



Commission of the European Communities

environment and quality of life

EXCHANGE OF INFORMATION CONCERNING ATMOSPHERIC POLLUTION IN THE EUROPEAN COMMUNITY

Annual Report 1985



Report

EUR 12476 EN

Blow-up from microfiche original

Commission of the European Communities

environment and quality of life

EXCHANGE OF INFORMATION CONCERNING ATMOSPHERIC POLLUTION IN THE EUROPEAN COMMUNITY

Annual Report 1985

Daily data

Period: October 84 to September 85

Decision 82/459/EEC extending Decision 75/441/EEC

**ENEX GROUP
Rue Van Elewyck 11
B-1050 Bruxelles**

Contract CCAM/87/321/B6642

FINAL REPORT

**Directorate-General
Environment, Nuclear Safety and Civil Protection**

1990

EUR 12476 EN

**Published by the
COMMISSION OF THE EUROPEAN COMMUNITIES
Directorate-General
Telecommunications, Information Industries and Innovation
L-2920 LUXEMBOURG**

LEGAL NOTICE

Neither the Commission of the European Communities nor any person acting on behalf of the Commission is responsible for the use which might be made of the following information

Catalogue number: CD-NA-12476-EN-C

ACKNOWLEDGMENTS

We wish to express our appreciation to Mr. A. Price for his constructive comments during the elaboration of this report.

We also express our thanks to Mrs. M.-Ch. Van Houtte for her collaboration.

FOREWORD

During the elaboration of the present report, it was discovered that some data transmitted by Belgium were wrong. In agreement with the European Communities and the Belgian Coordinator, it was then exceptionally decided to modify these data.

The same modifications have been made in the Commission archives.

Follows the list of data modified:

series 012010080403: period 88/01/15 - 88/01/21 set to 'BLANK'

series 012010140403: period 88/01/14 - 88/01/21 set to 'BLANK'

series 012010170403: period 88/01/15 - 88/01/22 set to 'BLANK'

series 012010220403: period 88/01/15 - 88/01/22 set to 'BLANK'

series 012010260403: period 88/01/16 - 88/01/23 set to 'BLANK'

ABSTRACT

The annual report 85 concerning the exchange of information on atmospheric pollution in the European Communities is presented in this document.

This report aims at presenting the content of the exchange of information as required by the Council Decision 82/459/EEC. Covering the period October 84 to September 85, it summarizes and evaluates the data for certain sulphur compounds and suspended particulates from measuring stations selected by the Member States in accordance with an agreed procedure.

RESUMEN

En el presente informe se ofrece un estudio de las cifras de contaminación atmosférica por agentes contaminantes específicos de los países de la Comunidad Europea. Abarca el período que se extiende entre octubre de 1984 y septiembre de 1985.

Para preservar la continuidad de los informes anuales, el formato de este documento es similar al de los informes anuales anteriores, aunque en él se han tenido en cuenta los comentarios y sugerencias de los coordinadores nacionales.

El informe se divide en dos partes. La primera consiste en una presentación general de las estaciones que han efectuado las mediciones; la segunda, en la que se evalúan los parámetros estadísticos que caracterizan la serie, consta a su vez de dos apartados:

- estadísticas descriptivas
- análisis periódicos

El objetivo principal de este informe acerca del intercambio de información es crear un documento de referencia.

RESUME

Denne beretning indeholder en analyse af luftforureningsdata for bestemte forurende stoffer i EF-landene. Den dækker tidsrummet fra oktober 1984 til september 1985.

Af hensyn til kontinuiteten i årsberetningerne er denne beretning stillet op på stort set samme måde som de tidligere årsberetninger, idet der er taget hensyn til de nationale koordinators bemærkninger og forslag.

Beretningen er delt i to dele. Den første del indeholder en generel beskrivelse af de målestationer, hvorfra oplysningerne stammer. Den anden del vedrører evalueringen af de statistiske parametre for serierne opdelt på:

- beskrivende statistik
- tidsrækkeanalyser

Hovedformålet med denne beretning om udvekslingen af oplysninger er at opna et opstagsværk.

Zusammenfassung

In diesem Bericht wird eine Analyse der aus den Mitgliedstaaten der Europäischen Gemeinschaft stammenden Tagesdaten für bestimmte Luftschadstoffe vorgelegt. Er erstreckt sich auf den Zeitraum Oktober 84 bis September 85.

Aus Gründen der Einheitlichkeit ist dieses Dokument ähnlich aufgebaut wie seine Vorgänger, berücksichtigt jedoch die Bemerkungen und Empfehlungen der nationalen Koordinatoren.

Der Bericht besteht aus zwei Teilen. Der erste enthält eine allgemeine Vorstellung der Stationen, die Messungen vorgelegt haben. Der zweite Teil enthält die Bewertung der statistischen Parameter der Meßreihen und ist wie folgt gegliedert:

- deskriptive Statistik
- Zeitreihenanalysen

In erster Linie soll dieser Bericht über den gegenseitigen Austausch von Informationen ein Bezugsdokument darstellen.

ΠΕΡΙΛΗΨΗ

Η έκθεση αυτή παρουσιάζει μια ανάλυση των δεδομένων της ατμοσφαιρικής ρύπανσης για ορισμένα αερολύματα στις χώρες των Ευρωπαϊκών Κοινοτήτων. Καλύπτει την περίοδο από Οκτώβριο 1984 μέχρι Σεπτέμβριο 1985.

Για να εξασφαλιστεί η συνέχεια των ετήσιων εκθέσεων, η παρουσίαση αυτού του εγγράφου είναι όμοια με αυτήν των προγενέστερων ετήσιων εκθέσεων και λαμβάνει υπόψη τις παρατηρήσεις και προτάσεις των Εθνικών Συντονιστών.

Η έκθεση διαιρείται σε δύο μέρη. Το πρώτο μέρος αφορά μια γενική παρουσίαση των σταθμών οι οποίοι διαβιβάζουν μετρήσεις. Το δεύτερο μέρος, σχετικά με την αξιολόγηση των στατιστικών παραμέτρων που χαρακτηρίζουν τις σειρές, υποδιαιρείται σε :

- περιγραφική στατιστική
- αναλύσεις χρονικών σειρών.

Κύριος στόχος αυτής της έκθεσης ανταλλαγής πληροφοριών είναι να αποτελέσει ένα έγγραφο αναφοράς.

SUMMARY

This report presents an analysis of the air pollution data for specific pollutants in the countries of the European Communities. It covers the period October 84 to September 85.

In order to ensure continuity of the annual reports, the presentation of this document is similar to the one of the previous annual reports and takes into consideration the comments and suggestions of the National Coordinators.

The report is divided in two parts. The first part concerns a general presentation of the stations which submitted measurements. The second part related to the evaluation of the statistical parameters characterizing the series is divided into:

- descriptive statistics
- time series analyses.

The main goal of this report on the exchange of information is to present a reference document.

RESUME

Le présent rapport propose une analyse des données journalières relatives à la pollution atmosphérique par des polluants spécifiques dans les pays de la Communauté européenne. Il couvre la période d'octobre 1984 à septembre 1985.

En vue d'assurer une continuité dans la présentation des rapports, la présentation de ce document est similaire à celle des rapports annuels antérieurs, tout en tenant compte des commentaires et propositions émis par les coordinateurs nationaux.

Le rapport comprend deux parties. La première partie consiste en une présentation générale des stations qui ont fourni des mesures. La seconde partie a trait à l'évaluation des paramètres statistiques caractérisant les séries et comprend elle-même les deux sections suivantes :

- statistiques descriptives
- analyse des séries chronologiques.

L'objectif principal de ce rapport relatif à l'échange d'informations est de constituer un document de référence.

SOMMARIO

La presente relazione contiene un'analisi dei dati giornalieri relativi a determinati inquinanti atmosferici nei paesi della Comunità europea e riguarda il periodo compreso tra l'ottobre 1984 e il settembre 1985.

Volendo garantire una certa continuità nelle relazioni annuali il presente documento è stato redatto in maniera analoga a quella delle relazioni degli anni precedenti e tiene conto dei commenti e dei suggerimenti dei coordinatori nazionali.

La relazione si compone di due parti: la prima presenta in generale le stazioni di misurazione che hanno trasmesso i dati mentre la seconda, relativa alla valutazione dei parametri statistici che caratterizzano le serie, si suddivide in:

- statistiche descrittive
- analisi di serie cronologiche.

L'obiettivo principale della presente relazione sullo scambio di informazioni è la presentazione di un documento di riferimento.

SAMENVATTING

Dit verslag bevat een analyse van de gegevens met betrekking tot de door specifieke stoffen veroorzaakte luchtverontreiniging in de landen van de Europese Gemeenschap. Het betreft de periode oktober 1984 tot en met september 1985.

Met het oog op de continuïteit van de jaarverslagen komt de presentatie van dit verslag in grote lijnen overeen met die van de voorgaande jaarverslagen, met dien verstande dat er rekening is gehouden met de opmerkingen en suggesties van de nationale coördinatoren.

Het verslag bestaat uit twee delen. In het eerste deel wordt een algemene beschrijving van de meetstations gegeven. Het tweede deel, dat betrekking heeft op de evaluatie van de statistische parameters waarmee de datareeksen worden gekarakteriseerd, is ingedeeld in:

- beschrijvende statistiek en
- tijdreeksanalyse.

Dit verslag met betrekking tot de gegevensuitwisseling is in de eerste plaats bedoeld als referentiedocument.

SUMÁRIO

O presente relatório apresenta uma análise dos dados de poluição atmosférica relativos a poluentes específicos nos países das Comunidades Europeias. Abrange o período de Outubro de 1984 a Setembro de 1985.

Para assegurar a continuidade dos relatórios anuais, a apresentação deste documento é semelhante à dos relatórios anuais anteriores e toma em consideração os comentários e sugestões dos coordenadores nacionais.

O relatório divide-se em duas partes. A primeira diz respeito à apresentação geral das estações que efectuaram medições. A segunda parte, referente à avaliação dos parâmetros estatísticos que caracterizam as séries, divide-se em:

- estatística descritiva
- análise de séries cronológicas

O presente relatório sobre a troca de informações pretende essencialmente constituir um documento de referência.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
CHAPTER I General presentation of the series	2
I.1. Content of the exchange of information	3
I.2. Breakdown of the annual series by country and by town class	6
I.3. Breakdown of the annual series by the measurement techniques codes	9
I.4. The monthly median	13
I.5. Characteristics of the annual series	14
CHAPTER II Treatment of the selected series	20
II.1. Introduction	20
II.2. Non-parametric statistics	24
II.3. Parametric statistics	25
II.3.1. Definitions	25
II.3.2. Histograms	27
II.4. Characteristics of the time series	29
FIGURES	33
ANNEXES	75
ABBREVIATED DESCRIPTIVE TABLES	123

INTRODUCTION

The Council Decision 82/459/EEC extends the Decision 75/441/EEC which has established a common procedure for the exchange of information between the surveillance and monitoring networks based on data relating to atmospheric pollution caused by sulphur compounds and suspended particulates.

The new decision allows the measurements of additional pollutants i.e. NO_x , CO, O_3 and particulate heavy metals such as Lead, Cadmium, etc. over recommended averaging times.

To make the considerable amount of data submitted by the Member States available to the experts and to draw constructive conclusions on the content of the exchange of information on atmospheric pollution, annual reports summarizing the results of this exchange must be drafted.

It is important to consider the series of measurement received from the field stations in two perspectives, first on individual basis, to obtain *records of each station and their characteristics*, which may in turn lead to a representative selection or the establishment of standards. Secondly on a global basis to show the *yearly European situation* and hence to obtain an overall synopsis which may, for instance, fit into forecasting programmes. Both approaches are envisaged throughout this report and should certainly help clarifying the function and the role of such an important exchange system in the frame of the European programme for the protection of man and the environment.

This report covers four pollutants for which the Council Decision recommends an averaging time of 24 hours: i.e. sulphur compounds and suspended particulates. The heavy metals are not included in the report: these data require specific statistical treatment.

The time period considered is from October 84 to September 85 and the data series treated are those stored in the Commission archives as at the end of April 1988.

CHAPTER I. GENERAL PRESENTATION OF THE SERIES

This chapter covers two different items:

I.1 to I.3 : an overall description of the state of the exchange of information in the European Communities

I.4 and I.5 : some annual characteristics of the raw series

I.1 CONTENT OF THE EXCHANGE OF INFORMATION

A total of 301 series covering the period extending from 1 October 1984 up to 30 September 1985 have been stored in the Commission archives.

Table I.1, illustrated by Fig. I.1.1, gives the splitting between the four pollutants.

Table I.1

	Pollutant code				Tot
	1	2	3	4	
	SO ₂	Smoke	SPM	Acid	
no. of annual series	102	70	47	82	301
percentage	33.9	23.3	15.6	27.2	100.0 %

PROPORTION OF SERIES BY POLLUTANT

PERIOD: Oct.84 - Sept.85

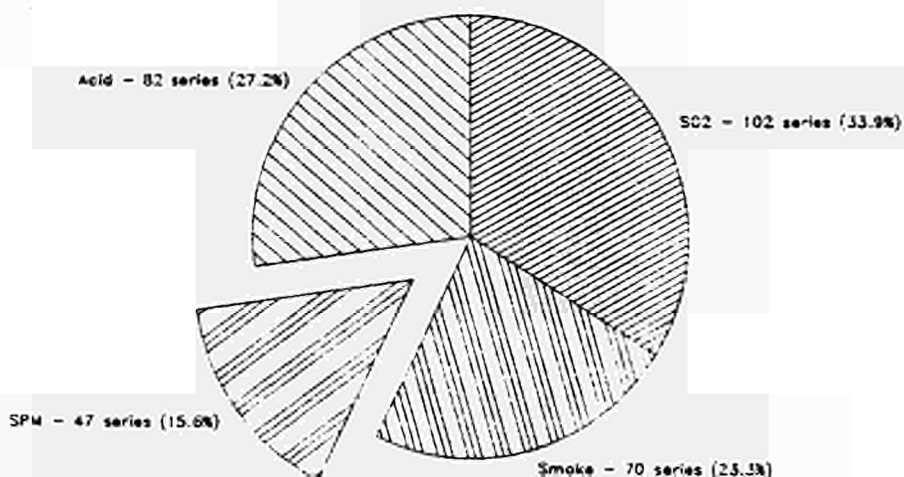


Fig. I.1.1

Table I.2, illustrated in Fig I.1.2, presents a summary of the number of annual series with respect to the town class in terms of number of inhabitants.

Table I.2

	Town class - (inhabitants)						Tot
	1 >2M	2 1-2M	3 .5-1M	4 .1-.5M	5 1-100	6 <1m	
no. of annual series	24	46	45	94	53	39	301
percentage	8.0	15.3	15.0	31.2	17.6	13.0	100 %

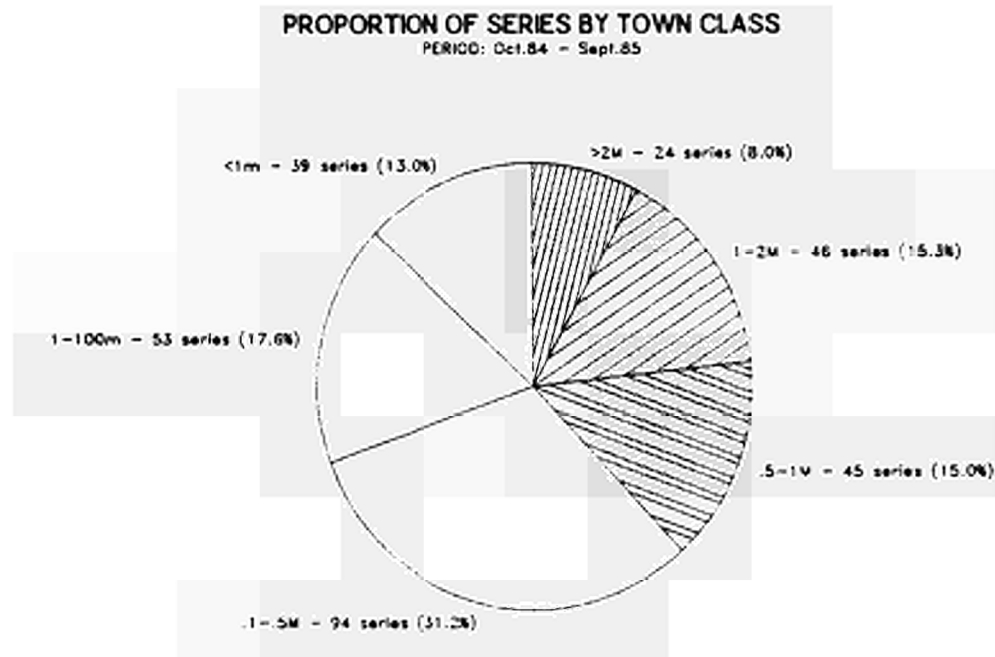


Fig. I.1.2

Table I.3, illustrated in Fig I.1.3, presents a summary of the number of annual series with respect to the countries.

Table I.3

	Country										Tot
	1	2	3	4	5	6	7	8	9	11	
	B	D	DK	F	IRL	I	L	NL	GB	GR	
no. of ann. series	60	30	31	99	14	13	10	32	0	12	301
percentage	19.9	10.0	10.3	32.9	4.7	4.3	3.3	10.6	0.0	4.0	100%

PROPORTION OF SERIES BY COUNTRY

PERIOD: Oct.84 - Sept.85

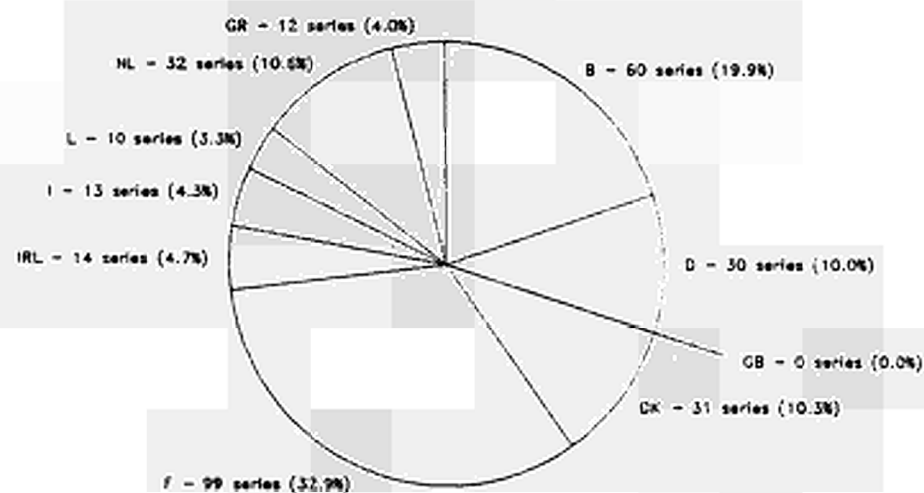


Fig. I.1.3

I.2 BREAKDOWN OF THE ANNUAL SERIES BY COUNTRY AND BY TOWN CLASS

Table I.4 summarizes the number of annual series for each town class and for each pollutant. The results are grouped by countries.

Table I.4

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
Belgium	1	-	-	-	-	0
B	2	-	6	-	6	12
(1)	3	-	6	-	6	12
	4	-	15	-	15	30
	5	-	3	-	3	6
	6	-	-	-	-	0
	all	-	30	-	30	60

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
Federal Rep	1	-	-	-	-	0
of Germany	2	-	-	-	-	0
D	3	-	-	-	-	0
(2)	4	-	-	-	-	0
	5	-	-	-	-	0
	6	15	-	15	-	30
	all	15	-	15	-	30

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
Denmark	1	-	-	-	-	0
DK	2	7	-	6	-	13
(3)	3	-	-	-	-	0
	4	4	-	2	-	6
	5	8	-	4	-	12
	6	-	-	-	-	0
	all	19	-	12	-	31

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
France	1	2	5	1	5	13
F	2	7	5	-	5	17
(4)	3	6	-	2	3	11
	4	3	15	4	25	47
	5	4	-	5	2	11
	6	-	-	-	-	0
	all	22	25	12	40	99

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
Ireland	1	-	-	-	-	0
IRL	2	-	-	-	-	0
(5)	3	-	5	-	5	10
	4	-	1	-	1	2
	5	-	1	-	1	2
	6	-	-	-	-	0
	all	-	7	-	7	14

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
Italy	1	3	-	-	-	3
I	2	2	-	2	-	4
(6)	3	-	-	-	-	0
	4	1	-	1	-	2
	5	2	-	2	-	4
	6	-	-	-	-	0
	all	8	-	5	-	13

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
Luxemburg	1	-	-	-	-	0
L	2	-	-	-	-	0
(7)	3	-	-	-	-	0
	4	-	-	-	-	0
	5	-	4	-	4	8
	6	-	1	-	1	2
	all	-	5	-	5	10

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
The Netherlands NL (8)	1	-	-	-	-	0
	2	-	-	-	-	0
	3	12	-	-	-	12
	4	7	-	-	-	7
	5	6	-	-	-	6
	6	7	-	-	-	7
	all	32	-	-	-	32

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
United Kingdom UK (9)	1	-	-	-	-	0
	2	-	-	-	-	0
	3	-	-	-	-	0
	4	-	-	-	-	0
	5	-	-	-	-	0
	6	-	-	-	-	0
	all	-	-	-	-	0

	town class	Pollutant				tot
		1 SO ₂	2 Smoke	3 SPM	4 Acid	
Greece GR (11)	1	4	3	1	-	8
	2	-	-	-	-	0
	3	-	-	-	-	0
	4	-	-	-	-	0
	5	2	-	2	-	4
	6	-	-	-	-	0
	all	6	3	3	-	12

Remarks:

- France, Greece and The Netherlands have transmitted data on respectively 4, 3 and 1 pollutants; the other countries report for a couple of pollutants (SO₂ - SPM or Smoke - Acid).

In summary:

SO₂ : D, DK, F, I, NL, GR

Smoke: B, F, IRL, L, GR

SPM : D, DK, F, I, GR

Acid : B, F, IRL, L

- three countries (Germany, Luxemburg and The Netherlands) have transmitted data from background sites.

I.3 BREAKDOWN OF THE ANNUAL SERIES BY THE MEASUREMENT TECHNIQUE CODES

Table I.5 compares the measurement technique codes used by each Member State for the period October 84 - September 85 in terms of annual series. The results are grouped by pollutant.

It is important to remind that the codes of measurement technique not only cover the sampling and the calibration but also in some countries, the laboratory or the organization responsible for the analysis.

Table I.5

No. of annual series for SO₂

TM	country										tot
	1 B	2 D	3 DK	4 F	5 IRL	6 I	7 L	8 NL	9 GB	11 GR	
2	-	-	-	-	-	-	-	32	-	-	32
13	-	15	-	-	-	-	-	-	-	-	15
22	-	-	-	-	-	2	-	-	-	-	2
24	-	-	-	-	-	3	-	-	-	-	3
25	-	-	-	-	-	3	-	-	-	-	3
27	-	-	12	-	-	-	-	-	-	-	12
28	-	-	1	-	-	-	-	-	-	-	1
29	-	-	6	-	-	-	-	-	-	-	6
30	-	-	-	-	-	-	-	-	-	3	3
31	-	-	-	-	-	-	-	-	-	1	1
32	-	-	-	-	-	-	-	-	-	2	2
35	-	-	-	9	-	-	-	-	-	-	9
36	-	-	-	11	-	-	-	-	-	-	11
37	-	-	-	2	-	-	-	-	-	-	2
all	-	15	19	22	-	8	-	32	-	6	102

No. of annual series for Smoke

TM	country										tot
	1 B	2 D	3 DK	4 F	5 IRL	6 I	7 L	8 NL	9 GB	11 GR	
1	-	-	-	-	-	-	5	-	-	-	5
3	30	-	-	-	-	-	-	-	-	-	30
4	-	-	-	-	5	-	-	-	-	-	5
5	-	-	-	-	1	-	-	-	-	-	1
6	-	-	-	-	1	-	-	-	-	-	1
10	-	-	-	25	-	-	-	-	-	-	25
23	-	-	-	-	-	-	-	-	-	3	3
all	30	-	-	25	7	-	5	-	-	3	70

No. of annual series for SPM

TM	country										tot
	1 B	2 D	3 DK	4 F	5 IRL	6 I	7 L	8 NL	9 GB	11 GR	
8	-	15	-	-	-	-	-	-	-	-	15
15	-	-	-	-	-	5	-	-	-	-	5
18	-	-	-	12	-	-	-	-	-	-	12
47	-	-	12	-	-	-	-	-	-	-	12
48	-	-	-	-	-	-	-	-	-	3	3
all	-	15	12	12	-	5	-	-	-	3	47

No. of annual series for Acid

TM	country										tot
	1 B	2 D	3 DK	4 F	5 IRL	6 I	7 L	8 NL	9 GB	11 GR	
1	-	-	-	-	-	-	5	-	-	-	5
3	30	-	-	-	-	-	-	-	-	-	30
4	-	-	-	-	5	-	-	-	-	-	5
5	-	-	-	-	1	-	-	-	-	-	1
6	-	-	-	-	1	-	-	-	-	-	1
8	-	-	-	9	-	-	-	-	-	-	9
11	-	-	-	31	-	-	-	-	-	-	31
all	30	-	-	40	7	-	5	-	-	-	82

This table indicates whether countries are using one code preferably or not.

Although it does not appear in the previous table, it is also worth noting that 7 stations of Denmark measure SO₂ according to two different measurement techniques. These stations as well as the techniques used are presented in Table I.6:

Table I.6

TM	Measurement technique	Station identifier PPCVVSSS	Town name
27	colorimetric	03201103	Kobenhaven
28	coulometric		
27	colorimetric	03401815	Aalborg
29	UV fluorescence	03402915	Odense
		03501565	Esbjerg
		03502515	Fredericia
		03503351	Naestvest
		03504635	Randers

For more details about the measurement techniques, the reader should refer to the Descriptive Table of the Commission.

Figures I.3.1 to I.3.7 (pages F.1 to F.7) present for the seven stations, the coefficients of correlation and the orthogonal regression lines computed on all data, even those not plotted on the graphic for clarity reasons.

Remark:

- Fig. I.3.1, I.3.3 and I.3.6 point out some peculiar measurements aligned along a vertical axis. In such a case, the regression line could be biased.

I.4 THE MONTHLY MEDIAN

Before applying any treatment on the data received from the Member States, a reduction operation is necessary to obtain a useful and interpretable parameter.

One such reduction parameter is the monthly median, which gives the middle value of the ranked daily data. The tables of Annex 1 contain the list of the monthly medians for each station.

The results are computed on the basis of the (unselected) values received by the Commission. The measurement units are the $\mu\text{g}/\text{m}^3$ for SO_2 , Smoke, SPM and Acid.

The representativity of the median values is related to the number of daily measured values.

Remark:

It must pointed out that the whole set of values involved in this exchange and presented in this report does not necessarily reflect the real situation of the atmospheric pollution in the European Communities for the following reasons:

- *the exchange of information concerns only a selection of measurement stations.*
- *the majority of the stations are located in urban areas.*
- *the coverage is not equivalent in each Member State.*
- *the policy for placing stations differs between Member States and even regions or towns.*
- *the extra-boundaries pollutants transport can considerably increase the local pollution level.*

I.5 CHARACTERISTICS OF THE ANNUAL SERIES

Annex 2 summarizes the main characteristics and occurrences shown by all the series received for "1985" before any selection.

The first ten columns concern the completeness of the series and point out several limit values:

MONTH label used: month

number of months (monthly records) stored in the archives of the Commission for the period October 84 - September 85.

BLANK and REP labels used: bla and rep

respectively the numbers of BLANK and REP found in the records. The label BLANK is a letter code used for a day with no valid measurement for any reason, while the label REP is the code used to indicate a single measurement over several days.

FIVE SPACES FIELDS label used: spa

number of five spaces fields found in the records. These fields symbolize a non existing day in the year (e.g 31st September). Normally each series should contain 7 fields "space" for the period October 84 - September 85 since all the monthly records contain 31 data fields.

NULL VALUES label used: ze

number of null values. From an analytical point of view, null values have no meaning and one should preferably speak about "below the detection limit".

VALUES ABOVE 9999 MEASUREMENT UNITS label used: >9999

number of values higher than 9999 measurement units considered as an upper limit above which values become unlikely and hence require confirmation from the Member State.

MEASURED VALUESlabel used: cas

number of cases or measured values found in the records. This excludes the BLANK, REP and spaces field but includes the null values.

MINIMUM and ITS OCCURRENCElabels used: min and occ

the lowest (non null) value observed and its occurrence.

MEDIANlabel used: med

the median is computed on the basis of all the values found in the annual series. The null values are taken into consideration.

The following two columns illustrate the practical accuracy of the series:

DISCONTINUITIESlabel used: gap

the number of discontinuities in a fixed range of the distribution i.e. between the minimum value and the median.

MISSING DIGITlabel used: dig

symbol indicating the number of missing digits in the series. It is composed of a number of missing digits in the tens and a number of missing digits in the units. For example: the station 06514001 seems to report SPM to the nearest $10 \mu\text{g}/\text{m}^3$ (9 digits are missing in the units with 63 gaps between 10 and $80 \mu\text{g}/\text{m}^3$ - cf. page A2.8).

The last column gives a status code for each series associated to the following hierarchical conditions:

hierarchical condition	status code
no. of month < 12	1
no. of "BLANK" + space > 177	2
no. of val. with concentration > 9999 measurement units	3
no. of measured values + REP < 240	4
no. of REP > 104	5
else	0

This status code will allow to select or to reject the series in the subsequent treatments.

Remarks:

- series of 12 months are completely filled with "BLANK" labels.
These series are:

<i>ppcvvsss pltm</i>		
<i>04101006 0135</i>	<i>Paris</i>	<i>SO₂</i>
<i>04402047 0135</i>	<i>Le Havre</i>	<i>SO₂</i>
<i>04402029 0318</i>	<i>Le Havre</i>	<i>SPM</i>
<i>04502019 0318</i>	<i>Fos-Berre</i>	<i>SPM</i>

- 30.4% of the series for SO₂ and 50.0% of the series for Acid contain at least one null value. The percentages are lower for Smoke and SPM with respectively 5.7% and 4.3%.

The following histograms illustrate some of the results presented in Annex 2.

Figure I.5.1 shows the breakdown of the annual series with respect to the number of months contained in each series.

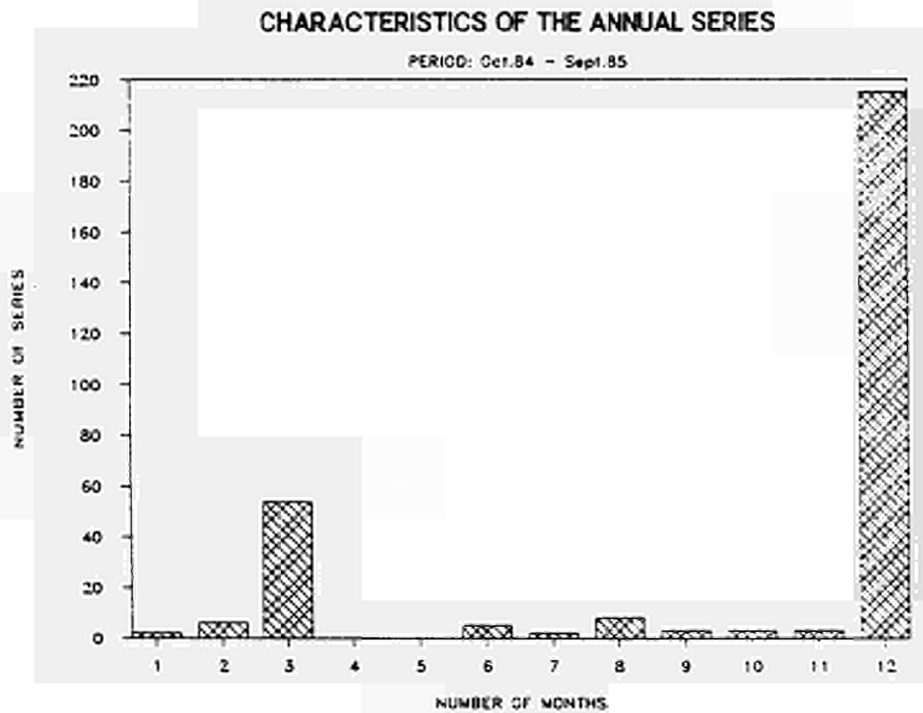


Fig. I.5.1

Remark:

The peak at 12 months corresponds to 215 series (71.4%). Another peak at 3 months corresponds to 54 series (17.9%). The average number of months per series is 9.81.

Figure I.5.2 presents the breakdown of the series according to the percentage of measured values contained in each series (no meas. val./3.65).

The class noted "0" covers the series which contain less than 5% of measured values, the class "10" the series containing between 5 and 15% and so on.

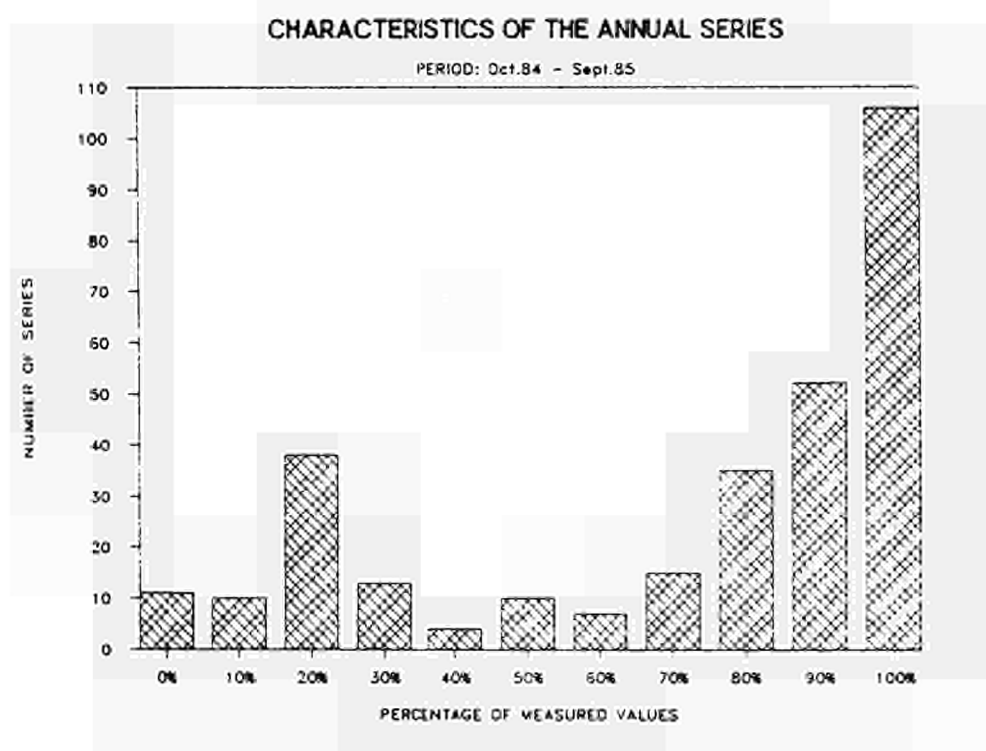


Fig. I.5.2

Remark:

190 series (63.1%) contain 75% and more of measured values.

Figure I.5.3 presents the cumulated percentages of series containing a certain proportion of "BLANK" labels. The percentage of BLANK is determined by the ratio between the number of BLANK and the number of measurements plus the number of BLANK.

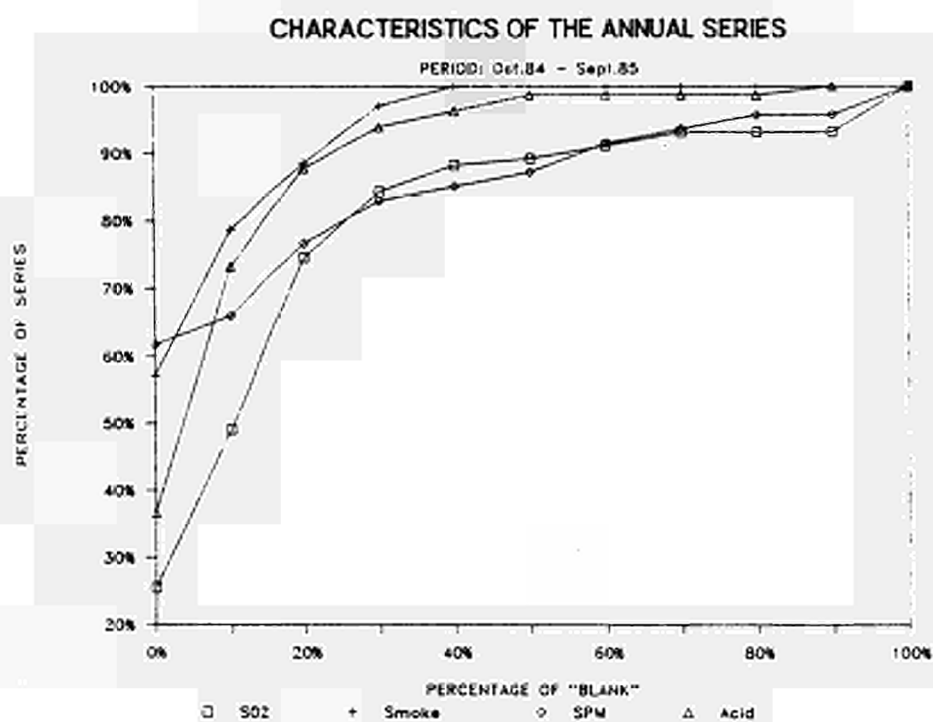


Fig. I.5.3

Remark:

For SO₂, 74.5% of the series present a percentage below 25%. The figures are respectively of 88.6%, 76.6% and 87.8% for Smoke, SPM and Acid.

Figure II.1.1 shows the proportion of rejected and selected series for the pollutants SO₂, Smoke, SPM and Acid. Table II.2 summarizes the results of the selection process.

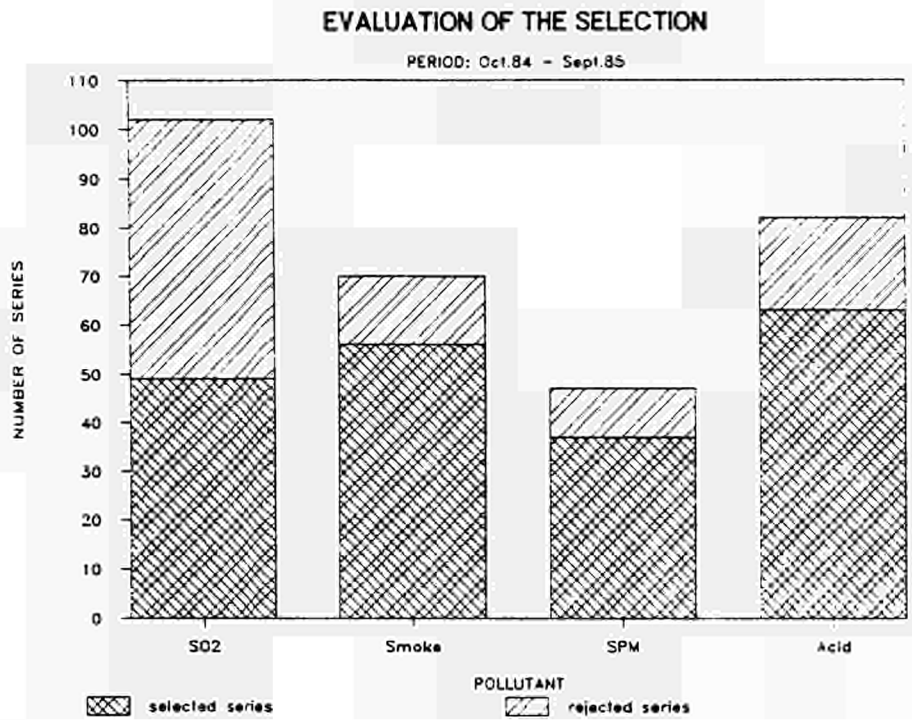


Fig. II.1.1

Table II.2

	pollutant				Tot
	1 SO ₂	2 Smoke	3 SPM	4 Acid	
no. of annual series	102	70	47	82	301
no of annual series selected	49	56	37	63	205
percentage of selection	48.0	80.0	78.7	76.8	68.1

Fig. II.1.2, illustrates the repartition of the selected series between the classes of town.

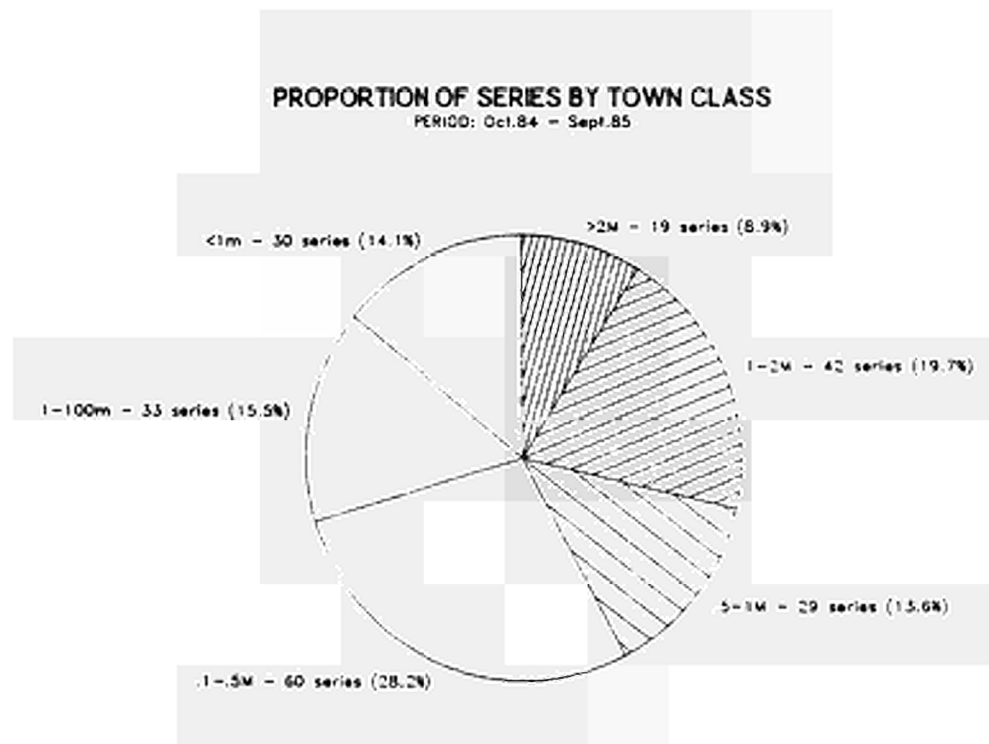


Fig. II.1.2

Remarks:

Before presenting the results of the treatments, it is important to underline the following remarks:

- the whole set of values involved in this exchange and presented in this report does not necessarily reflect the real situation of the atmospheric pollution in the European Communities for the reasons presented in I.4.
- the representativity of the parameters is dependent on the number of measured values. The selection performed previously guarantees a minimum of 240 daily values. This also means that 2/3 of the 12 months period are covered and thus the series contain necessarily measurements taken during both seasons.
- the statistics performed in this report are only descriptive statistics, and not inferential statistics. That is, the parameters presented are reductions of the sample of the measurements sent by each Member State, and not estimators of the effective pollution level of the area covered by the station.
- some parameters like the kurtosis may appear sophisticated. However these parameters are presented in this report because they show the characteristics of the distribution of the air pollution values.
- the reader must be careful when interpreting general graphics, such as histograms since the numbers of selected series are low.

II.2 NON-PARAMETRIC STATISTICS

Annex 3 gives the yearly percentiles 25, 50, 75, 95, 98 computed for the selected series and both the maximum and the minimum values recorded for each series.

This Annex should be compared with the plot of the median, the interquartile range and the 98 percentile for each series presented in the Fig. II.2.1 to II.2.7 (pages F.8 to F.14).

Remark:

Such a presentation gives an idea of the dissymmetry of the distribution. It also allows rapid comparison of the whole set of series grouped by pollutant.

Based also on results presented in Annex 3, two groups of scattered diagrams are presented for each pollutant, in the Fig. II.2.8 to II.2.15 (pages F.15 to F.22).

The first group (Fig. II.2.8 - II.2.11) concerns the correlation between central tendency parameters (median) and a marker of the higher values (percentile 98).

The second group (Fig. II.2.12 1 - II.2.15) concerns the correlation between central tendency parameters (median) and a central dispersion tendency parameter (interquartile range).

Fig. II.2.16 (page F.23) presents the relation between the median associated with the town class. The illustrative label used is the country code.

Remark:

Comparisons between country levels are doubtful without knowledge of the differences between the measurement methods.

II.3 PARAMETRIC STATISTICS

Annex 4 gives some descriptive statistics computed for the selected series: the mean, the standard deviation, the variation coefficient, the skewness, a shape estimator, and the kurtosis.

II.3.1 Definitions

A succinct description of the descriptive parameters computed is listed below (see definition in Comparative study on data analysis - part 2: Descriptive statistics and data reduction - Technical Report no 2, April 1984, APRECO).

MEAN

Label used: mean

The mean is the most common measure of central tendency for variable measured at interval-level. Often referred to as the "average", it is merely the sum of the individual values for each case divided by the number of cases.

STANDARD DEVIATION

Label used: std.d

The standard deviation is a measure of the dispersion of the data about the mean of an interval-level variable. This statistic is one way of measuring how closely the individual scores of the variable cluster around the mean. The standard deviation has the same units as the original variable.

VARIATION COEFFICIENT

Label used: V

The variation coefficient is a relative measure of the dispersion (without units).

$$V = \text{std.d} / \text{mean}$$

SKEWNESS:

Label used: skew

Skewness measures deviation from symmetry. The measure of skewness will take on a value of zero when the distribution is completely symmetric. A positive value indicates that the cases are clustered more to the left of the mean with most of the extreme values to the right. A negative value indicates clustering to the right. For example, a normal distribution is completely symmetric and has a skewness value of zero.

A lognormal distribution is dissymmetric with a positive value for skewness.

SHAPE ESTIMATOR: (cf. APRECO 84) Label used: D

The skewness and the kurtosis are usually applied to compare the relative frequency function with the theoretically normal distribution. Since other shape may also be expected, an estimator D of the frequency distribution shape is defined:

$$D = \text{skew} / (V (V^2 + 3))$$

D has the following properties:

- D = 0 normal distribution
- D = 0.364 Maxwell
- D = 0.37 Rayleigh
- D = 0.5 Chi-Square with 2 degrees of freedom
- D = 0.6 Chi-Square with 6 degrees of freedom
- D = 1 log-normal.

KURTOSIS Label used: kurt

Kurtosis is a measure of the relative peakedness or flatness of the curve defined by the distribution.

A normal distribution will have a kurtosis of zero. If the kurtosis is positive, then the distribution is more peaked than a normal distribution, while a negative value means that it is flatter.

