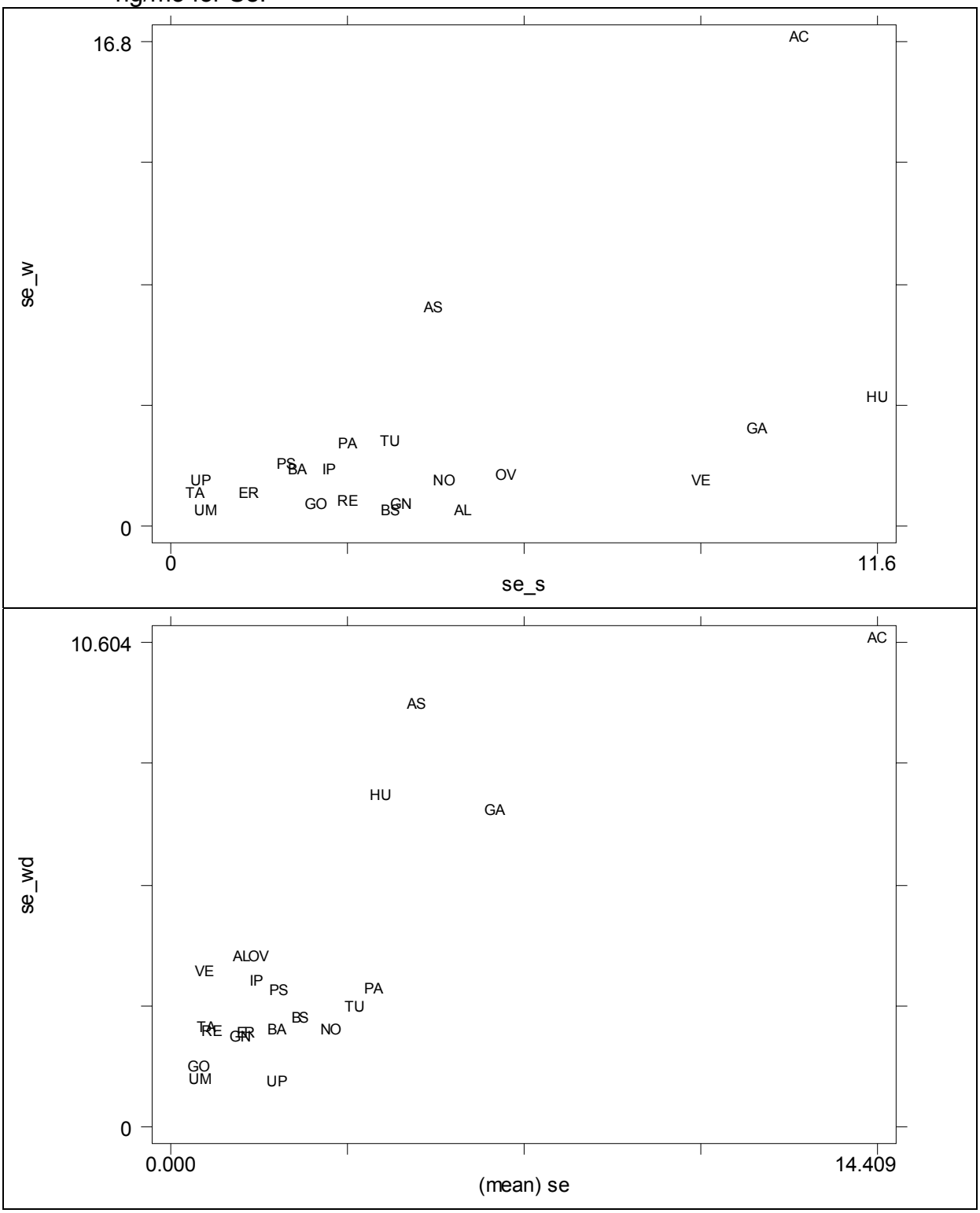

Fig. 3.21: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Si.