Remark:

Relative descriptive parameters (such as V, skew, D, kurt) can be used to compare stations or pollutants without any assumption of conversion factors.

II.3.2 Histograms: (Fig. II.3.1 to II.3.7)

The histograms corresponding to each of the above parameters are presented in Fig. II.3.1 to II.3.7 (pages F.24 to F.30). The histograms of the medians (presented in Annex 3) have also been included in these figures.

The following tables (II.3.1 to II.3.7) summarize the histograms and present the range of values in which lie more than 50% of the values.

Table II.3.1 - MEDIAN

pollutant	% of series	range value med in $\mu\text{g}/\text{m}^3$
SO ₂	59.2	7.5 - 22.5
Smoke	69.6	7.5 - 22.5
SPM	62.1	25 - 55
Acid	61.8	10 - 40

Table II.3.2 - MEAN

pollutant	% of series	range value mean in $\mu\text{g}/\text{m}^3$
SO ₂	61.3	12.5 - 32.5
Smoke	57.2	12.5 - 27.5
SPM	72.9	17.5 - 62.5
Acid	58.7	25 - 55

Table II.3.3 - STANDARD DEVIATION

pollutant	% of series	range value std in $\mu\text{g}/\text{m}^3$
SO ₂	59.2	10 - 30
Smoke	59.0	8.75 - 23.75
SPM	54.0	23.75 - 38.75
Acid	71.4	20 - 50

Table II.3.4 - VARIATION COEFFICIENT

pollutant	% of series	range value V
SO ₂	51.0	0.625 - 1.375
Smoke	58.9	0.65 - 1.05
SPM	54.0	0.45 - 0.65
Acid	58.8	0.625 - 1.125

Table II.3.5 - SKEWNESS

pollutant	% of series	range value skw
SO ₂	59.2	2.25 - 4.25
Smoke	55.4	1.25 - 2.75
SPM	62.1	1.25 - 2.25
Acid	61.8	1.75 - 3.25

Table II.3.6 - SHAPE ESTIMATOR

pollutant	% of series	range value shp
SO ₂	59.1	0.2 - 0.6.
Smoke	50.0	0.625 - 0.925
SPM	51.3	0.475 - 0.775
Acid	57.2	0.2 - 0.8

Table II.3.7 - KURTOSIS

pollutant	% of series	range value kurt
SO ₂	57.2	3.0 - 23.0
Smoke	51.8	0.0 - 8.0
SPM	59.4	0.0 - 4.0
Acid	63.5	3.0 - 15.0

Remarks:

- Compared to the mean, the shift of the median to the left illustrates the dissymetry of the distributions.
 - As a general rule for all pollutants, the frequency distribution is far from a normal distribution (shape estimator $D = 0$) and not precisely a log-normal distribution (shape estimator $D = 1$).
 - Except for SPM, the kurtosis values for the other pollutants are spread over a large range of positive values.
- 4 series (3 for SPM and 1 for Acid) have a negative kurtosis.

II.4 CHARACTERISTICS OF THE TIME SERIES

Annex 5 contains some characteristics of the time series:

- the ratio of the number of summer to winter measurements
- the seasonal percentiles 50 and 98
- the parameters of the annual regression line
- the number of the 3 days persistences for a concentration value higher than $125 \mu\text{g}/\text{m}^3$.

The winter is defined as the period October 84 to March 85 and the summer, the period April 85 to September 85.

This is an arbitrary balanced splitting of the year. In fact, only a spectral analysis of a time series performed over several years can detect seasonal periodicity.

The scatter diagrams between the median and the percentile 98 presented in Annex 5 are drawn for both seasons in Fig. II.4.1 to II.4.8 (pages F.31 to F.34).

Remark:

A scattering of values appears in winter for SO_2 , Smoke and Acid.

The Fig. II.4.9 to II.4.16 (pages F.35 to F.38) compare the percentiles of the winter and the summer period.

The orthogonal regressions are given for indicative purposes. All data have been taken into consideration to compute the regression lines.

Remarks:

- It is worth noting that the slopes of the regression lines of the 98 percentile are higher than the slopes of the median for all the pollutants. The weight of the winter 98 percentiles is higher than for the winter medians indicating isolated pollution events of higher magnitude in winter.
- Although one must also take into consideration the scattering of the points illustrated by the coefficients of correlation, such graphics possibly show peculiar behavior of stations. For example, in the plot of the seasonal median for Acid (page F.38) several stations present summer values higher than winter values (plot below the diagonal). This fact is worth noting when considering the behavior of the other stations.

Annex 6 gives the status of the isolated extremum of the monthly median values. To find out a relative dispersion of the monthly median values around a central tendency, Z is defined as the normalized monthly median :

$$Z = \frac{| X - \text{MEAN} |}{\text{STD}}$$

where X is the monthly median, the MEAN statistics is the mean of the monthly median distribution excluding the minimum and maximum, and the STD.D statistics is the standard deviation of this distribution. Each normalized median value has been ranked from -5 to 5 according to the following intervals:

1	if $Z > 2.33$ and $Z < 2.88$	standard deviation
2	if $Z > 2.88$ and $Z < 3.09$	standard deviation
3	if $Z > 3.09$ and $Z < 3.71$	standard deviation
4	if $Z > 3.71$ and $Z < 3.99$	standard deviation
5	if $Z > 3.99$	

The minus sign is given when the calculated monthly value is lower than the MEAN, the sign + when the value is higher. The variation range of the scale is thus extending from - 5 (minimum value at more than 3.99 standard deviation from the MEAN) to + 5 (maximum value at more than 3.99 standard deviation from the MEAN).

Tables of Annex 6 point out monthly values at least at $|2.33|$ standard deviation from the MEAN tendency. The boxes left empty represent thus the monthly medians with values lower than $|2.33|$.

Fig. II.4.17 (page F.39) illustrates the Annex 6 and presents the average value for each month.

Remarks:

- *For all pollutants there are more exceptional higher than lower months; this is confirmed by the distribution of the skewness described in Chapter II.3.*
- *For the four pollutants covered, exceptional high pollution events have been more frequently observed in January - February 1985.*

FIGURES**Unselected series****Page**

Correlation diagrams between measurement techniques I.3.1 to I.3.7 ; F.1-F.7

Selected series**Non-parametric statistics**

Global representation of the percentiles 25,50,75,98 based on results of Annex 3 II.2.1 to II.2.7 ; F.8-F.14

Scatter chart of the percentiles 50 and 98 based on results of Annex 3 II.2.8 to II.2.11 ; F.15-F.18

Scatter chart of the median and interquartile range based on results of Annex 3 II.2.12 to II.2.15 ; F.19-F.22

Global median value by town classes II.2.16 ; F.23

Annual parameters

Histograms of descriptive parameters based on results of Annex 4 II.3.1 to II.3.7 ; F.24-F.30

Characteristics of the time series

Scatter chart of the percentiles 50 and 98 for summer and winter based on results of Annex 5 II.4.1 to II.4.8 ; F.31-F.34

Correlation diagrams
 - between the winter and summer median
 - between the winter and summer percentile 98
 based on results of Annex 5 II.4.9 to II.4.16 ; F.35-F.38

Isolated extremum of the monthly median based on results on Annex 6 II.4.17 ; F.39

COMMENTS ON FIGURES I.3.1 TO I.3.7

Figures I.3.1 to I.3.7 present the coefficient of correlation and the orthogonal regression lines for seven stations of Denmark using two different measurement techniques for SO₂.

The stations and techniques are the following:

Table I.5

TM	Measurement technique	Station identifier PPCVVSSS	Town name
27	colorimetric	03201103	Kobenhaven
28	coulometric		
27	colorimetric	03401815	Aalborg
29	UV fluorescence	03402915	Odense
		03501565	Esbjerg
		03502515	Fredericia
		03503351	Naestvest
		03504635	Randers

For more details, the reader should refer to the Descriptive Tables of the Commission.

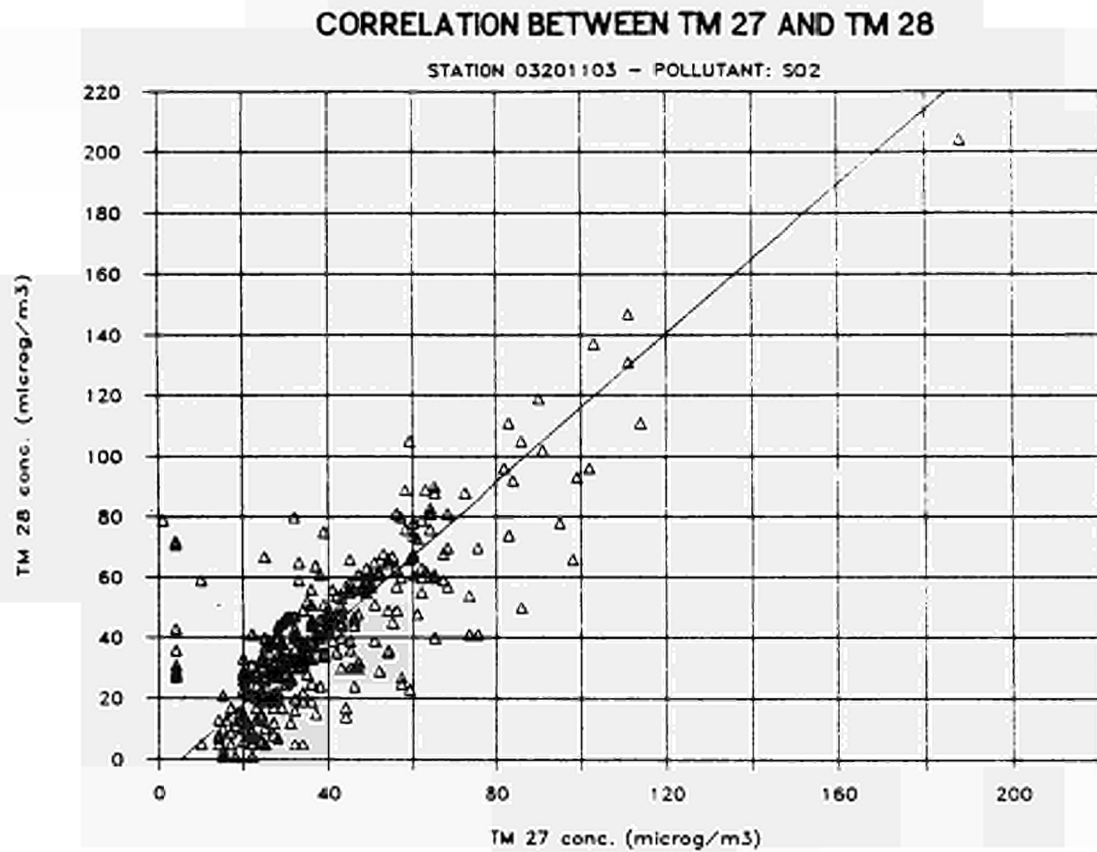


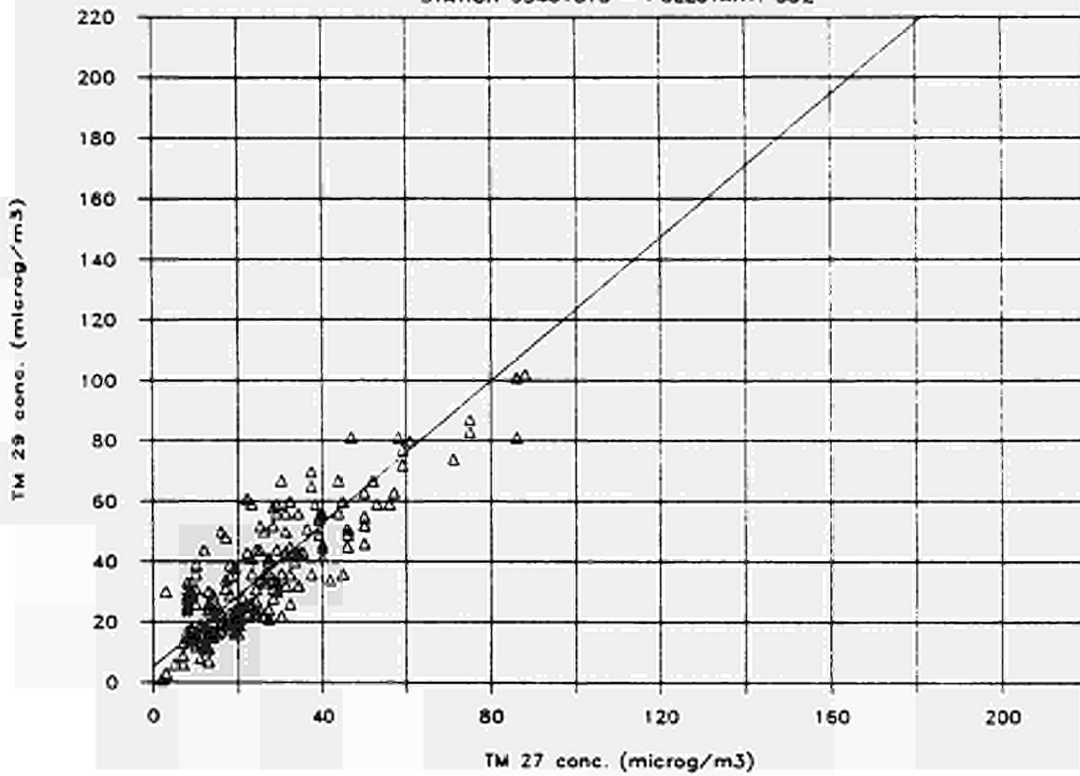
Fig. I.3.1

orthogonal regression line:

n: 328
slope: 1.22
int.: - 6.12 $\mu\text{g}/\text{m}^3$
corr. coeff.: 0.804

CORRELATION BETWEEN TM 27 AND TM 29

STATION 03401815 - POLLUTANT: SO2

Fig. I.3.2orthogonal regression line:

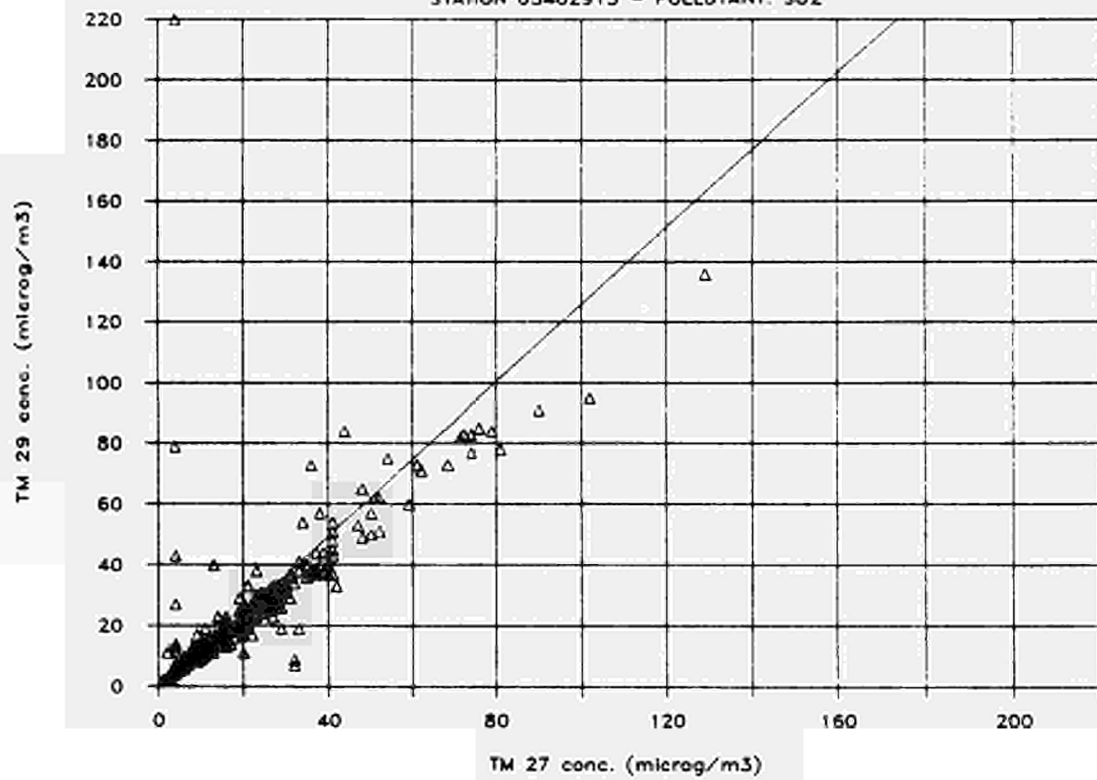
n: 180

slope: 1.18

int.: 5.13 $\mu\text{g}/\text{m}^3$

corr. coeff.: 0.852

CORRELATION BETWEEN TM 27 AND TM 29

STATION 03402915 - POLLUTANT: SO₂Fig. 1.3.3orthogonal regression line:

n: 311

slope: 1.278

int.: - 1.98 $\mu\text{g}/\text{m}^3$

corr. coeff.: 0.773

CORRELATION BETWEEN TM 27 AND TM 29

STATION 03501565 - POLLUTANT: SO2

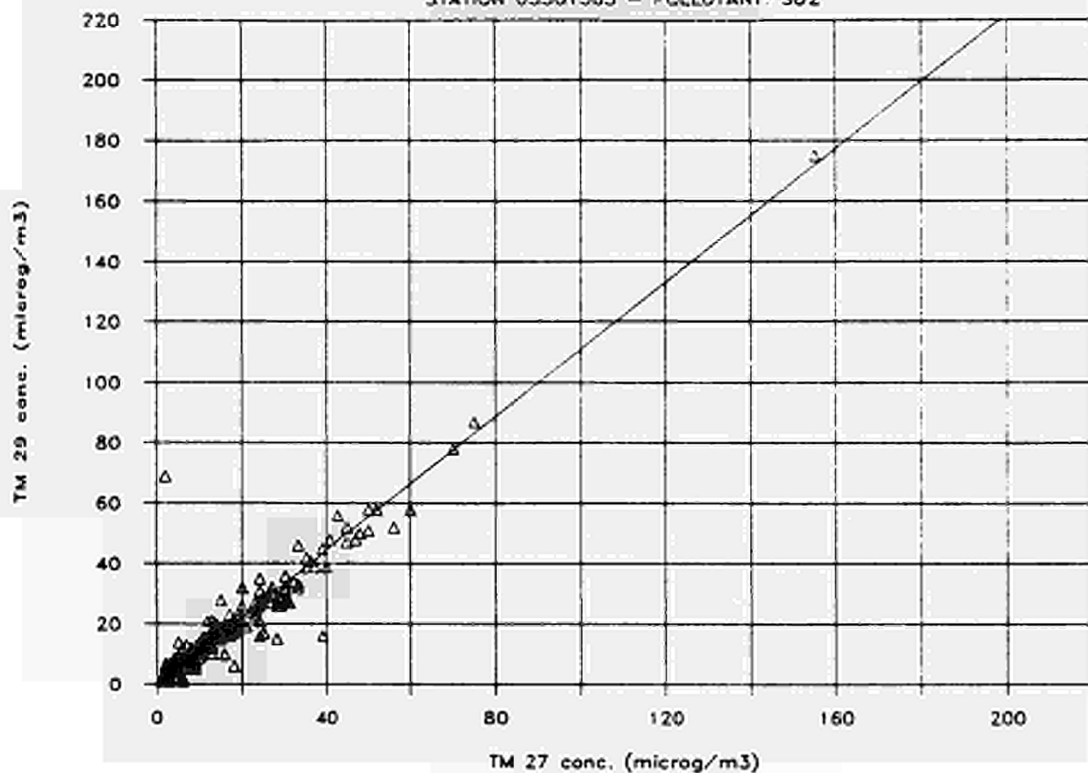


Fig. I.3.4

orthogonal regression line:

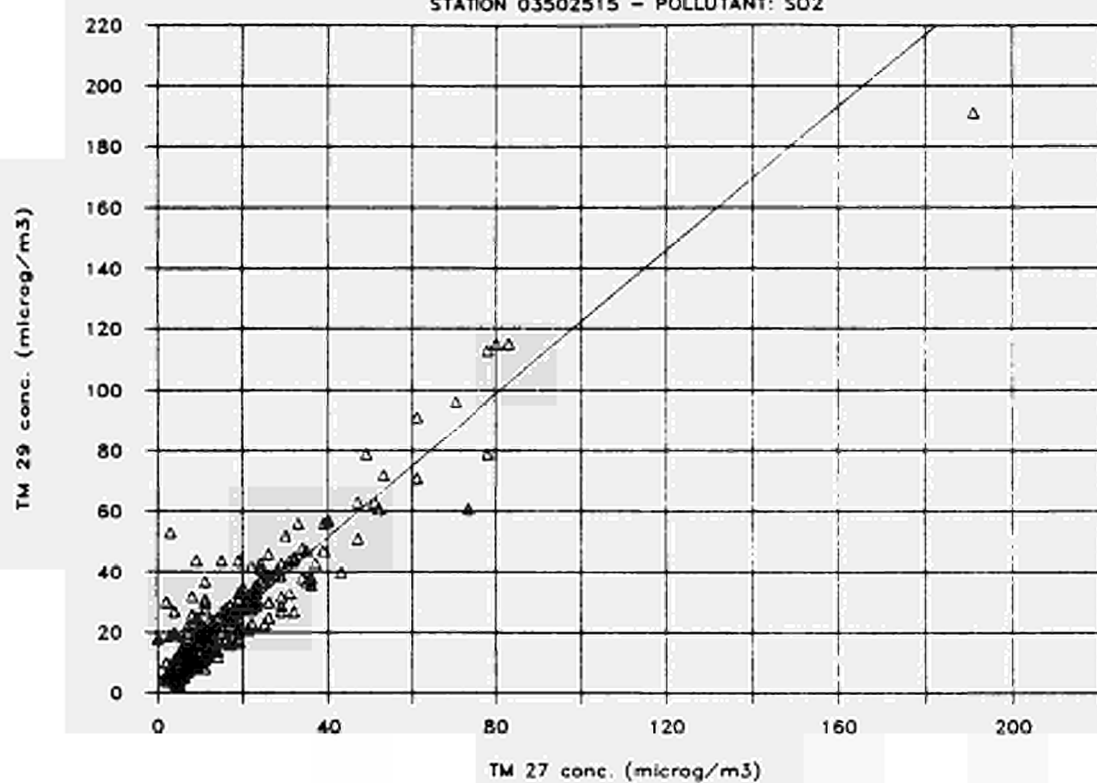
n: 310

slope: 1.11

int.: $0.36 \mu\text{g}/\text{m}^3$

corr. coeff.: 0.948

CORRELATION BETWEEN TM 27 AND TM 29

STATION 03502515 - POLLUTANT: SO₂Fig. I.3.5orthogonal regression line:

n: 272

slope: 1.18

int.: 4.30 $\mu\text{g}/\text{m}^3$

corr. coeff.: 0.930

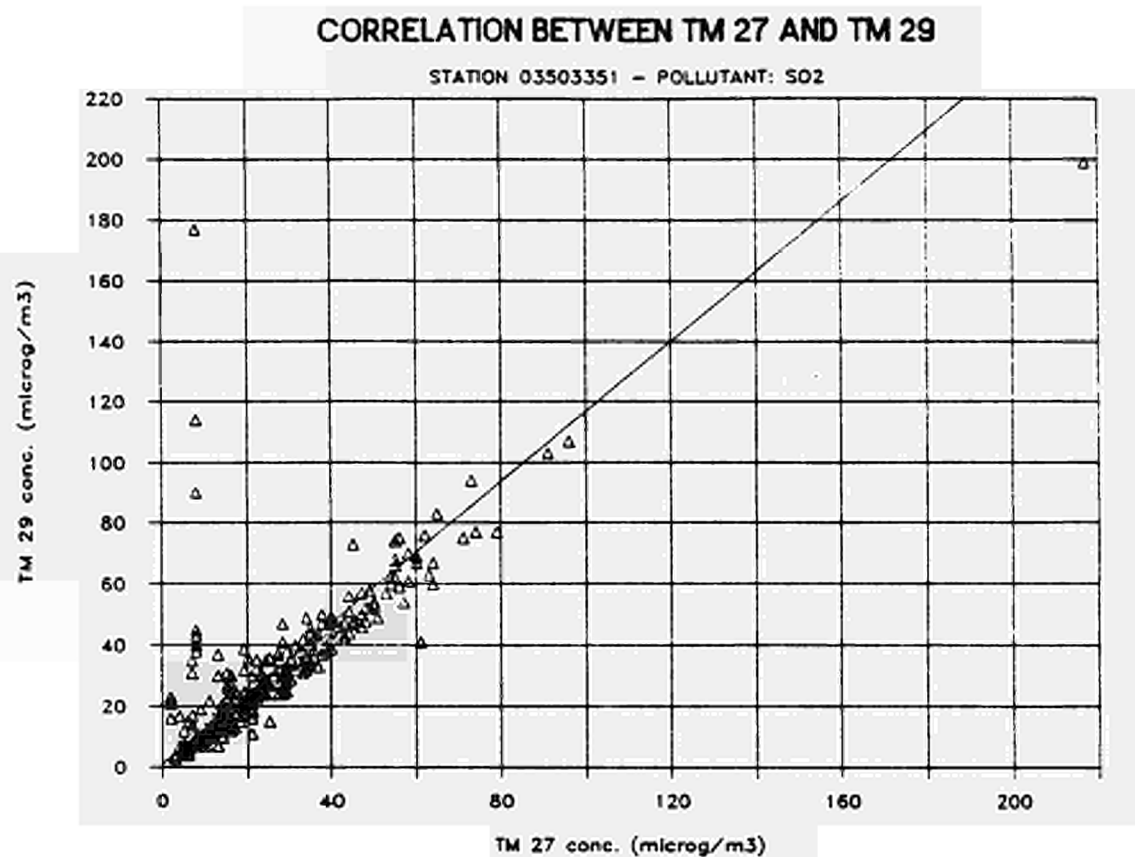


Fig. I.3.6

orthogonal regression line:

n: 304
slope: 1.16
int.: 1.20 $\mu\text{g}/\text{m}^3$
corr. coeff.: 0.808

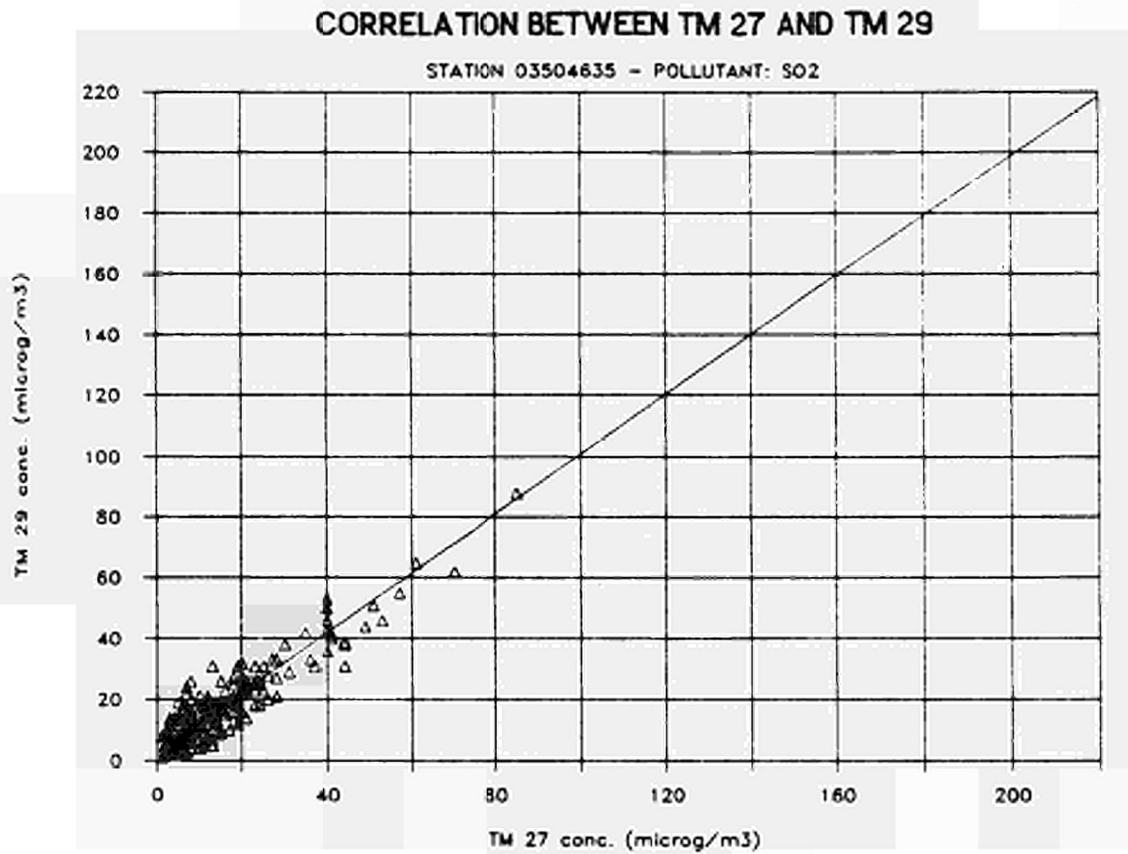


Fig. I.3.7

orthogonal regression line:

n: 305

slope: 0.98

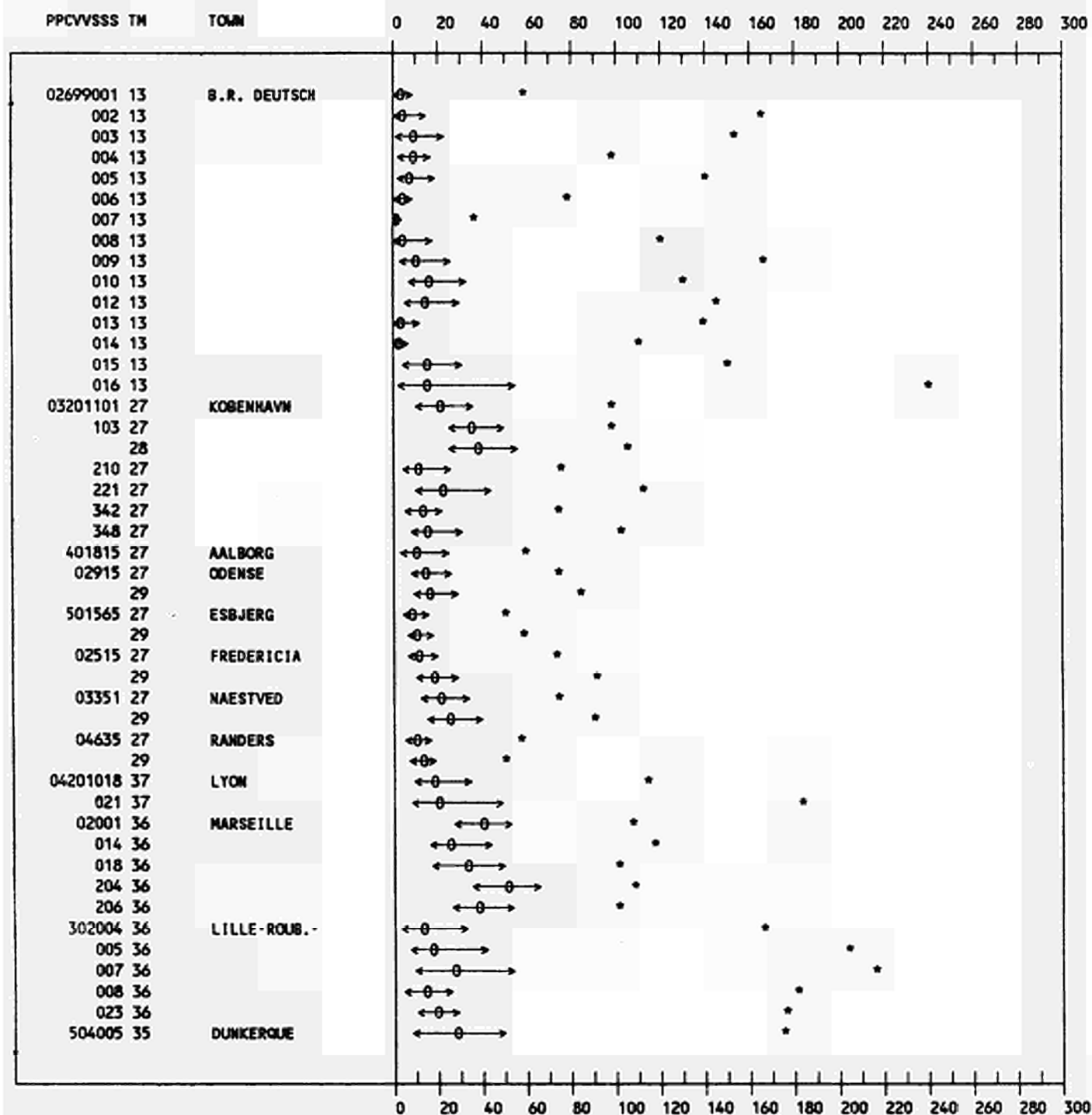
int.: 2.91 $\mu\text{g}/\text{m}^3$

corr. coeff.: 0.918

Global representation of the percentiles 25 50 75 98 %

Pollutant : SO₂

Year : October 84 - September 85

Units : microg /m³

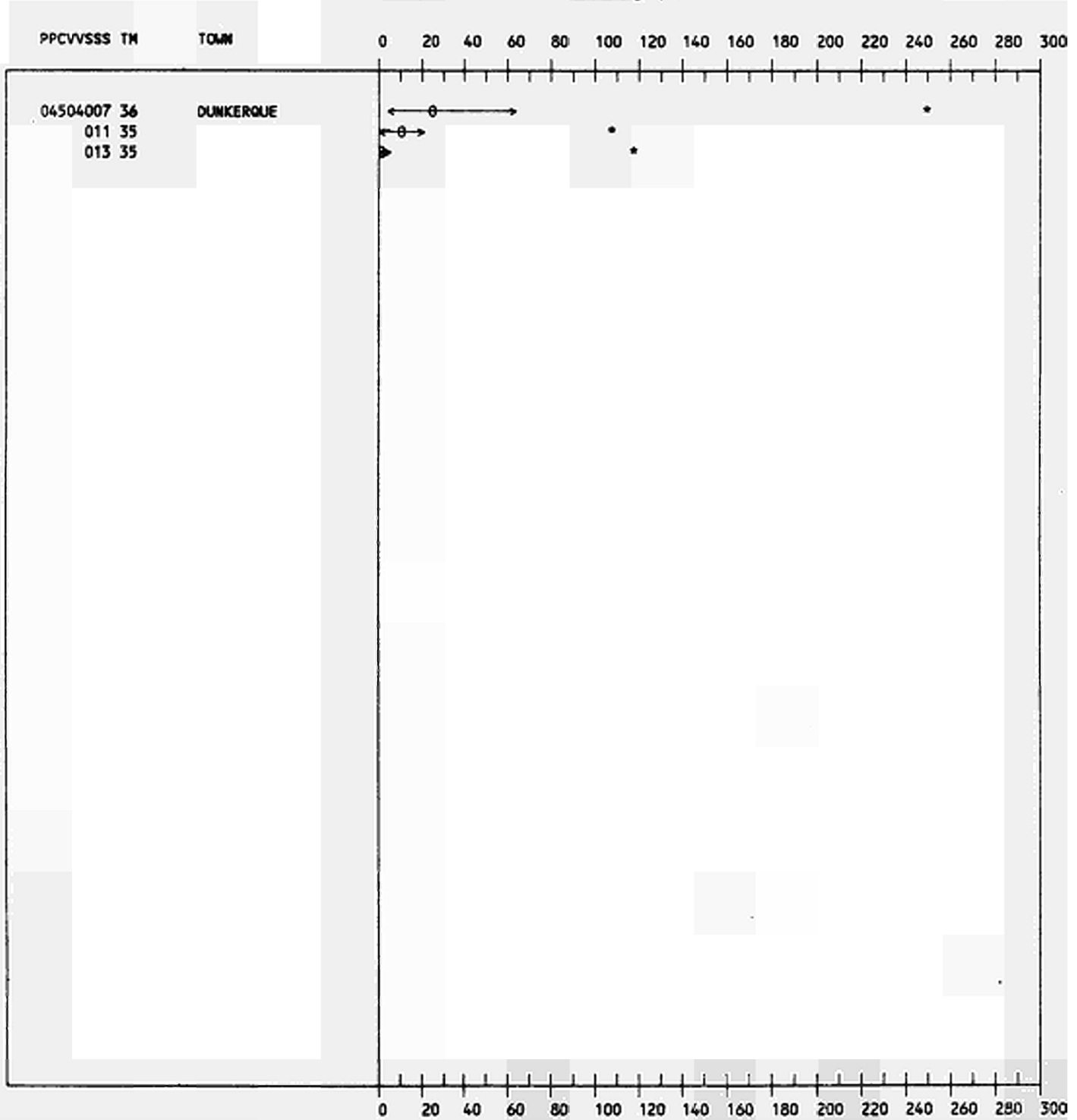
Caption : < 25 th percentile.
 0 50 th percentile.
 > 75 th percentile.
 * 98 th percentile.

Fig. II.2.1

Global representation of the percentiles 25 50 75 98 %

Pollutant : SO₂

Year : October 84 - September 85

Units : microg /m³

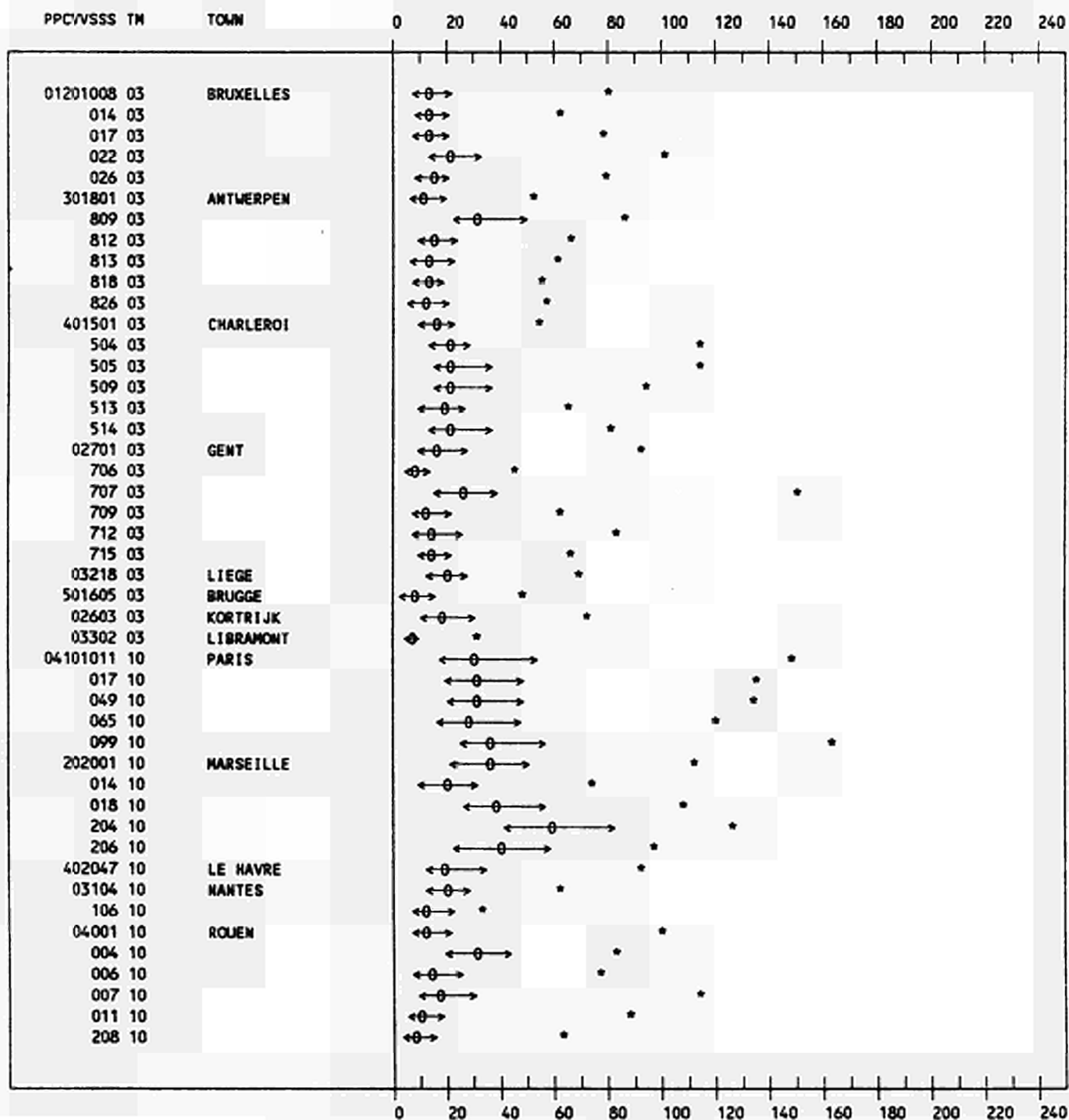
Caption : < 25 th percentile.
 0 50 th percentile.
 > 75 th percentile.
 • 98 th percentile.

Fig. II.2.2

Global representation of the percentiles 25 50 75 98 %

Pollutant : Smoke

Year : October 84 - September 85

Units : $\mu\text{g}/\text{m}^3$ 

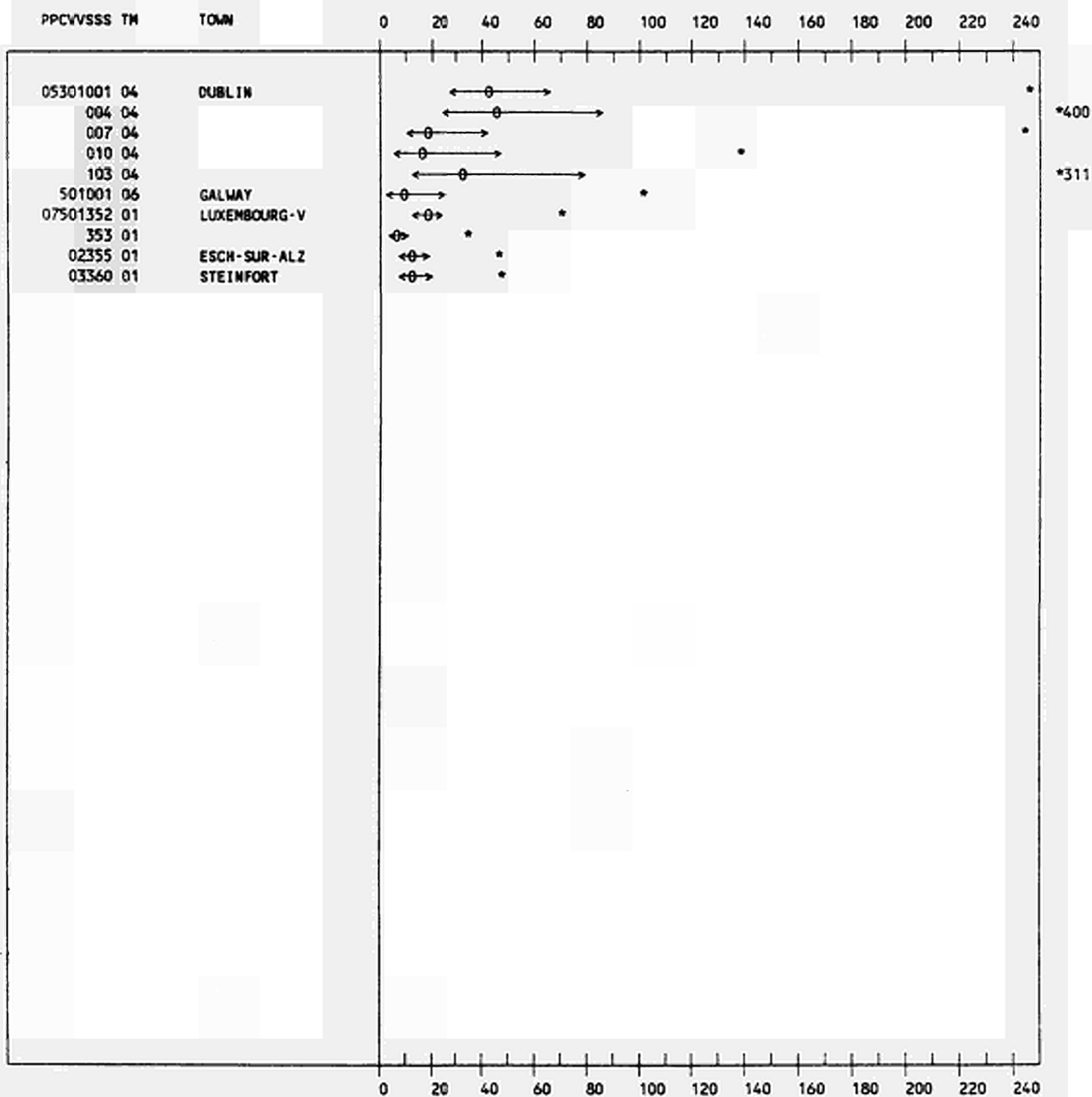
Caption : < 25 th percentile.
 0 50 th percentile.
 > 75 th percentile.
 * 98 th percentile.

Fig. II.2.3

Global representation of the percentiles 25 50 75 98 %

Pollutant : Smoke

Year : October 84 - September 85

Units : microg /m³

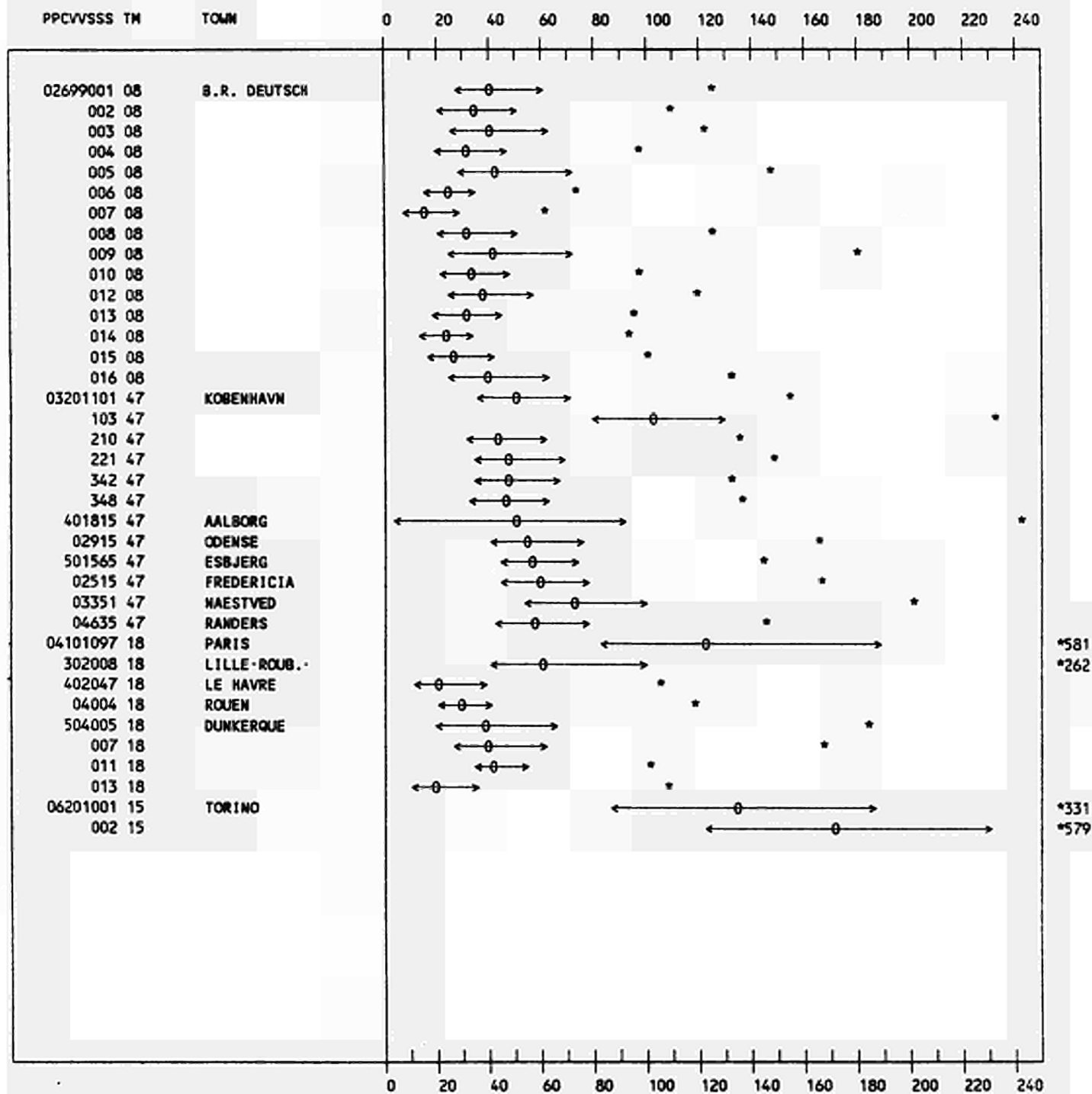
Caption : < 25 th percentile.
 0 50 th percentile.
 > 75 th percentile.
 * 98 th percentile.

Fig. II.2.4

Global representation of the percentiles 25 50 75 98 %

Pollutant : SPM

Year : October 84 - September 85

Units : microg /m³

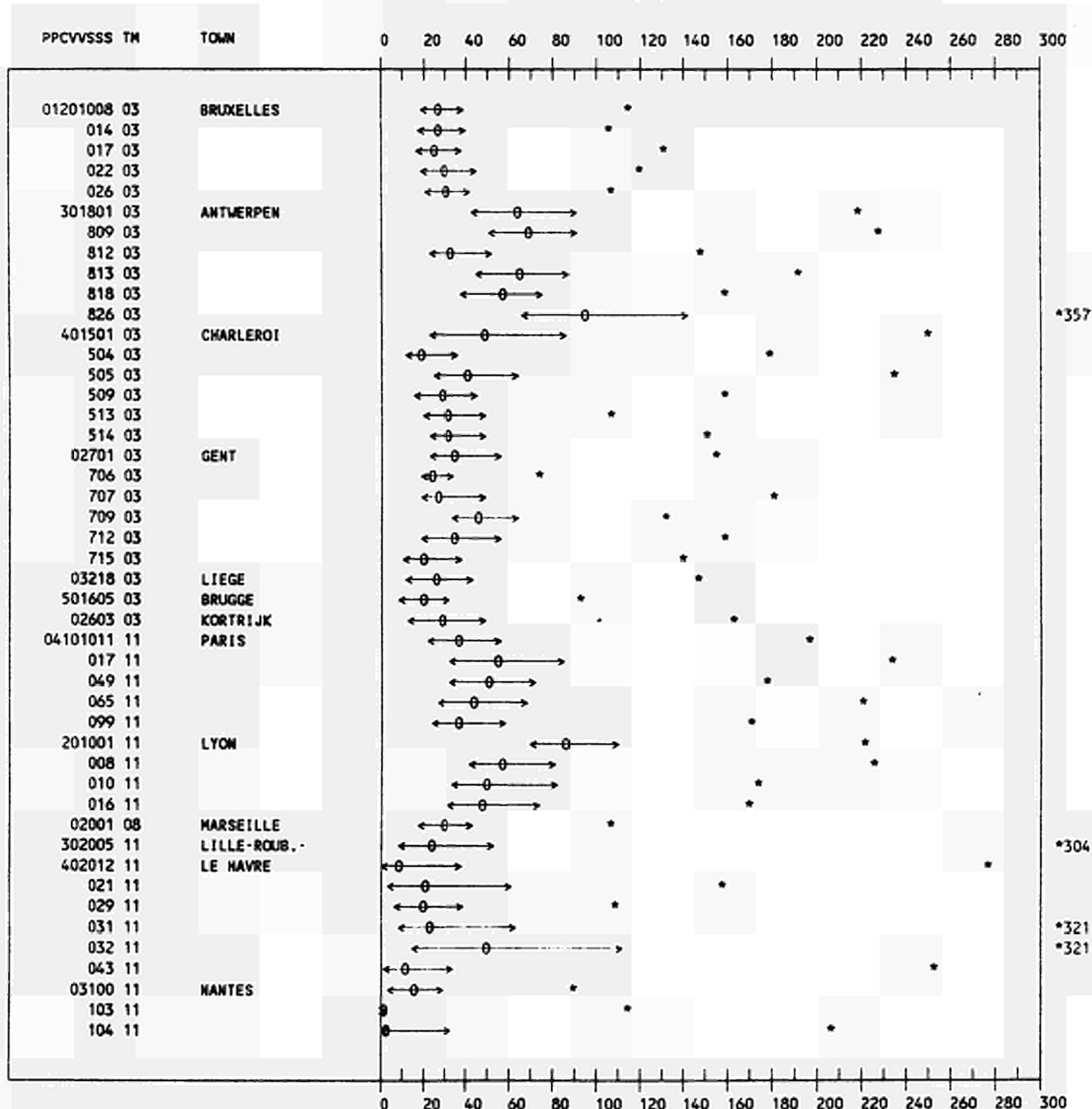
Caption : < 25 th percentile.
 o 50 th percentile.
 > 75 th percentile.
 * 98 th percentile.

Fig. II.2.5

Global representation of the percentiles 25 50 75 98 %

Pollutant : Acid

Year : October 84 - September 85

Units : microg /m³

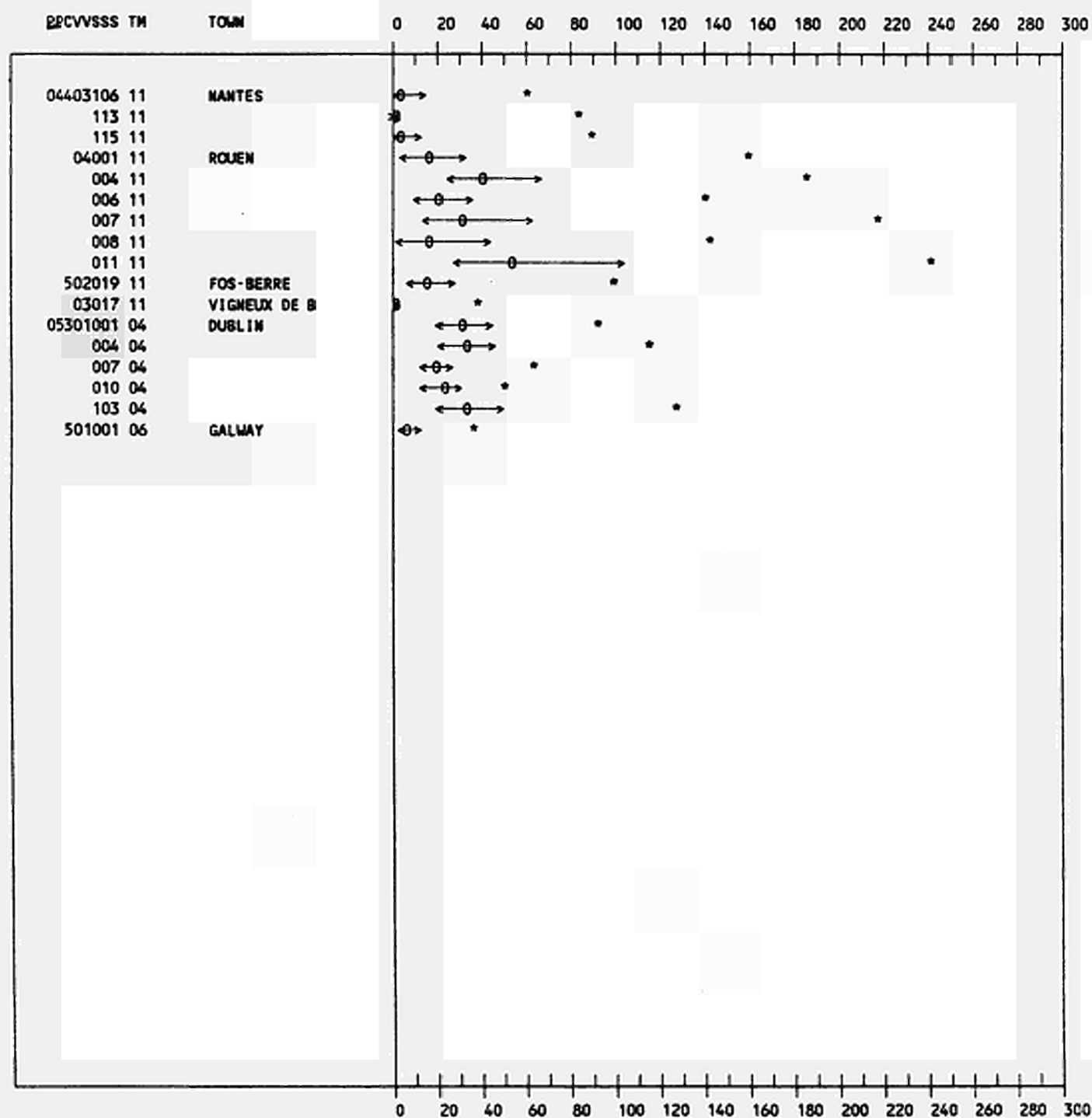
Caption : < 25 th percentile.
 0 50 th percentile.
 > 75 th percentile.
 • 98 th percentile.

Fig. II.2.6

Global representation of the percentiles 25 50 75 98 %

Pollutant : Acid

Year : October 84 - September 85

Units : microg /m³

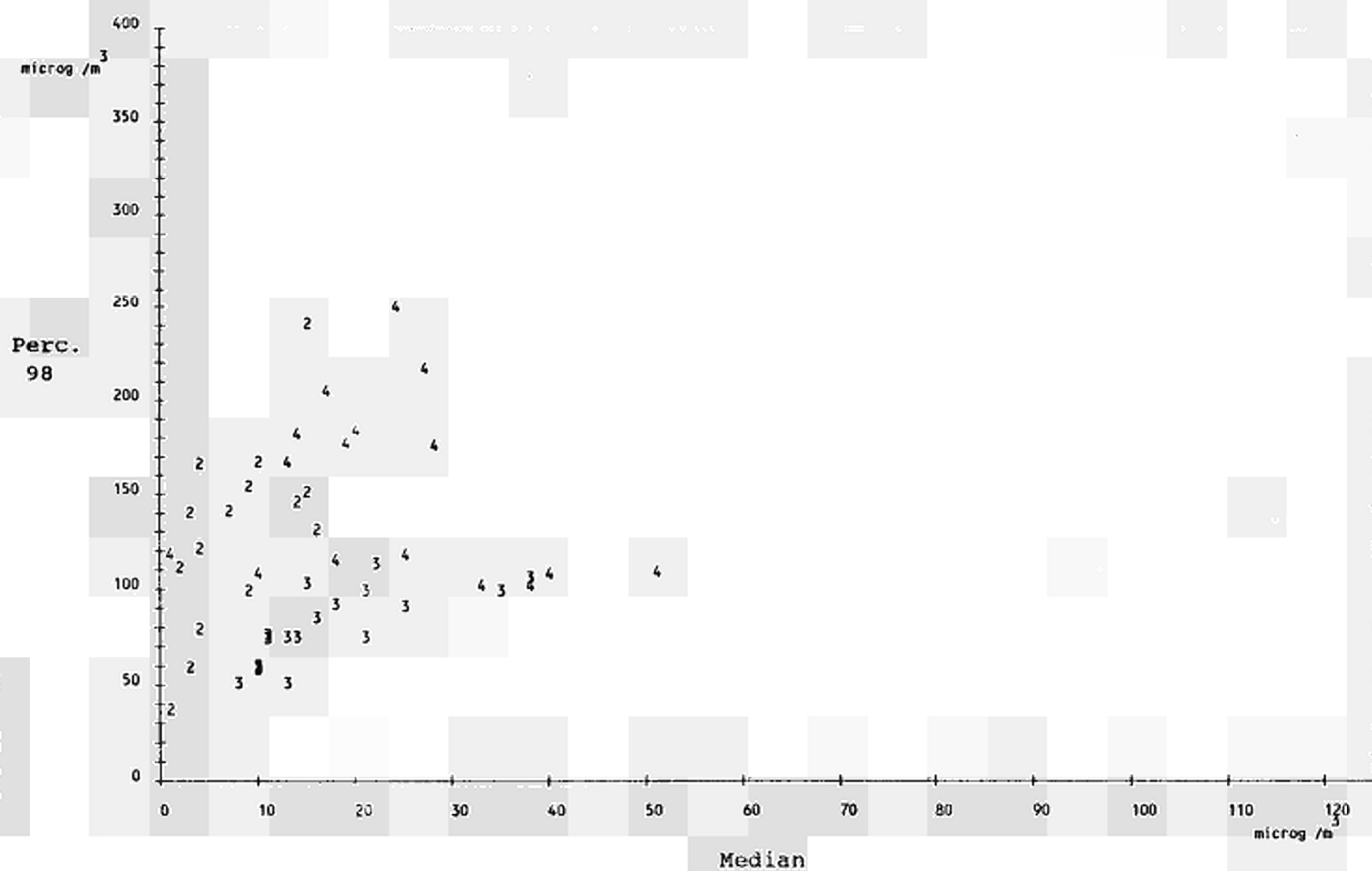
Caption : < 25 th percentile.
 0 50 th percentile.
 > 75 th percentile.
 * 98 th percentile.

Fig. II.2.7

Scatter chart of the percentile 50 and 98 labelled with the country code.

Pollutant : SO₂

Year : October 84 - September 85



Scatter chart of the percentile 50 and 98 labelled with the country code.

Pollutant : Smoke

Year : October 84 - September 85

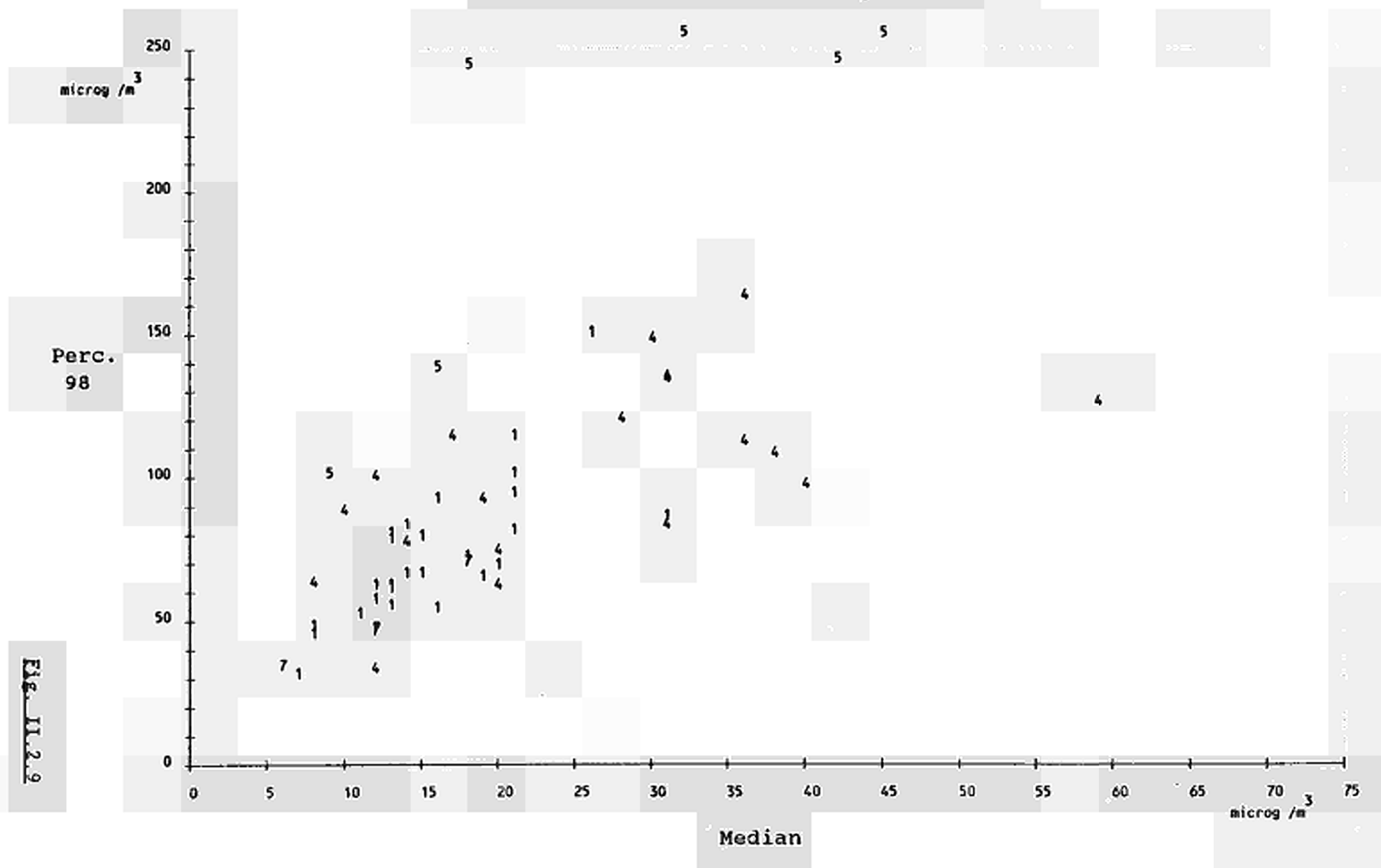


Fig. II.2.9

51

F.16

Scatter chart of the percentile 50 and 98 labelled with the country code.

Pollutant : SPM

Year : October 84 - September 85

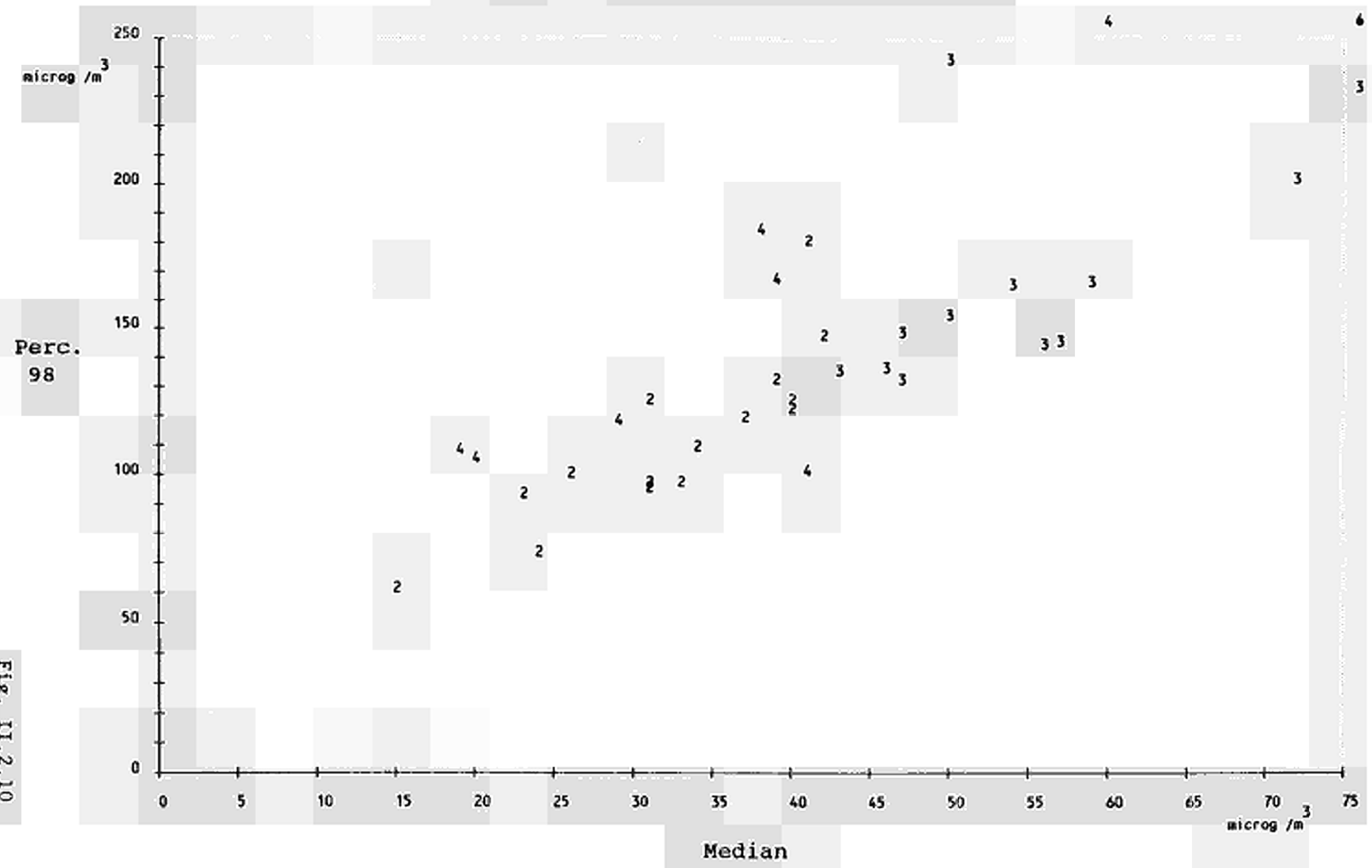
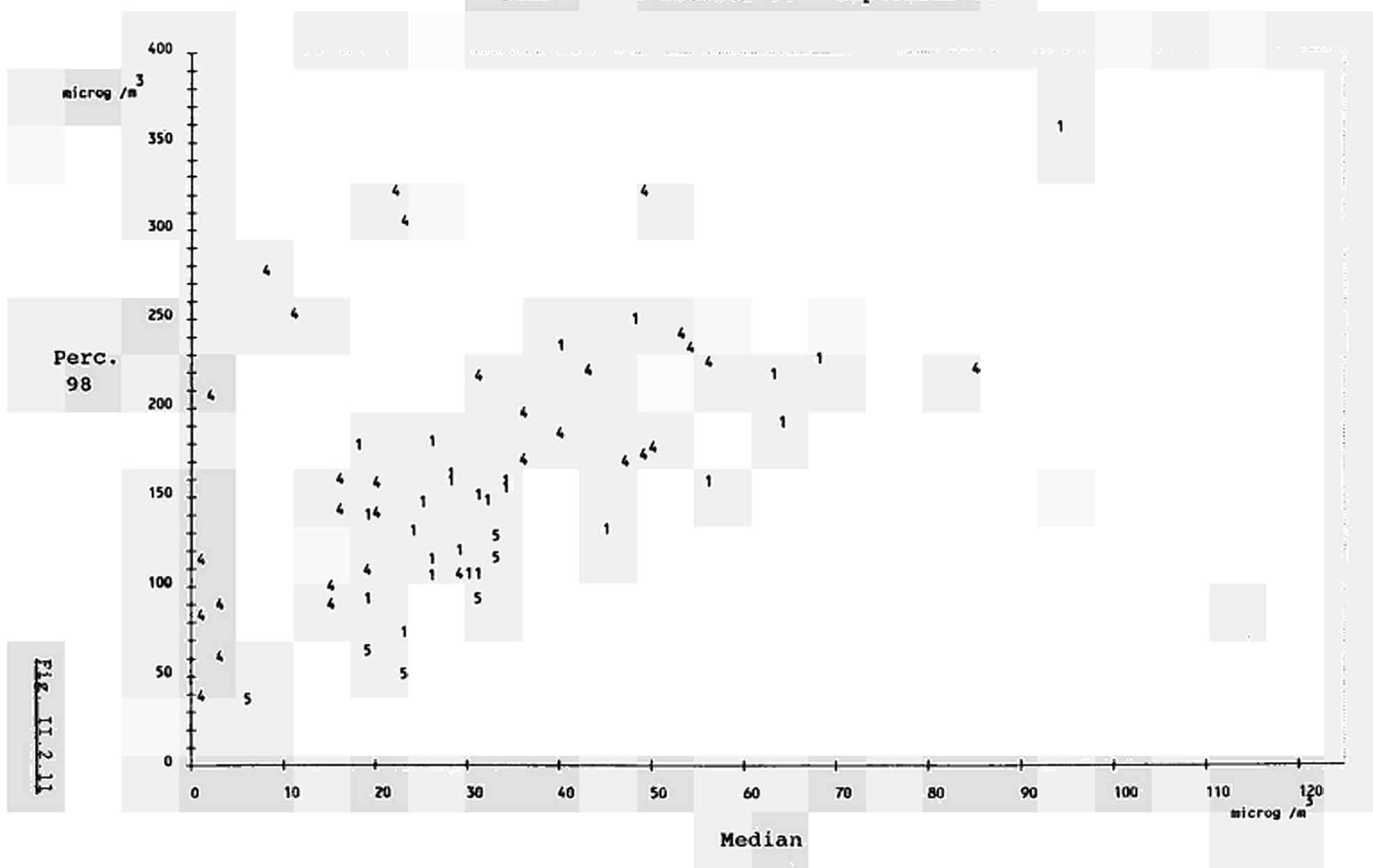


FIG. II.2.10

Scatter chart of the percentile 50 and 98 labelled with the country code.

Pollutant : Acid

Year : October 84 - September 85



Scatter chart of the median and interquartile range with the country code.

Pollutant : SO₂

Year : October 84 - September 85

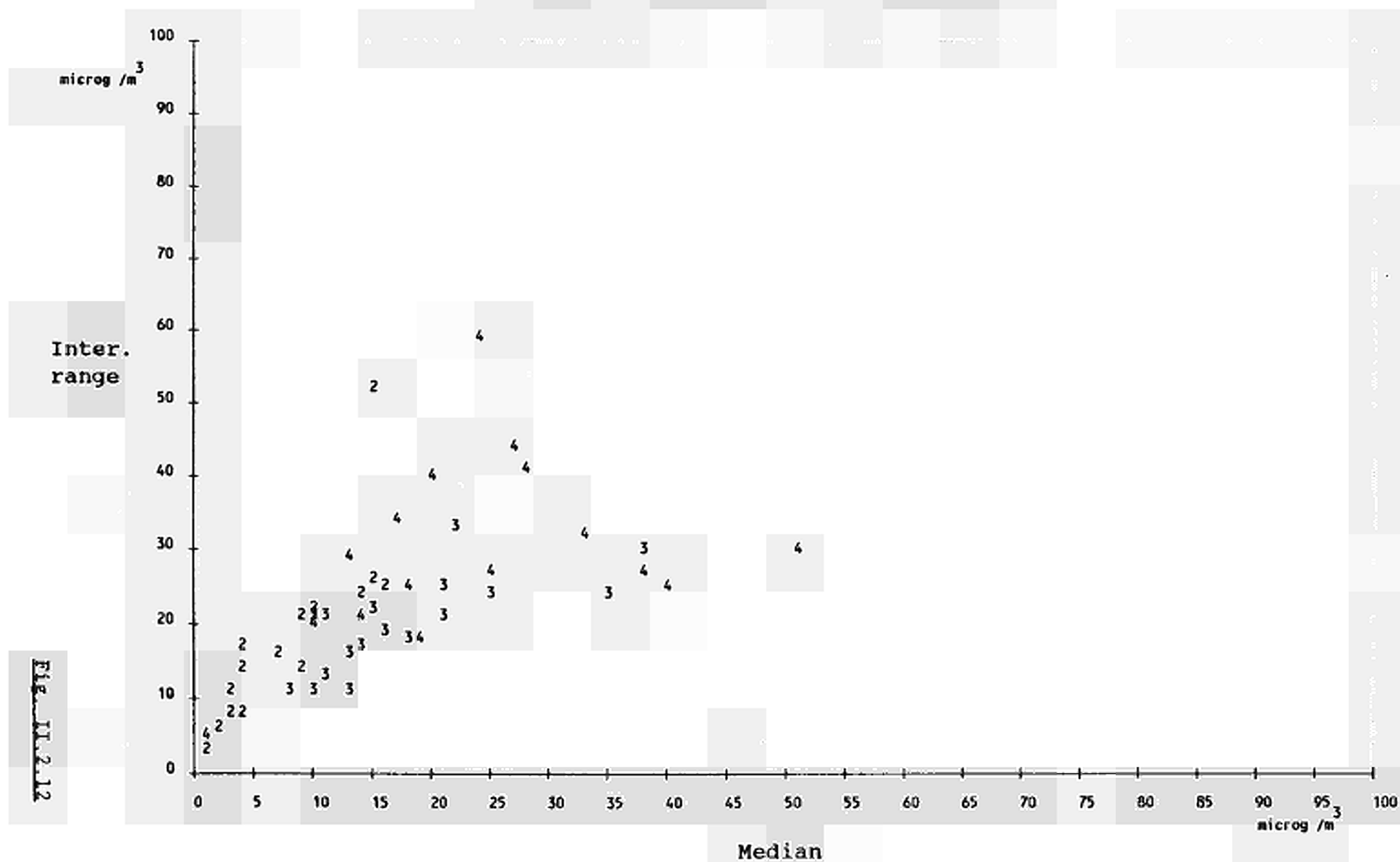


Fig. II.2.12

Scatter chart of the median and interquartile range with the country code.

Pollutant : Smoke

Year : October 84 - September 85

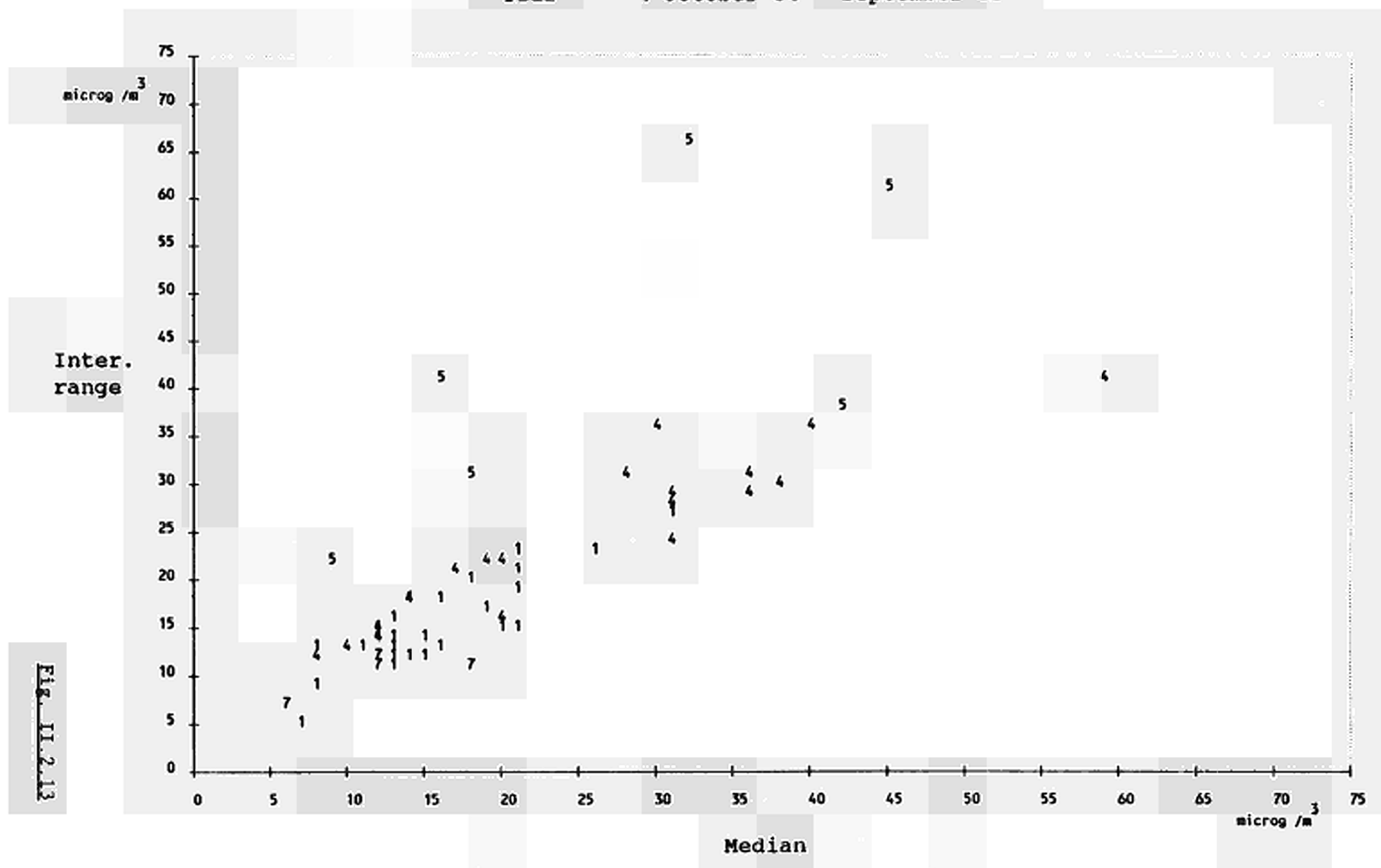


Fig. II.2.13

Scatter chart of the median and interquartile range with the country code.

Pollutant : SPM

Year : October 84 - September 85

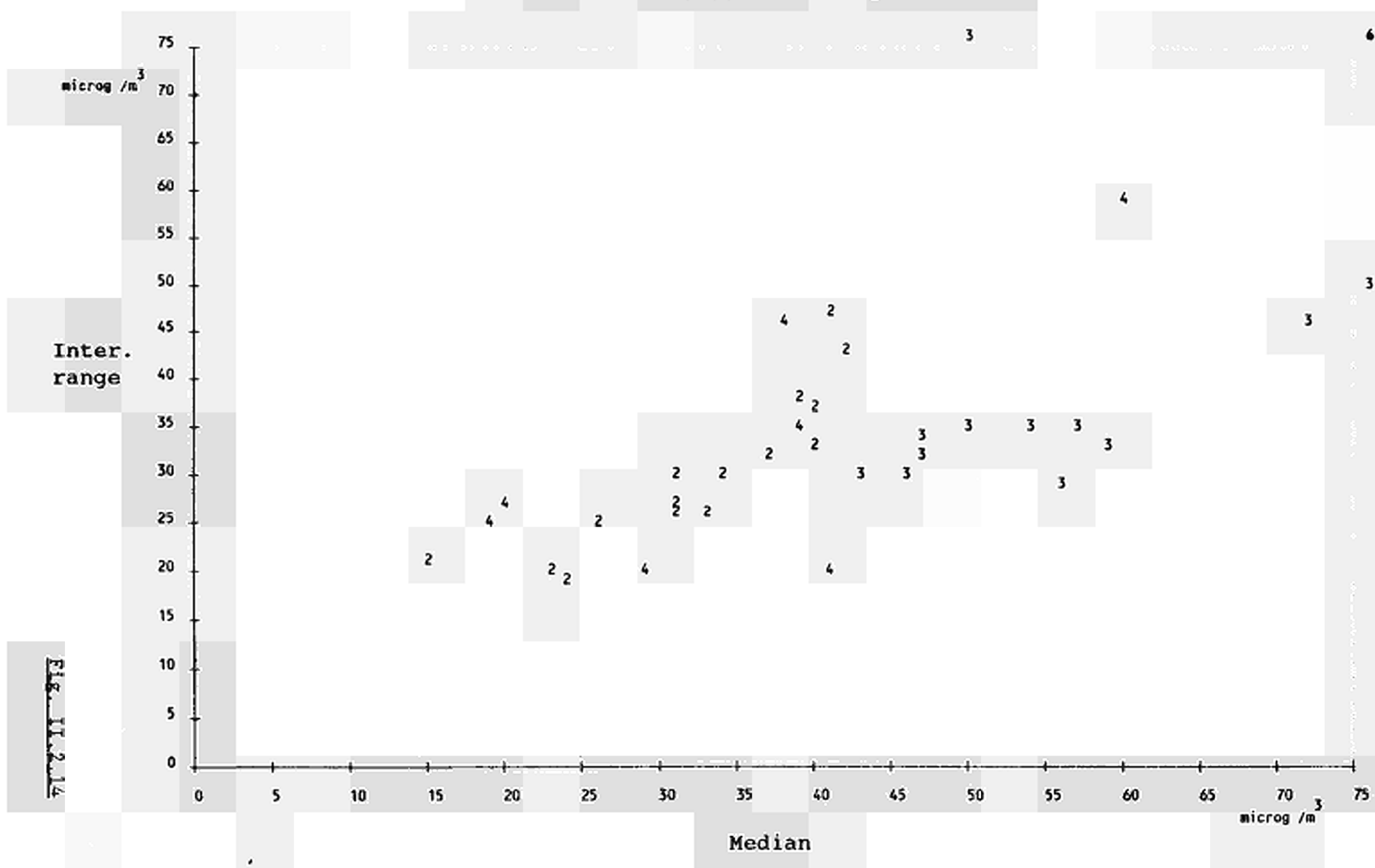


FIG. II.2.14

Scatter chart of the median and interquartile range with the country code.

Pollutant : Acid

Year : October 84 - September 85

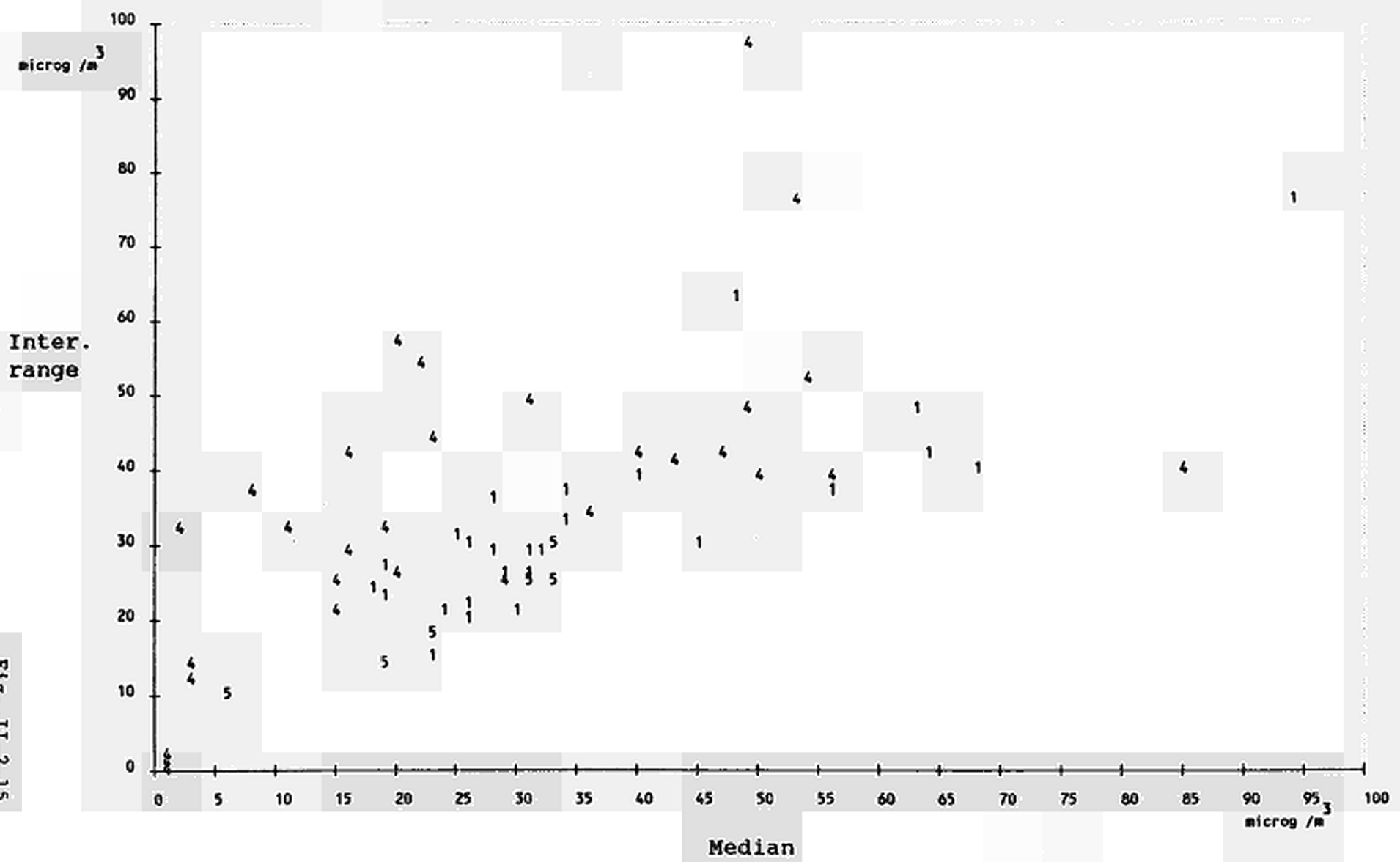
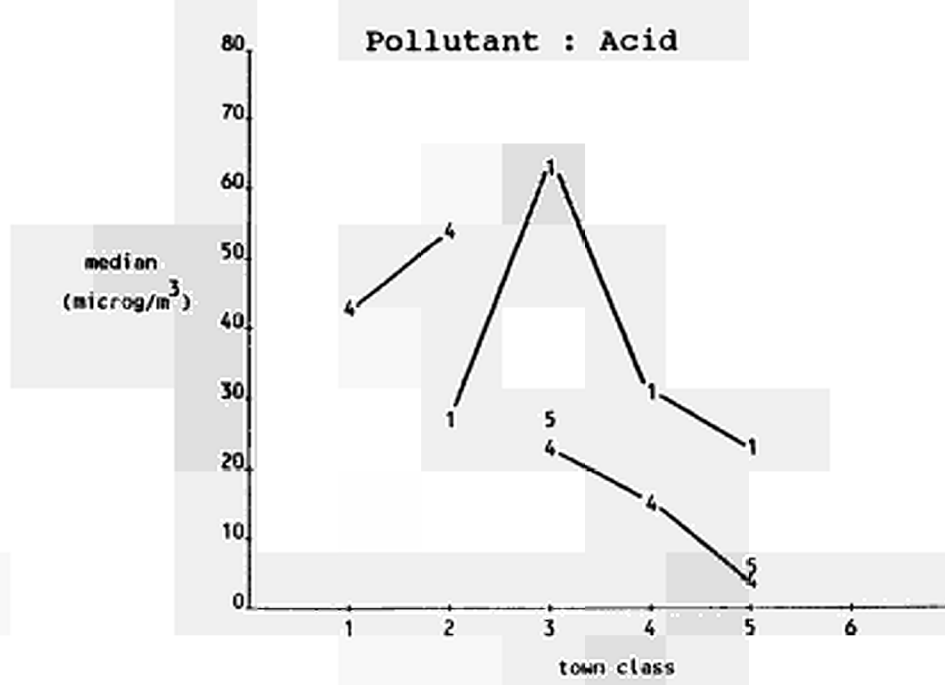
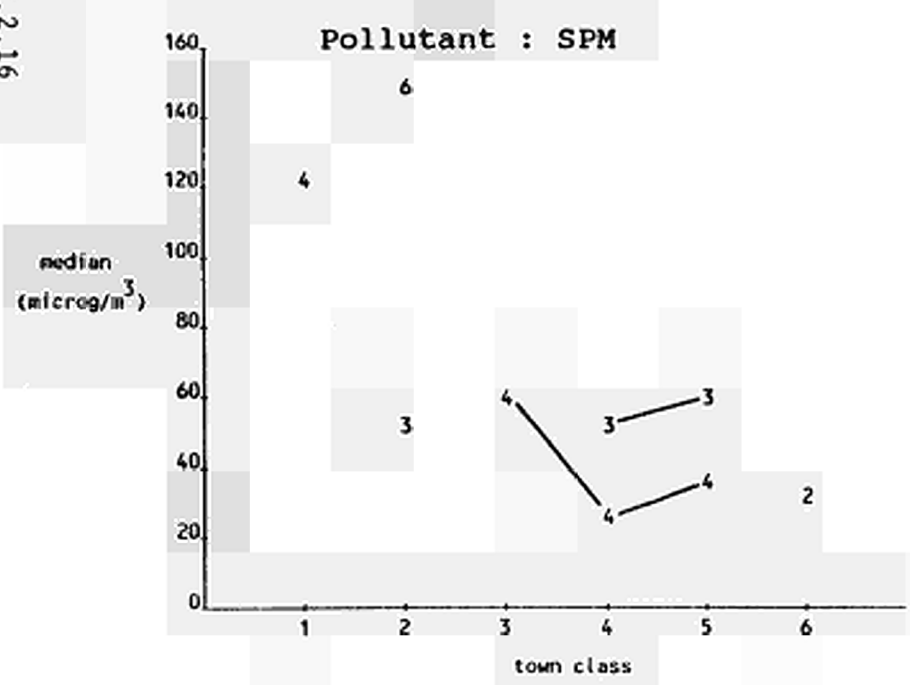
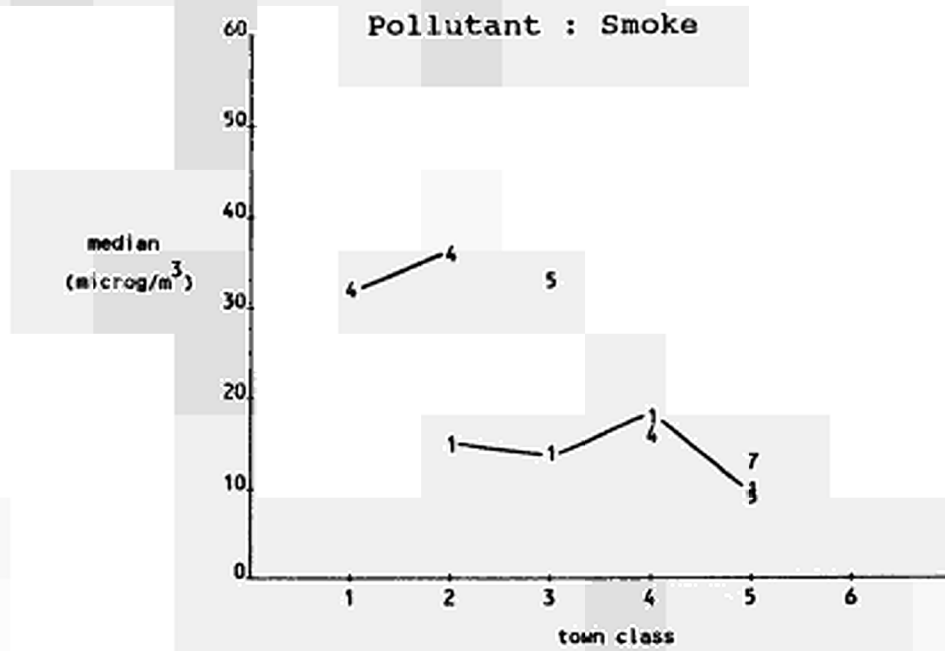
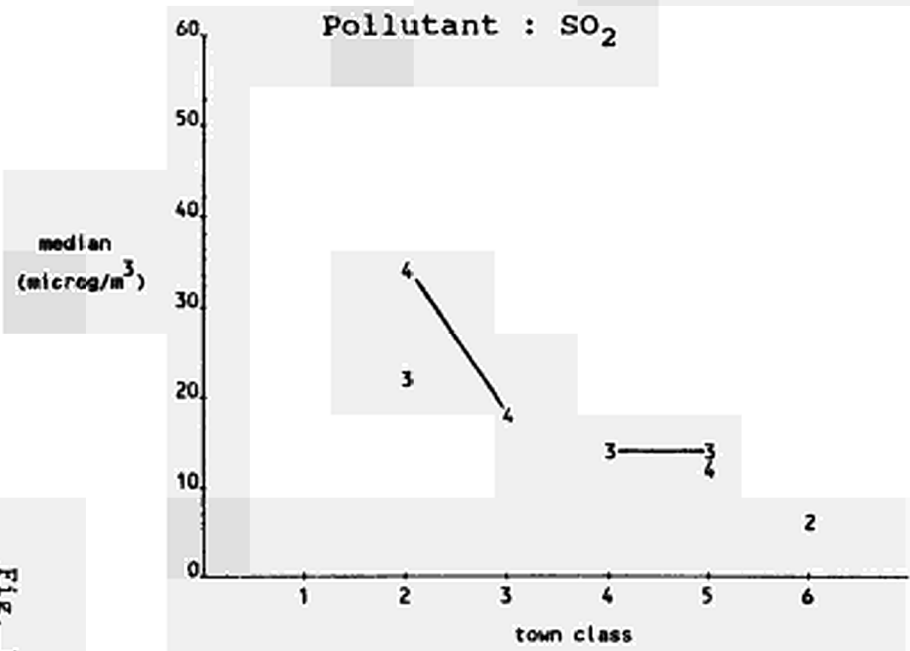