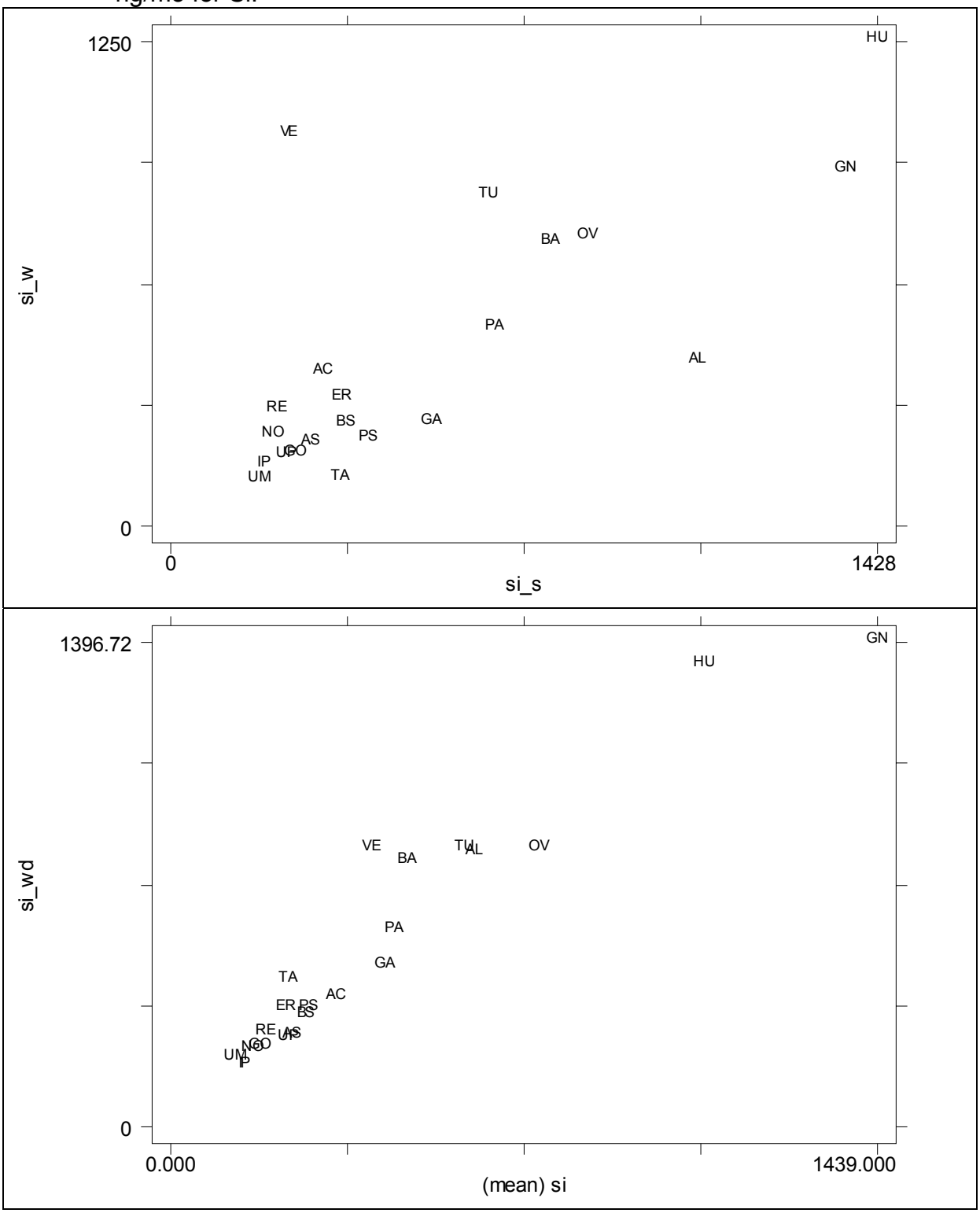

Fig. 3.22: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Ti.