FIG. II.2.15

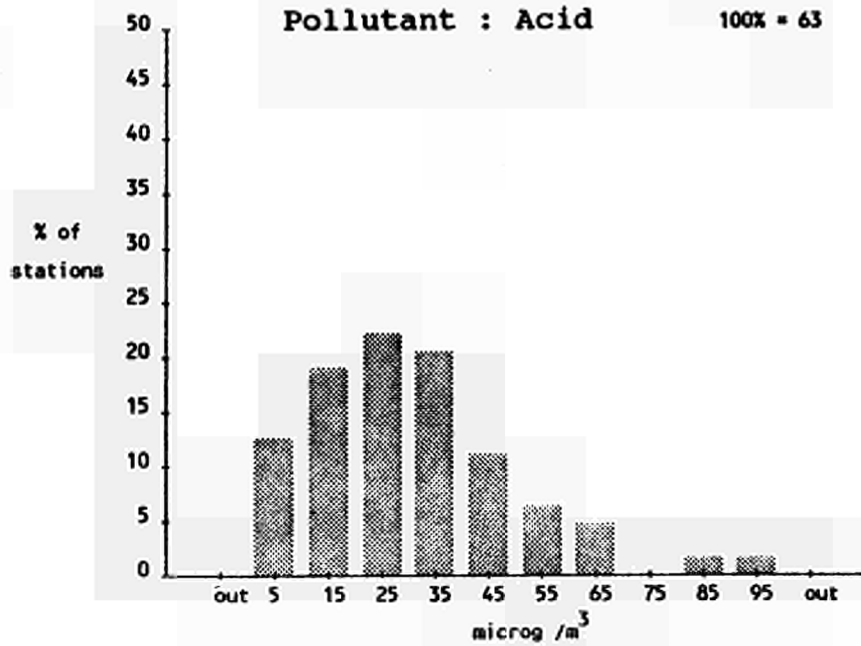
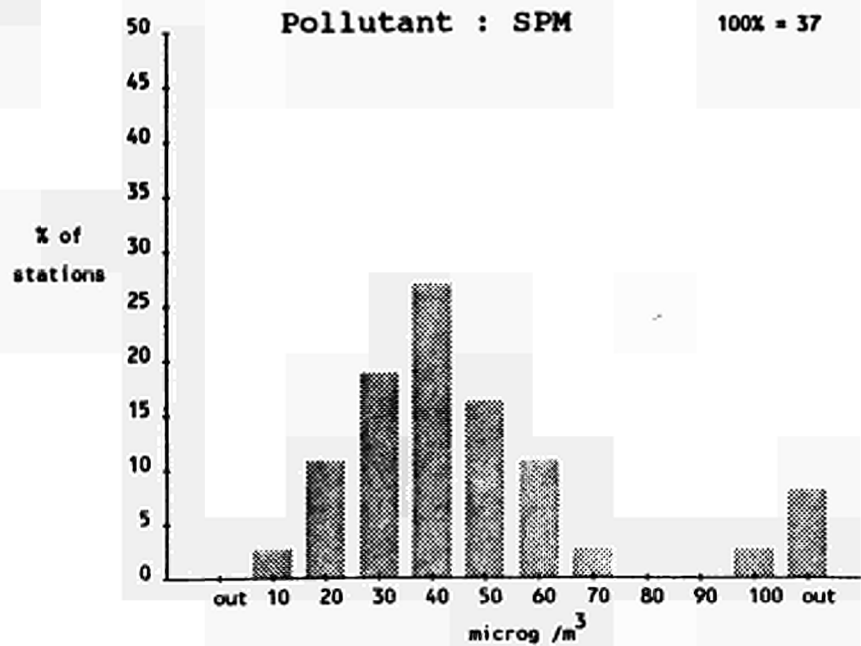
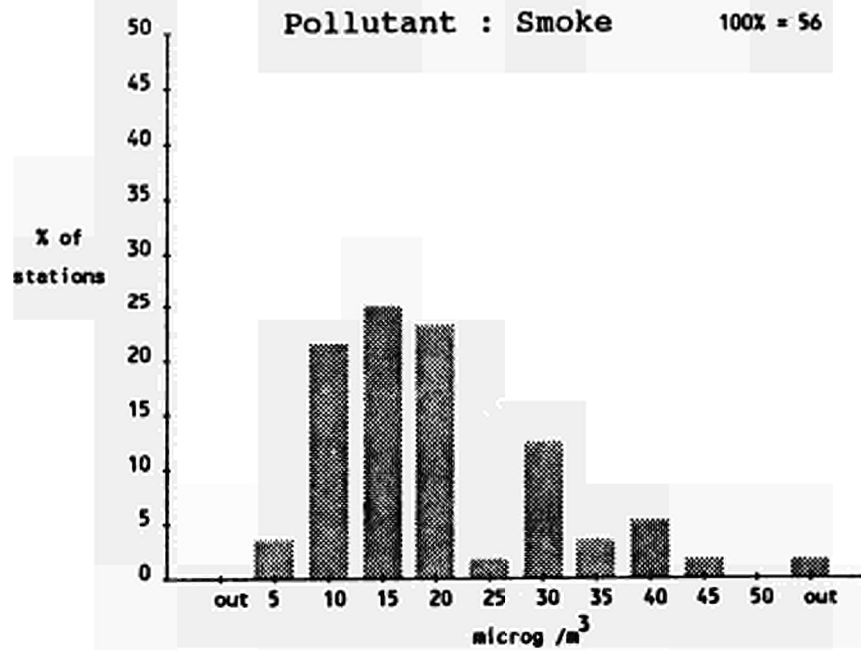
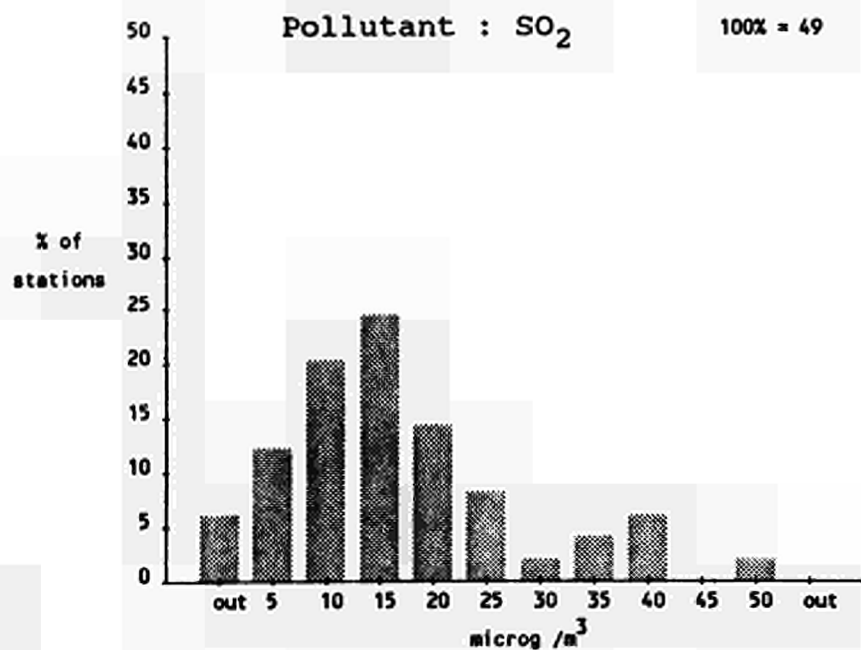
GLOBAL MEDIAN VALUE BY TOWN CLASS - October 84 - September 85

FIG. 11.2.16



ANNUAL MEDIAN FOR STATIONS - October 84 - September 85

FIG. II.3.1



ANNUAL MEAN FOR STATIONS - October 84 - September 85

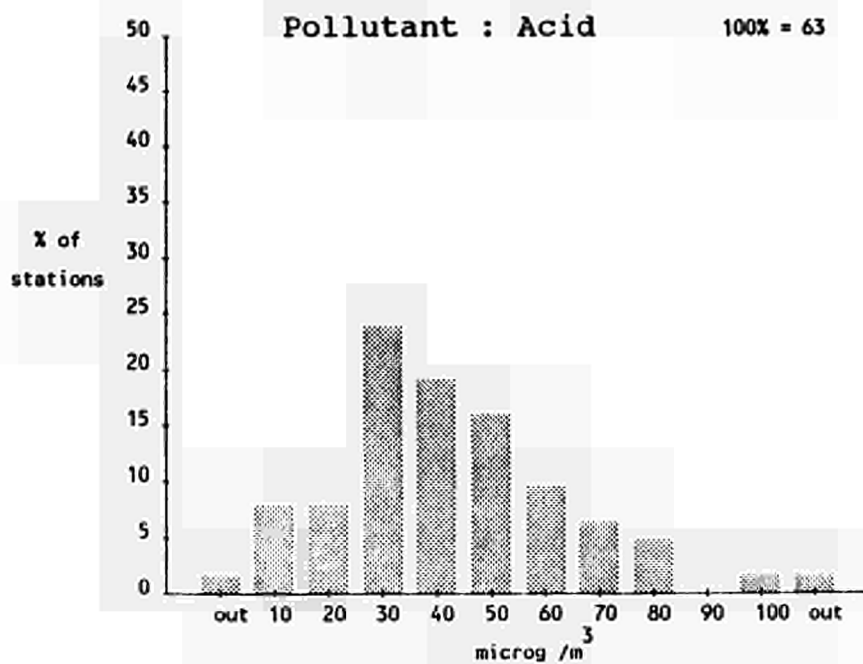
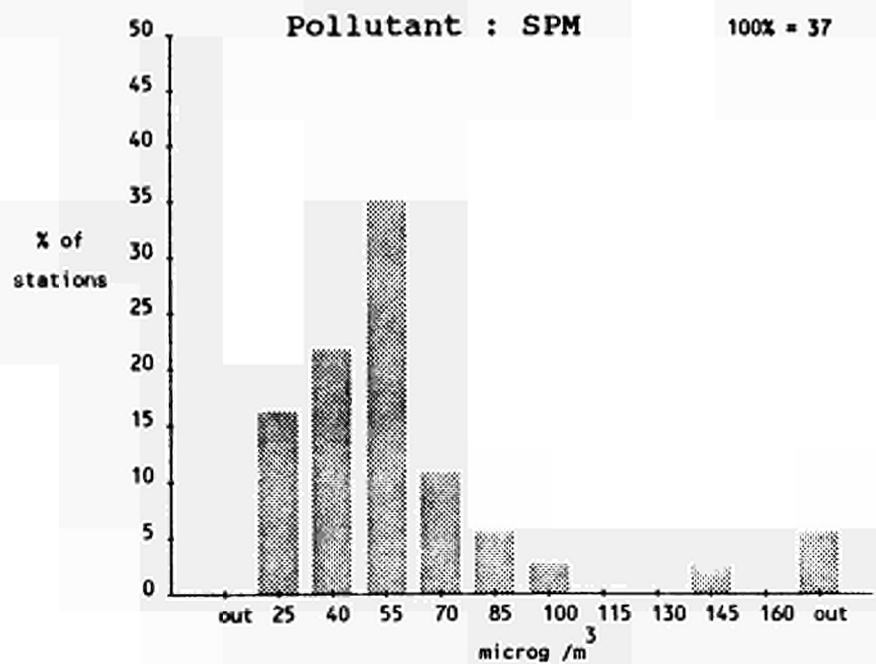
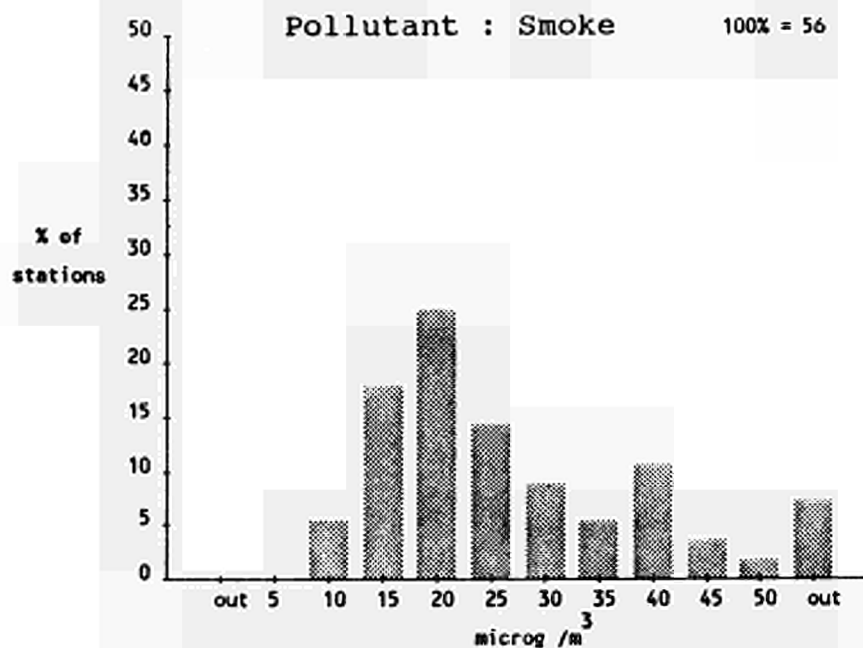
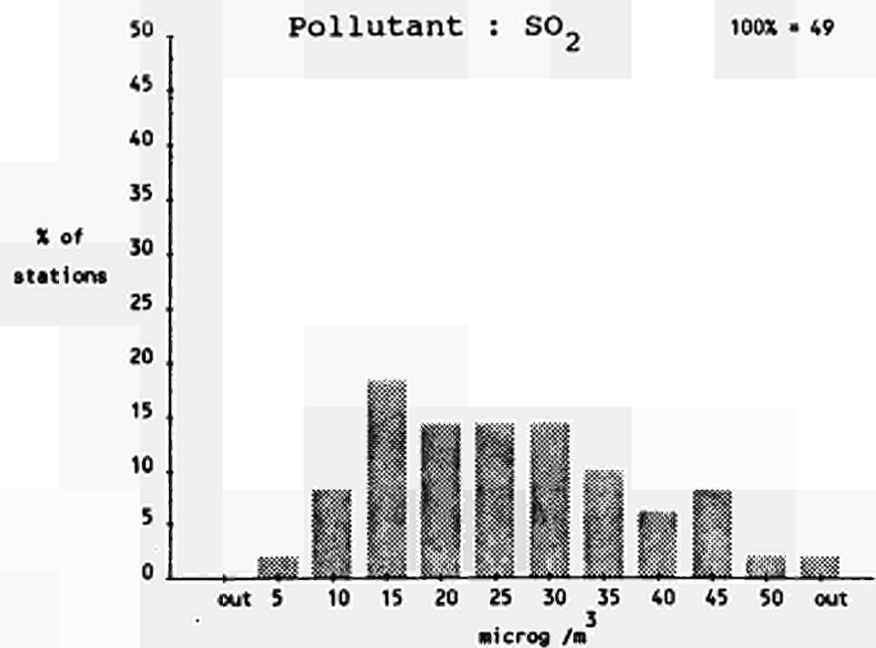


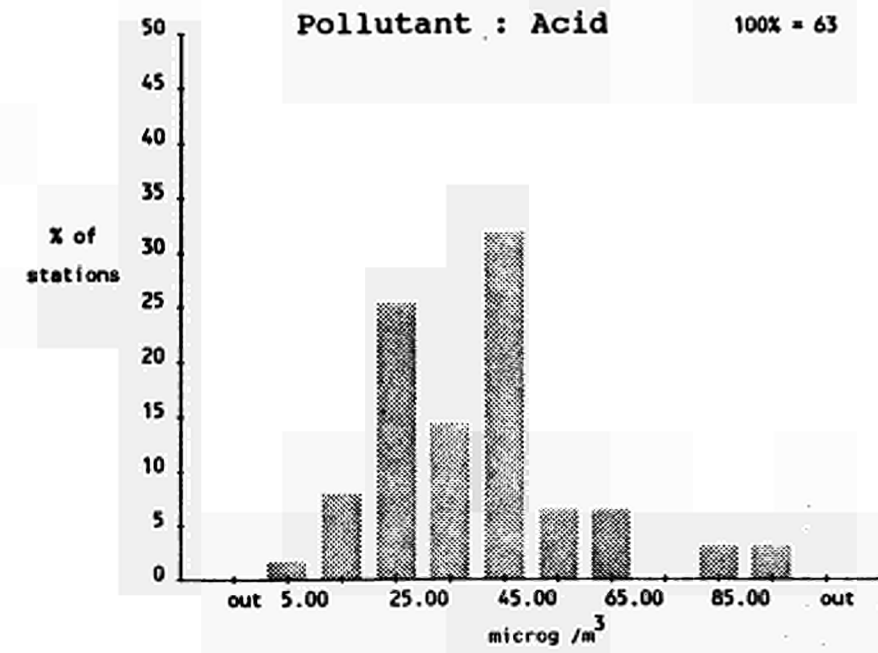
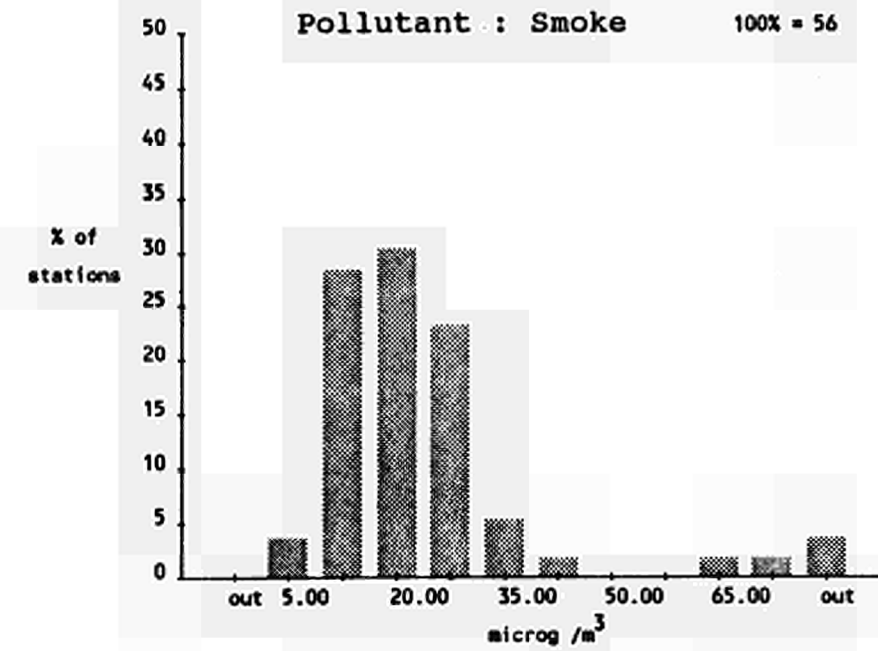
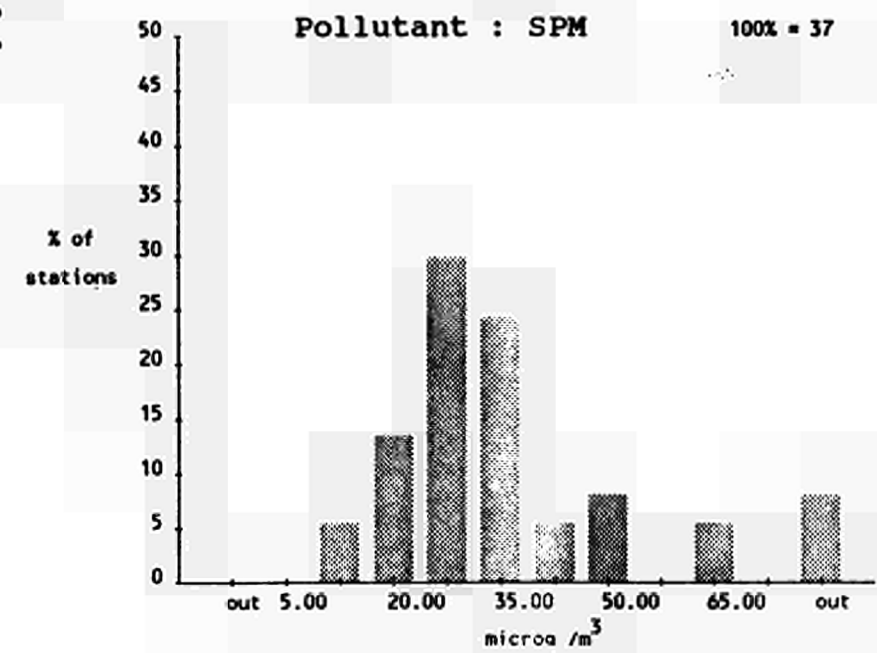
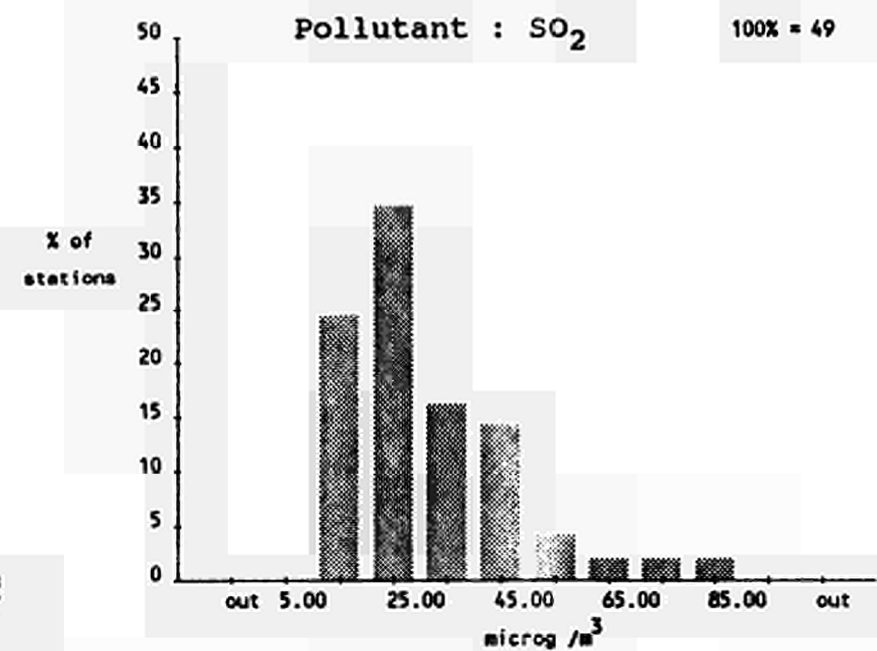
FIG. II.3.2

60

F.25

ANNUAL STANDARD DEVIATION FOR STATIONS - October 84 - September 85

Fig. II.3.3



ANNUAL COEFFICIENT OF VARIATION FOR STATIONS - October 84 - September 85

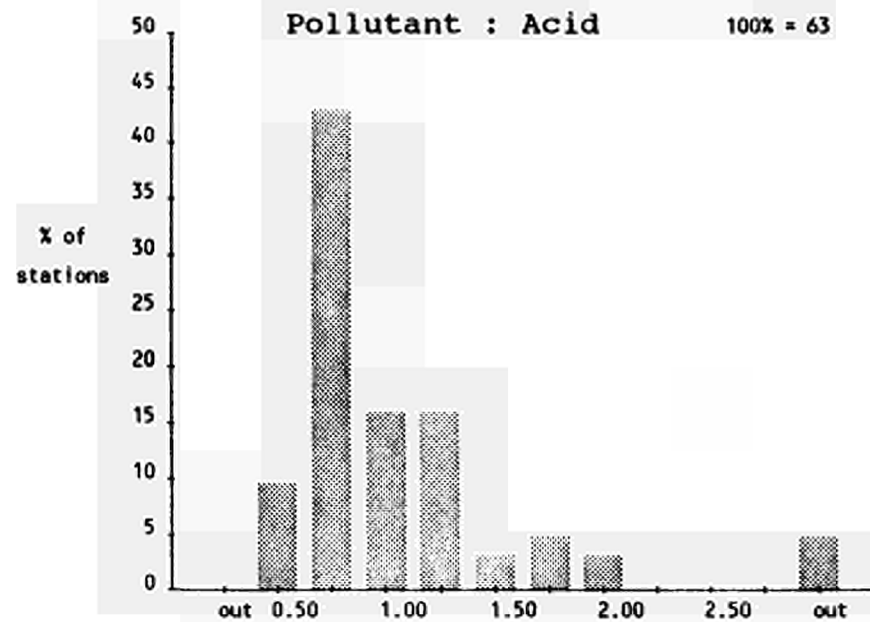
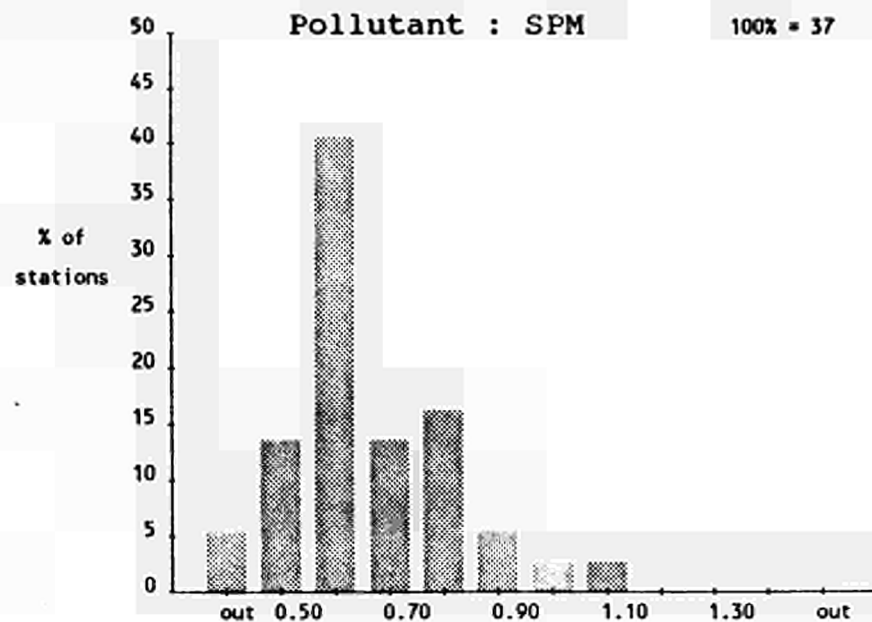
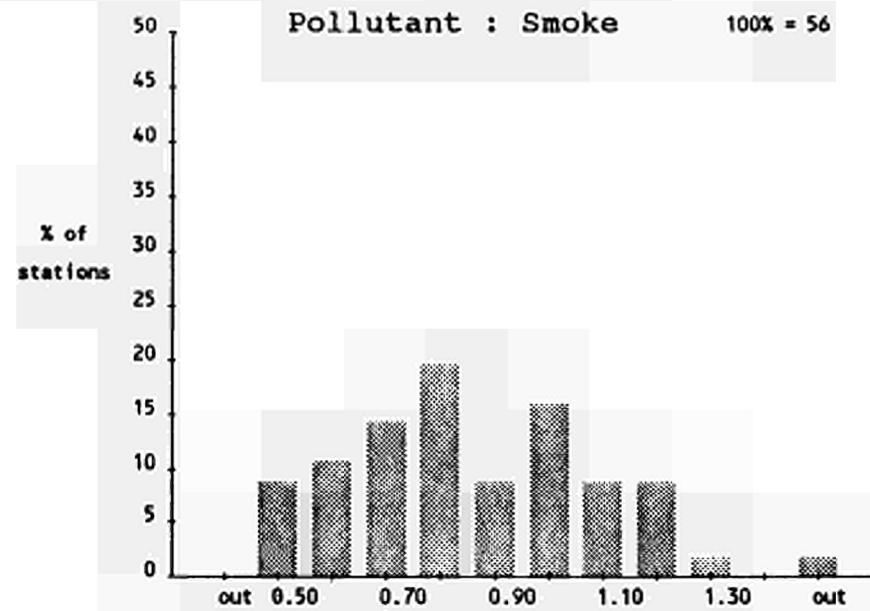
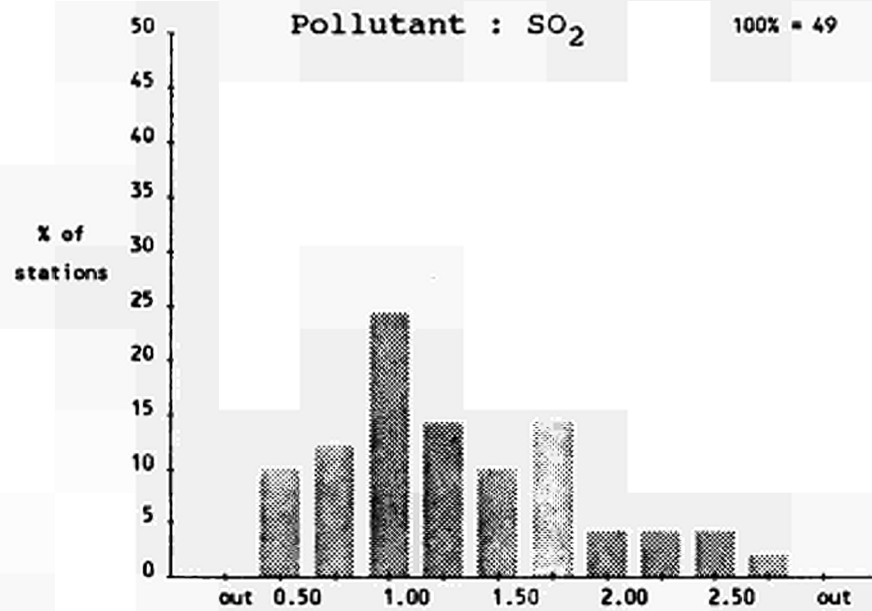


Fig. 11.3.4

ANNUAL SKEWNESS FOR STATIONS - October 84 - September 85

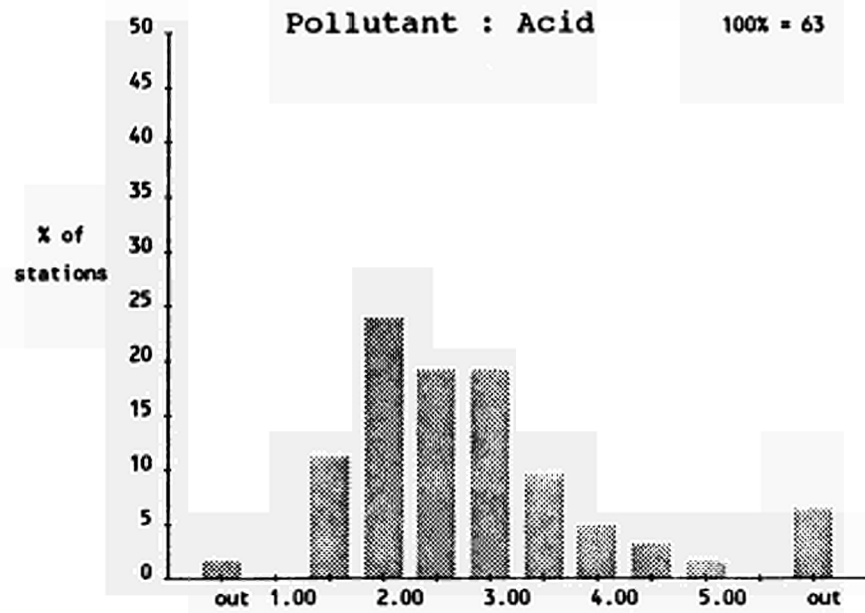
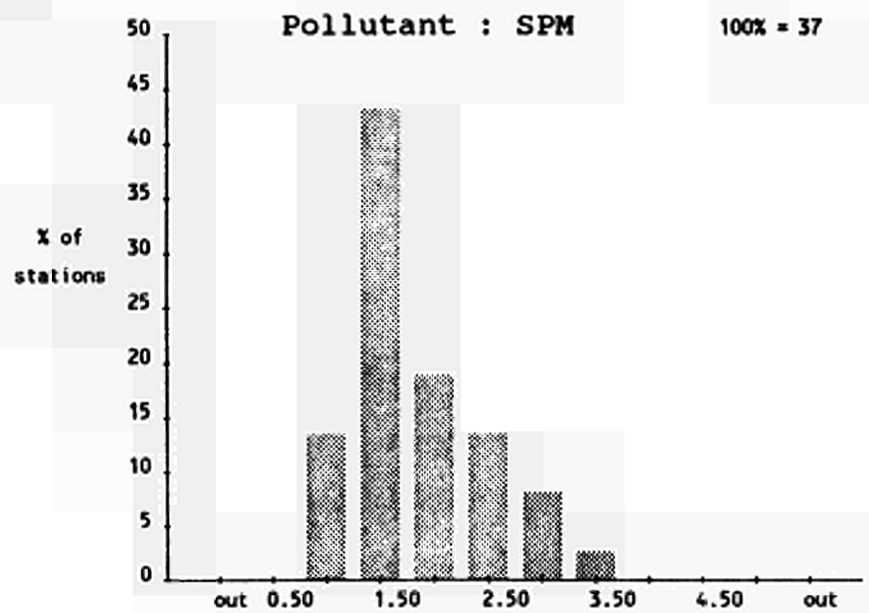
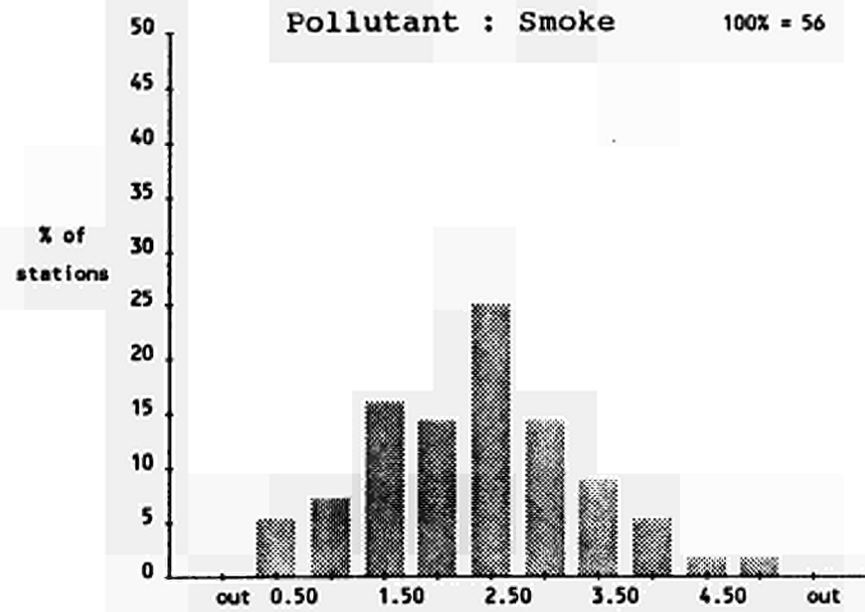
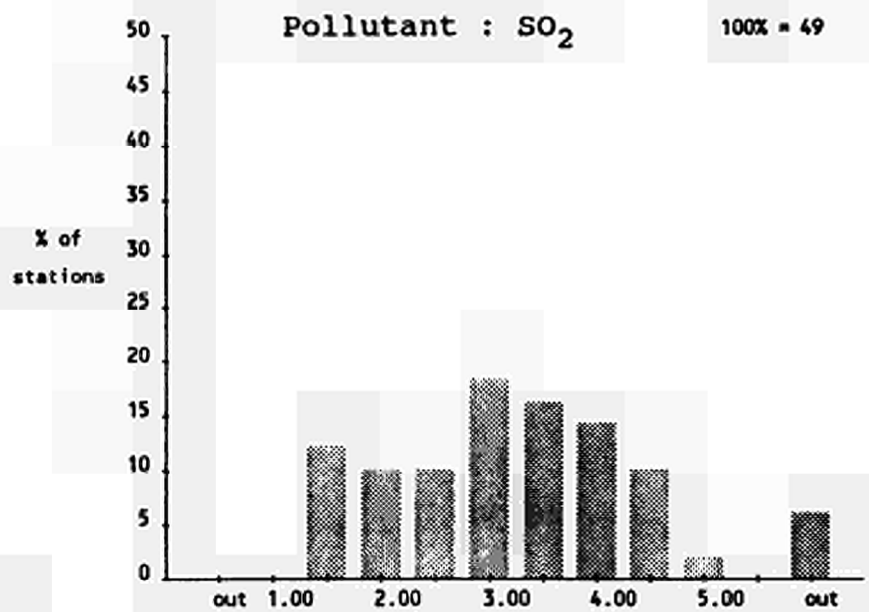


FIG. 11.3.5

ANNUAL SHAPE ESTIMATOR OF THE FREQUENCY DISTRIBUTION FOR STATIONS - October 84 - September 85

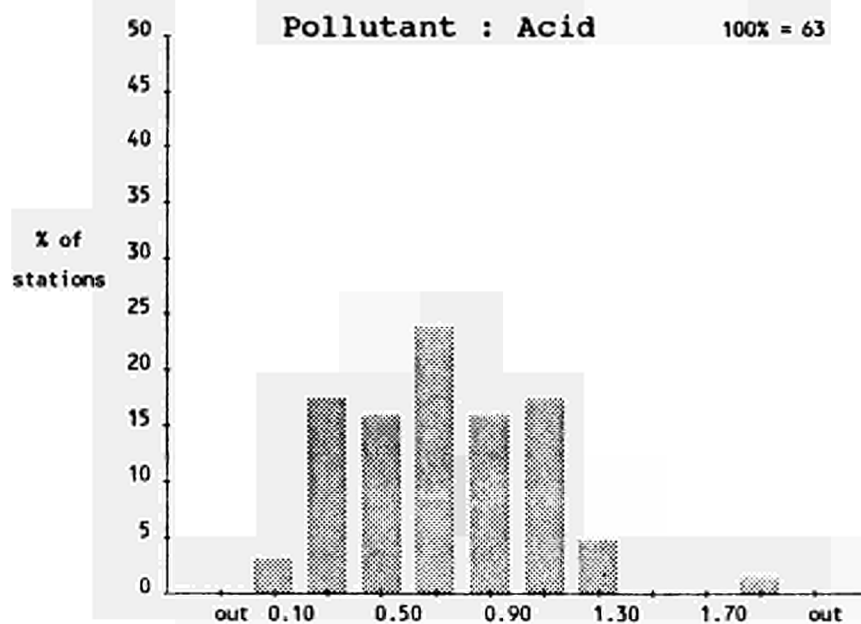
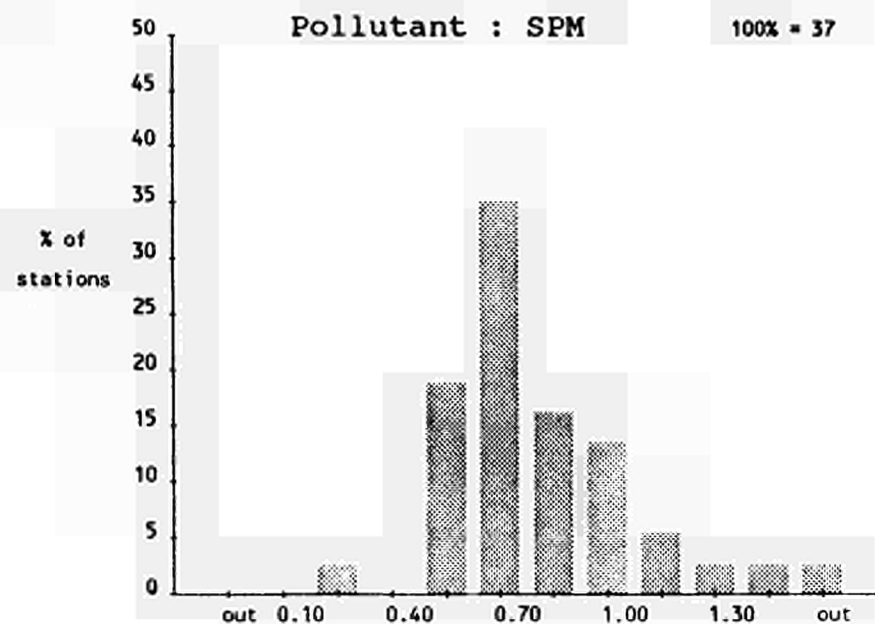
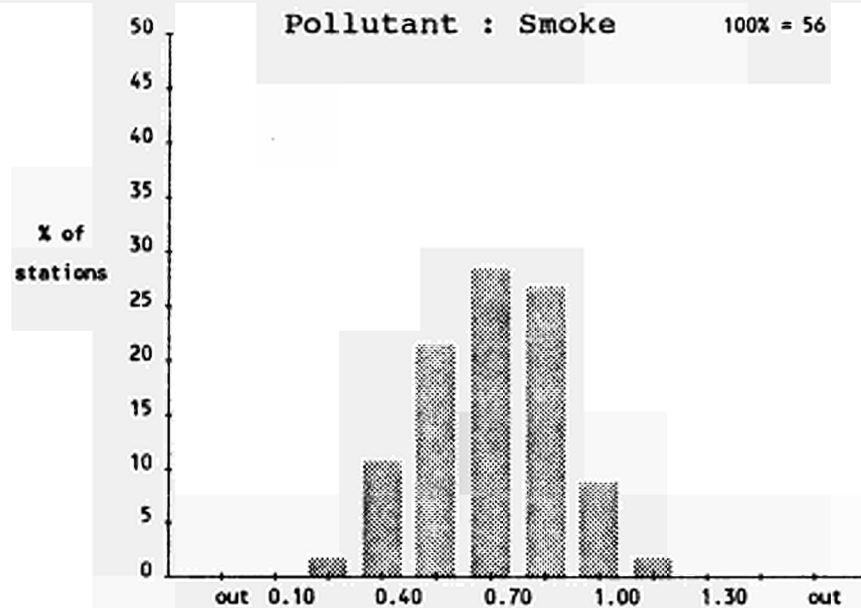
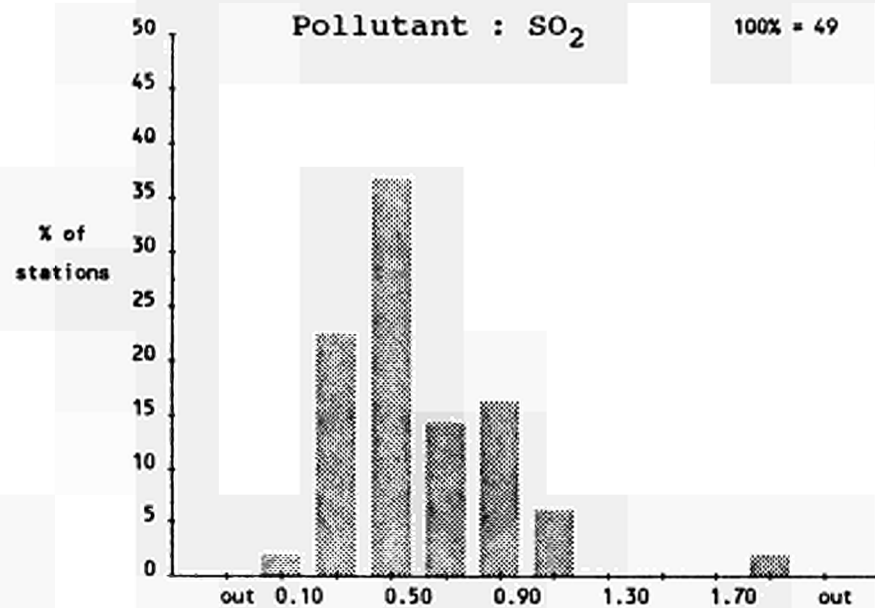