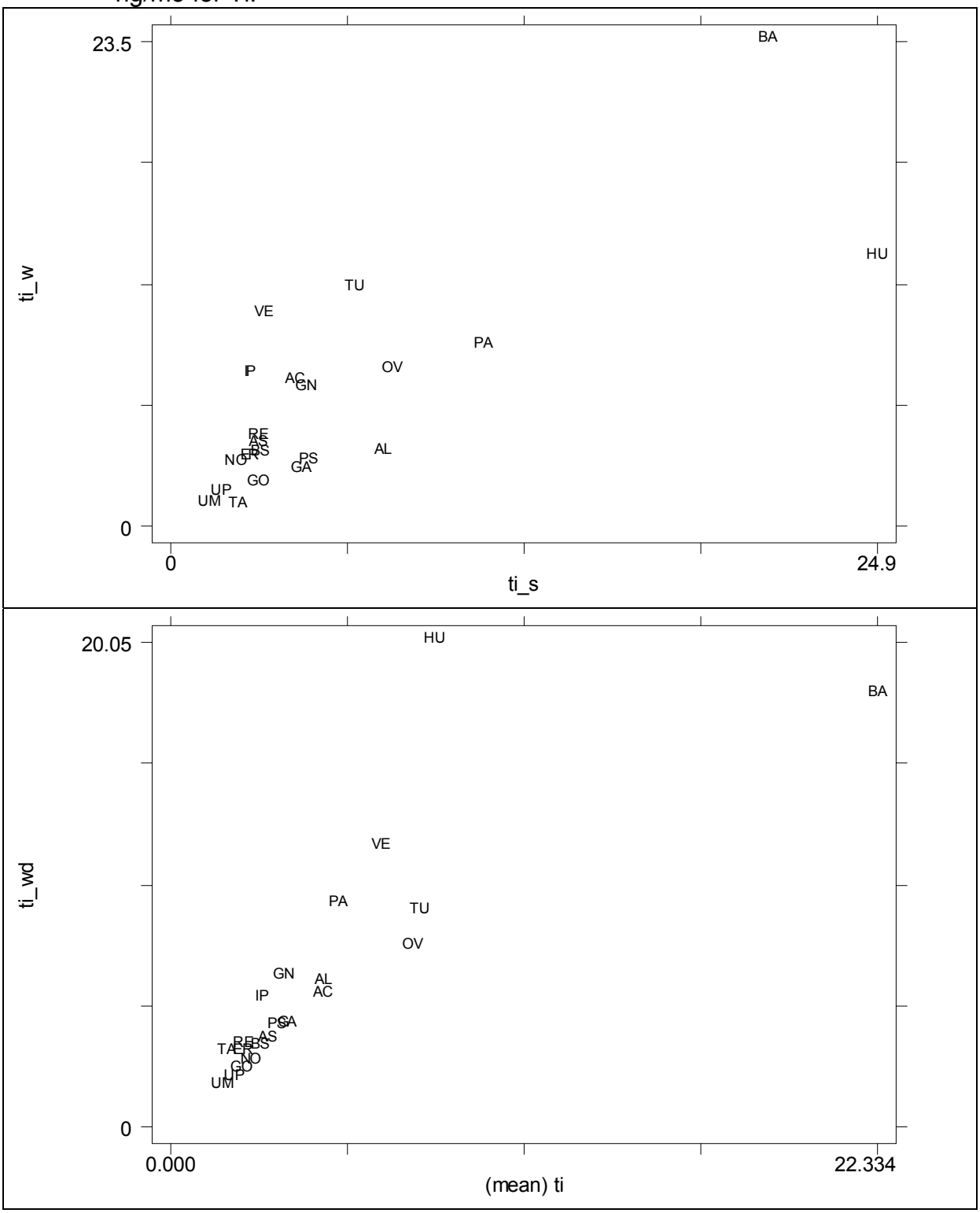

Fig. 3.23: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for V.