FIG. II.3.6

64

F.29

ANNUAL KURTOSIS FOR STATIONS - October 84 - September 85

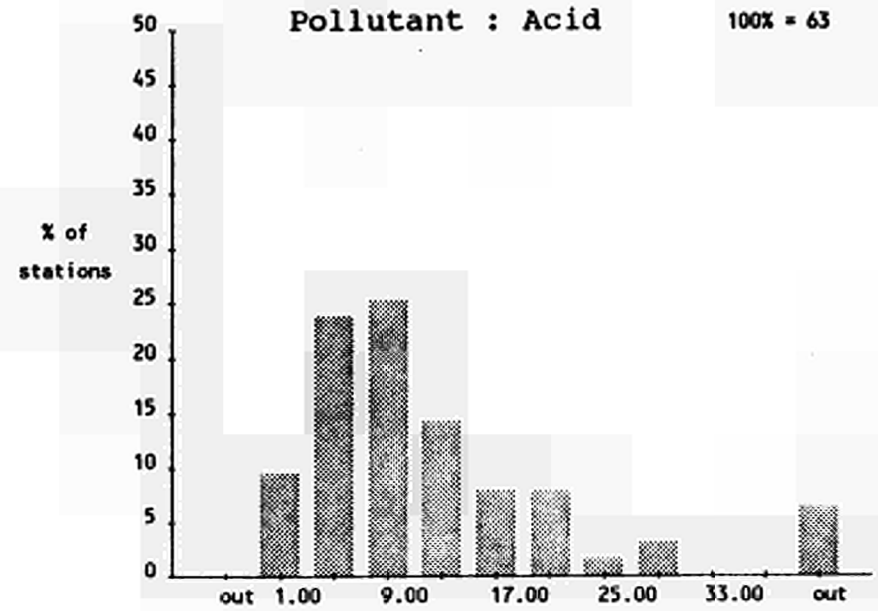
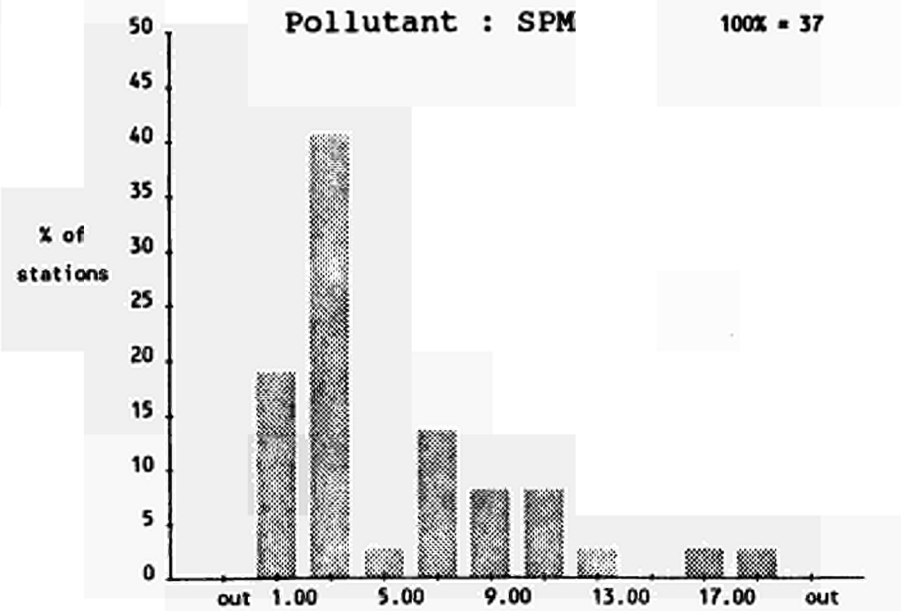
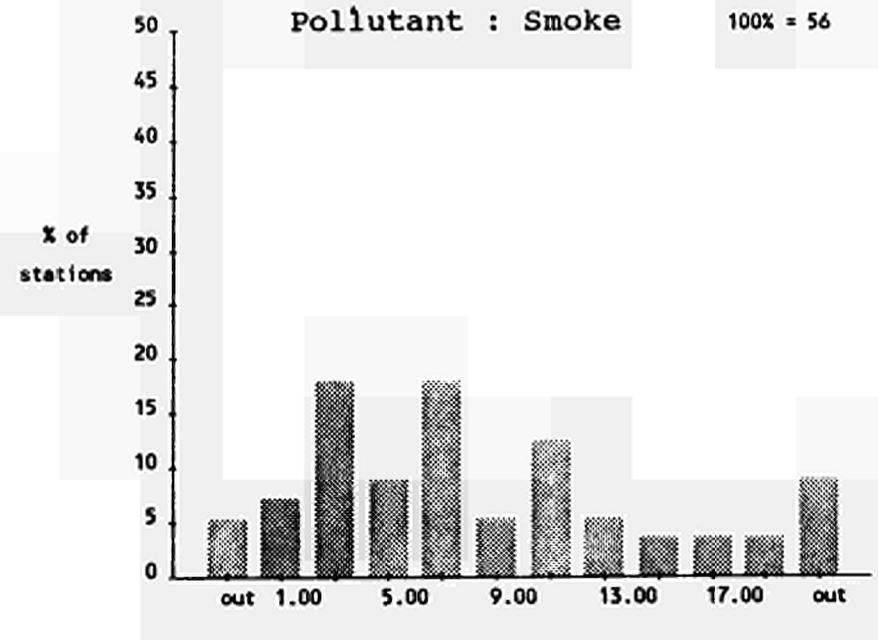
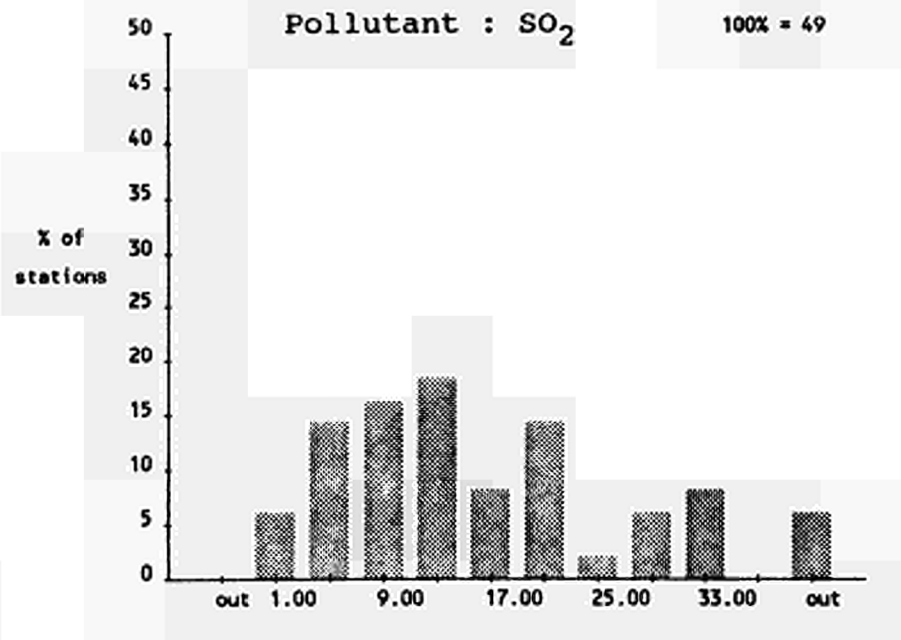