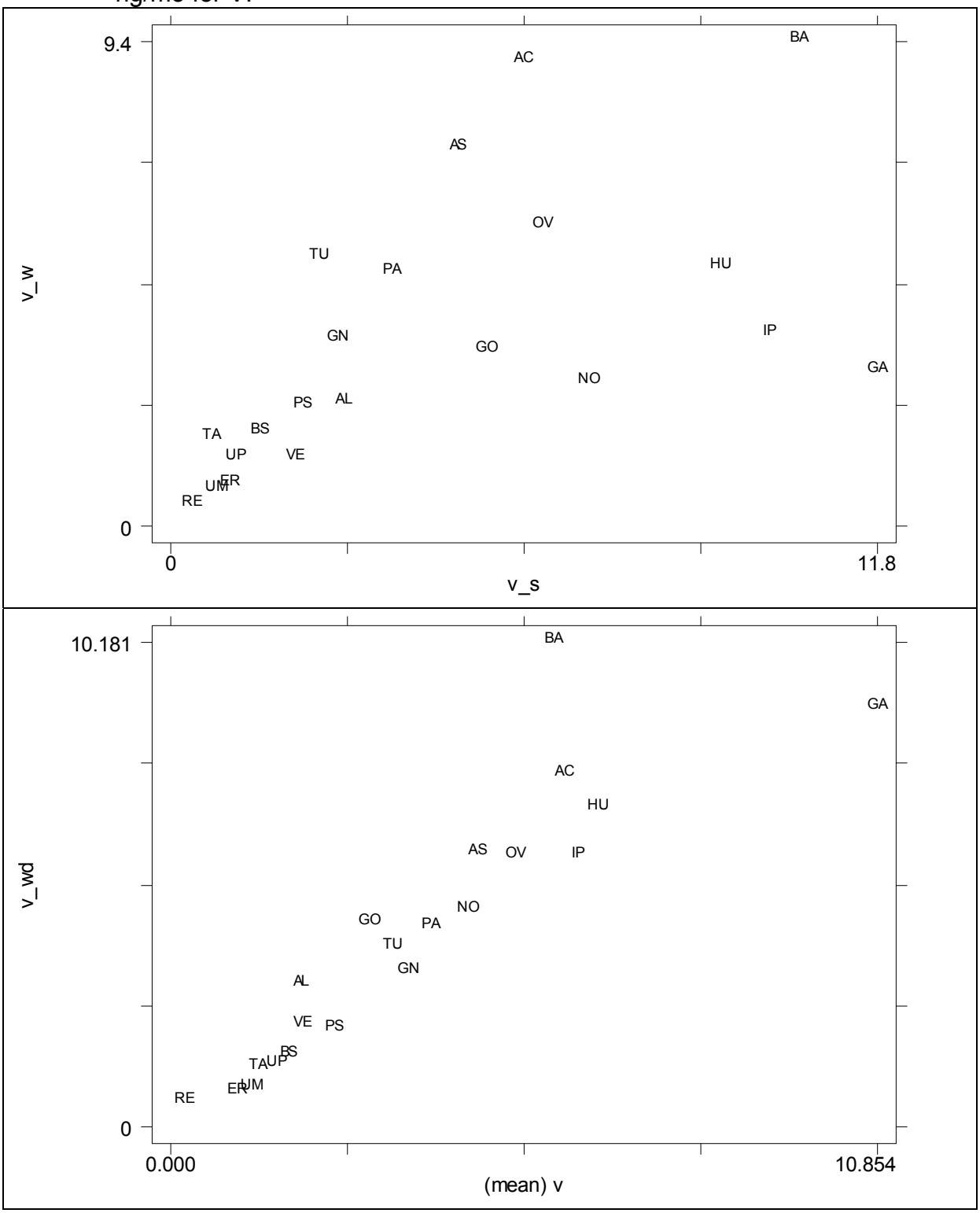

Fig. 3.24: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for Zn.