Fig. 11.3.7

SCATTER CHART OF THE PERCENTILES 50 AND 98

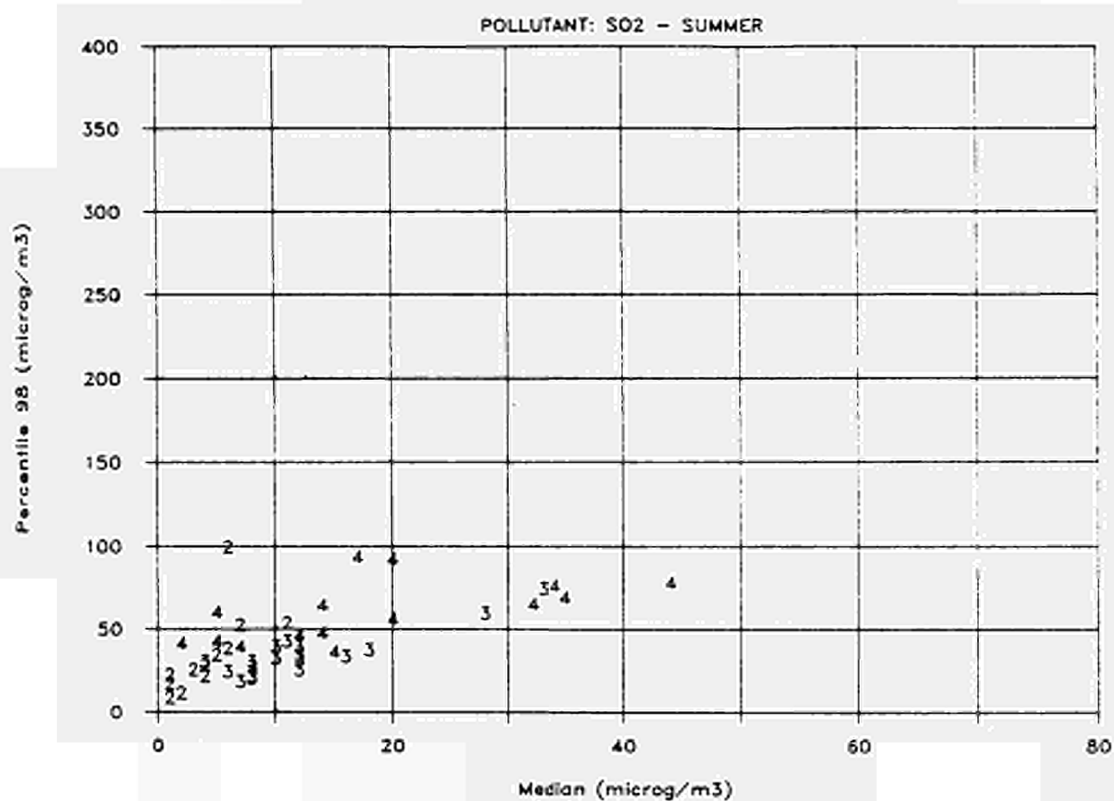


Fig. II.4.1

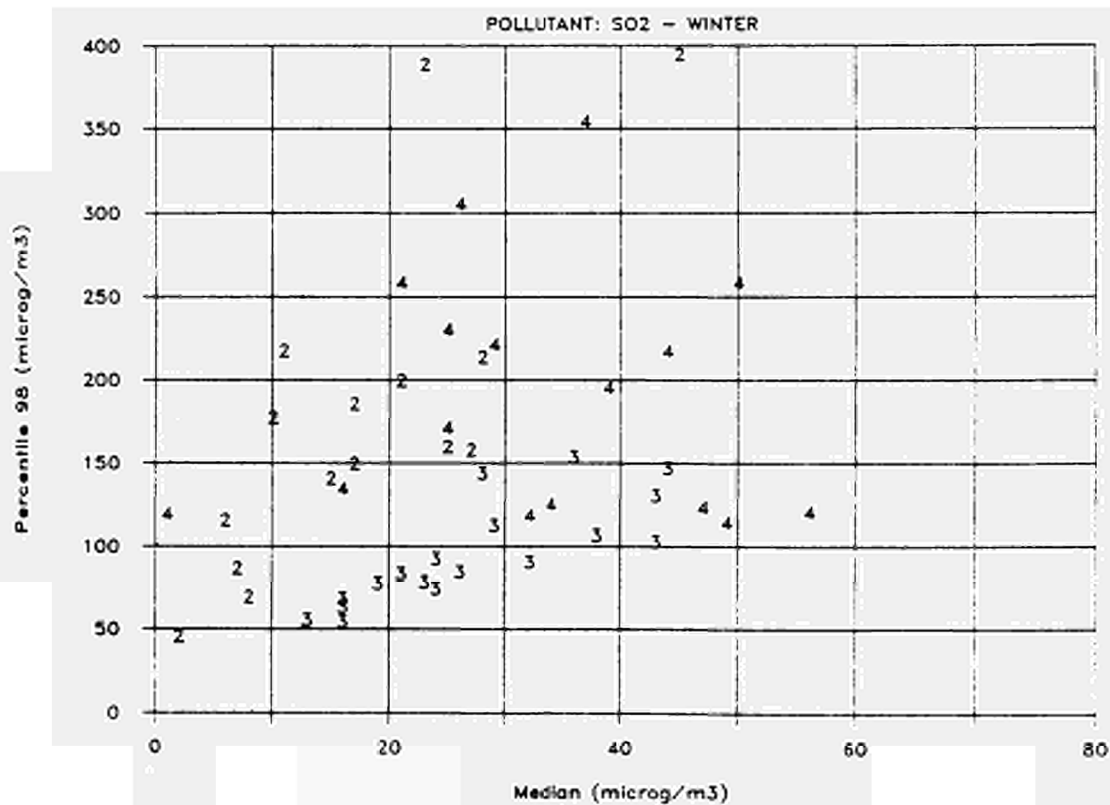


Fig. II.4.2

SCATTER CHART OF THE PERCENTILES 50 AND 98

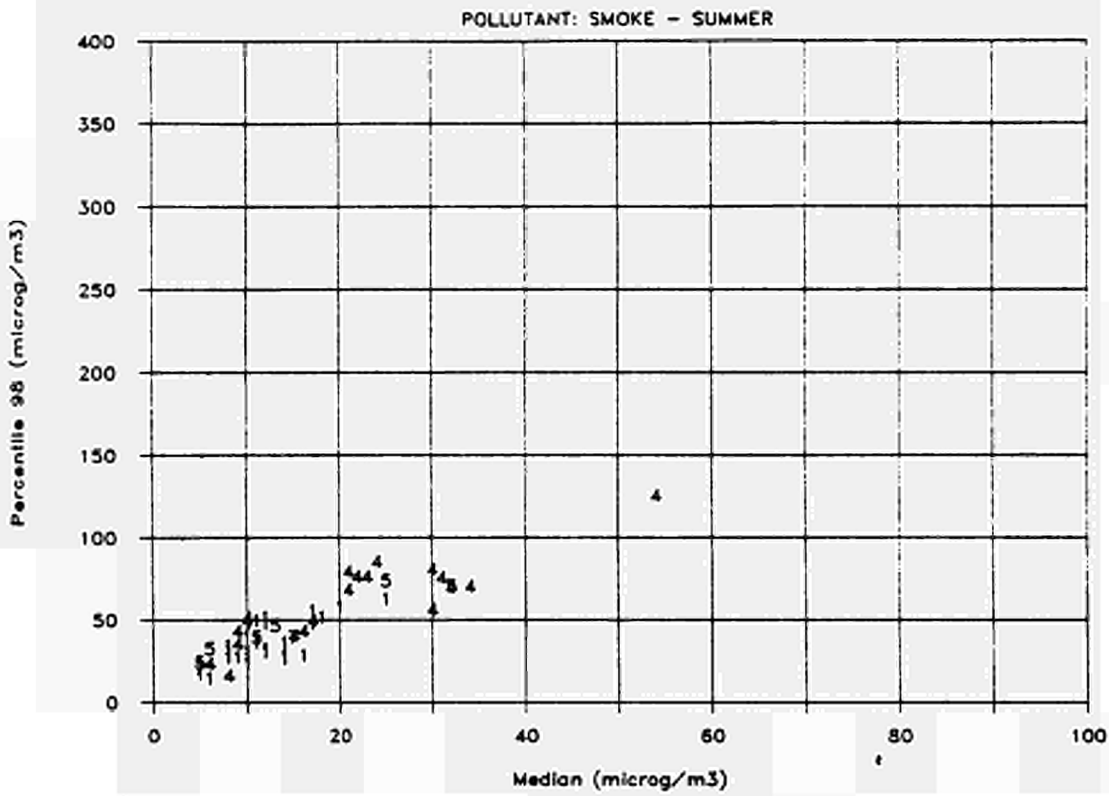


Fig. II.4.3

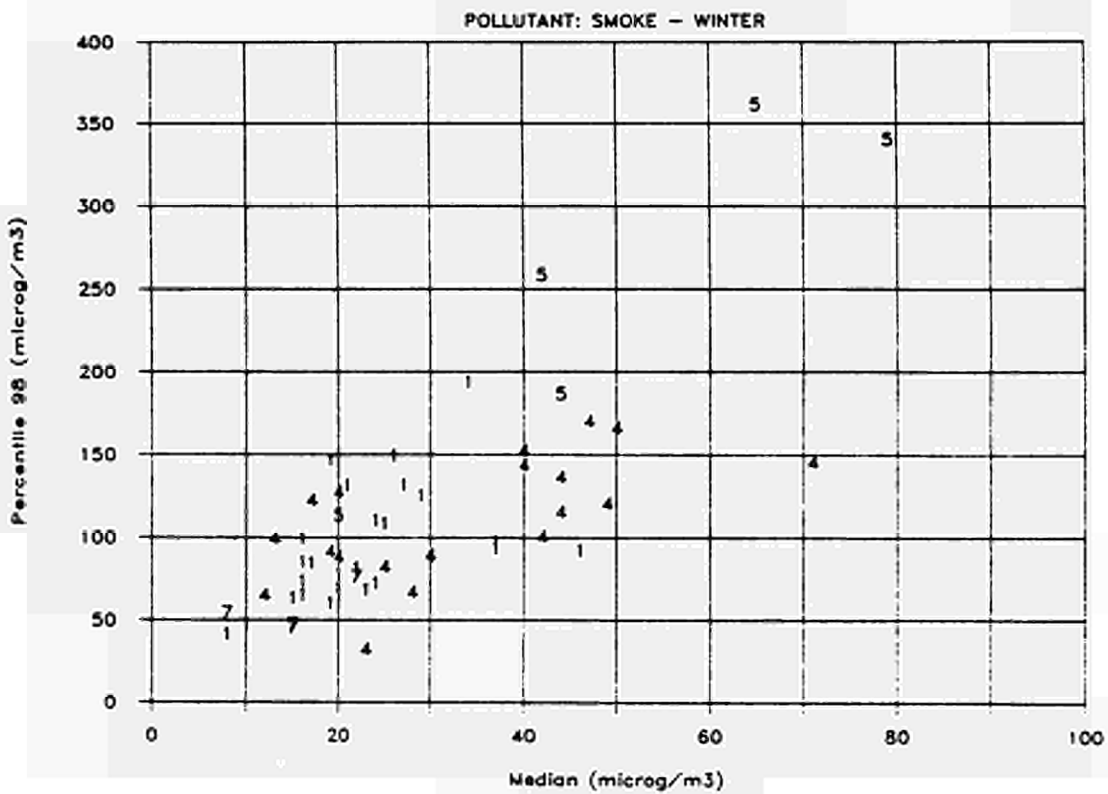


Fig. II.4.4

SCATTER CHART OF THE PERCENTILES 50 AND 98

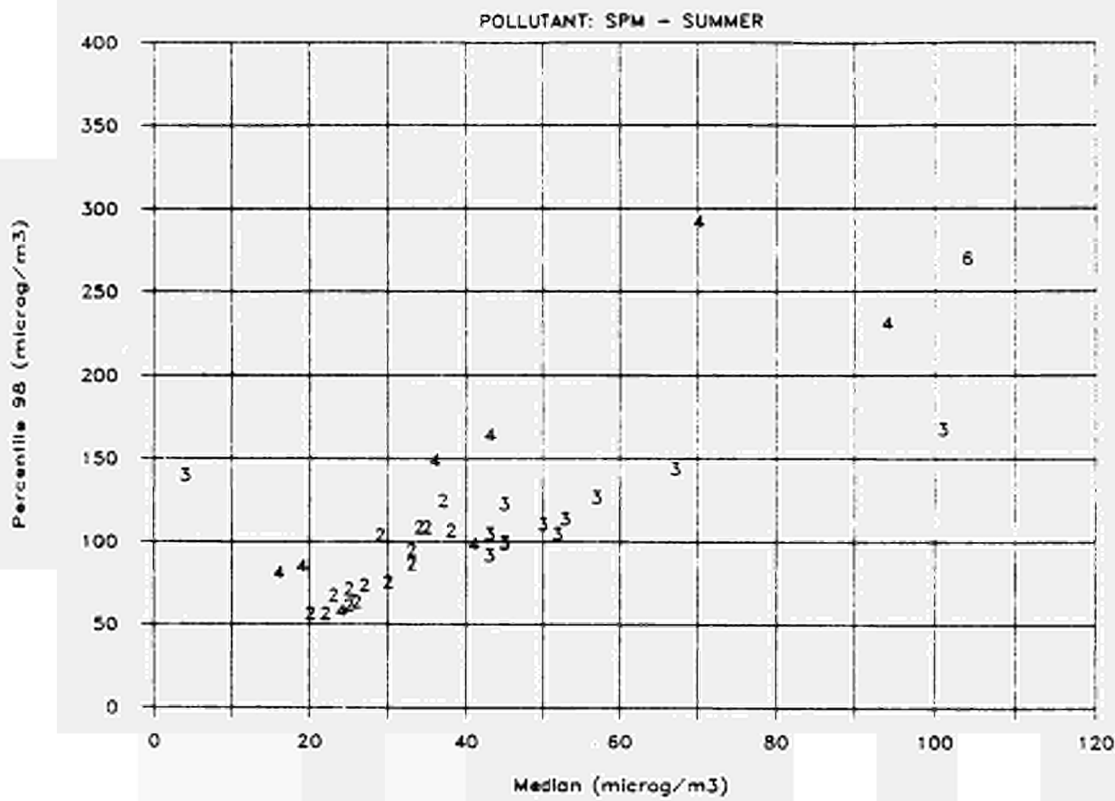


Fig. II.4.5

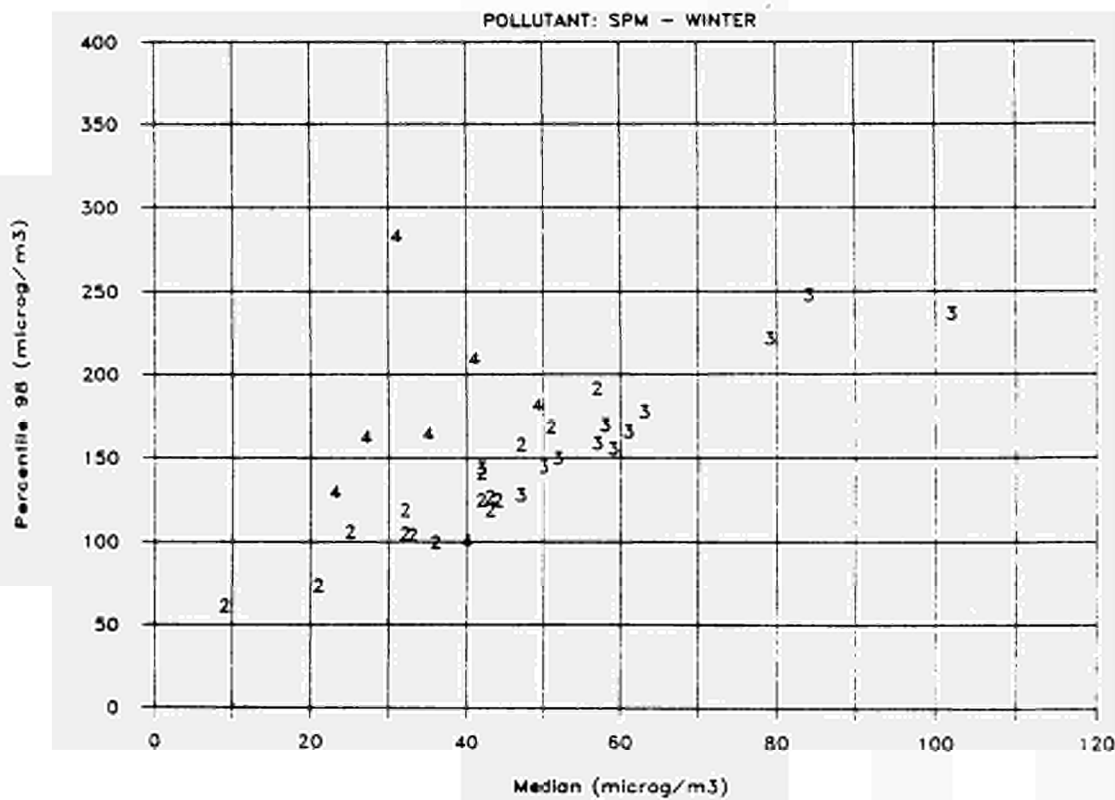


Fig. II.4.6

SCATTER CHART OF THE PERCENTILES 50 AND 98

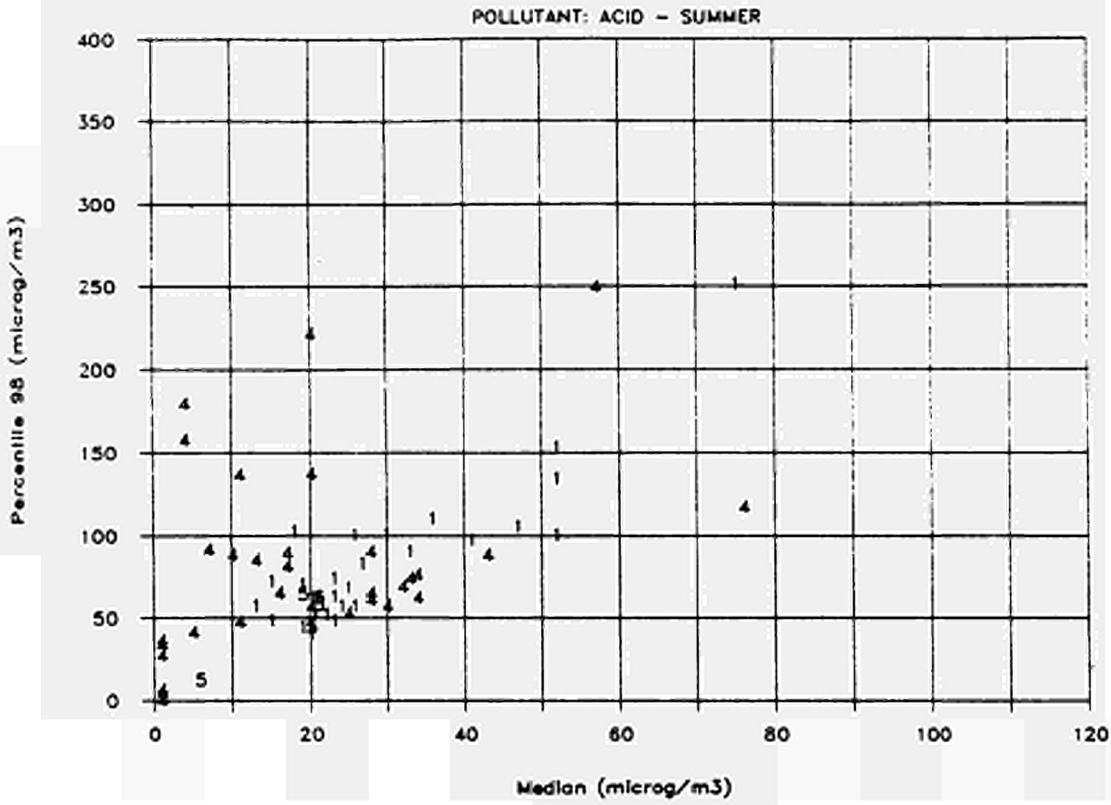


Fig. II.4.7

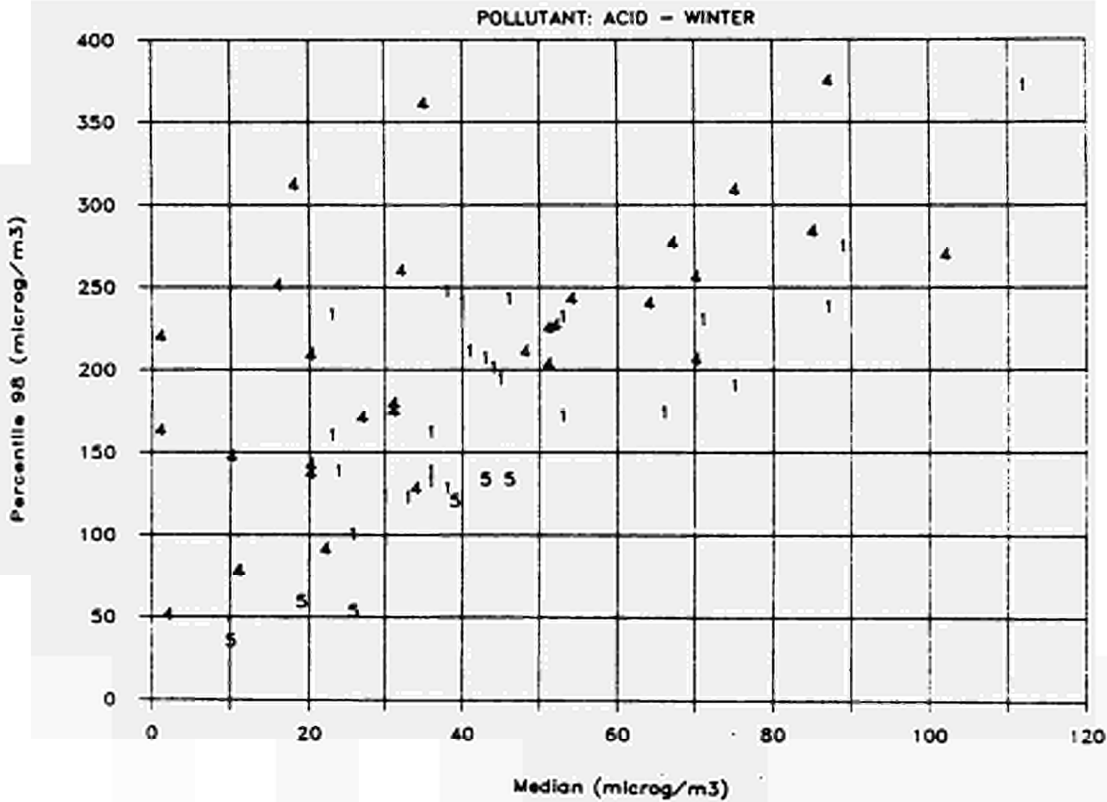


Fig. II.4.8

CORRELATION BETWEEN THE SUMMER AND WINTER PERCENTILES 50 AND 98

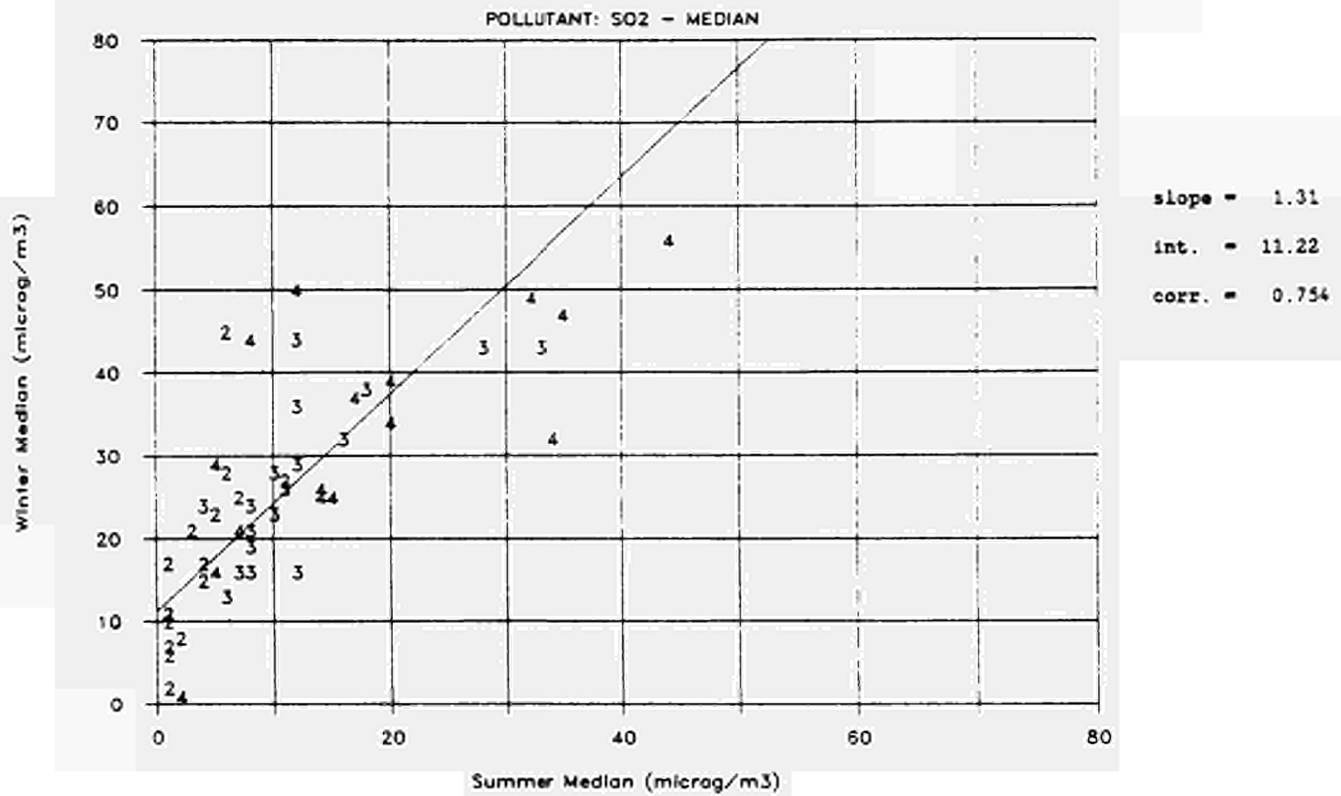


Fig. II.4.9

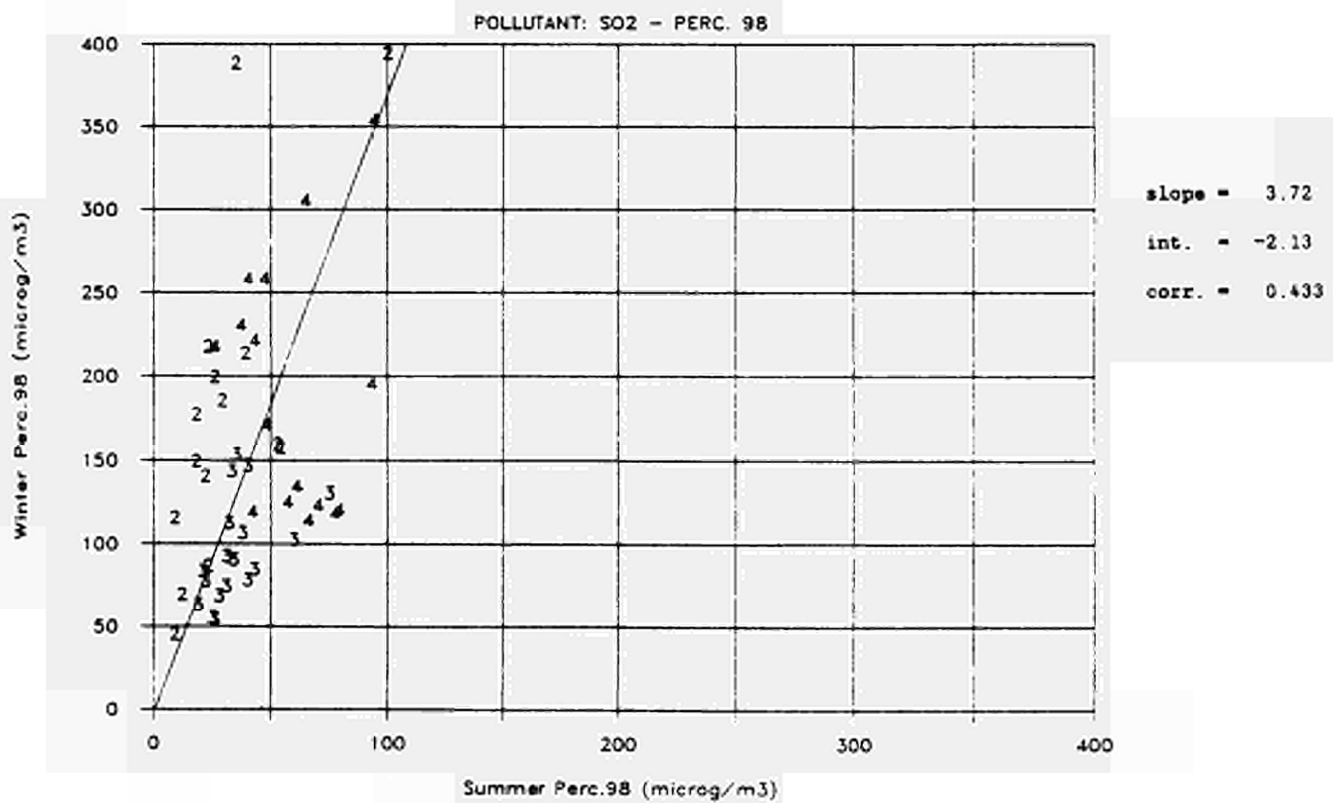


Fig. II.4.10

CORRELATION BETWEEN THE SUMMER AND WINTER PERCENTILES 50 AND 98

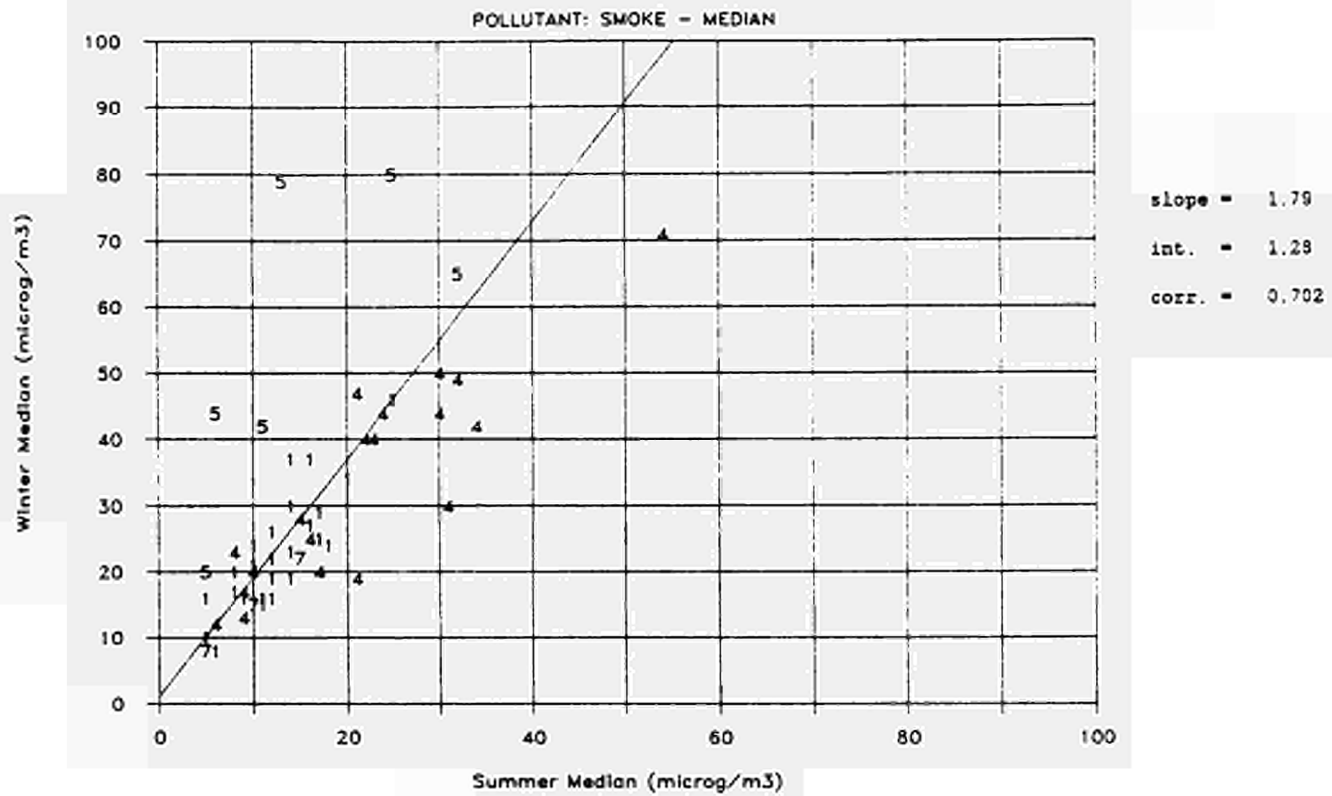


Fig. II.4.11

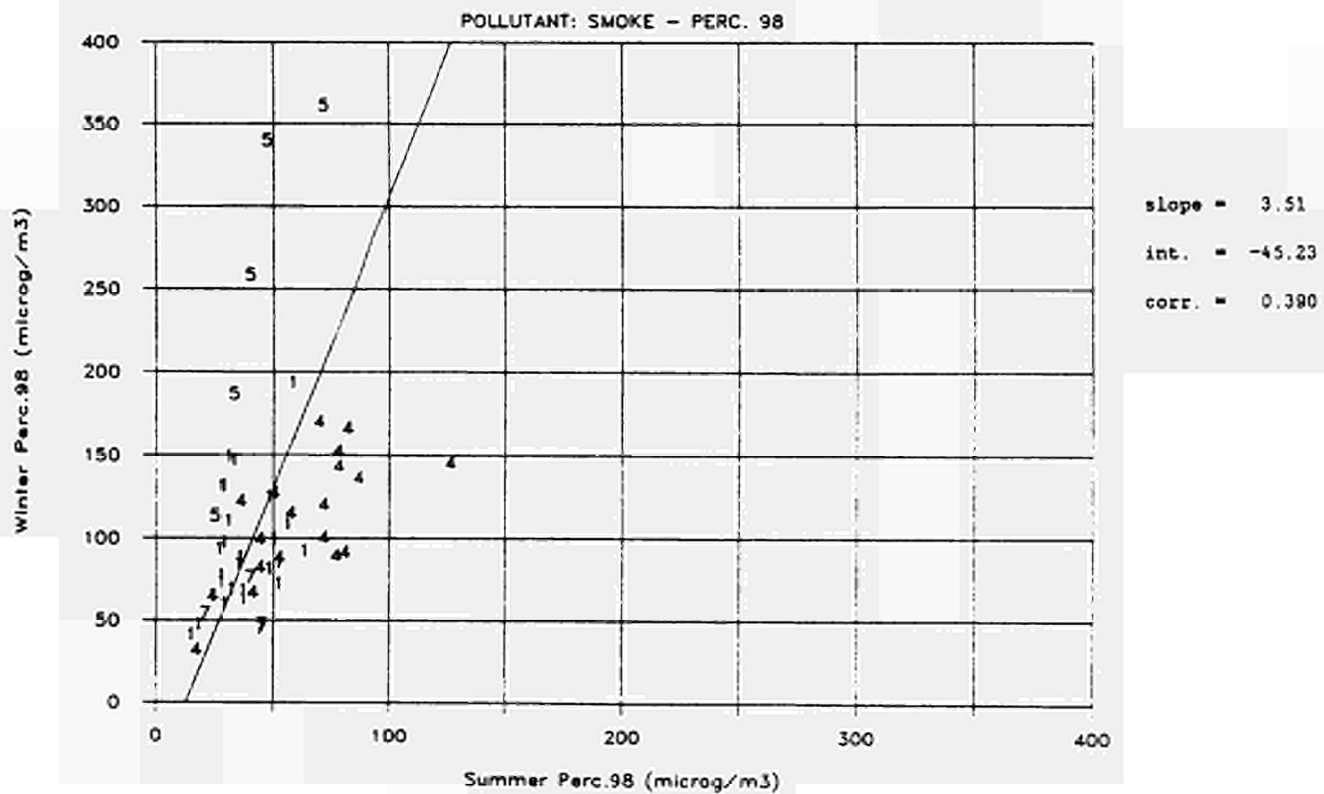


Fig. II.4.12

CORRELATION BETWEEN THE SUMMER AND WINTER PERCENTILES 50 AND 98

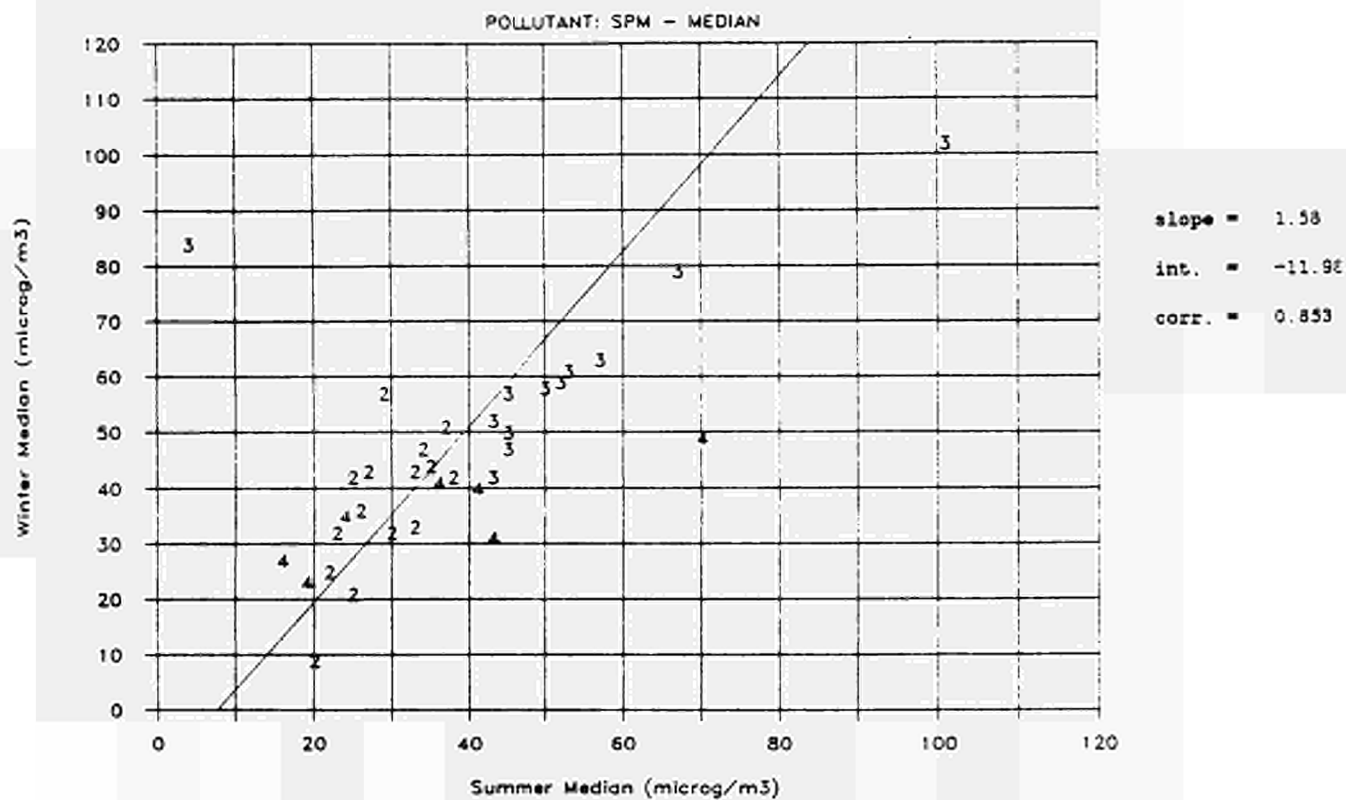


Fig. II.4.13

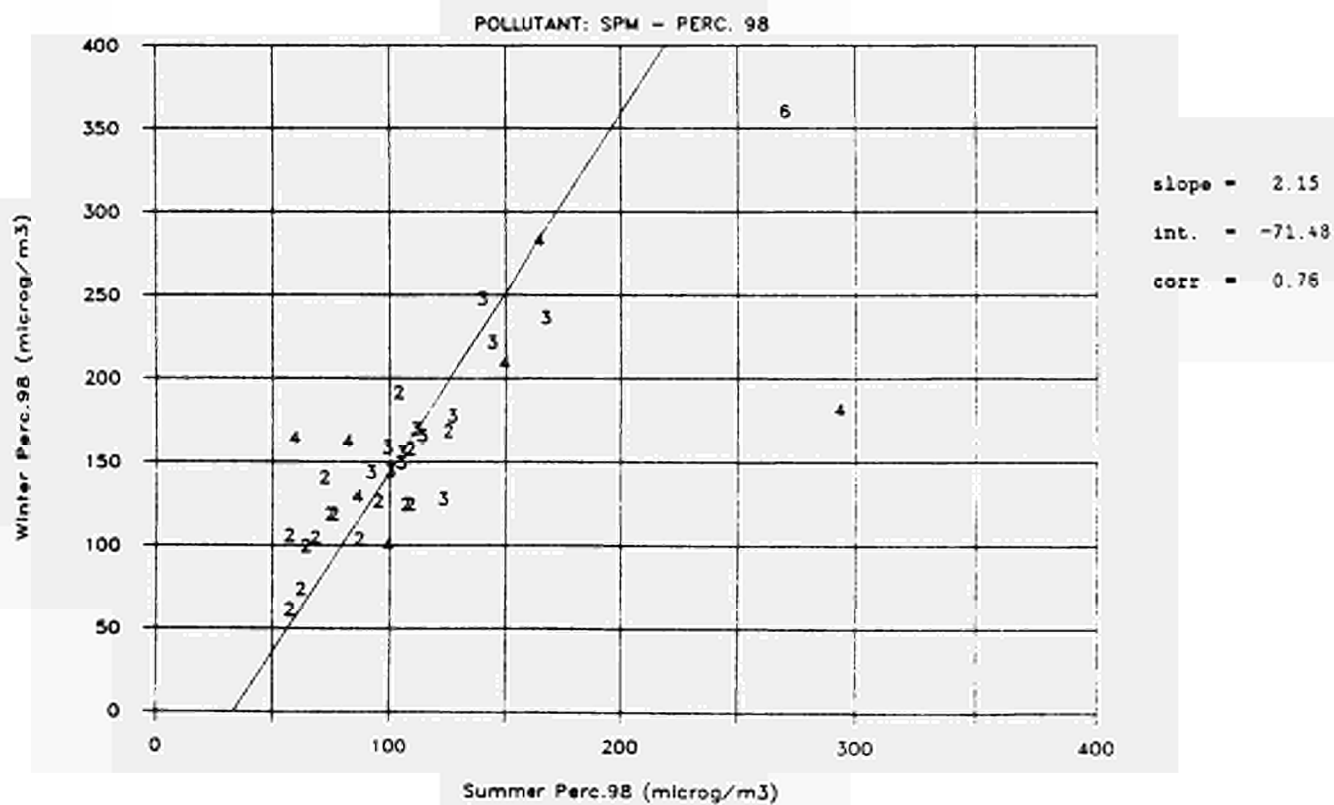


Fig. II.4.14

CORRELATION BETWEEN THE SUMMER AND WINTER PERCENTILES 50 AND 98

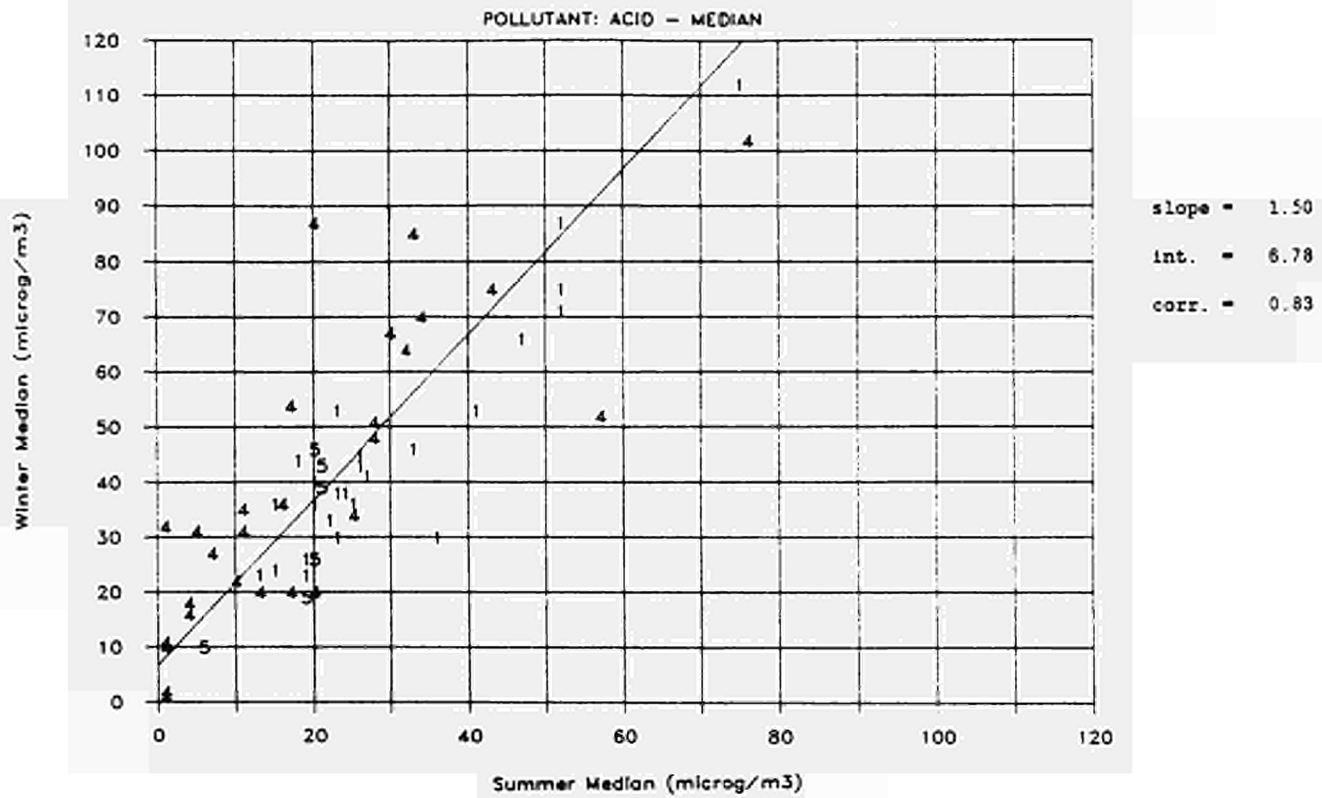


Fig. II.4.15

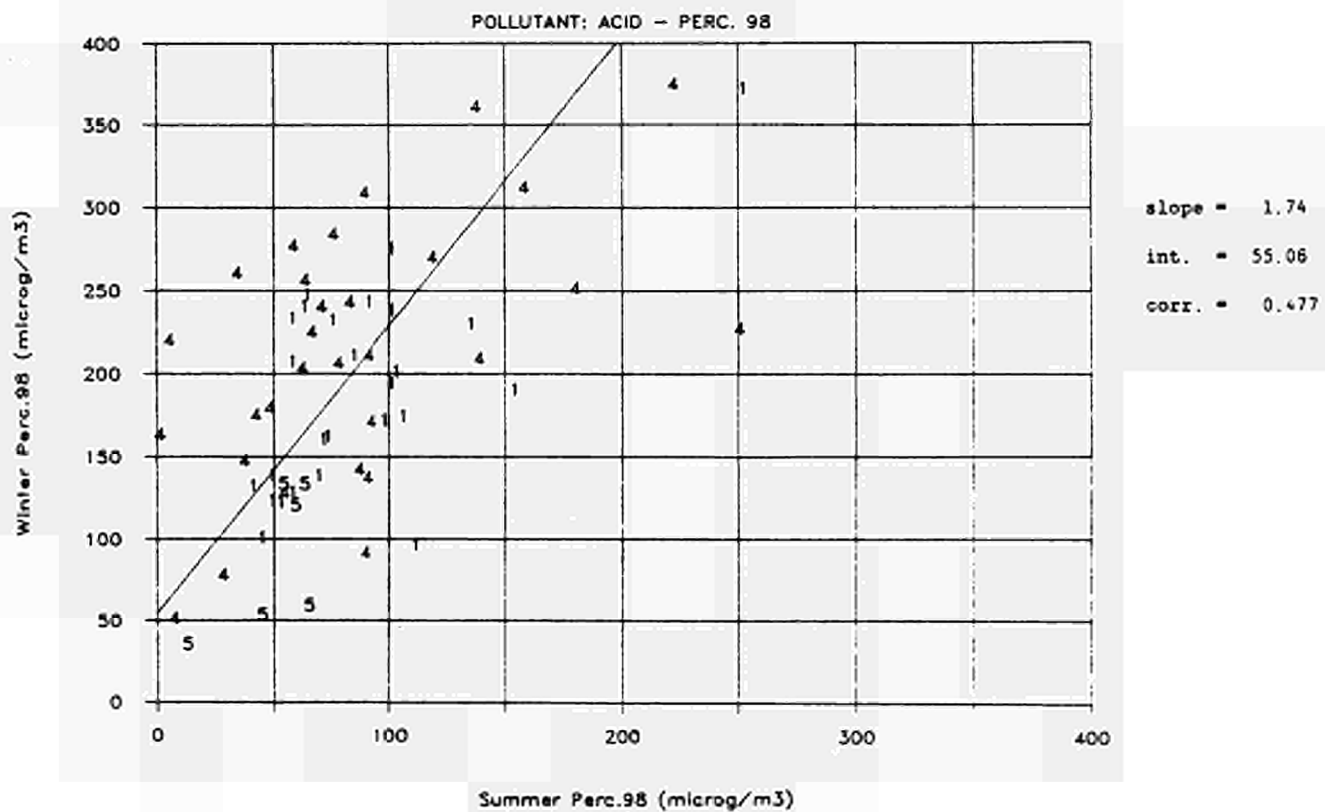


Fig. II.4.16

ISOLATED EXTREMES OF THE MONTHLY MEDIAN

PERIOD: Oct.84 - Sept.85

average of the extremes behaviour

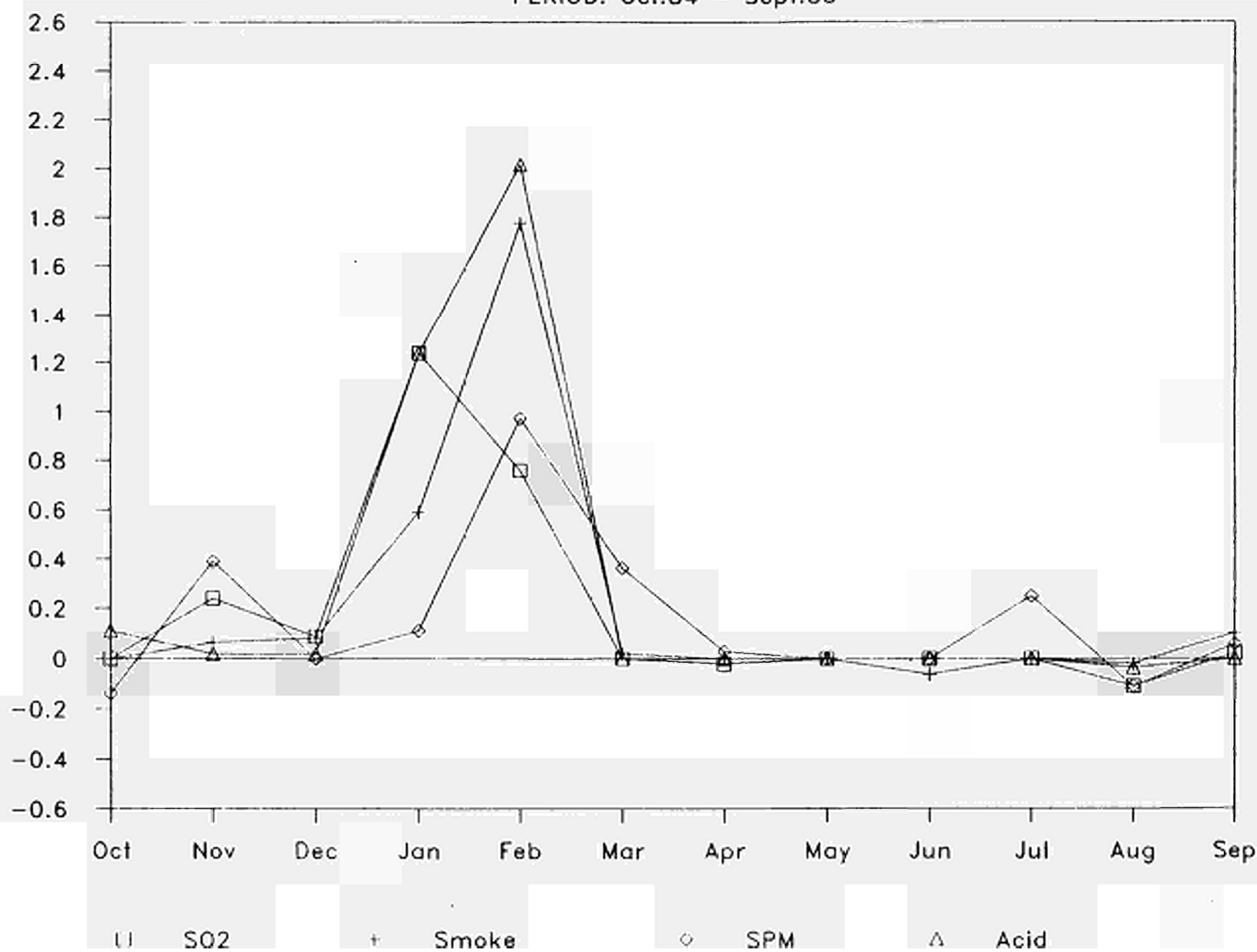


Fig. II.4.17

A N N E X E S

	Page
<u>Unselected series</u>	
A.1. Monthly medians	77
A.2. Global description	86
<u>Selected series</u>	
A.3. Yearly percentiles 25, 50, 75, 95, 98 (see corresponding Fig. II.2.1 to II.2.15)	96
A.4. Annual descriptive parameters (see corresponding Fig. II.3.1 to II.3.7)	103
A.5. First characteristics of the time series (see corresponding Fig. II.4.1 to II.4.16)	110
A.6. Status of the isolated extremum of the monthly median values (see corresponding Fig. II.4.17)	117

ANNUAL CHARACTERISTICS OF THE SERIES

October 1984 - September 1985

Annex 1: Monthly medians

Column caption:

<u>Label</u>	<u>Explanation</u>
Station code	PPCVVSSSPLTM: PP country code C town class code VV town code SSS station code PL pollutant code TM measurement technique code
monthly medians	measurement unit poll. 1-4: $\mu\text{g}/\text{m}^3$ special symbols used: "--": no data recorded for the month "." : at least one missing value for the month
cas no.	number of cases reported for the year (measured values).

Monthly medians
Pollutant 1: SO₂ (column caption: see A1.1)

Station code PFCVVSSSPLTM	Town name	Values in measurement unit											cas no	
		OCT 84	NOV	DEC	JAN 85	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP
026990010113	B.R. DEUTSCH	3	16.	13.	12	8.	6.	2	5	2	2	2	0	352
026990020113	B.R. DEUTSCH	3.	5.	8.	62	52	28.	4.	4.	4	0	0	1	301
026990030113	B.R. DEUTSCH	7	17.	23.	48.	57	17	5	5	1	2	1	4	359
026990040113	B.R. DEUTSCH	9	15	12	40	25	12	7	5	4	4	3	6	365
026990050113	B.R. DEUTSCH	7.	23.	18	20.	12.	15	5	4	5	2	4	3	333
026990060113	B.R. DEUTSCH	3.	4	6	17	21	8	5.	1	1	0	0	3	343
026990070113	B.R. DEUTSCH	0	0	1	7	5	4	2	1	0	0	0	0	365
026990080113	B.R. DEUTSCH	5.	41	24	22	15	18	4.	1.	0	0	1.	1.	351
026990090113	B.R. DEUTSCH	9.	37	37	55	17	22	5	8	4	4.	6.	5	360
026990100113	B.R. DEUTSCH	14	16.	19	52	46	26.	16.	12.	12.	9.	9.	11	347
026990120113	B.R. DEUTSCH	13.	28	25	59	32	23	7	9.	4	7.	6	5	355
026990130113	B.R. DEUTSCH	4	7	9	57	29	10	1	1	0.	0	0	1	364
026990140113	B.R. DEUTSCH	4	2	6	20	14.	6	2.	0	0	0	0.	0.	359
026990150113	B.R. DEUTSCH	13.	22	26.	56.	49	23	10	11	5.	4	4	4.	350
026990160113	B.R. DEUTSCH	9.	41.	16.	89	109	103.	8.	25.	6.	2	0.	4	298
032011010127	KOBENHAVN	22	29	41	64	53	36	19	19	11	9	10	11	365
032011030127	KOBENHAVN	36	42	52	47	45	40	28	29	29	28	31	29	365
032011030128	KOBENHAVN	36.	39.	29.	57	62.	46	31.	36	38	32	32.	44.	328
032012100127	KOBENHAVN	4	26	19	26	35	30	14	12	7	5	8	6	365
032012210127	KOBENHAVN	16	41	48	62	67	40	21	19	10	7	11	8	365
032013420127	KOBENHAVN	8	15	24	31	37	21	12	10	6	5	6	10	365
032013480127	KOBENHAVN	18	24	35	32	37	25	15	8	9	10	10	12	365
034018150127	AALBORG	16	29	24	30	25	22	14	4	4	4	4	4	365
034018150129	AALBORG	17.	31.	29.	45.	50.	27.	27	20.	--.	--.	--.	--.	180
034029150127	ODENSE	14	32	28	24	26	28	13	12	8	9	9	9	365
034029150129	ODENSE	19	23.	30	32.	33	25.	13.	12.	10.	10.	10.	11	311
035015650127	ESBJERG	9	25	12	17	11	11	7	8	7	5	6	5	365
035015650129	ESBJERG	10.	23	16.	20	13.	12.	7.	8	10.	8.	9.	7.	310
035025150127	FREDERICIA	11	23	23	26	20	16	9	7	7	8	9	7	365
035025150129	FREDERICIA	31.	36.	35	28.	29.	17.	18.	14.	9.	11.	13.	16	272
035033510127	NAESTVED	29	25	30	39	39	21	16	10	16	10	20	18	365
035033510129	NAESTVED	35	37.	42	45.	41	24	19.	15.	25.	13.	17.	19.	304
035048350127	RANDERS	11	19	19	18	15	15	7	8	7	7	8	3	365
035048350129	RANDERS	14	18.	20.	17.	18	15.	8	10.	10	15.	14.	13	305
041010060135	PARIS	--.	--.	--.	--.	--.	--.	--.	--.	--.	--.	--.	--.	0
041010970135	PARIS	--.	--.	--.	--.	--.	--.	--.	--.	--.	--.	--.	92.	1
042010180137	LYON	6	20.	17	42.	63.	30	18	16	13.	12.	12.	--.	300
042010210137	LYON	17	42.	46.	101	51.	37.	4.	4	12.	11.	14	--.	285
042020010136	MARSEILLE	39	45	57.	51.	43.	44.	34.	39.	37.	42.	22.	41	330
042020140136	MARSEILLE	29	23	25	52.	70.	54.	26.	21.	17.	24.	13.	20.	319
042020180136	MARSEILLE	41	16.	34	48.	27.	28	27.	23.	35.	38.	13.	54.	316
042022040136	MARSEILLE	54	41.	61.	74	45.	61.	53.	36.	40.	47.	53.	51.	292
042022060136	MARSEILLE	48.	33	47	74.	57.	57.	28.	23.	30.	40.	29.	48.	295
043020040136	LILLE-ROUB.-	23.	23.	23.	67.	73.	20	4.	5	8.	3.	7.	5.	338
043020050136	LILLE-ROUB.-	9.	16.	9.	77.	96.	33.	21.	18.	10.	15.	10.	21.	318
043020070136	LILLE-ROUB.-	22.	34.	39	108.	125	54	15.	14.	20.	6.	7.	16.	332
043020080136	LILLE-ROUB.-	13.	16.	22.	67.	59.	20.	6.	5.	22.	5.	7.	19.	301
043020100135	LILLE-ROUB.-	--.	--.	--.	--.	--.	--.	--.	--.	15.	3.	10.	8.	99
043020230136	LILLE-ROUB.-	16.	17.	20.	79.	69	29	13.	20	14.	20.	9.	11.	332

Monthly medians
Pollutant 2: Smoke (column caption: see A1.1)

Station code PPCVVSSSPLTM	Town name	Values in measurement unit												cas no
		OCT 84	NOV	DEC	JAN 85	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
012010010203	BRUXELLES	21.	31	29.	--.	--.	--.	--.	--.	18.	16	11	20	174
012010080203	BRUXELLES	12	7	12.	37.	43.	20	15	12	12	13	8	16.	331
012010140203	BRUXELLES	10	19	14	23	26	12	15.	9	10.	--.	10.	13.	299
012010170203	BRUXELLES	15	19	23.	24	34	8.	8	13	12	10	8.	8.	320
012010220203	BRUXELLES	19	25	25	22	58	25	21	22	18	14	14	16.	364
012010260203	BRUXELLES	14.	21	17	17	26	16	9	12	12	11	10	14	355
013018010203	ANTWERPEN	13	20	14.	18	28	12	9	9.	7	7	7	12	362
013018090203	ANTWERPEN	46	54.	50.	39	51	30	29	24.	25	23	23	28	358
013018120203	ANTWERPEN	19	28	19	18	29	16	11	12.	13	10	10	12.	356
013018130203	ANTWERPEN	19	21	26	22	29	14	8	9.	6	8	6.	12.	361
013018180203	ANTWERPEN	9	17	15.	16.	34	14	11	13	9	11	9	14	361
013018260203	ANTWERPEN	12	18	16.	16.	29.	16	9	14	6	7	6	8	361
014015010203	CHARLEROI	14	29	21	16.	27.	19	21	16	16	10	9	14.	322
014015040203	CHARLEROI	17	27	21.	37	54	27	17	21	17	12	6.	15.	308
014015050203	CHARLEROI	17	37	29	37	54	29	20	21	18	14	14	17	365
014015090203	CHARLEROI	29	37	29	39	37	27	18	14	17	14	12.	17	358
014015130203	CHARLEROI	23	34	16	19.	37	27	23.	19	14.	14	9	9	330
014015140203	CHARLEROI	25	30	45	37	39	27	21	14	16	14.	10	15	358
014027010203	GENT	24	29	24.	28	39	18	8	12	10	12	14	14	364
014027060203	GENT	12	12	11.	14	11	7	5	7.	12.	--.	2.	5.	257
014027070203	GENT	31	33	34	45	58	26	16	27.	20	20	18	31	364
014027090203	GENT	16.	26.	20	20	25	12	7	11.	10	8.	8	12	342
014027120203	GENT	24.	24	20.	34	34	16	8	14.	8	12	10	13	356
014027150203	GENT	21.	24	18	20	28	16	9	14	11	10	10	12	358
014032020203	LIEGE	--.	--.	--.	--.	79.	28	20.	17.	19	13	19	22	214
014032050203	LIEGE	--.	--.	--.	--.	64.	21	17.	17.	18.	13.	--.	27.	163
014032180203	LIEGE	20	27.	26.	13.	41.	20.	23.	22.	18.	15	9.	23	305
015016050203	BRUGGE	18.	22.	20.	18.	10.	5.	4	3	3	5	10	10	339
015026030203	KORTRIJK	21	36	30	16.	43.	--.	12.	18	12	13	11	18	302
015033020203	LIEBRAMONT	7.	12	7	16	7	10	5	7	6	6	6	5	351
041010110210	PARIS	31	53.	47	52	106	28	20	26	16	20	15	32.	357
041010170210	PARIS	31.	41	40.	42	64	28	23	25.	20.	22	16	36	359
041010490210	PARIS	33	49	48	44	59.	29	25.	25.	22.	24	16.	34.	355
041010650210	PARIS	30.	40	40	42	62	26	23	24	18	17	12.	34	356
041010990210	PARIS	38	51	52.	51	74	33	28	33	27	26	22	47	364
042020010210	MARSEILLE	34	34	62	47	60	38	23	28	28.	40.	27	42	362
042020140210	MARSEILLE	28	17	39.	25.	30.	19.	9	9	14	27	19	28	356
042020180210	MARSEILLE	47	34	65	48.	57	42	33	30.	29	38	28.	51	351
042022040210	MARSEILLE	90	71.	62.	44.	93	71	51.	62.	60	51.	40.	90.	331
042022060210	MARSEILLE	57	33	54	32	58	40	28	30	31	51	32	55	365
044010010210	CLERMONT-FER	7	7	16	--.	--.	--.	--.	--.	--.	--.	--.	--.	92
044010020210	CLERMONT-FER	14	12	20	--.	--.	--.	--.	--.	--.	--.	--.	--.	92
044010040210	CLERMONT-FER	5	4	11	--.	--.	--.	--.	--.	--.	--.	--.	--.	92
044010080210	CLERMONT-FER	2	4	7	--.	--.	--.	--.	--.	--.	--.	--.	--.	92
044010320210	CLERMONT-FER	17	27	40	--.	--.	--.	--.	--.	--.	--.	--.	--.	92
044010330210	CLERMONT-FER	13	10	17	--.	--.	--.	--.	--.	--.	--.	--.	--.	92
044020470210	LE HAVRE	10	15	21	23	53.	19	27	21.	14.	29.	15.	34.	298
044031040210	NANTES	27	33	29.	28	37	15	17.	17.	15	15	8	31.	325
044031060210	NANTES	14.	23.	24	33	25	12	10	11	8	6	6.	17.	332

Monthly medians
Pollutant 4: Acid (column caption: see A1.1)

Station code	Town name	Values in measurement unit											cas no	
		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP
		84			85									
044020120411	LE HAVRE	7.	20	12.	38.	96.	6	0.	10.	1.	5.	0.	6	322
044020210411	LE HAVRE	5.	7	8.	102.	63.	39	35	47	15.	23.	0.	35.	338
044020290411	LE HAVRE	16.	16	9.	21.	65.	26.	16	14	23.	27.	10.	28	329
044020310411	LE HAVRE	14.	55	22.	32.	232.	30	17.	16.	7.	10.	5.	28.	317
044020320411	LE HAVRE	63.	77	136.	60.	169.	60.	11.	8.	20.	33.	40.	50	334
044020430411	LE HAVRE	2.	13	11.	18.	72.	14	3	8.	4.	5.	1.	25.	314
044031000411	NANTES	10.	23.	4.	38.	31	22	5.	2.	21.	23.	11	13.	335
044031030411	NANTES	0.	0.	3.	20.	37.	3.	0.	0.	0.	0.	0	0.	317
044031040411	NANTES	1	26.	41.	79.	80.	22.	6.	0.	0.	0.	0	0.	327
044031060411	NANTES	0.	9.	13	26.	13.	8.	0.	3.	0.	0.	0	3.	319
044031130411	NANTES	0	0.	1	7.	3	0.	0.	0.	0.	0.	0.	0.	327
044031150411	NANTES	0.	9.	5	23.	37.	13.	10.	2.	0.	0.	0	1.	333
044040010411	ROUEN	19.	23.	38.	32.	76	48.	13.	0.	4.	5.	7	10.	349
044040040411	ROUEN	31	35.	54	63.	117	62.	47.	15	17.	20.	24.	64.	312
044040060411	ROUEN	21	24.	30	53.	49	38.	15.	4	8.	22.	13	10.	348
044040070411	ROUEN	52	21.	25	116.	107	85.	36.	16	10.	16.	24.	16.	333
044040080411	ROUEN	11.	19.	17.	40.	92.	16.	0.	3	0.	0.	24.	30.	341
044040110411	ROUEN	47	25.	52	82.	55.	54.	36.	32	78.	92.	106.	46.	328
044070070408	CAEN - AGGLO	18.	23	26.	--.	--.	--.	--.	--.	--.	--.	--.	--.	87
045020190411	FOS-BERRE	13.	29.	20.	30.	--.	4.	10	14	12.	12.	9.	14	280
045030170411	VIGNEUX DE B	0.	0.	1.	7.	15.	4.	0.	0.	0.	0.	0.	0.	300
053010010404	DUBLIN	38	52	37	43.	51.	43	37	27	26.	16	15	16	352
053010040404	DUBLIN	28.	36.	39	67	47	35	33.	32.	29.	14.	13.	18	325
053010070404	DUBLIN	19	15	14.	28.	--.	24.	14.	55.	25.	19.	12	15	259
053010100404	DUBLIN	29	31.	19	25.	15	35	25	31	20	21	7.	10	355
053011030404	DUBLIN	33	48	47	76	57	38	31	31	27.	20	17	13	362
054010010405	CORK	--.	--.	--.	7.	0	3.	7.	7	7	7.	7.	6.	210
055010010406	GALWAY	6	9	10.	20	7	10	6.	4.	6.	6.	6	6.	316
075013520401	LUXEMBOURG-V	--.	--.	--.	--.	--.	--.	13	17	9.	9	11	19.	181
075013530401	LUXEMBOURG-V	--.	--.	--.	--.	--.	--.	21.	31.	13.	16	36	22.	172
075023550401	ESCH-SUR-ALZ	--.	--.	--.	--.	--.	--.	21	14	11	10.	16.	15	133
075033800401	STEINFORT	--.	--.	--.	--.	--.	--.	16	7	7	9	11	9.	180
076990010401	SITE DE FOND	--.	--.	--.	17.	18	18	7	15	8	18	5	8	272

ANNUAL CHARACTERISTICS OF THE SERIES

October 1984 - September 1985

Annex 2: Global description

Column caption:

<u>Label</u>	<u>Explanation</u>
station code	PPCVSSSPLTM: PP country code C town class code VV town code SSS station code PL pollutant code TM measurement technique code
month	number of months recorded for the year
BLA	number of values labelled as "BLANK"
REP	number of values labelled as "REP"
spa	number of values labelled as space
ze	number of null values
>9999	number of values higher than 9999 measurement units poll. 1-4: $\mu\text{g}/\text{m}^3$
cas	number of cases reported for the year (measured values)
min	minimum concentration for the year (measurement unit)
occ	occurrence of the minimum
med	median (measurement unit)
gap	number of gaps between the minimum and the median (for integer values)
dig	symbol for the number of missing digits into the yearly series. Example: a) 9: 9 digits are missing in the units b) 52: 5 digits are missing in the tens and 2 digits are missing in the units.
rej cde	reject code for the series.

<u>hierarchical condition</u>	<u>reject code</u>
no. of month < 12	1
no. of "BLANK" > 170	2
no. of val. with concentration > 9999 measurement units	3
no. of measured values < 240	4
no. of REP > 104	5
else	0

Global description
Pollutant 1: SO₂ (column caption: see A2.1)

Station code	Town	month	BLA	REP	spa	ze >9999	cas	min	occ	med	gap	dig	rej	
PPCVVSSSPLTM	name	no	no	no	no	no	no	val	no	val	no	nn	cde	
026990010113	B.R. DEUTSCH	12	13	0	7	52	0	352	1	50	3	0	10	0
026990020113	B.R. DEUTSCH	12	64	0	7	69	0	301	1	29	4	0	0	0
026990030113	B.R. DEUTSCH	12	6	0	7	32	0	359	1	39	9	0	0	0
026990040113	B.R. DEUTSCH	12	0	0	7	0	0	365	1	26	9	0	0	0
026990050113	B.R. DEUTSCH	12	32	0	7	24	0	333	1	26	7	0	0	0
026990060113	B.R. DEUTSCH	12	22	0	7	80	0	343	1	41	4	0	0	0
026990070113	B.R. DEUTSCH	12	0	0	7	180	0	365	1	39	1	0	30	0
026990080113	B.R. DEUTSCH	12	14	0	7	88	0	351	1	42	4	0	0	0
026990090113	B.R. DEUTSCH	12	5	0	7	0	0	360	1	27	10	0	0	0
026990100113	B.R. DEUTSCH	12	18	0	7	5	0	347	1	16	16	0	0	0
026990120113	B.R. DEUTSCH	12	10	0	7	12	0	355	1	28	14	0	0	0
026990130113	B.R. DEUTSCH	12	1	0	7	120	0	364	1	26	3	0	0	0
026990140113	B.R. DEUTSCH	12	6	0	7	138	0	359	1	35	2	0	10	0
026990150113	B.R. DEUTSCH	12	15	0	7	22	0	350	1	14	15	0	0	0
026990160113	B.R. DEUTSCH	12	67	0	7	40	0	298	1	15	15	0	0	0
032011010127	KOBENHAVN	12	0	0	7	0	0	365	1	2	21	0	0	0
032011030127	KOBENHAVN	12	0	0	7	1	0	365	1	1	35	9	0	0
032011030128	KOBENHAVN	12	37	0	7	0	0	328	1	3	38	3	0	0
032012100127	KOBENHAVN	12	0	0	7	1	0	365	2	5	11	0	0	0
032012210127	KOBENHAVN	12	0	0	7	0	0	365	2	3	22	0	0	0
032013420127	KOBENHAVN	12	0	0	7	0	0	365	2	9	13	0	0	0
032013480127	KOBENHAVN	12	0	0	7	0	0	365	1	1	15	0	0	0
034018150127	AALBORG	12	0	0	7	0	0	365	2	1	10	0	10	0
034018150129	AALBORG	8	63	0	5	0	0	180	1	1	31	4	10	1
034029150127	ODENSE	12	0	0	7	0	0	365	1	1	14	0	0	0
034029150129	ODENSE	12	54	0	7	0	0	311	2	4	16	0	0	0
035015650127	ESBJERG	12	0	0	7	0	0	365	1	8	8	0	20	0
035015650129	ESBJERG	12	55	0	7	0	0	310	1	9	10	0	10	0
035025150127	FREDERICIA	12	0	0	7	2	0	365	2	6	11	0	0	0
035025150129	FREDERICIA	12	93	0	7	0	0	272	2	1	18	0	10	0
035033510127	NAESTVED	12	0	0	7	0	0	365	2	4	21	0	10	0
035033510129	NAESTVED	12	61	0	7	0	0	304	3	1	25	0	0	0
035046350127	RANDERS	12	0	0	7	0	0	365	1	3	10	0	10	0
035046350129	RANDERS	12	60	0	7	0	0	305	1	1	13	0	20	0
041010060135	PARIS	12	365	0	7	0	0	0	0	0	0	0	0	4
041010970135	PARIS	12	364	0	7	0	0	1	92	1	92	0	99	2
042010180137	LYON	12	65	0	7	5	0	300	1	5	18	0	0	0
042010210137	LYON	12	80	0	7	12	0	285	1	5	20	0	0	0
042020010136	MARSEILLE	12	35	0	7	0	0	330	7	1	40	5	0	0
042020140136	MARSEILLE	12	46	0	7	0	0	319	1	1	25	1	0	0
042020180136	MARSEILLE	12	49	0	7	0	0	316	1	3	33	1	0	0
042022040136	MARSEILLE	12	73	0	7	0	0	292	6	1	51	11	0	0
042022060136	MARSEILLE	12	70	0	7	0	0	295	7	1	38	4	0	0
043020040136	LILLE-ROUB.-	12	27	0	7	33	0	338	1	18	13	0	0	0
043020050136	LILLE-ROUB.-	12	47	0	7	5	0	318	1	6	17	0	0	0
043020070136	LILLE-ROUB.-	12	33	0	7	13	0	332	1	7	27	0	0	0
043020080136	LILLE-ROUB.-	12	64	0	7	9	0	301	1	9	14	0	0	0
043020100135	LILLE-ROUB.-	12	266	0	7	9	0	99	1	5	9	0	50	2
043020230136	LILLE-ROUB.-	12	33	0	7	6	0	332	1	3	19	0	0	0

Global description
Pollutant 1: SO₂ (column caption: see A2.1)

Station code	Town	month	BLA	REP	spa	ze >9999	cas	min	occ	med	gap	dig	rej
PFCVVSSSPLTM	name	no	no	no	no	no	no	val	no	val	no	nn	ede
044020470135	LE HAVRE	12	365	0	7	0	0	0	0	0	0	0	4
044040040135	ROUEN	12	137	0	7	0	0	228	5	2	48	1	4
044070070135	CAEN - AGGLO	3	92	0	1	0	0	0	0	0	0	0	1
045040050135	DUNKERQUE	12	77	0	7	21	0	288	1	6	28	1	0
045040070136	DUNKERQUE	12	106	0	7	44	0	259	1	6	24	1	0
045040110135	DUNKERQUE	12	98	0	7	58	0	267	1	14	10	0	10
045040130135	DUNKERQUE	12	125	0	7	83	0	240	1	49	1	0	20
061020070125	ROMA, ITALIA	8	65	0	5	0	0	178	26	12	52	25	55
061020080125	ROMA, ITALIA	8	68	0	5	0	0	175	26	1	130	100	35
061020090125	ROMA, ITALIA	2	13	0	1	1	0	48	26	20	52	25	66
062010010122	TORINO	7	8	0	5	0	0	204	34	3	107	46	0
062010020122	TORINO	7	78	0	5	0	0	134	31	2	125	65	0
064080010124	PESCARA	11	248	0	7	14	0	86	1	1	11	0	20
065090010124	PISTOIA	2	38	0	0	0	0	24	3	1	34	20	31
065140010124	VERCELLI	10	67	0	7	0	0	236	1	1	58	15	0
083015150102	AMSTERDAM	3	92	0	1	0	0	0	0	0	0	0	0
083015160102	AMSTERDAM	3	21	0	1	0	0	71	12	1	30	2	30
083015180102	AMSTERDAM	3	22	0	1	0	0	70	2	2	25	3	10
083015190102	AMSTERDAM	3	92	0	1	0	0	0	0	0	0	0	0
083015200102	AMSTERDAM	3	14	0	1	0	0	78	9	1	29	3	20
083015210102	AMSTERDAM	3	10	0	1	0	0	82	6	1	22	4	40
083015230102	AMSTERDAM	3	16	0	1	0	0	76	11	2	31	3	20
083015250102	AMSTERDAM	3	10	0	1	0	0	82	7	1	24	3	20
083024040102	DEN HAAG	3	5	0	1	0	0	87	5	2	39	10	10
083024050102	DEN HAAG	3	7	0	1	0	0	85	4	1	32	4	20
083034180102	ROTTERDAM	3	18	0	1	0	0	74	7	1	41	14	0
083034230102	ROTTERDAM	3	16	0	1	0	0	76	7	1	27	3	30
084018140102	ENSCHDEDE	3	92	0	1	0	0	0	0	0	0	0	0
084029080102	GRONINGEN	3	15	0	1	0	0	77	2	1	16	2	20
084029090102	GRONINGEN	3	6	0	1	0	0	86	2	3	14	0	10
084032130102	TILBURG	3	21	0	1	0	0	71	13	1	27	2	30
084032140102	TILBURG	3	22	0	1	0	0	70	6	1	17	3	20
084046070102	UTRECHT	3	5	0	1	0	0	87	6	1	23	1	20
084046100102	UTRECHT	3	6	0	1	0	0	86	6	1	22	2	30
085015280102	BUSSUM	3	16	0	1	0	0	76	5	1	23	3	20
085022040102	DEN BOSCH	3	11	0	1	0	0	81	10	1	27	1	10
085035300102	HILVERSUM	3	27	0	1	0	0	65	7	1	22	0	30
085041210102	MAASTRICHT	3	9	0	1	0	0	83	7	3	28	5	20
085053040102	MIDDELBURG	3	3	0	1	0	0	89	5	1	28	4	0
085068060102	ZWOLLE	3	3	0	1	0	0	89	6	3	20	1	20
086991240102	LIG. ACHTERGR	3	7	0	1	0	0	85	5	2	16	0	50
086992060102	LIG. ACHTERGR	3	24	0	1	0	0	68	6	2	19	0	20
086993120102	LIG. ACHTERGR	3	15	0	1	0	0	77	6	1	29	4	20
086995010102	LIG. ACHTERGR	3	35	0	1	0	0	57	2	1	16	4	40
086996170102	LIG. ACHTERGR	3	7	0	1	0	0	85	2	1	13	1	30
086998150102	LIG. ACHTERGR	3	5	0	1	0	0	87	1	1	21	1	10
086999010102	LIG. ACHTERGR	3	15	0	1	8	0	77	1	3	9	0	20
111010010130	ATHENS	2	10	0	1	0	0	51	8	1	40	15	10
111010030130	ATHENS	2	4	0	1	0	0	57	5	24	6	0	72

Global description

Pollutant 1: SO₂ (column caption: see A2.1)

Station code	Town	month	BLA	REP	spa	ze	>9999	cas	min	occ	med	gap	dig	rej
PPCVSSSPLTM	name	no	no	no	no	no	no	no	val	no	val	no	nn	cde
111010040130	ATHENS	2	33	0	1	0	0	28	5	8	7	0	62	1
111010050131	ATHENS	2	21	0	1	0	0	40	5	4	13	1	60	1
115010010132	MEGALOPOLI	3	53	0	1	0	0	39	10	7	20	3	41	1
115020010132	PTOLEMAIDA	3	41	0	1	0	0	51	10	8	25	4	20	1

Global description
Pollutant 2: Smoke (column caption: see A2.1)

Station code	Town	month	BLA	REP	spa	ze >9999	cas	min	occ	med	gap	dig	rej	
PPCVSSSPLTM	name	no	no	no	no	no	no	val	no	val	no	nn	cde	
012010010203	BRUXELLES	10	130	0	6	0	0	174	4	1	18	0	20	1
012010080203	BRUXELLES	12	34	0	7	0	0	331	2	1	13	0	10	0
012010140203	BRUXELLES	12	66	0	7	0	0	299	3	3	13	0	20	0
012010170203	BRUXELLES	12	45	0	7	0	0	320	4	2	13	0	0	0
012010220203	BRUXELLES	12	1	0	7	0	0	364	4	2	21	0	0	0
012010260203	BRUXELLES	12	10	0	7	0	0	355	3	2	15	0	10	0
013018010203	ANTWERPEN	12	3	0	7	0	0	362	1	3	11	1	10	0
013018090203	ANTWERPEN	12	7	0	7	0	0	358	3	1	31	2	0	0
013018120203	ANTWERPEN	12	9	0	7	0	0	356	1	2	15	2	0	0
013018130203	ANTWERPEN	12	4	0	7	0	0	361	1	3	13	0	0	0
013018180203	ANTWERPEN	12	4	0	7	0	0	361	1	1	13	0	10	0
013018260203	ANTWERPEN	12	4	0	7	0	0	361	1	6	12	0	10	0
014015010203	CHARLEROI	12	43	0	7	0	0	322	1	2	16	6	20	0
014015040203	CHARLEROI	12	57	0	7	0	0	308	4	5	21	7	0	0
014015050203	CHARLEROI	12	0	0	7	0	0	365	3	2	21	7	0	0
014015090203	CHARLEROI	12	7	0	7	0	0	358	4	4	21	7	0	0
014015130203	CHARLEROI	12	35	0	7	0	0	330	1	3	19	7	10	0
014015140203	CHARLEROI	12	7	0	7	0	0	358	4	7	21	7	0	0
014027010203	GENT	12	1	0	7	0	0	364	2	6	16	6	0	0
014027060203	GENT	12	108	0	7	0	0	257	2	31	8	2	11	0
014027070203	GENT	12	1	0	7	0	0	364	2	3	26	11	0	0
014027090203	GENT	12	23	0	7	0	0	342	2	15	12	4	10	0
014027120203	GENT	12	9	0	7	0	0	356	2	10	14	5	10	0
014027150203	GENT	12	7	0	7	0	0	358	2	5	14	5	20	0
014032020203	LIEGE	8	28	0	6	0	0	214	5	1	19	0	0	1
014032050203	LIEGE	8	79	0	6	0	0	163	5	1	18	0	0	1
014032180203	LIEGE	12	60	0	7	0	0	305	2	2	20	1	10	0
015016050203	BRUGGE	12	26	0	7	0	0	339	2	1	8	1	40	0
015026030203	KORTRIJK	12	63	0	7	0	0	302	1	2	18	1	0	0
015033020203	LIBRAMONT	12	14	0	7	0	0	351	2	5	7	0	40	0
041010110210	PARIS	12	6	2	7	0	0	357	4	2	30	0	0	0
041010170210	PARIS	12	4	2	7	0	0	359	4	2	31	1	0	0
041010490210	PARIS	12	9	1	7	0	0	355	7	2	31	0	0	0
041010650210	PARIS	12	7	2	7	0	0	356	2	2	28	2	0	0
041010990210	PARIS	12	1	0	7	0	0	364	7	1	36	3	0	0
042020010210	MARSEILLE	12	3	0	7	0	0	362	4	1	36	11	0	0
042020140210	MARSEILLE	12	9	0	7	0	0	356	2	4	20	5	10	0
042020180210	MARSEILLE	12	14	0	7	0	0	351	6	1	38	13	0	0
042022040210	MARSEILLE	12	34	0	7	0	0	331	13	2	59	22	0	0
042022060210	MARSEILLE	12	0	0	7	0	0	365	6	4	40	13	0	0
044010010210	CLERMONT-FER	3	0	0	1	0	0	92	2	2	10	2	40	1
044010020210	CLERMONT-FER	3	0	0	1	2	0	92	1	2	16	5	30	1
044010040210	CLERMONT-FER	3	0	0	1	1	0	92	1	7	6	1	71	1
044010080210	CLERMONT-FER	3	0	0	1	0	0	92	1	18	4	1	61	1
044010320210	CLERMONT-FER	3	0	0	1	0	0	92	2	1	27	9	10	1
044010330210	CLERMONT-FER	3	0	0	1	0	0	92	1	2	13	3	30	1
044020470210	LE HAVRE	12	67	0	7	0	0	298	3	12	19	2	0	0
044031040210	NANTES	12	40	0	7	0	0	325	3	2	20	6	20	0
044031060210	NANTES	12	33	0	7	0	0	332	6	59	12	2	61	0

Global description
Pollutant 2: Smoke (column caption: see A2.1)

Station code	Town	month	BLA	REP	spa	ze >9999	cas	min	occ	med	gap	dig	rej	
PFVVSSSFLTM	name	no	no	no	no	no	no	val	no	val	no	nm	cde	
044040010210	ROUEN	12	1	0	7	0	0	364	2	28	12	0	10	0
044040040210	ROUEN	12	68	0	7	0	0	299	1	2	31	6	0	0
044040060210	ROUEN	12	36	0	7	0	0	329	2	18	14	4	10	0
044040070210	ROUEN	12	110	0	7	0	0	255	3	6	17	3	0	0
044040110210	ROUEN	12	10	0	7	0	0	355	1	21	10	1	0	0
044042080210	ROUEN	12	50	0	7	0	0	315	1	39	8	0	20	0
053010010204	DUBLIN	12	10	0	7	0	0	355	1	3	42	8	0	0
053010040204	DUBLIN	12	36	0	7	0	0	329	1	3	45	8	0	0
053010070204	DUBLIN	12	96	0	7	0	0	269	1	6	18	3	0	0
053010100204	DUBLIN	12	8	0	7	0	0	357	1	36	16	2	0	0
053011030204	DUBLIN	12	3	0	7	0	0	362	1	7	32	4	0	0
054010010205	CORK	12	156	0	7	0	0	209	1	1	12	0	0	4
055010010206	GALWAY	12	45	0	7	29	0	320	1	14	9	1	0	0
075013520201	LUXEMBOURG-V	12	2	0	7	0	0	363	1	1	16	2	0	0
075013530201	LUXEMBOURG-V	12	101	0	7	0	0	264	2	35	6	0	30	0
075023550201	ESCH-SUR-ALZ	12	73	0	7	0	0	292	2	7	12	0	40	0
075033600201	STEINFORT	12	3	0	7	0	0	362	2	2	12	0	20	0
076990010201	SITE DE FOND	9	1	0	6	13	0	272	2	5	6	0	60	1
111010010223	ATHENS	3	8	0	1	0	0	84	18	1	203	148	0	1
111010020223	ATHENS	1	8	0	0	0	0	23	11	3	35	17	31	1
111010050223	ATHENS	3	2	0	1	0	0	90	15	1	104	66	0	1

Global description
Pollutant 3: SPM (column caption: see A2.1)

Station code	Town	month	BLA	REP	spa	ze >9999	cas	min	occ	med	gap	dig	rej	
PFCVSSSPLTM	name	no	no	no	no	no	no	val	no	val	no	mn	cde	
026990010308	B.R. DEUTSCH	12	6	0	7	0	0	359	7	1	40	5	0	0
026990020308	B.R. DEUTSCH	12	4	0	7	0	0	361	4	1	34	1	0	0
026990030308	B.R. DEUTSCH	12	2	0	7	0	0	363	8	1	40	0	0	0
026990040308	B.R. DEUTSCH	12	3	0	7	0	0	362	6	1	31	1	0	0
026990050308	B.R. DEUTSCH	12	4	0	7	0	0	361	10	1	42	0	0	0
026990060308	B.R. DEUTSCH	12	2	0	7	0	0	363	4	2	24	0	10	0
026990070308	B.R. DEUTSCH	12	6	0	7	0	0	359	1	4	15	0	10	0
026990080308	B.R. DEUTSCH	12	6	0	7	0	0	359	2	1	31	4	0	0
026990090308	B.R. DEUTSCH	12	7	0	7	0	0	358	10	2	41	0	0	0
026990100308	B.R. DEUTSCH	12	7	0	7	0	0	358	9	1	33	0	0	0
026990120308	B.R. DEUTSCH	12	6	0	7	0	0	359	11	1	37	0	0	0
026990130308	B.R. DEUTSCH	12	3	0	7	0	0	362	4	1	31	0	0	0
026990140308	B.R. DEUTSCH	12	15	0	7	0	0	350	3	2	23	0	0	0
026990150308	B.R. DEUTSCH	12	16	0	7	0	0	349	4	1	26	2	0	0
026990160308	B.R. DEUTSCH	12	21	0	7	0	0	344	7	1	39	1	0	0
032011010347	KOBENHAVN	12	0	0	7	0	0	365	1	2	50	14	0	0
032011030347	KOBENHAVN	12	0	0	7	0	0	365	1	1	102	41	0	0
032012100347	KOBENHAVN	12	14	0	7	0	0	351	2	2	43	16	0	0
032012210347	KOBENHAVN	12	0	0	7	0	0	365	2	1	47	15	0	0
032013420347	KOBENHAVN	12	0	0	7	0	0	365	2	1	47	9	0	0
032013480347	KOBENHAVN	12	0	0	7	0	0	365	2	5	46	9	0	0
034018150347	AALBORG	12	0	0	7	0	0	365	4	147	50	30	0	0
034029150347	ODENSE	12	0	0	7	0	0	365	2	1	54	16	0	0
035015650347	ESBJERG	12	0	0	7	0	0	365	2	1	56	21	0	0
035025150347	FREDERICIA	12	0	0	7	0	0	365	2	2	58	22	0	0
035033510347	NAESTVED	12	0	0	7	0	0	365	2	5	72	27	0	0
035046350347	RANDERS	12	0	0	7	0	0	365	2	1	57	19	0	0
041010970318	PARIS	12	77	0	7	0	0	288	42	1	122	11	0	0
043020080318	LILLE-ROUB.-	12	113	0	7	0	0	252	9	2	60	8	0	0
043020230318	LILLE-ROUB.-	12	159	0	7	0	0	206	8	1	35	4	0	4
044020280318	LE HAVRE	12	365	0	7	0	0	0	0	0	0	0	0	4
044020470318	LE HAVRE	12	65	0	7	0	0	300	1	1	20	1	0	0
044040040318	ROUEN	12	18	0	7	0	0	347	6	1	29	4	0	0
044070070318	CAEN - AGGLO	3	26	0	1	0	0	66	4	1	20	3	30	1
045020190318	FOS-BERRE	12	365	0	7	0	0	0	0	0	0	0	0	4
045040050318	DUNKERQUE	12	111	0	7	0	0	254	7	1	38	2	0	0
045040070318	DUNKERQUE	12	80	0	7	0	0	285	14	1	39	0	0	0
045040110318	DUNKERQUE	12	84	0	7	0	0	281	6	1	41	15	0	0
045040130318	DUNKERQUE	12	81	0	7	0	0	284	2	3	19	0	0	0
062010010315	TORINO	12	1	0	7	54	0	364	41	1	134	41	0	0
062010020315	TORINO	12	0	0	7	1	0	365	36	1	171	44	0	0
064080010315	PESCARA	11	252	0	7	0	0	82	25	1	94	40	0	1
065090010315	PISTOIA	8	123	0	3	0	0	122	3	1	55	26	0	1
065140010315	VERCELLI	11	32	0	7	0	0	302	10	3	80	63	9	1
111010020348	ATHENS	1	21	0	0	0	0	10	124	1	181	38	12	1
115010010348	MEGALOPOLI	3	58	0	1	0	0	34	12	1	106	75	10	1
115020010348	PTOLEMAIDA	3	59	0	1	0	0	33	68	1	405	263	0	1

Global description
Pollutant 4: Acid (column caption: see A2.1)

Station code	Town	month	BLA	REP	spa	ze >9999	cas	min	occ	med	gap	dig	rej	
PPCVSSSPLTM	name	no	no	no	no	no	no	val	no	val	no	nn	cde	
012010010403	BRUXELLES	10	130	0	6	0	0	174	7	3	30	3	0	1
012010080403	BRUXELLES	12	41	0	7	0	0	324	2	2	26	3	0	0
012010140403	BRUXELLES	12	74	0	7	0	0	291	5	2	26	1	0	0
012010170403	BRUXELLES	12	53	0	7	0	0	312	5	1	24	2	0	0
012010220403	BRUXELLES	12	9	0	7	0	0	356	4	1	29	2	0	0
012010260403	BRUXELLES	12	18	0	7	0	0	347	2	1	30	3	0	0
013018010403	ANTWERPEN	12	3	0	7	0	0	362	4	1	63	8	0	0
013018090403	ANTWERPEN	12	7	0	7	0	0	358	27	2	68	1	0	0
013018120403	ANTWERPEN	12	32	0	7	7	0	333	7	1	32	1	0	0
013018130403	ANTWERPEN	12	4	0	7	0	0	361	14	1	64	6	0	0
013018180403	ANTWERPEN	12	4	0	7	0	0	361	14	1	56	1	0	0
013018260403	ANTWERPEN	12	3	0	7	1	0	362	14	1	94	17	0	0
014015010403	CHARLEROI	12	57	0	7	3	0	308	3	1	48	17	0	0
014015040403	CHARLEROI	12	70	0	7	3	0	295	2	3	18	6	0	0
014015050403	CHARLEROI	12	2	0	7	0	0	363	3	1	40	16	0	0
014015090403	CHARLEROI	12	11	0	7	1	0	354	2	1	28	10	0	0
014015130403	CHARLEROI	12	48	0	7	2	0	317	2	3	31	11	0	0
014015140403	CHARLEROI	12	16	0	7	0	0	349	5	1	31	10	0	0
014027010403	GENT	12	16	0	7	8	0	349	4	3	34	18	1	0
014027060403	GENT	12	110	0	7	5	0	255	4	8	23	13	20	0
014027070403	GENT	12	15	0	7	1	0	350	4	10	26	15	0	0
014027090403	GENT	12	26	0	7	0	0	339	4	3	45	28	0	0
014027120403	GENT	12	20	0	7	1	0	345	4	2	34	20	0	0
014027150403	GENT	12	81	0	7	28	0	284	4	11	19	10	1	0
014032020403	LIEGE	8	66	0	6	3	0	176	13	1	58	14	0	1
014032050403	LIEGE	8	124	0	6	0	0	118	2	1	84	45	0	1
014032180403	LIEGE	12	98	0	7	13	0	267	2	11	25	1	0	0
015016050403	BRUGGE	12	27	0	7	0	0	338	2	3	19	5	0	0
015026030403	KORTRIJK	12	75	0	7	7	0	290	2	14	28	0	0	0
015033020403	LIBRAMONT	6	0	0	3	0	0	183	6	1	23	2	40	1
041010110411	PARIS	12	10	7	7	3	0	348	3	1	36	0	0	0
041010170411	PARIS	12	7	2	7	0	0	356	5	1	54	4	0	0
041010490411	PARIS	12	11	2	7	0	0	352	6	1	50	4	0	0
041010650411	PARIS	12	9	2	7	0	0	354	2	1	43	3	0	0
041010990411	PARIS	12	1	0	7	1	0	364	3	1	36	1	0	0
042010010411	LYON	12	51	0	7	0	0	314	24	1	85	18	0	0
042010080411	LYON	12	76	0	7	0	0	289	14	1	56	5	0	0
042010100411	LYON	12	90	0	7	0	0	275	14	1	49	1	0	0
042010160411	LYON	12	85	0	7	1	0	280	6	1	47	7	0	0
042020010408	MARSEILLE	12	41	0	7	0	0	324	3	1	29	0	0	0
043020050411	LILLE-ROUB.-	12	71	0	7	35	0	294	1	2	23	0	0	0
043020100408	LILLE-ROUB.-	3	85	0	1	0	0	7	1	2	25	19	75	1
043020100411	LILLE-ROUB.-	9	138	0	6	63	0	135	1	3	2	0	10	1
044010010408	CLERMONT-FER	3	0	0	1	0	0	92	12	3	28	5	30	1
044010020408	CLERMONT-FER	3	0	0	1	0	0	92	15	2	31	6	30	1
044010040408	CLERMONT-FER	3	0	0	1	0	0	92	36	1	60	7	40	1
044010080408	CLERMONT-FER	3	0	0	1	0	0	92	16	1	36	5	40	1
044010320408	CLERMONT-FER	3	9	0	1	1	0	83	4	1	39	8	0	1
044010330408	CLERMONT-FER	3	15	0	1	0	0	77	10	1	34	6	10	1

Global description
Pollutant 4: Acid (column caption: see A2.1)

Station code	Town	month	BLA	REP	spa	ze	>9999	cas	min	occ	med	gap	dig	rej
PPCVSSSFLTM	name	no	no	no	no	no	no	no	val	no	val	no	nn	cde
044020120411	LE HAVRE	12	43	0	7	81	0	322	1	13	8	0	0	0
044020210411	LE HAVRE	12	27	0	7	52	0	338	1	7	20	0	0	0
044020290411	LE HAVRE	12	36	0	7	40	0	329	1	9	19	0	0	0
044020310411	LE HAVRE	12	48	0	7	8	0	317	1	7	22	0	0	0
044020320411	LE HAVRE	12	31	0	7	0	0	334	1	1	49	5	0	0
044020430411	LE HAVRE	12	51	0	7	52	0	314	1	18	11	0	0	0
044031000411	NANTES	12	30	0	7	49	0	335	1	9	15	0	0	0
044031030411	NANTES	12	48	0	7	224	0	317	1	5	0	0	20	0
044031040411	NANTES	12	38	0	7	159	0	327	1	2	2	0	0	0
044031060411	NANTES	12	46	0	7	131	0	319	1	14	3	0	20	0
044031130411	NANTES	12	38	0	7	237	0	327	1	12	0	0	0	0
044031150411	NANTES	12	32	0	7	120	0	333	1	22	3	0	0	0
044040010411	ROUEN	12	16	0	7	44	0	349	1	11	16	0	0	0
044040040411	ROUEN	12	53	0	7	5	0	312	1	2	40	2	0	0
044040060411	ROUEN	12	17	0	7	31	0	348	1	2	20	0	0	0
044040070411	ROUEN	12	32	0	7	17	0	333	1	2	31	0	0	0
044040080411	ROUEN	12	24	0	7	69	0	341	1	4	16	0	0	0
044040110411	ROUEN	12	37	0	7	3	0	328	1	1	53	2	0	0
044070070408	CAEN - AGGLO	3	5	0	1	1	0	87	1	1	22	7	40	1
045020190411	FOS-BERRE	12	85	0	7	25	0	280	1	3	15	0	0	0
045030170411	VIGNEUX DE B	12	65	0	7	185	0	300	1	23	0	0	20	0
053010010404	DUBLIN	12	13	0	7	0	0	352	5	20	31	9	0	0
053010040404	DUBLIN	12	40	0	7	0	0	325	6	5	33	8	0	0
053010070404	DUBLIN	12	106	0	7	0	0	259	6	20	19	6	10	0
053010100404	DUBLIN	12	10	0	7	0	0	355	5	5	23	3	30	0
053011030404	DUBLIN	12	3	0	7	0	0	362	6	11	33	5	0	0
054010010405	CORK	12	155	0	7	83	0	210	6	4	7	0	41	4
055010010406	GALWAY	12	49	0	7	0	0	316	3	90	6	2	44	0
075013520401	LUXEMBOURG-V	6	2	0	3	0	0	181	1	2	12	1	50	1
075013530401	LUXEMBOURG-V	6	11	0	3	0	0	172	3	1	21	1	10	1
075023550401	ESCH-SUR-ALZ	6	50	0	3	0	0	133	4	1	14	0	50	1
075033600401	STEINFORT	6	3	0	3	0	0	180	3	10	9	0	40	1
076990010401	SITE DE FOND	9	1	0	6	24	0	272	1	3	11	1	10	1

ANNUAL CHARACTERISTICS OF THE SERIES

October 1984 - September 1985

Annex 3: Yearly percentiles 25,50,75,95,98
computed for the selected series

Column caption:

<u>Label</u>	<u>Explanation</u>
station code	PPCVVSSSPLTM: PP country code C town class code VV town code SSS station code PL pollutant code TM measurement technique code
cas	number of cases reported for the year (measured values)
min	minimum concentration for the year ($\mu\text{g}/\text{m}^3$)
max	maximum concentration for the year ($\mu\text{g}/\text{m}^3$)
25,50,75,95,98	yearly percentiles ($\mu\text{g}/\text{m}^3$)

Results of this annex are graphically presented in :

Fig. II.2.1 to II.2.7 ; pages F.8 - F.14
 Fig. II.2.8 to II.2.11 ; pages F.15 - F.18
 Fig. II.2.12 to II.2.15 ; pages F.19 - F.22

Yearly percentiles
Pollutant 1: SO₂ (column caption: see A3.1)

Station code	Town	cas	min	max	25	50	75	95	98
PPCVSSSPLTM	name	no	val	val	val	val	val	val	val
026990010113	B.R. DEUTSCH	352	1	201	1	3	9	35	58
026990020113	B.R. DEUTSCH	301	1	283	1	4	15	102	165
026990030113	B.R. DEUTSCH	359	1	344	2	9	23	83	153
026990040113	B.R. DEUTSCH	365	1	245	3	9	17	62	98
026990050113	B.R. DEUTSCH	333	1	205	3	7	19	73	140
026990060113	B.R. DEUTSCH	343	1	121	1	4	9	53	78
026990070113	B.R. DEUTSCH	365	1	136	1	1	4	22	36
026990080113	B.R. DEUTSCH	351	1	355	1	4	18	78	120
026990090113	B.R. DEUTSCH	360	1	992	4	10	26	99	166
026990100113	B.R. DEUTSCH	347	1	286	8	16	33	98	130
026990120113	B.R. DEUTSCH	355	1	256	6	14	30	96	145
026990130113	B.R. DEUTSCH	364	1	257	1	3	12	73	139
026990140113	B.R. DEUTSCH	359	1	195	1	2	7	45	110
026990150113	B.R. DEUTSCH	350	1	428	5	15	31	100	150
026990160113	B.R. DEUTSCH	298	1	491	3	15	55	212	240
032011010127	KOBENHAVN	365	1	218	11	21	36	77	98
032011030127	KOBENHAVN	365	1	188	26	35	50	77	98
032011030128	KOBENHAVN	328	1	204	26	38	56	89	105
032012100127	KOBENHAVN	365	2	104	5	11	26	61	75
032012210127	KOBENHAVN	365	2	214	11	22	44	91	112
032013420127	KOBENHAVN	365	2	162	6	13	22	58	74
032013480127	KOBENHAVN	365	1	198	9	15	31	69	102
034018150127	AALBORG	365	2	88	4	10	25	50	59
034029150127	ODENSE	365	1	129	9	14	26	57	74
034029150129	ODENSE	311	2	220	10	16	29	73	84
035015650127	ESBJERG	365	1	155	5	8	16	37	50
035015650129	ESBJERG	310	1	175	7	10	18	45	58
035025150127	FREDERICIA	365	2	191	7	11	20	49	73
035025150129	FREDERICIA	272	2	191	11	18	29	57	91
035033510127	NAESTVED	365	2	217	13	21	34	60	74
035033510129	NAESTVED	304	3	199	16	25	40	70	90
035046350127	RANDERS	365	1	100	6	10	17	40	57
035046350129	RANDERS	305	1	88	8	13	19	38	50
042010180137	LYON	300	1	259	10	18	35	68	114
042010210137	LYON	285	1	315	9	20	49	132	183
042020010138	MARSEILLE	330	7	139	28	40	53	78	107
042020140136	MARSEILLE	319	1	157	17	25	44	93	117
042020180136	MARSEILLE	316	1	153	18	33	50	83	101
042022040136	MARSEILLE	292	6	184	36	51	66	94	108
042022060136	MARSEILLE	295	7	289	27	38	54	83	101
043020040136	LILLE-ROUB.-	338	1	331	4	13	33	111	166
043020050136	LILLE-ROUB.-	318	1	461	8	17	42	129	204
043020070136	LILLE-ROUB.-	332	1	391	10	27	54	161	216
043020080136	LILLE-ROUB.-	301	1	342	5	14	26	90	181
043020230136	LILLE-ROUB.-	332	1	286	11	19	29	100	176
045040050135	DUNKERQUE	286	1	317	9	28	50	109	175
045040070136	DUNKERQUE	259	1	519	5	24	64	138	249
045040110135	DUNKERQUE	267	1	151	1	10	21	63	107
045040130135	DUNKERQUE	240	1	196	1	1	6	53	117

Yearly percentiles
Pollutant 2: Smoke (column caption: see A3.1)

Station code	Town	cas	min	max	25	50	75	95	98
PFVVSSSPLTM	name	no	val	val	val	val	val	val	val
012010080203	BRUXELLES	331	2	126	8	13	22	58	80
012010140203	BRUXELLES	299	3	155	9	13	21	39	62
012010170203	BRUXELLES	320	4	180	8	13	21	47	78
012010220203	BRUXELLES	364	4	163	14	21	33	74	101
012010260203	BRUXELLES	355	3	222	9	15	21	41	79
013018010203	ANTWERPEN	362	1	88	7	11	20	41	52
013018090203	ANTWERPEN	358	3	133	23	31	50	79	86
013018120203	ANTWERPEN	356	1	121	10	15	24	53	66
013018130203	ANTWERPEN	361	1	94	7	13	23	43	61
013018180203	ANTWERPEN	361	1	80	8	13	19	42	55
013018260203	ANTWERPEN	361	1	126	6	12	21	47	57
014015010203	CHARLEROI	322	1	81	10	16	23	40	54
014015040203	CHARLEROI	308	4	186	14	21	29	69	114
014015050203	CHARLEROI	365	3	186	16	21	37	73	114
014015090203	CHARLEROI	358	4	147	16	21	37	65	94
014015130203	CHARLEROI	330	1	98	10	19	27	54	65
014015140203	CHARLEROI	358	4	132	14	21	37	61	81
014027010203	GENT	364	2	211	10	16	28	70	92
014027060203	GENT	257	2	87	5	8	14	31	45
014027070203	GENT	364	2	290	16	26	39	87	150
014027090203	GENT	342	2	136	8	12	22	54	62
014027120203	GENT	356	2	202	8	14	26	54	83
014027150203	GENT	358	2	117	10	14	22	48	66
014032180203	LIEGE	305	2	87	13	20	28	51	69
015016050203	BRUGGE	339	2	129	3	8	16	36	48
015026030203	KORTRIJK	302	1	100	11	18	31	58	72
015033020203	LIBRAMONT	351	2	54	5	7	10	22	31
041010110210	PARIS	359	4	222	18	30	54	123	148
041010170210	PARIS	361	4	183	20	31	49	105	135
041010490210	PARIS	356	7	158	21	31	49	101	134
041010650210	PARIS	358	2	183	17	28	48	100	120
041010990210	PARIS	364	7	198	26	36	57	121	163
042020010210	MARSEILLE	362	4	168	22	36	51	90	112
042020140210	MARSEILLE	356	2	87	10	20	32	54	74
042020180210	MARSEILLE	351	6	131	27	38	57	90	108
042022040210	MARSEILLE	331	13	146	42	59	83	121	126
042022060210	MARSEILLE	365	6	131	23	40	59	83	97
044020470210	LE HAVRE	298	3	201	13	19	35	79	92
044031040210	NANTES	325	3	78	13	20	29	53	62
044031060210	NANTES	332	6	33	8	12	23	33	33
044040010210	ROUEN	364	2	194	8	12	22	65	100
044040040210	ROUEN	299	1	109	20	31	44	70	83
044040080210	ROUEN	329	2	166	8	14	26	58	77
044040070210	ROUEN	255	3	193	10	17	31	80	114
044040110210	ROUEN	355	1	139	6	10	19	48	88
044042080210	ROUEN	315	1	102	4	8	16	47	63
053010010204	DUBLIN	355	1	606	28	42	66	182	246
053010040204	DUBLIN	329	1	601	25	45	86	320	400
053010070204	DUBLIN	269	1	515	11	18	42	161	244

Yearly percentiles
Pollutant 2: Smoke (column caption: see A3.1)

Station code	Town	cas	min	max	25	50	75	95	98
PFCVVSSSFLIM	name	no	val	val	val	val	val	val	val
053010100204	DUBLIN	357	1	268	6	16	47	107	138
053011030204	DUBLIN	362	1	611	13	32	79	205	311
055010010206	GALWAY	320	1	132	3	9	25	72	101
075013520201	LUXEMBOURG-V	363	1	96	13	18	24	49	70
075013530201	LUXEMBOURG-V	264	2	76	4	6	11	26	34
075023550201	ESCH-SUR-ALZ	292	2	52	8	12	19	34	46
075033600201	STEINFORT	362	2	103	8	12	20	38	47

Yearly percentiles
Pollutant 3: SPM (column caption: see A3.1)

Station code	Town	cas	min	max	25	50	75	95	98
PPCVVSSSPLTM	name	no	val	val	val	val	val	val	val
026990010308	B.R. DEUTSCH	359	7	168	28	40	61	101	125
026990020308	B.R. DEUTSCH	361	4	170	21	34	51	88	109
026990030308	B.R. DEUTSCH	363	8	138	26	40	63	100	122
026990040308	B.R. DEUTSCH	362	6	230	20	31	47	82	97
026990050308	B.R. DEUTSCH	361	10	202	29	42	72	123	147
026990060308	B.R. DEUTSCH	363	4	89	16	24	35	59	73
026990070308	B.R. DEUTSCH	359	1	109	8	15	29	51	61
026990080308	B.R. DEUTSCH	359	2	206	21	31	51	108	125
026990090308	B.R. DEUTSCH	358	10	377	25	41	72	155	180
026990100308	B.R. DEUTSCH	358	9	151	22	33	48	86	97
026990120308	B.R. DEUTSCH	359	11	146	25	37	57	102	119
026990130308	B.R. DEUTSCH	362	4	118	19	31	45	81	95
026990140308	B.R. DEUTSCH	350	3	131	14	23	34	65	93
026990150308	B.R. DEUTSCH	349	4	117	17	26	42	74	100
026990160308	B.R. DEUTSCH	344	7	182	25	39	63	104	132
032011010347	KOBENHAVN	365	1	285	36	50	71	127	154
032011030347	KOBENHAVN	365	1	335	80	102	130	182	232
032012100347	KOBENHAVN	351	2	320	32	43	62	115	135
032012210347	KOBENHAVN	365	2	286	35	47	69	119	148
032013420347	KOBENHAVN	365	2	313	35	47	67	109	132
032013480347	KOBENHAVN	365	2	259	33	46	63	113	136
034018150347	AALBORG	365	4	323	4	50	92	194	242
034029150347	ODENSE	365	2	214	41	54	78	142	165
035015650347	ESBJERG	365	2	250	45	56	74	119	144
035025150347	FREDERICIA	365	2	229	45	59	78	142	166
035033510347	NAESTVED	365	2	315	54	72	100	170	201
035046350347	RANDERS	365	2	210	43	57	78	134	145
041010970318	PARIS	288	42	997	83	122	189	451	581
043020080318	LILLE-ROUB.-	252	9	371	41	60	100	230	262
044020470318	LE HAVRE	300	1	143	12	20	39	92	105
044040040318	ROUEN	347	6	276	21	29	41	89	118
045040050318	DUNKERQUE	254	7	313	20	38	66	134	184
045040070318	DUNKERQUE	285	14	296	27	39	62	130	167
045040110318	DUNKERQUE	281	6	137	35	41	55	87	101
045040130318	DUNKERQUE	284	2	206	11	19	36	80	108
062010010315	TORINO	364	41	583	87	134	187	317	331
062010020315	TORINO	365	36	790	123	171	231	451	579

Yearly percentiles
Pollutant 4: Acid (column caption: see A3.1)

Station code	Town	cas	min	max	25	50	75	95	98
PPCVSSSFLTM	name	no	val	val	val	val	val	val	val
012010080403	BRUXELLES	324	2	279	19	26	39	94	114
012010140403	BRUXELLES	291	5	143	18	26	40	89	105
012010170403	BRUXELLES	312	5	185	17	24	38	89	130
012010220403	BRUXELLES	356	4	178	19	29	45	83	119
012010260403	BRUXELLES	347	2	194	21	30	42	79	106
013018010403	ANTWERPEN	362	4	357	43	63	91	160	218
013018090403	ANTWERPEN	358	27	332	51	68	91	153	227
013018120403	ANTWERPEN	333	7	352	23	32	52	111	147
013018130403	ANTWERPEN	361	14	324	45	64	87	148	191
013018180403	ANTWERPEN	361	14	285	38	56	75	128	158
013018260403	ANTWERPEN	362	14	822	66	94	142	265	357
014015010403	CHARLEROI	308	3	414	23	48	86	172	249
014015040403	CHARLEROI	295	2	271	12	18	36	125	178
014015050403	CHARLEROI	363	3	309	25	40	64	155	234
014015090403	CHARLEROI	354	2	338	16	28	45	109	158
014015130403	CHARLEROI	317	2	147	20	31	49	78	106
014015140403	CHARLEROI	349	5	254	23	31	49	96	150
014027010403	GENT	349	4	349	23	34	56	124	154
014027060403	GENT	255	4	135	19	23	34	56	73
014027070403	GENT	350	4	375	19	26	49	113	180
014027090403	GENT	339	4	189	34	45	64	105	131
014027120403	GENT	345	4	334	19	34	56	124	158
014027150403	GENT	284	4	289	11	19	38	105	139
014032180403	LIEGE	267	2	194	12	25	43	100	146
015016050403	BRUGGE	338	2	370	9	19	32	62	92
015026030403	KORTRIJK	290	2	384	13	28	49	104	162
041010110411	PARIS	355	3	270	22	36	56	114	196
041010170411	PARIS	358	5	378	33	54	85	177	233
041010490411	PARIS	354	6	262	33	50	72	139	177
041010650411	PARIS	356	2	351	27	43	68	158	220
041010990411	PARIS	364	3	268	24	36	58	121	170
042010010411	LYON	314	24	434	70	85	110	175	221
042010080411	LYON	289	14	437	42	56	81	147	225
042010100411	LYON	275	14	384	34	49	82	145	173
042010160411	LYON	280	6	434	32	47	74	117	169
042020010408	MARSEILLE	324	3	193	18	29	43	81	106
043020050411	LILLE-ROUB.-	294	1	723	9	23	53	151	304
044020120411	LE HAVRE	322	1	392	1	8	38	187	276
044020210411	LE HAVRE	338	1	266	4	20	61	134	157
044020290411	LE HAVRE	329	1	261	7	19	39	90	108
044020310411	LE HAVRE	317	1	694	9	22	63	232	321
044020320411	LE HAVRE	334	1	935	15	49	112	236	321
044020430411	LE HAVRE	314	1	550	2	11	34	120	252
044031000411	NANTES	335	1	124	4	15	29	66	89
044031030411	NANTES	317	1	426	1	1	2	50	114
044031040411	NANTES	327	1	286	1	2	33	144	206
044031060411	NANTES	319	1	168	1	3	15	36	60
044031130411	NANTES	327	1	249	1	1	1	35	83
044031150411	NANTES	333	1	179	1	3	13	54	89

Yearly percentiles
Pollutant 4: Acid (column caption: see A3.1)

Station code	Town	cas	min	max	25	50	75	95	98
PCCVVSSSPLTM	name	no	val	val	val	val	val	val	val
044040010411	ROUEN	349	1	278	4	16	33	111	159
044040040411	ROUEN	312	1	227	25	40	87	134	185
044040060411	ROUEN	348	1	223	10	20	36	91	140
044040070411	ROUEN	333	1	383	14	31	83	180	217
044040080411	ROUEN	341	1	200	2	16	44	115	142
044040110411	ROUEN	328	1	350	28	53	104	215	241
045020190411	FOS-BERRE	280	1	224	7	15	28	73	99
045030170411	VIGNEUX DE B	300	1	254	1	1	3	23	38
053010010404	DUBLIN	352	5	264	20	31	45	68	92
053010040404	DUBLIN	325	6	177	21	33	46	98	115
053010070404	DUBLIN	259	6	84	13	19	27	52	63
053010100404	DUBLIN	355	5	63	13	23	31	46	50
053011030404	DUBLIN	362	6	153	20	33	50	94	127
055010010408	GALWAY	318	3	52	3	6	13	23	36

ANNUAL CHARACTERISTICS OF THE SERIES

October 1984 - September 1985

Annex 4: Annual descriptive parameters

Column caption:

<u>Label</u>	<u>Explanation</u>
station code	PPCVVSSSPLTM: PP country code C town class code VV town code SSS station code PL pollutant code TM measurement technique code
cas	number of cases reported for the year (measured values)
mean	mean ($\mu\text{g}/\text{m}^3$)
std.d	standard deviation ($\mu\text{g}/\text{m}^3$)
V	variation coefficient
skew	skewness
D	shape estimator of the frequency distribution
kurt	kurtosis

Results of this annex are presented in the form of histograms in :

Fig. II.3.1 to II.3.7 ; pages F.24 - F.30

Annual descriptive parameters
Pollutant 1: SO₂ (column caption: see A4.1)

Station code	Town	cas	mean	std.d	V	skew	D	kurt
FFCVSSSFLTM	name	no	val	val				
026990010113	B.R. DEUTSCH	352	9	16.5	1.86	6.03	0.50	55.7
026990020113	B.R. DEUTSCH	301	21	42.1	2.05	3.36	0.23	12.9
026990030113	B.R. DEUTSCH	359	22	39.3	1.83	4.13	0.36	21.5
026990040113	B.R. DEUTSCH	365	16	26.6	1.65	4.61	0.49	27.1
026990050113	B.R. DEUTSCH	333	18	32.1	1.76	3.51	0.33	13.6
026990060113	B.R. DEUTSCH	343	11	18.6	1.77	3.21	0.29	11.1
026990070113	B.R. DEUTSCH	365	5	11.0	2.27	6.51	0.35	60.9
026990080113	B.R. DEUTSCH	351	18	33.9	1.93	4.56	0.35	31.5
026990090113	B.R. DEUTSCH	360	32	86.2	2.71	7.59	0.27	67.3
026990100113	B.R. DEUTSCH	347	28	34.7	1.26	3.18	0.55	14.1
026990120113	B.R. DEUTSCH	355	26	35.5	1.34	2.67	0.42	8.8
026990130113	B.R. DEUTSCH	364	15	33.7	2.19	4.17	0.24	20.2
026990140113	B.R. DEUTSCH	359	10	24.5	2.39	4.66	0.22	25.4
026990150113	B.R. DEUTSCH	350	28	47.9	1.70	4.93	0.49	31.4
026990160113	B.R. DEUTSCH	298	49	75.7	1.56	2.68	0.32	8.8
032011010127	KOBENHAVN	365	30	28.9	0.98	2.96	0.76	13.3
032011030127	KOBENHAVN	365	39	21.2	0.54	1.76	1.00	7.0
032011030128	KOBENHAVN	328	42	26.1	0.62	1.56	0.74	5.1
032012100127	KOBENHAVN	365	19	19.6	1.02	1.84	0.45	3.5
032012210127	KOBENHAVN	365	33	31.4	0.95	2.07	0.56	6.1
032013420127	KOBENHAVN	365	19	19.2	1.01	2.57	0.63	10.3
032013480127	KOBENHAVN	365	24	26.5	1.09	3.19	0.70	13.8
034018150127	AALBORG	365	17	16.1	0.96	1.61	0.43	3.0
034029150127	ODENSE	365	20	18.1	0.88	2.15	0.64	6.2
034029150129	ODENSE	311	23	22.5	0.96	3.44	0.91	20.2
035015650127	ESBJERG	365	13	13.7	1.07	4.25	0.96	32.5
035015650129	ESBJERG	310	15	16.0	1.06	4.40	1.01	33.3
035025150127	FREDERICIA	365	17	17.4	1.04	4.12	0.97	29.1
035025150129	FREDERICIA	272	24	21.0	0.87	3.30	1.00	17.4
035033510127	NAESTVED	365	26	20.6	0.80	3.16	1.08	21.0
035033510129	NAESTVED	304	31	23.3	0.75	2.89	1.01	13.2
035046350127	RANDERS	365	14	13.0	0.94	2.76	0.76	10.4
035046350129	RANDERS	305	16	11.4	0.72	2.15	0.85	7.3
042010180137	LYON	300	27	31.6	1.16	3.79	0.75	20.2
042010210137	LYON	285	37	47.0	1.28	2.85	0.48	10.4
042020010136	MARSEILLE	330	43	21.8	0.50	1.45	0.89	3.3
042020140136	MARSEILLE	319	35	27.6	0.79	1.61	0.56	2.5
042020180136	MARSEILLE	316	37	24.5	0.66	1.32	0.58	2.6
042022040136	MARSEILLE	292	53	24.2	0.45	1.45	1.00	4.7
042022060136	MARSEILLE	295	43	25.5	0.59	3.60	1.81	28.4
043020040136	LILLE-ROUB.-	338	29	45.7	1.56	3.41	0.40	15.0
043020050136	LILLE-ROUB.-	318	37	58.5	1.59	4.04	0.46	21.0
043020070136	LILLE-ROUB.-	332	46	56.9	1.25	2.54	0.45	8.1
043020080136	LILLE-ROUB.-	301	27	46.0	1.73	4.38	0.42	22.6
043020230136	LILLE-ROUB.-	332	31	40.6	1.32	3.60	0.58	15.4
045040050135	DUNKERQUE	288	38	43.3	1.15	2.95	0.60	12.5
045040070136	DUNKERQUE	259	46	67.8	1.48	3.69	0.48	18.2
045040110135	DUNKERQUE	267	17	24.0	1.42	3.01	0.42	10.9
045040130135	DUNKERQUE	240	11	26.5	2.46	4.06	0.18	18.0

Annual descriptive parameters
Pollutant 2: Smoke (column caption: see A4.1)

Station code PPCVSSSPLTM	Town name	cas no	mean val	std.d val	V	skew	D	kurt
012010080203	BRUXELLES	331	19	17.7	0.92	2.59	0.73	8.3
012010140203	BRUXELLES	299	18	17.4	0.96	4.01	1.06	21.6
012010170203	BRUXELLES	320	19	21.4	1.10	4.42	0.95	24.8
012010220203	BRUXELLES	364	28	22.6	0.81	2.40	0.81	7.5
012010260203	BRUXELLES	355	19	21.5	1.11	5.23	1.12	35.5
013018010203	ANTWERPEN	362	16	13.6	0.86	2.38	0.74	7.4
013018090203	ANTWERPEN	358	37	20.7	0.55	1.09	0.60	1.2
013018120203	ANTWERPEN	356	20	16.6	0.83	2.39	0.78	7.7
013018130203	ANTWERPEN	361	17	14.1	0.82	1.87	0.62	4.7
013018180203	ANTWERPEN	361	16	12.6	0.77	2.01	0.72	4.8
013018260203	ANTWERPEN	361	17	16.5	0.99	2.88	0.73	12.2
014015010203	CHARLEROI	322	18	11.9	0.65	1.67	0.75	3.9
014015040203	CHARLEROI	308	28	24.8	0.89	2.86	0.85	11.0
014015050203	CHARLEROI	365	30	25.0	0.84	2.48	0.79	8.2
014015090203	CHARLEROI	358	27	19.9	0.73	2.34	0.91	7.7
014015130203	CHARLEROI	330	21	14.8	0.69	1.67	0.69	3.8
014015140203	CHARLEROI	358	26	18.9	0.72	2.02	0.79	6.1
014027010203	GENT	364	25	25.7	1.04	3.47	0.81	16.3
014027060203	GENT	257	12	11.3	0.97	3.00	0.79	13.3
014027070203	GENT	364	35	34.8	0.98	3.35	0.86	15.4
014027090203	GENT	342	18	16.1	0.92	2.83	0.80	11.9
014027120203	GENT	356	22	22.1	1.02	3.45	0.84	18.4
014027150203	GENT	358	19	15.7	0.84	2.83	0.91	11.4
014032180203	LIEGE	305	23	14.6	0.62	1.51	0.72	3.0
015016050203	BRUGGE	339	13	14.8	1.14	3.64	0.74	19.9
015026030203	KORTRIJK	302	23	17.3	0.74	1.60	0.61	3.1
015033020203	LIBRAMONT	351	9	6.8	0.77	2.78	1.01	10.6
041010110210	PARIS	359	43	36.5	0.85	1.78	0.56	3.4
041010170210	PARIS	361	40	30.8	0.77	1.91	0.69	4.2
041010490210	PARIS	356	40	28.3	0.71	1.67	0.68	2.8
041010650210	PARIS	358	38	29.0	0.77	1.74	0.63	3.6
041010990210	PARIS	364	48	33.1	0.70	1.97	0.81	4.2
042020010210	MARSEILLE	362	40	24.1	0.60	1.47	0.73	3.3
042020140210	MARSEILLE	356	24	16.7	0.71	1.39	0.56	2.2
042020180210	MARSEILLE	351	44	24.4	0.55	1.08	0.59	1.0
042022040210	MARSEILLE	331	64	30.2	0.47	0.50	0.33	-0.4
042022060210	MARSEILLE	365	42	23.5	0.56	0.58	0.32	-0.0
044020470210	LE HAVRE	298	28	24.4	0.87	2.37	0.73	9.2
044031040210	NANTES	325	23	14.7	0.63	1.12	0.53	1.3
044031060210	NANTES	332	18	8.6	0.55	0.68	0.38	-0.7
044040010210	ROUEN	364	20	24.1	1.22	3.58	0.65	16.6
044040040210	ROUEN	299	34	18.3	0.54	1.09	0.61	1.5
044040060210	ROUEN	329	20	20.1	0.99	2.52	0.64	10.2
044040070210	ROUEN	255	27	27.0	1.00	2.40	0.60	7.6
044040110210	ROUEN	355	17	19.2	1.16	3.16	0.62	13.0
044042080210	ROUEN	315	13	14.9	1.15	2.40	0.48	7.0
053010010204	DUBLIN	355	62	70.4	1.13	4.22	0.87	24.0
053010040204	DUBLIN	329	80	99.1	1.23	2.62	0.47	7.5
053010070204	DUBLIN	269	39	61.4	1.56	4.00	0.47	20.9

Annual descriptive parameters
Pollutant 2: Smoke (column caption: see A4.1)

Station code	Town	cas	mean	std.d	V	skew	D	kurt
PPCVSSSPLTM	name	no	val	val				
053010100204	DUBLIN	357	32	39.0	1.23	2.27	0.41	7.0
053011030204	DUBLIN	362	62	77.3	1.25	2.74	0.48	10.6
055010010208	GALWAY	320	19	24.3	1.28	2.24	0.38	5.3
075013520201	LUXEMBOURG-V	363	22	13.8	0.64	2.25	1.03	6.7
075013530201	LUXEMBOURG-V	264	9	9.1	1.00	3.23	0.80	15.3
075023550201	ESCH-SUR-ALZ	292	15	9.9	0.66	1.53	0.68	2.4
075033600201	STEINFORT	362	15	11.9	0.77	2.60	0.93	11.2

Annual descriptive parameters
Pollutant 3: SPM (column caption: see A4.1)

Station code PPCVSSSPLTM	Town name	cas no	mean val	std.d val	V	skew	D	kurt
026990010308	B.R. DEUTSCH	359	48	27.6	0.58	1.45	0.76	2.4
026990020308	B.R. DEUTSCH	361	40	25.4	0.63	1.61	0.75	3.7
026990030308	B.R. DEUTSCH	363	47	27.7	0.59	1.02	0.51	0.6
026990040308	B.R. DEUTSCH	362	37	24.7	0.67	2.67	1.16	13.2
026990050308	B.R. DEUTSCH	361	55	35.7	0.65	1.27	0.57	1.2
026990060308	B.R. DEUTSCH	363	27	15.8	0.58	1.23	0.64	1.5
026990070308	B.R. DEUTSCH	359	20	16.0	0.80	1.48	0.51	3.0
026990080308	B.R. DEUTSCH	359	41	31.2	0.75	1.76	0.66	3.7
026990090308	B.R. DEUTSCH	358	56	46.5	0.84	2.35	0.76	8.5
026990100308	B.R. DEUTSCH	358	39	22.5	0.58	1.50	0.77	3.0
026990120308	B.R. DEUTSCH	359	46	27.5	0.60	1.26	0.63	1.0
026990130308	B.R. DEUTSCH	362	35	22.1	0.63	1.21	0.57	1.3
026990140308	B.R. DEUTSCH	350	27	20.0	0.73	2.22	0.86	6.6
026990150308	B.R. DEUTSCH	349	32	21.1	0.65	1.63	0.73	2.9
026990160308	B.R. DEUTSCH	344	48	31.6	0.66	1.49	0.66	2.7
032011010347	KOBENHAVN	365	57	34.7	0.60	1.91	0.94	7.2
032011030347	KOBENHAVN	365	107	46.5	0.44	1.04	0.75	3.2
032012100347	KOBENHAVN	351	49	34.2	0.69	2.19	0.91	11.5
032012210347	KOBENHAVN	365	56	32.6	0.58	2.22	1.14	8.7
032013420347	KOBENHAVN	365	55	32.8	0.60	3.09	1.54	17.4
032013480347	KOBENHAVN	365	53	30.7	0.58	1.90	0.98	6.7
034018150347	AALBORG	365	61	65.2	1.06	1.31	0.30	1.7
034029150347	ODENSE	365	63	34.9	0.55	1.43	0.78	2.6
035015650347	ESBJERG	365	63	29.1	0.46	2.26	1.52	8.5
035025150347	FREDERICIA	365	67	35.3	0.53	1.50	0.86	3.1
035033510347	NAESTVED	365	80	44.2	0.55	1.30	0.71	3.3
035046350347	RANDERS	365	65	32.3	0.50	1.38	0.86	2.3
041010970318	PARIS	288	168	136.6	0.81	2.37	0.80	7.0
043020080318	LILLE-ROUB.-	252	81	64.9	0.80	1.73	0.60	2.8
044020470318	LE HAVRE	300	31	27.6	0.88	1.62	0.48	2.3
044040040318	ROUEN	347	37	29.6	0.80	3.60	1.23	18.6
045040050318	DUNKERQUE	254	53	48.0	0.90	2.41	0.70	7.8
045040070318	DUNKERQUE	285	52	41.2	0.79	2.77	0.97	10.2
045040110318	DUNKERQUE	281	48	20.0	0.42	1.38	1.03	2.3
045040130318	DUNKERQUE	284	29	28.8	1.00	2.87	0.71	11.4
062010010315	TORINO	364	145	82.9	0.57	1.08	0.57	1.8
062010020315	TORINO	365	198	118.1	0.60	1.94	0.97	4.7

Annual descriptive parameters
Pollutant 4: Acid (column caption: see A4.1)

Station code	Town	cas	mean	std.d	V	skew	D	kurt
PPCVSSSPLTM	name	no	val	val				
012010080403	BRUXELLES	324	34	27.8	0.82	3.44	1.14	20.1
012010140403	BRUXELLES	291	33	23.5	0.70	2.03	0.83	4.7
012010170403	BRUXELLES	312	34	28.3	0.84	2.55	0.81	7.7
012010220403	BRUXELLES	356	37	26.3	0.72	2.07	0.82	5.6
012010260403	BRUXELLES	347	36	23.3	0.65	2.54	1.13	9.6
013018010403	ANTWERPEN	362	73	47.2	0.65	2.19	0.99	7.6
013018090403	ANTWERPEN	358	79	43.3	0.55	2.19	1.20	6.7
013018120403	ANTWERPEN	333	44	39.5	0.90	3.80	1.11	20.7
013018130403	ANTWERPEN	361	73	41.0	0.56	2.09	1.12	7.3
013018180403	ANTWERPEN	361	61	34.2	0.56	2.05	1.11	7.4
013018260403	ANTWERPEN	362	118	84.6	0.72	2.77	1.10	14.3
014015010403	CHARLEROI	308	65	61.0	0.93	2.20	0.61	6.6
014015040403	CHARLEROI	295	34	42.8	1.27	3.08	0.52	11.0
014015050403	CHARLEROI	363	55	48.2	0.88	2.45	0.74	7.2
014015090403	CHARLEROI	354	40	41.8	1.04	3.60	0.84	17.2
014015130403	CHARLEROI	317	37	24.6	0.66	1.29	0.57	2.5
014015140403	CHARLEROI	349	42	33.7	0.81	3.00	1.02	12.4
014027010403	GENT	349	47	40.7	0.87	3.07	0.94	14.4
014027060403	GENT	255	28	18.8	0.68	2.38	1.01	8.7
014027070403	GENT	350	42	45.7	1.10	3.71	0.80	18.2
014027090403	GENT	339	54	29.8	0.56	1.69	0.92	4.4
014027120403	GENT	345	46	41.9	0.91	2.80	0.81	11.6
014027150403	GENT	284	32	37.8	1.17	3.09	0.60	13.0
014032180403	LIEGE	267	34	32.5	0.97	2.15	0.57	5.7
015016050403	BRUGGE	338	25	30.0	1.18	6.00	1.16	55.9
015026030403	KORTRIJK	290	39	42.3	1.07	3.20	0.72	16.9
041010110411	PARIS	355	47	40.5	0.87	2.58	0.80	8.6
041010170411	PARIS	358	68	54.0	0.79	2.07	0.72	5.8
041010490411	PARIS	354	61	40.1	0.66	1.88	0.83	4.5
041010650411	PARIS	356	59	50.6	0.86	2.24	0.69	6.5
041010990411	PARIS	364	48	40.2	0.84	2.44	0.79	8.0
042010010411	LYON	314	96	46.2	0.48	2.92	1.88	14.1
042010080411	LYON	289	69	51.3	0.74	3.66	1.40	18.7
042010100411	LYON	275	65	47.4	0.73	2.63	1.02	10.9
042010160411	LYON	280	59	46.8	0.80	3.89	1.34	22.6
042020010408	MARSEILLE	324	34	25.1	0.73	2.27	0.88	8.6
043020050411	LILLE-ROUB.-	294	50	91.8	1.85	4.88	0.41	28.5
044020120411	LE HAVRE	322	36	66.5	1.83	2.84	0.24	8.6
044020210411	LE HAVRE	338	39	46.7	1.20	1.75	0.33	3.7
044020290411	LE HAVRE	329	29	32.7	1.13	2.68	0.56	11.9
044020310411	LE HAVRE	317	54	83.9	1.54	3.14	0.38	13.6
044020320411	LE HAVRE	334	79	94.0	1.18	3.28	0.63	20.9
044020430411	LE HAVRE	314	32	63.1	1.95	4.37	0.33	24.3
044031000411	NANTES	335	21	22.5	1.07	1.76	0.40	3.6
044031030411	NANTES	317	11	41.2	3.61	6.87	0.12	54.6
044031040411	NANTES	327	27	49.1	1.79	2.91	0.26	9.2
044031060411	NANTES	319	11	17.1	1.58	4.29	0.49	28.8
044031130411	NANTES	327	8	25.3	3.29	5.84	0.13	39.9
044031150411	NANTES	333	13	24.9	1.92	3.85	0.30	18.2

Annual descriptive parameters
Pollutant 4: Acid (column caption: see A4.1)

Station code	Town	cas	mean	std.d	V	skew	D	kurt
PPCVVSSSPLTM	name	no	val	val				
044040010411	ROUEN	349	29	38.3	1.34	2.73	0.42	9.5
044040040411	ROUEN	312	52	41.8	0.81	1.86	0.63	4.2
044040060411	ROUEN	348	29	33.0	1.12	2.68	0.56	9.3
044040070411	ROUEN	333	51	59.2	1.16	2.30	0.46	6.5
044040080411	ROUEN	341	32	38.7	1.22	1.74	0.32	2.9
044040110411	ROUEN	328	76	65.5	0.87	1.31	0.40	1.5
045020190411	FOS-BERRE	280	23	27.1	1.18	3.13	0.61	14.4
045030170411	VIGNEUX DE B	300	5	17.3	3.24	10.54	0.24	140.2
053010010404	DUBLIN	352	35	25.0	0.71	3.35	1.34	22.7
053010040404	DUBLIN	325	38	26.3	0.70	1.85	0.76	4.6
053010070404	DUBLIN	259	22	14.0	0.65	1.58	0.71	2.9
053010100404	DUBLIN	355	24	12.4	0.52	0.44	0.26	-0.4
053011030404	DUBLIN	362	39	27.5	0.71	1.62	0.65	3.0
055010010406	GALWAY	316	9	7.4	0.81	2.21	0.75	6.9

ANNUAL CHARACTERISTICS OF THE SERIES

October 1984 - September 1985

Annex 5: First characteristics of the time series
(selected series)

Column caption:

<u>Label</u>	<u>Explanation</u>
station code	PPCVVSSSPLTM: PP country code C town class code VV town code SSS station code PL pollutant code TM measurement technique code
S/W	ratio of the number of summer to winter measurements
50,98	winter and summer percentiles ($\mu\text{g}/\text{m}^3$) winter: October 84 to March 85 summer: April to September 85
slope, int.	slope ($\mu\text{g}/\text{m}^3/100$ days) and intercept ($\mu\text{g}/\text{m}^3$) of the regression line computed for the yearly series.
persist.	number of 3 days persistence for a concentration value higher than $125 \mu\text{g}/\text{m}^3$.