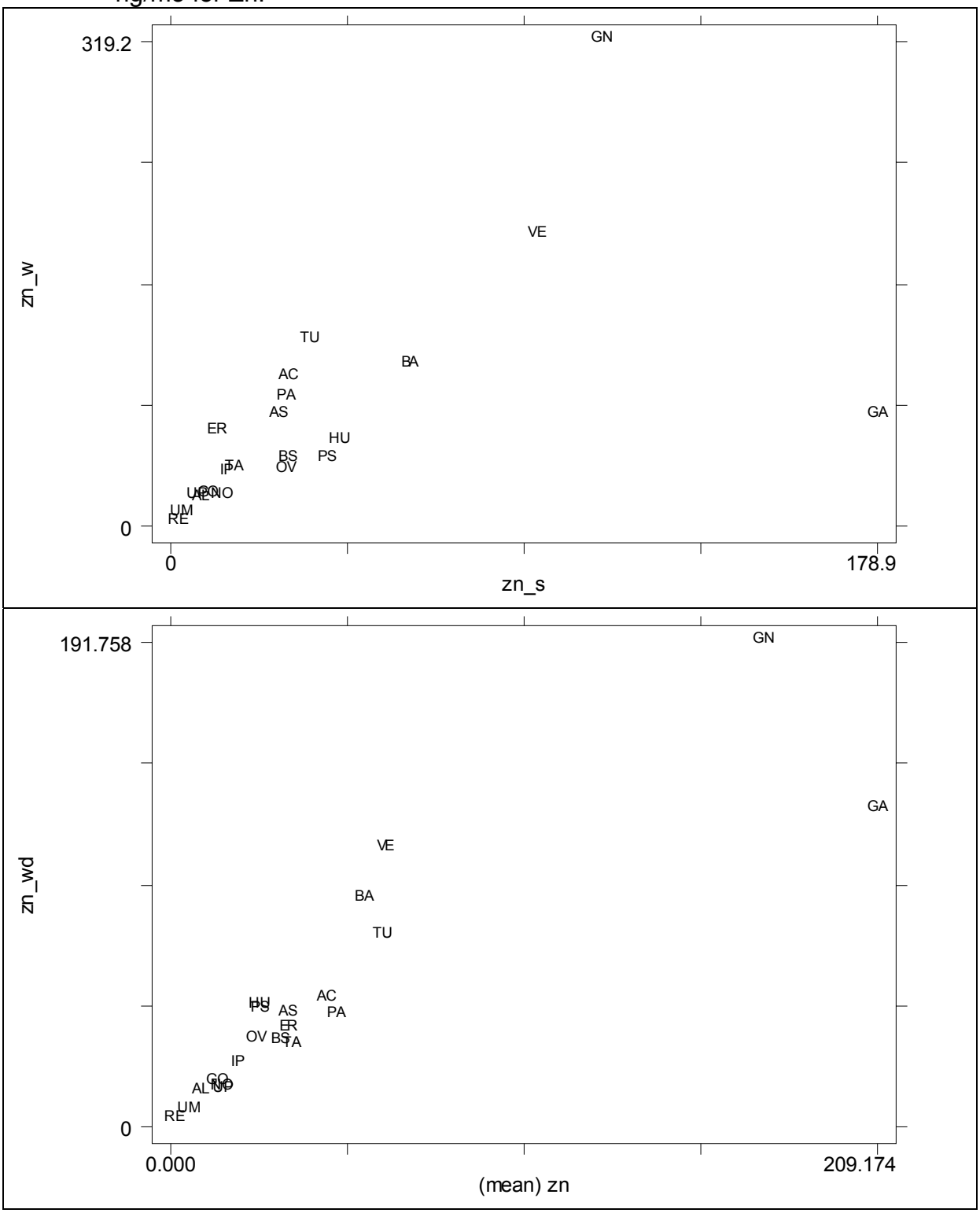

Fig. 3.25: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for PM2.5.

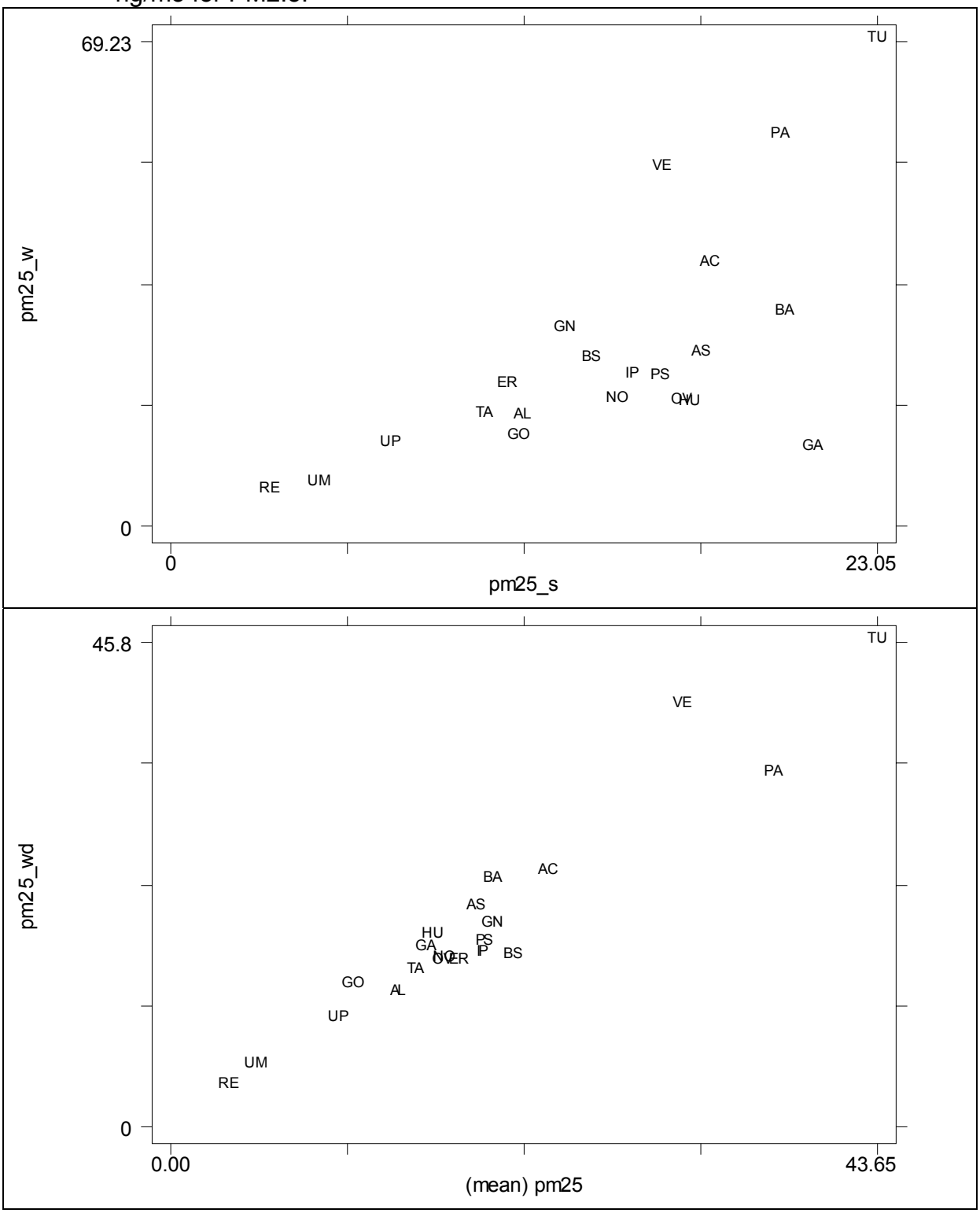

Fig. 3.26: Correlation diagram of Winter (w) and Summer (s) mean concentrations and Weekday (wd) and Weekend ((mean)) mean concentrations, respectively, in ng/m3 for BS.