Results of this annex are graphically presented in :

Fig. II.4.1 to II.4.8 ; pages F.31 - F.34

Fig. II.4.9 to II.4.12 ; pages F.35 - F.38

First characteristics of the time series
Pollutant 1: SO₂ (column caption: see A5.1)

Station code	Town	S/W no	summer		winter		regression		persist. no
			50	98	50	98	slope	int.	
026990010113	B.R. DEUTSCH	1.08	2	12	8	70	-5	18	0
026990020113	B.R. DEUTSCH	1.06	1	23	11	218	-10	40	3
026990030113	B.R. DEUTSCH	1.04	3	26	21	200	-11	41	3
026990040113	B.R. DEUTSCH	1.01	4	22	15	141	-7	28	2
026990050113	B.R. DEUTSCH	1.22	4	29	17	186	-11	40	1
026990060113	B.R. DEUTSCH	0.92	1	23	7	87	-4	17	0
026990070113	B.R. DEUTSCH	1.01	1	9	2	46	-2	8	0
026990080113	B.R. DEUTSCH	0.94	1	18	17	150	-11	38	0
026990090113	B.R. DEUTSCH	1.00	5	35	23	389	-20	68	2
026990100113	B.R. DEUTSCH	0.93	11	54	27	158	-8	41	0
026990120113	B.R. DEUTSCH	0.96	7	53	25	160	-11	47	3
026990130113	B.R. DEUTSCH	1.00	1	18	10	178	-8	30	3
026990140113	B.R. DEUTSCH	1.01	1	9	6	116	-5	19	0
026990150113	B.R. DEUTSCH	1.00	6	39	28	214	-13	51	4
026990160113	B.R. DEUTSCH	1.07	6	100	45	395	-21	88	13
032011010127	KOBENHAVN	1.01	12	35	36	154	-12	51	1
032011030127	KOBENHAVN	1.01	26	60	43	103	-7	52	0
032011030128	KOBENHAVN	1.00	33	75	43	131	-4	49	0
032012100127	KOBENHAVN	1.01	8	31	24	93	-6	31	0
032012210127	KOBENHAVN	1.01	12	40	44	147	-14	58	0
032013420127	KOBENHAVN	1.01	8	21	21	84	-7	32	0
032013480127	KOBENHAVN	1.01	10	33	26	144	-9	41	0
034018150127	AALBORG	1.01	4	31	24	75	-9	33	0
034029150127	ODENSE	1.01	10	40	23	79	-7	33	0
034029150129	ODENSE	1.01	11	43	26	85	-7	37	0
035015650127	ESBJERG	1.01	6	25	13	56	-5	21	0
035015650129	ESBJERG	1.03	8	28	16	69	-5	24	0
035025150127	FREDERICIA	1.01	8	22	19	78	-6	28	0
035025150129	FREDERICIA	1.09	12	32	29	113	-10	44	0
035033510127	NAESTVED	1.01	16	34	32	91	-7	39	0
035033510129	NAESTVED	0.90	18	38	38	107	-9	48	0
035046350127	RANDERS	1.01	7	19	16	64	-5	23	0
035046350129	RANDERS	1.05	12	26	16	55	-2	20	0
042010180137	LYON	0.78	14	48	25	172	-4	34	3
042010210137	LYON	0.79	8	26	44	218	-17	64	5
042020010136	MARSEILLE	0.98	35	70	47	124	-4	51	0
042020140136	MARSEILLE	0.89	20	57	34	126	-6	46	0
042020180136	MARSEILLE	0.85	34	77	32	119	-1	38	0
042022040136	MARSEILLE	0.78	44	79	56	121	-3	58	1
042022060136	MARSEILLE	1.11	32	66	49	115	-5	53	0
043020040136	LILLE-ROUB.-	0.97	5	43	29	222	-13	53	5
043020050136	LILLE-ROUB.-	0.86	14	65	26	306	-9	52	7
043020070136	LILLE-ROUB.-	0.87	12	47	50	259	-16	74	7
043020080136	LILLE-ROUB.-	1.08	7	40	21	259	-10	44	6
043020230136	LILLE-ROUB.-	0.96	15	37	25	231	-9	47	6
045040050135	DUNKERQUE	1.22	20	93	39	196	-10	56	6
045040070136	DUNKERQUE	0.99	17	94	37	355	-11	65	8
045040110135	DUNKERQUE	1.47	5	61	16	135	-5	27	0
045040130135	DUNKERQUE	0.88	2	42	1	120	-1	12	0

First characteristics of the time series
Pollutant 2: Smoke (column caption: see A5.1)

Station code	Town	S/W	summer		winter		regression		persist.
			no	50 98	50 98	slope int.	no		
012010080203	BRUXELLES	1.22	12	52	16	86	-1	21	0
012010140203	BRUXELLES	0.64	11	50	16	100	-2	21	0
012010170203	BRUXELLES	1.11	10	28	21	132	-6	30	3
012010220203	BRUXELLES	1.00	17	58	25	109	-4	35	0
012010260203	BRUXELLES	1.06	12	33	19	147	-5	28	2
013018010203	ANTWERPEN	1.00	9	28	16	74	-4	23	0
013018090203	ANTWERPEN	1.03	25	63	48	93	-9	54	0
013018120203	ANTWERPEN	0.96	12	48	22	82	-6	30	0
013018130203	ANTWERPEN	0.98	8	32	20	70	-5	27	0
013018180203	ANTWERPEN	1.03	11	37	15	64	-2	19	0
013018260203	ANTWERPEN	1.03	8	35	17	85	-5	25	0
014015010203	CHARLEROI	1.30	14	29	19	61	-4	25	0
014015040203	CHARLEROI	0.77	16	29	27	132	-7	39	3
014015050203	CHARLEROI	1.01	17	48	29	126	-7	42	0
014015090203	CHARLEROI	0.97	16	29	37	98	-9	44	0
014015130203	CHARLEROI	1.05	14	37	23	69	-5	31	0
014015140203	CHARLEROI	0.97	14	27	37	94	-9	42	0
014027010203	GENT	1.01	12	31	26	150	-9	41	2
014027060203	GENT	0.44	5	18	10	48	-3	17	0
014027070203	GENT	1.00	20	58	34	194	-9	51	3
014027090203	GENT	0.97	8	28	20	78	-6	29	0
014027120203	GENT	1.05	10	31	24	111	-8	36	1
014027150203	GENT	1.05	10	24	20	66	-6	30	0
014032180203	LIEGE	1.29	18	52	24	73	-3	29	0
015016050203	BRUGGE	1.17	5	24	16	66	-5	23	0
015026030203	KORTRIJK	1.50	14	36	30	89	-6	35	0
015033020203	LIBRAMONT	1.09	6	15	8	42	-2	13	0
041010110210	PARIS	0.98	21	69	47	171	-13	66	3
041010170210	PARIS	0.99	23	77	40	153	-8	54	3
041010490210	PARIS	0.96	24	86	44	137	-8	55	1
041010650210	PARIS	0.97	22	77	40	144	-8	52	1
041010990210	PARIS	1.01	30	81	50	167	-10	65	3
042020010210	MARSEILLE	0.99	30	57	44	116	-6	51	0
042020140210	MARSEILLE	1.06	16	44	25	83	-3	30	0
042020180210	MARSEILLE	0.94	32	71	49	121	-6	56	0
042022040210	MARSEILLE	1.06	54	126	71	146	-6	75	2
042022060210	MARSEILLE	1.01	34	71	42	101	-3	47	0
044020470210	LE HAVRE	0.65	21	80	19	92	2	25	0
044031040210	NANTES	0.91	15	41	28	68	-7	35	0
044031060210	NANTES	0.96	8	17	23	33	-5	25	0
044040010210	ROUEN	1.00	9	36	17	123	-3	28	0
044040040210	ROUEN	1.11	31	76	30	90	-1	35	0
044040060210	ROUEN	1.08	10	52	20	89	-4	27	0
044040070210	ROUEN	1.20	17	50	20	128	-3	33	0
044040110210	ROUEN	0.95	9	44	13	100	-2	20	0
044042080210	ROUEN	0.88	6	24	12	66	-3	19	0
053010010204	DUBLIN	1.05	32	71	65	362	-25	108	11
053010040204	DUBLIN	0.82	25	74	80	434	-40	151	21
053010070204	DUBLIN	1.13	11	40	42	259	-20	76	6

First characteristics of the time series
Pollutant 2: Smoke (column caption: see A5.1)

Station code	Town	S/W	summer		winter		regression		persist.
			no	50 98	50 98	slope	int.	no	
PPCVSSSPLTM									
053010100204	DUBLIN	0.96	6	33	44	187	-20	69	0
053011030204	DUBLIN	1.02	13	47	79	341	-40	134	15
055010010206	GALWAY	0.85	5	25	20	114	-9	36	0
075013520201	LUXEMBOURG-V	1.01	15	40	22	77	-3	27	0
075013530201	LUXEMBOURG-V	1.87	5	21	8	55	-3	16	0
075023550201	ESCH-SUR-ALZ	0.84	10	45	15	48	1	13	0
075033600201	STEINFORT	1.01	10	45	15	46	1	14	0

First characteristics of the time series
Pollutant 3: SPM (column caption: see A5.1)

Station code	Town	S/W	summer		winter		regression		persist.
			no	50 98	50 98	slope int.	no		
026990010308	B.R. DEUTSCH	1.02	38	107	42	125	-3	54	0
026990020308	B.R. DEUTSCH	1.02	27	74	43	119	-5	50	1
026990030308	B.R. DEUTSCH	0.99	35	109	44	125	-1	49	0
026990040308	B.R. DEUTSCH	1.01	30	76	32	119	-1	39	1
026990050308	B.R. DEUTSCH	1.02	37	125	51	169	-6	67	0
026990060308	B.R. DEUTSCH	1.02	25	62	21	74	2	23	0
026990070308	B.R. DEUTSCH	1.03	20	57	9	62	5	11	0
026990080308	B.R. DEUTSCH	1.02	25	72	42	141	-9	58	1
026990090308	B.R. DEUTSCH	1.05	29	104	57	192	-13	79	5
026990100308	B.R. DEUTSCH	1.01	33	87	33	104	-0	39	0
026990120308	B.R. DEUTSCH	1.01	33	95	43	127	-4	53	0
026990130308	B.R. DEUTSCH	1.02	26	64	36	100	-4	42	0
026990140308	B.R. DEUTSCH	1.10	22	57	25	106	-1	30	0
026990150308	B.R. DEUTSCH	0.96	23	68	32	105	-4	39	0
026990160308	B.R. DEUTSCH	1.08	34	109	47	158	-6	58	0
032011010347	KOBENHAVN	1.01	45	99	57	159	-8	72	2
032011030347	KOBENHAVN	1.01	101	168	102	237	-1	109	22
032012100347	KOBENHAVN	1.09	43	92	42	144	-0	50	2
032012210347	KOBENHAVN	1.01	43	105	52	150	-6	68	2
032013420347	KOBENHAVN	1.01	45	100	50	145	-2	59	1
032013480347	KOBENHAVN	1.01	45	123	47	128	-2	56	0
034018150347	AALBORG	1.01	4	140	84	248	-36	128	14
034029150347	ODENSE	1.01	50	111	58	170	-4	70	5
035015650347	ESBJERG	1.01	52	105	59	156	-3	69	1
035025150347	FREDERICIA	1.01	57	127	63	178	-3	73	5
035033510347	NAESTVED	1.01	67	144	79	222	-6	90	12
035046350347	RANDERS	1.01	53	114	61	166	-7	77	5
041010970318	PARIS	1.42	94	232	203	721	-64	300	89
043020080318	LILLE-ROUB.-	1.38	70	293	49	182	16	49	14
044020470318	LE HAVRE	0.99	19	86	23	130	-0	31	0
044040040318	ROUEN	0.93	24	59	35	165	-7	50	1
045040050318	DUNKERQUE	1.40	43	165	31	284	2	49	3
045040070318	DUNKERQUE	1.14	36	149	41	210	-2	55	3
045040110318	DUNKERQUE	1.08	41	99	40	101	0	48	0
045040130318	DUNKERQUE	1.20	16	82	27	163	-4	37	1
062010010315	TORINO	1.01	104	270	168	361	-29	197	132
062010020315	TORINO	1.01	147	289	206	621	-32	256	204

First characteristics of the time series
Pollutant 4: Acid (column caption: see A5.1)

Station code	Town	S/W	summer		winter		regression		persist.
			no	50	98	50	98	slope		int.
012010080403	BRUXELLES	1.28	22	53	33	123	-5	43	0
012010140403	BRUXELLES	0.67	23	49	30	124	-3	39	0
012010170403	BRUXELLES	1.17	20	41	36	133	-9	49	0
012010220403	BRUXELLES	1.05	25	69	36	139	-3	42	0
012010260403	BRUXELLES	1.12	24	58	38	129	-6	48	0
013018010403	ANTWERPEN	1.00	52	135	71	231	-8	88	5
013018090403	ANTWERPEN	1.03	52	101	87	239	-16	109	15
013018120403	ANTWERPEN	0.99	27	84	41	212	-8	58	3
013018130403	ANTWERPEN	0.98	52	154	75	191	-8	88	5
013018180403	ANTWERPEN	1.03	47	106	66	175	-4	69	6
013018260403	ANTWERPEN	1.02	75	252	112	373	-22	159	38
014015010403	CHARLEROI	1.23	30	101	89	276	-31	123	6
014015040403	CHARLEROI	0.76	13	58	23	234	-6	43	6
014015050403	CHARLEROI	1.02	33	91	46	244	-13	79	5
014015090403	CHARLEROI	0.95	20	63	40	241	-10	57	4
014015130403	CHARLEROI	1.05	36	111	30	97	2	34	0
014015140403	CHARLEROI	1.01	26	58	43	208	-9	58	5
014027010403	GENT	0.96	26	101	45	195	-11	66	4
014027060403	GENT	0.44	19	45	26	101	-1	29	0
014027070403	GENT	0.94	23	64	38	248	-9	57	10
014027090403	GENT	0.98	41	98	53	173	-7	66	3
014027120403	GENT	1.02	23	75	53	233	-14	71	7
014027150403	GENT	0.93	19	71	23	161	-4	40	1
014032180403	LIEGE	1.10	15	73	36	163	-8	48	2
015016050403	BRUGGE	1.18	15	49	24	139	-5	35	1
015026030403	KORTRIJK	1.48	18	103	44	202	-11	60	9
041010110411	PARIS	0.97	28	66	51	226	-12	68	5
041010170411	PARIS	0.98	33	75	85	285	-24	112	22
041010490411	PARIS	0.95	34	77	70	207	-17	91	10
041010650411	PARIS	0.96	32	70	64	241	-17	89	20
041010980411	PARIS	1.01	28	62	51	204	-12	70	5
042010010411	LYON	0.74	76	118	102	271	-15	121	16
042010080411	LYON	0.88	43	89	75	310	-17	98	9
042010100411	LYON	0.60	34	63	70	257	-20	95	5
042010160411	LYON	0.77	30	58	67	278	-18	88	6
042020010408	MARSEILLE	0.86	25	54	34	129	-5	43	1
043020050411	LILLE-ROUB.-	0.87	16	66	36	546	-17	79	8
044020120411	LE HAVRE	1.00	4	158	18	313	-11	56	4
044020210411	LE HAVRE	1.02	20	138	20	210	-2	42	2
044020290411	LE HAVRE	1.14	17	90	20	138	-0	29	1
044020310411	LE HAVRE	0.97	11	137	35	362	-18	88	12
044020320411	LE HAVRE	1.02	20	222	87	376	-25	124	25
044020430411	LE HAVRE	0.96	4	180	16	252	3	27	3
044031000411	NANTES	0.97	10	89	22	92	-1	23	0
044031030411	NANTES	0.89	1	5	1	221	-5	21	3
044031040411	NANTES	1.01	1	34	32	261	-15	55	10
044031060411	NANTES	0.93	1	28	11	79	-3	17	0
044031130411	NANTES	0.88	1	1	1	164	-3	12	0
044031150411	NANTES	0.99	1	37	10	148	-5	23	1

First characteristics of the time series
Pollutant 4: Acid (column caption: see A5.1)

Station code	Town	S/W	summer		winter		regression		persist.
PPCVSSSPLIM		no	50	98	50	98	slope	int.	no
044040010411	ROUEN	0.99	5	42	31	176	-11	50	1
044040040411	ROUEN	0.78	28	91	48	212	-4	59	6
044040060411	ROUEN	0.99	11	48	31	180	-9	46	3
044040070411	ROUEN	0.88	17	82	54	244	-15	78	14
044040080411	ROUEN	1.02	7	92	27	172	-4	40	3
044040110411	ROUEN	1.05	57	250	52	228	8	61	7
045020190411	FOS-BERRE	1.75	13	86	20	143	-3	30	0
045030170411	VIGNEUX DE B	0.96	1	7	2	52	-2	9	0
053010010404	DUBLIN	1.07	21	63	43	134	-11	56	0
053010040404	DUBLIN	0.81	21	59	39	121	-11	56	0
053010070404	DUBLIN	1.12	19	65	19	60	-0	22	0
053010100404	DUBLIN	0.97	20	45	26	54	-4	31	0
053011030404	DUBLIN	0.99	20	54	46	134	-13	63	0
055010010406	GALWAY	0.83	6	13	10	36	-2	13	0

ANNUAL CHARACTERISTICS OF THE SERIES

October 1984 - September 1985

Annex 6: Status of the isolated extremum of the
monthly median values

Column caption:

<u>Label</u>	<u>Explanation</u>
station code	PPCVVSSSPLTM: PP country code C town class code VV town code SSS station code PL pollutant code TM measurement technique code
status code	The status code found in the following Annex is a scaling of the isolation tendency of the extreme monthly median values with respect to the spreading of the other monthly medians (see explanation in Chapter II.4).

Results of this annex are summarized in :

Fig. II.4.13 ; page F.39

Status of the isolated extremum of the monthly median values
Pollutant 1: SO₂ (column caption: see A6.1)

Station code	Status code											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
PFCVSSSPLTM												
	84			85								85
026990010113 B.R. DEUTSCH	.	1	.	.	.	.	.	.	.	.	.	.
026990020113 B.R. DEUTSCH	.	.	.	3	1	.	.	.	.	.	.	.
026990030113 B.R. DEUTSCH	.	.	.	1	3	.	.	.	.	.	.	.
026990040113 B.R. DEUTSCH	.	.	.	5	1	.	.	.	.	.	.	.
026990050113 B.R. DEUTSCH
026990060113 B.R. DEUTSCH	.	.	.	1	3	.	.	.	.	.	.	.
026990070113 B.R. DEUTSCH	.	.	.	3	.	.	.	.	.	.	.	.
026990080113 B.R. DEUTSCH	.	3	.	.	.	.	.	.	.	.	.	.
026990090113 B.R. DEUTSCH	.	.	.	3	.	.	.	.	.	.	.	.
026990100113 B.R. DEUTSCH	.	.	.	3	1	.	.	.	.	.	.	.
026990120113 B.R. DEUTSCH	.	.	.	5	.	.	.	.	.	.	.	.
026990130113 B.R. DEUTSCH	.	.	.	5	1	.	.	.	.	.	.	.
026990140113 B.R. DEUTSCH	.	.	.	4	1	.	.	.	.	.	.	.
026990150113 B.R. DEUTSCH	.	.	.	2	1	.	.	.	.	.	.	.
026990160113 B.R. DEUTSCH
032011010127 KOBENHAVN	.	.	.	1	.	.	.	.	.	.	.	.
032011030127 KOBENHAVN	.	.	1	.	.	.	.	.	.	.	.	.
032011030128 KOBENHAVN	.	.	.	1	2	.	.	.	.	.	.	.
032012100127 KOBENHAVN
032012210127 KOBENHAVN
032013420127 KOBENHAVN	1	.	.	.	.	.	.	.
032013480127 KOBENHAVN
034018150127 AALBORG
034029150127 ODENSE
034029150129 ODENSE
035015650127 ESBJERG	.	5	.	.	.	.	.	.	.	.	.	.
035015650129 ESBJERG	.	2	.	.	.	.	.	.	.	.	.	.
035025150127 FREDERICIA
035025150129 FREDERICIA
035033510127 NÆSTVED
035033510129 NÆSTVED
035046350127 RANDERS
035046350129 RANDERS	-1	.	.	.	.	.
042020010136 MARSEILLE	.	.	3	.	.	.	.	.	.	.	-5	.
042020140136 MARSEILLE	3	.	.	.	.	.	.	.
042020180136 MARSEILLE	1
042022040136 MARSEILLE	.	.	.	3	.	.	.	.	.	.	.	.
042022060136 MARSEILLE	.	.	.	2	.	.	.	.	.	.	.	.
043020040136 LILLE-ROUB.-	.	.	.	1	2	.	.	.	.	.	.	.
043020050136 LILLE-ROUB.-	.	.	.	1	4	.	.	.	.	.	.	.
043020070136 LILLE-ROUB.-	.	.	.	1	3	.	.	.	.	.	.	.
043020080136 LILLE-ROUB.-	.	.	.	3	1	.	.	.	.	.	.	.
043020230136 LILLE-ROUB.-	.	.	.	3	1	.	.	.	.	.	.	.
045040050135 DUNKERQUE	.	.	.	1	3	.	.	.	.	.	.	.
045040070136 DUNKERQUE	.	.	.	5	.	.	.	.	.	.	.	.
045040110135 DUNKERQUE	3	.	.	.	.	.	.	.

Status of the isolated extremum of the monthly median values
Pollutant 3: SPM (column caption: see A6.1)

Station code	Status code																	
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						
FFCVSSSPLTM	84					85					85							
026990010308	B.R.	DEUTSCH	|	.	3	|	.	.	.	.	.	1	|	.	.	.	.	|
026990020308	B.R.	DEUTSCH	|	.	.	|	.	2	|	1	|	.	.	.	.	.	.	|
026990030308	B.R.	DEUTSCH	|	.	.	|	.	.	1	|	.	.	.	.	.	.	.	|
026990040308	B.R.	DEUTSCH	|	.	.	|	.	.	1	|	.	.	.	.	.	.	.	|
026990050308	B.R.	DEUTSCH	|	.	.	|	.	.	.	|	.	.	.	.	.	.	.	|
026990060308	B.R.	DEUTSCH	|	.	.	|	.	.	.	|	.	.	.	1	|	.	4	|
026990070308	B.R.	DEUTSCH	|	.	.	|	.	.	.	|	.	.	.	3	|	.	.	|
026990080308	B.R.	DEUTSCH	|	.	5	|	.	.	.	|	.	.	.	.	.	.	.	|
026990090308	B.R.	DEUTSCH	|	.	1	|	.	.	.	|	.	.	.	.	.	.	.	|
026990100308	B.R.	DEUTSCH	|	.	.	|	.	.	.	|	.	.	.	.	.	.	.	|
026990120308	B.R.	DEUTSCH	|	.	.	|	.	.	.	|	.	.	.	.	.	.	.	|
026990130308	B.R.	DEUTSCH	|	.	.	|	.	.	.	|	.	.	.	.	.	.	.	|
026990140308	B.R.	DEUTSCH	|	.	.	|	.	.	1	|	.	.	.	.	.	.	.	|
026990150308	B.R.	DEUTSCH	|	.	.	|	.	.	.	|	.	.	.	.	.	.	.	|
026990160308	B.R.	DEUTSCH	|	.	.	|	.	3	|	.	.	.	.	.	.	.	.	|
032011010347	KOBENHAVN		|	.	.	|	.	.	1	|	.	.	.	.	.	.	.	|
032011030347	KOBENHAVN		|	.	.	|	.	-1	|	5	|	.	.	.	.	.	.	|
032012100347	KOBENHAVN		|	-5	|	.	.	.	.	|	.	.	.	.	.	.	.	|
032012210347	KOBENHAVN		|	.	1	|	.	.	.	3	|	.	.	.	.	.	.	|
032013420347	KOBENHAVN		|	.	.	|	.	.	.	2	|	.	.	.	.	.	.	|
032013480347	KOBENHAVN		|	.	.	|	.	.	.	3	|	.	.	.	.	.	.	|
034018150347	AALBORG		|	.	.	|	.	.	.	.	|	.	.	.	.	.	.	|
034029150347	ODENSE		|	.	.	|	.	.	.	1	|	.	.	.	.	.	.	|
035015650347	ESBJERG		|	.	3	|	.	.	.	.	|	.	.	.	.	.	.	|
035025150347	FREDERICIA		|	.	.	|	.	.	.	.	|	.	.	.	.	.	.	|
035033510347	NAESTVED		|	.	.	|	.	.	.	3	|	.	.	.	.	.	.	|
035046350347	RANDERS		|	.	1	|	.	.	.	.	|	.	.	.	.	.	-2	|
043020080318	LILLE-ROUB.	-	|	.	.	|	.	.	.	.	|	.	5	|	1	|	.	|
044020470318	LE HAVRE		|	.	.	|	.	.	5	|	.	.	.	.	.	.	.	|
044040040318	ROUEN		|	.	.	|	.	.	5	|	.	.	.	.	-2	|	.	|
045040050318	DUNKERQUE		|	.	.	|	.	.	.	.	|	.	.	.	.	.	.	|
045040070318	DUNKERQUE		|	.	.	|	.	.	.	1	|	.	.	.	.	.	.	|
045040110318	DUNKERQUE		|	.	.	|	.	.	1	|	.	.	.	.	.	.	.	|
045040130318	DUNKERQUE		|	.	.	|	.	.	5	|	.	.	.	.	.	.	.	|
062010010315	TORINO		|	.	.	|	.	.	5	|	.	-1	|	.	.	.	|	
062010020315	TORINO		|	.	.	|	.	.	5	|	.	.	.	.	-3	|	.	|

Status of the isolated extremum of the monthly median values
Pollutant 4: Acid (column caption: see A6.1)

Station code PFCVSSSPLTM	Status code											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
	84				85				85			
012010080403 BRUXELLES	.	.	.	4	1	.	.	.	.	.	.	.
012010170403 BRUXELLES	.	.	.	1	3	.	.	.	.	.	.	.
012010220403 BRUXELLES	5	.	.	.	.	.	.	.
012010280403 BRUXELLES	.	.	.	2	1	.	.	.	.	.	.	.
013018010403 ANTWERPEN	.	.	.	2	1	.	.	.	.	.	.	.
013018090403 ANTWERPEN	1	.	.	.	.	.	.	.
013018120403 ANTWERPEN	.	.	.	1	3	.	.	.	.	.	.	.
013018130403 ANTWERPEN	2	.	.	.	.	.	.	.
013018180403 ANTWERPEN	.	.	.	1	.	.	.	.	.	.	.	.
013018260403 ANTWERPEN	.	.	1	.	.	.	.	-1	.	.	.	.
014015010403 CHARLEROI	1	.	.	.	.	.	.	.	.	.	.	.
014015040403 CHARLEROI	.	.	.	3	1	.	.	.	.	.	.	.
014015050403 CHARLEROI	5	.	.	.	.	.	.	.	.	.	.	.
014015090403 CHARLEROI	.	.	.	3	1	.	.	.	.	.	.	.
014015130403 CHARLEROI	1	.	.	.	.
014015140403 CHARLEROI
014027010403 GENT	.	.	.	1	1	.	.	.	.	.	.	.
014027070403 GENT	.	.	.	1	5	.	.	.	.	.	.	.
014027090403 GENT	5	.	.	.	.	-2	.	.
014027120403 GENT	5	.	.	.	.	.	.	.
014027150403 GENT	.	.	-2	.	5	.	.	.	.	.	.	.
014032180403 LIEGE	5	.	.	.	.	.	.	.
015016050403 BRUGGE	.	.	.	3	1	.	.	.	.	.	.	.
041010110411 PARIS	.	.	.	1	1	.	.	.	.	.	.	.
041010170411 PARIS	1	.	.	.	.	.	.	.
041010490411 PARIS	1	.	.	.	.	.	.	.
041010650411 PARIS	.	.	.	1	3	.	.	.	.	.	.	.
041010990411 PARIS	.	.	.	1	1	.	.	.	.	.	.	.
042020010408 MARSEILLE	.	.	1	5	.	.	.	.	.	.	.	.
043020050411 LILLE-ROUB.-	.	.	.	1	2	.	.	.	.	.	.	.
044020120411 LE HAVRE	.	.	.	1	5	.	.	.	.	.	.	.
044020210411 LE HAVRE	.	.	.	5	.	.	.	.	.	.	.	.
044020290411 LE HAVRE	5	.	.	.	.	.	.	.
044020310411 LE HAVRE	.	1	.	.	5	.	.	.	.	.	.	.
044020320411 LE HAVRE	.	.	1	.	3	.	.	.	.	.	.	.
044020430411 LE HAVRE	5	.	.	.	.	.	.	.
044031000411 NANTES	.	.	.	1	.	.	.	.	.	.	.	.
044031030411 NANTES	.	.	.	2	5	.	.	.	.	.	.	.
044031040411 NANTES	.	.	.	1	1	.	.	.	.	.	.	.
044031060411 NANTES	.	.	.	5	.	.	.	.	.	.	.	.
044031130411 NANTES	.	.	.	5	1	.	.	.	.	.	.	.
044031150411 NANTES	.	.	.	1	5	.	.	.	.	.	.	.
044040010411 ROUEN	4	.	.	.	.	.	.	.
044040040411 ROUEN	5	.	.	.	.	.	.	.
044040060411 ROUEN	.	.	.	1	.	.	.	.	.	.	.	.
044040070411 ROUEN	.	.	.	1	.	.	.	.	.	.	.	.
044040080411 ROUEN	5	.	.	.	.	.	.	.
044040110411 ROUEN	1	.	.
045030170411 VIGNEUX DE B	.	.	.	1	5	.	.	.	.	.	.	.

ABBREVIATED DESCRIPTIVE TABLES

(based on Commission files)

POLLUTANTS (PL)

01	SO ₂
02	SMOKE/FUMES
03	PARTICLES
04	ACIDITY

COUNTRY (PP)

01	BELGIQUE
02	BUNDESREPUBLIK D.
03	DANMARK
04	FRANCE
05	IRELAND
06	ITALIA
07	LUXEMBOURG G'DUCHE
08	NEDERLAND
09	UNITED KINGDOM
11	GREECE

CLASS OF TOWN (C)

1	> 2 M inhabitants
2	1 - 2 M inhabitants
3	0.5 - 1 M inhabitants
4	0.1 - 0.5 M inhabitants
5	< 0.1 M inhabitants
6	BACKGROUND STATIONS

COUNTRY/CLASS OF TOWN/TOWN (PPCVV)

Numerical order

01 2 01	BRUXELLES
01 3 01	ANTWERPEN
01 4 01	CHARLEROI
01 4 02	GENT
01 4 03	LIEGE
01 5 01	BRUGGE
01 5 02	KORTRIJK
01 5 03	LIBRAMONT
01 5 04	NAMUR
01 6 99	SITES DE FOND
02 1 01	BERLIN (WEST)
02 2 01	MUENCHEN, BAYERN
02 3 01	DORTMUND
02 3 02	DUISBURG
02 3 03	DUESSELDORF
02 3 04	FRANKFURT-AM-MAIN
02 3 05	NUERNBERG, BAYERN
02 3 06	STUTTGART
02 4 01	AUGSBURG, BAYERN
02 4 02	ERLANGEN, BAYERN
02 4 03	KARLSRUHE
02 4 04	KASSEL, HESSEN
02 4 05	LUDWIGSHAFEN
02 4 06	MANNHEIM
02 4 07	REGENSBURG, BAYERN
02 4 08	WIESBADEN, HESSEN
02 4 09	WUERZBURG, BAYERN
02 4 10	INGOLSTADT, BAYERN
02 4 11	FUERTH, BAYERN
02 4 12	MAINZ
02 4 13	FREIBERG
02 5 01	ASCHAFFENBURG
02 5 02	KELHEIM, BAYERN
02 5 03	HEILBROENN
02 5 04	ULM
02 5 05	SPEIZER
02 6 00	HINTERGRUNDKLASSE
02 6 99	B.R. DEUTSCHLAND
03 2 01	KOBENHAVN
03 4 01	AALBORG
03 4 02	ODENSE
03 5 01	ESBJERG
03 5 02	FREDERICIA
03 5 03	NAESTVED
03 5 04	RANDERS

COUNTRY/CLASS OF TOWN/TOWN (PPCVV)

Numerical order

04 1 01 PARIS
04 2 01 LYON
04 2 02 MARSEILLE
04 3 01 BORDEAUX
04 3 02 LILLE-ROUB. -TOURC.
04 3 03 TOULOUSE
04 4 01 CLERMONT-FERRAND
04 4 02 LE HAVRE
04 4 03 NANTES
04 4 04 ROUEN
04 4 05 STRASBOURG
04 4 06 MONTPELLIER
04 4 07 CAEN - AGGLOMERATION
04 5 01 CALAIS
04 5 02 FOS-BERRE
04 5 03 VIGNEUX DE BRETAGNE
04 5 04 DUNKERQUE FRANCE
04 6 99 SITE DU FOND

05 3 01 DUBLIN
05 4 01 CORK
05 5 01 GALWAY
05 5 02 CORK COUNTY COUNCIL,
05 6 99 BACKGROUND SITES

06 1 01 MILANO
06 1 02 ROMA, ITALIA
06 2 01 TORINO
06 3 02 GENOVA
06 4 01 ANCONA
06 4 02 BARI
06 4 03 BOLOGNA
06 4 04 BOLZANO
06 4 05 LA SPEZIA
06 4 06 MODENA
06 4 07 PADOVA
06 4 08 PESCARA
06 4 09 PIACENZA
06 4 10 TERNI
06 4 11 TRIESTE
06 4 12 VENEZIA
06 4 13 VERONA
06 4 14 FERRARA
06 5 01 AOSTA
06 5 02 ASCOLI PICENO
06 5 03 ASTI
06 5 04 BELLUNO
06 5 05 CREMONA
06 5 06 CUNEO
06 5 07 GELA
06 5 08 MACERATA
06 5 09 PISTOIA
06 5 10 ROVIGO

COUNTRY/CLASS OF TOWN/TOWN (PPCVV)

Numerical order

06 5 11	SASSARI
06 5 12	TARANTO
06 5 13	TRENTO
06 5 14	VERCELLI
06 5 15	POMEZIA
06 5 16	CIVITAVECCHIA
06 5 17	MONTEROTONDO
06 5 18	GUIDONIA
06 5 19	TIVOLI
06 5 20	COLLEFERRO
06 5 21	NETTUNO
06 6 99	POSTI DI SFONDO
07 0 00	LUXEMBOURG G'DUCHE
07 5 01	LUXEMBOURG-VILLE
07 5 02	ESCH-SUR-ALZETTE
07 5 03	STEINFORT
07 6 99	SITE DE FOND
08 3 01	AMSTERDAM
08 3 02	DEN HAAG
08 3 03	ROTTERDAM
08 4 01	ENSCHEDÉ
08 4 02	GRONINGEN
08 4 03	TILBURG
08 4 04	UTRECHT
08 5 01	BUSSUM
08 5 02	DEN BOSCH
08 5 03	HILVERSUM
08 5 04	MAASTRICHT
08 5 05	MIDDELBURG
08 5 06	ZWOLLE
08 6 99	LIG.ACHTERGRONDMET.
09 1 01	GREATER LONDON
09 1 02	GREATER MANCHESTER
09 1 03	W.MIDL.CONURBATION
09 2 01	GLASGOW|SURROUNDINGS
09 2 02	MERSEYSIDE CONURB.
09 3 01	LEEDS
09 3 02	SHEFFIELD
09 3 03	TYNESIDE
09 4 01	BELFAST
09 4 02	CARDIFF
09 4 03	EDINBURGH
09 4 04	PORTSMOUTH
09 4 05	TEESSIDE
09 5 01	BARNSELY
09 5 02	BATH
09 5 03	BEDFORD
09 5 04	EXETER
09 5 05	LINCOLN
09 6 99	BACKGR.SITES FOR U.K

COUNTRY/CLASS OF TOWN/TOWN (PPCVV)

Numerical order

11 1 01	ATHENS
11 3 01	THESSALONIKI
11 5 01	MEGALOPOLI
11 5 02	PTOLEMAIDA

COUNTRY/CLASS OF TOWN/TOWN (PPCVV)

Alphabetical order

AALBORG	03 4 01
AMSTERDAM	08 3 01
ANCONA	06 4 01
ANTWERPEN	01 3 01
AOSTA	06 5 01
ASCHAFFENBURG	02 5 01
ASCOLI PICENO	06 5 02
ASTI	06 5 03
ATHENS	11 1 01
AUGSBURG, BAYERN	02 4 01
B.R. DEUTSCHLAND	02 6 99
BACKGR.SITES FOR U.K	09 6 99
BACKGROUND SITES	05 6 99
BARI	06 4 02
BARNSLEY	09 5 01
BATH	09 5 02
BEDFORD	09 5 03
BELFAST	09 4 01
BELLUNO	06 5 04
BERLIN (WEST)	02 1 01
BOLOGNA	06 4 03
BOLZANO	06 4 04
BORDEAUX	04 3 01
BRUGGE	01 5 01
BRUXELLES	01 2 01
BUSSUM	08 5 01
CAEN - AGGLOMERATION	04 4 07
CALAIS	04 5 01
CARDIFF	09 4 02
CHARLEROI	01 4 01
CIVITAVECCHIA	06 5 16
CLERMONT-FERRAND	04 4 01
COLLEFERRO	06 5 20
CORK	05 4 01
CORK COUNTY COUNCIL,	05 5 02
CREMONA	06 5 05
CUNEO	06 5 06
DEN BOSCH	08 5 02
DEN HAAG	08 3 02
DORTMUND	02 3 01
DUBLIN	05 3 01
DUESSELDORF	02 3 03
DUISBURG	02 3 02
DUNKERQUE FRANCE	04 5 04

COUNTRY/CLASS OF TOWN/TOWN (PPCVV)

Alphabetical order

EDINBURGH	09 4 03
ENSCHEDÉ	08 4 01
ERLANGEN, BAYERN	02 4 02
ESBJERG	03 5 01
ESCH-SUR-ALZETTE	07 5 02
EXETER	09 5 04
FERRARA	06 4 14
FOS-BERRE	04 5 02
FRANKFURT-AM-MAIN	02 3 04
FREDERICIA	03 5 02
FREIBERG	02 4 13
FUERTH, BAYERN	02 4 11
GALWAY	05 5 01
GELA	06 5 07
GENOVA	06 3 02
GENT	01 4 02
GLASGOW | SURROUNDINGS	09 2 01
GREATER LONDON	09 1 01
GREATER MANCHESTER	09 1 02
GRONINGEN	08 4 02
GUIDONIA	06 5 18
HEILBROENN	02 5 03
HILVERSUM	08 5 03
HINTERGRUNDKLASSE	02 6 00
INGOLSTADT, BAYERN	02 4 10
KARLSRUHE	02 4 03
KASSEL, HESSEN	02 4 04
KELHEIM, BAYERN	02 5 02
KOBENHAVN	03 2 01
KORTRIJK	01 5 02
LA SPEZIA	06 4 05
LE HAVRE	04 4 02
LEEDS	09 3 01
LIBRAMONT	01 5 03
LIEGE	01 4 03
LIG.ACHTERGRONDMET.	08 6 99
LILLE-ROUB. -TOURC.	04 3 02
LINCOLN	09 5 05
LUDWIGSHAFEN	02 4 05
LUXEMBOURG G'DUCHE	07 0 00
LUXEMBOURG-VILLE	07 5 01
LYON	04 2 01

COUNTRY/CLASS OF TOWN/TOWN (PPCVV)

Alphabetical order

MAASTRICHT	08 5 04
MACERATA	06 5 08
MAINZ	02 4 12
MANNHEIM	02 4 06
MARSEILLE	04 2 02
MEGALOPOLI	11 5 01
MERSEYSIDE CONURB.	09 2 02
MIDDELBURG	08 5 05
MILANO	06 1 01
MODENA	06 4 06
MONTEROTONDO	06 5 17
MONTPELLIER	04 4 06
MUENCHEN, BAYERN	02 2 01
NAESTVED	03 5 03
NAMUR	01 5 04
NANTES	04 4 03
NETTUNO	06 5 21
NUERNBERG, BAYERN	02 3 05
ODENSE	03 4 02
PADOVA	06 4 07
PARIS	04 1 01
PESCARA	06 4 08
PIACENZA	06 4 09
PISTOIA	06 5 09
POMEZIA	06 5 15
PORTSMOUTH	09 4 04
POSTI DI SFONDO	06 6 99
PTOLEMAIDA	11 5 02
RANDERS	03 5 04
REGENSBURG, BAYERN	02 4 07
ROMA, ITALIA	06 1 02
ROTTERDAM	08 3 03
ROUEN	04 4 04
ROVIGO	06 5 10
SASSARI	06 5 11
SHEFFIELD	09 3 02
SITE DE FOND	07 6 99
SITE DU FOND	04 6 99
SITES DE FOND	01 6 99
SPEIZER	02 5 05
STEINFORT	07 5 03
STRASBOURG	04 4 05
STUTTGART	02 3 06

COUNTRY/CLASS OF TOWN/TOWN (PPCVV)

Alphabetical order

TARANTO	06 5 12
TEESSIDE	09 4 05
TERNI	06 4 10
THESSALONIKI	11 3 01
TILBURG	08 4 03
TIVOLI	06 5 19
TORINO	06 2 01
TOULOUSE	04 3 03
TRENTO	06 5 13
TRIESTE	06 4 11
TYNESIDE	09 3 03
ULM	02 5 04
UTRECHT	08 4 04
VENEZIA	06 4 12
VERCELLI	06 5 14
VERONA	06 4 13
VIGNEUX DE BRETAGNE	04 5 03
W.MIDL. CONURBATION	09 1 03
WIESBADEN, HESSEN	02 4 08
WUERZBURG, BAYERN	02 4 09
ZWOLLE	08 5 06