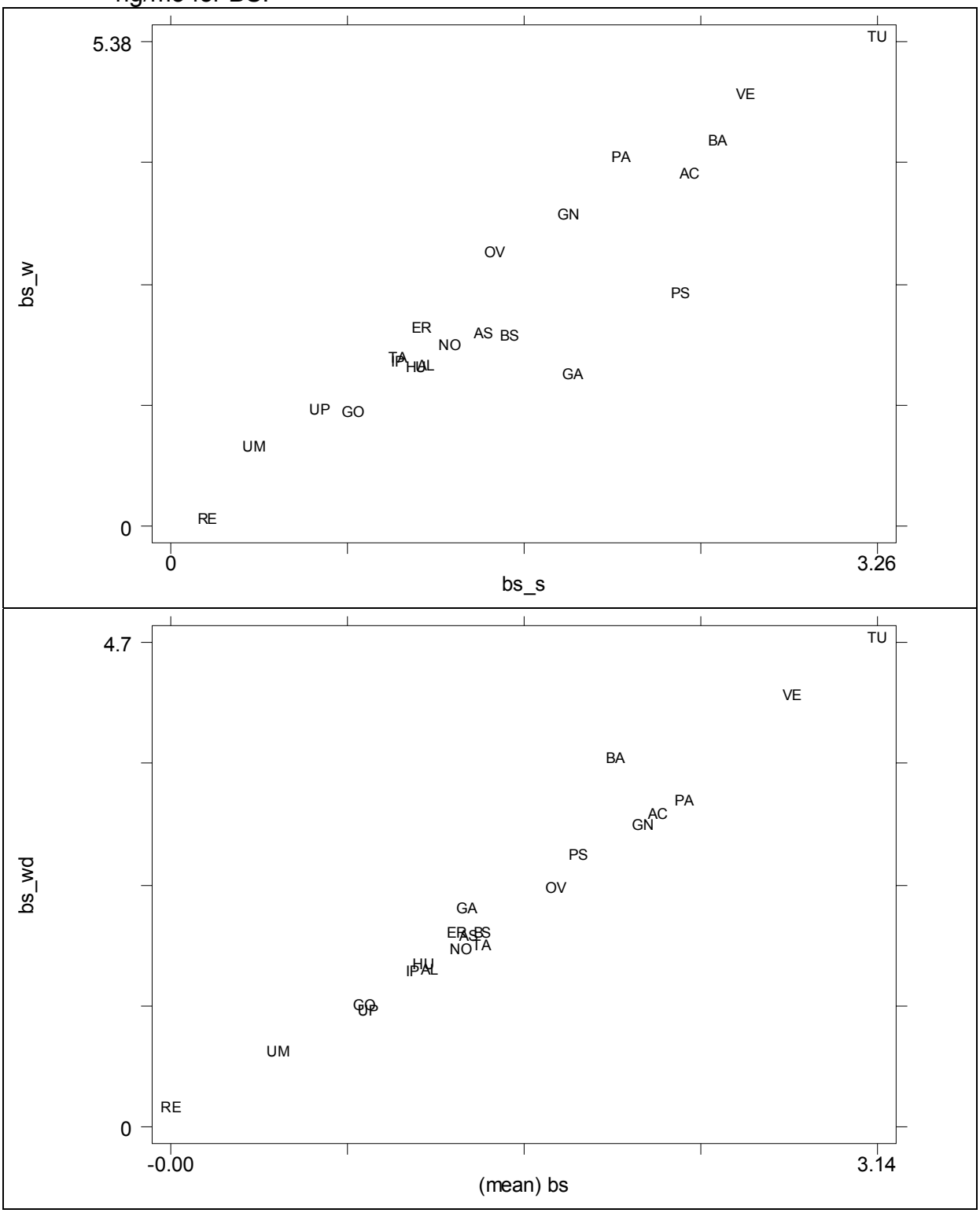

Fig. 4 Correlation between Antwerp City and Antwerp South for Al, Ca, S, Pb, As, and Se, measured at the same days (some sampling hours are not the same). Pearson correlation factor rp is calculated (not time-weighed) including all concentrations >LoD but highest value excluded.

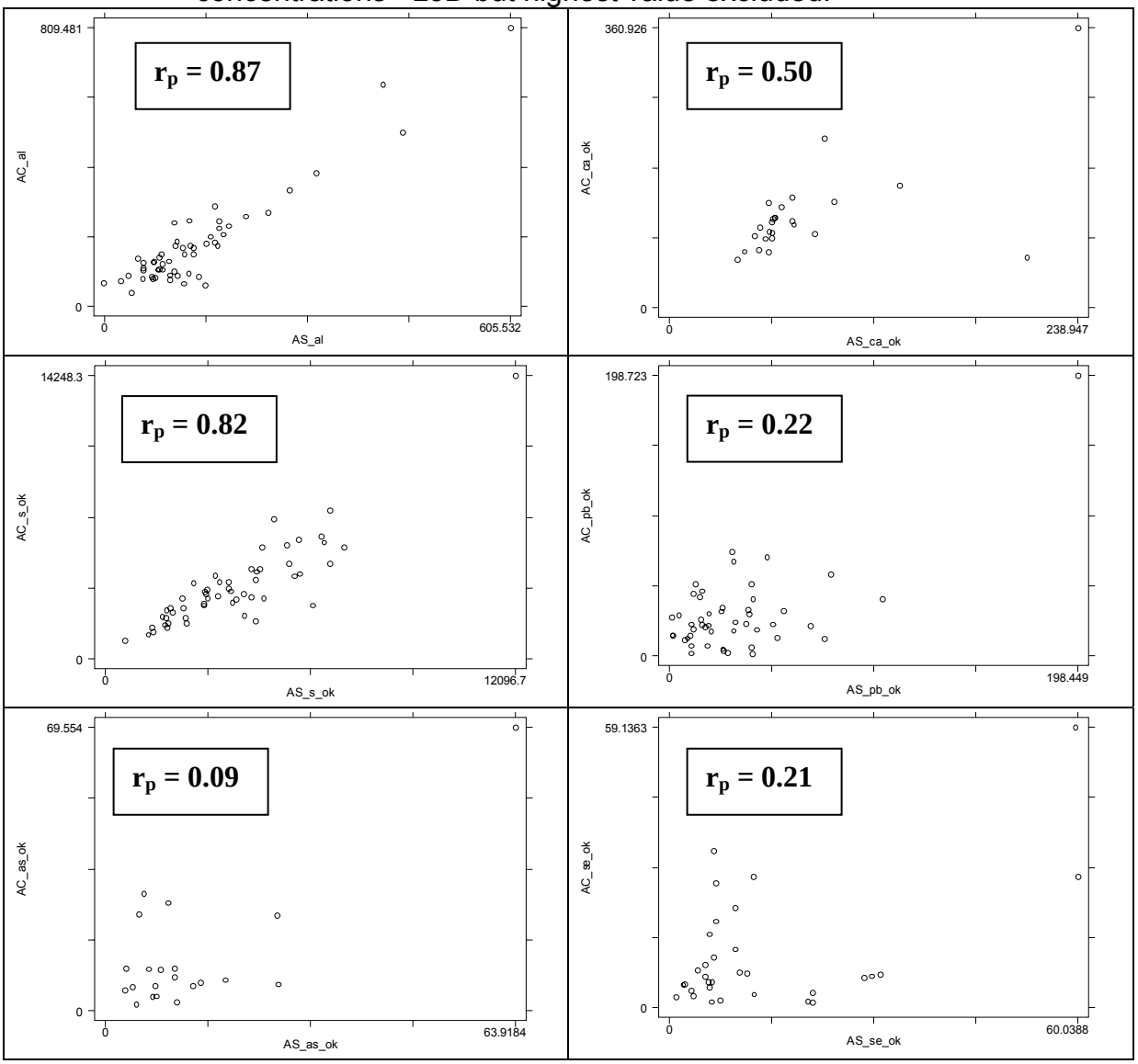

Fig. 5 Correlation diagrams between elements (Bi, Se, Co, Ga, Ni) having only a small number of filters >LoD. Concentrations of all centres >LoD included. In addition, Ga versus Ni is given for both batches separately.