

LRTAP - 3/75
Kjeller, 2nd April 1975

THE CONCENTRATION OF WATERSOLUBLE
COMPONENTS IN PRECIPITATION AND
AIRBORNE PARTICULATE MATTER

Results from the NORDFORSK 100-days
sampling programme.

by

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PREFACE

This is a preliminary report of the results from the 100-days period of extensive measurements at ground sampling stations in Denmark, Finland, Norway and Sweden. The results have not been fully evaluated and commented, this report is therefore distributed only as information material for the LRTAP-project.



Brynjulf Ottar
Director

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THE CONCENTRATION OF WATERSOLUBLE
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INTRODUCTION

Anthropogenic emissions of sulphur dioxide is the main cause of the acid precipitation in Scandinavia. Sulphur dioxide in the atmosphere may react and interact with other substances which are present in the atmosphere, and precipitation scavenging of sulphur dioxide and sulphate particles is closely connected with rainout of other species. It is therefore of interest to compare the chemical composition of aerosol and precipitation samples to obtain more information on atmospheric reactions and precipitation processes.

With support from NORDFORSK, extensive studies have been undertaken at the pilot station Råö by C. Brosset and IVL in Gothenburg, and the aerosol sampling equipment developed was suitable for analysis of several components.

At the 10th meeting of NORDFORSK's study group for the investigation of the acidification of precipitation, in Helsinki, 19th November 1972, it was suggested that a pilot measurement programme should be carried out within the NORDFORSK-project. The purpose of this exercise was to see that the sampling and analysis methods were reliable, and that the results obtained were of value in connection with a meteorological interpretation. It was suggested that a minimum of 30-50 samples would be necessary, and a sampling period of 100 days was decided in order to ensure a reasonable balance between high and low air concentrations.

In addition to sulphate and strong acid in the aerosol and in precipitation, the following components were named as essential: ammonium, nitrate, chloride, calcium, sodium and iron. In addition, total suspended particulates were recorded, and supplementary chemical analysis were carried out by several of the laboratories.

This report is a collection and summary of the measurement data. Some statistical analysis of data have been carried out and the meteorological conditions are commented for periods with high air concentrations. The measurement results at Råö during the episodes and have been commented by Brosset (1, 2).

SAMPLING AND CHEMICAL ANALYSIS

The aerosol sampling equipment constructed at Råö was duplicated by the Norwegian Institute for Air Research and installed at the sampling site Birkenes in southern Norway. This equipment has a fan-type pump capable of drawing 2-3000 m³ of air per 24 hours, through the filter, a 142 mm diameter Gelman Acropor AB 5000. Because of the air flow, the cylindrical air intake will admit particles up to 60 μ diameter (approximately). At Keldsnor in Denmark, a LIB-type sampling apparatus was used, and at Jokioinen in Finland a LIB-sampler and a Staplex high-volume sampler were used alternatively.

After sampling the filters were folded placed in a tight polyethylene bag and sent to the respective laboratories for chemical analysis.

After weighing, the filters were leached with 200 ml of water at 22°C. The leaching solution was analysed for the following components by recommended methods:

H^+ -strong acids:	by Gran's plot titration according to Askne and Brosset (3) or LRTAP-5/71.
SO_4^{--}	by the barium perchlorate-thorin spectrophotometric method according to LRTAP-4/71.
NO_3^-	by reduction to nitrate and coupling (the Griess method)- according to recommended water analysis methods (4, 5).
NH_4^+	by the indophenol blue method after a procedure adopted by NORDFORSK's working group for water analysis methods (6, 7).

Other components were determined by standard physico-chemical methods. In addition, filters from Keldsnor were analysed by proton-induced x-ray-fluorescence for a number of elements.

The Gelman Acropor filter was selected because of excellent strength and good chemical properties. The filter material adsorbs or neutralizes only a small amount of the strong acid in the samples, under the leaching conditions specified this adsorption amounts to 2-5 μ equivalents per filter.

In addition, the concentration of iron (III)-ions were determined because the first two protolysis steps of Fe^{3+} are included in the titration value for strong acid (3).

In order to investigate the reproducibility of the chemical analysis, 25 filters from Råö were cut in halves and analysed separately at IVL and at NILU. Good agreement was obtained, particularly for ammonium, nitrate and sulphate. For strong acid a systematic difference was found amounting to about 5 μ mol H^+ per half-filter.

Only one of the samples was high in particulate strong acid. The two laboratories' results for this sample were 44.7 and 41.1 μ mol, respectively.

For the sampling of precipitation, a special precipitation sampling apparatus developed by J. Morkowski at the Eidgenössische Materialprüfungsanstalt (EMPA) in Zürich, was used at Råö and Birkenes. A diagram of this equipment is shown in figure 2. The lid is controlled by a precipitation sensor and stays open after the last rain experienced. The maximum sampling duration in a single precipitation period was initially set to 6 hours, but this had to be changed to 3 hours in order to avoid overflow in the sample collection bottles. A clock and printer records opening and closing of the lid and changing of sample bottles. Chemical analysis of the precipitation samples were performed by the same methods as for the aerosol samples.

Results

The four countries Denmark, Finland, Norway and Sweden have reported results from aerosol and precipitation samples collected between March and October 1973. Copies of the results are presented in Appendix 1. The stations where the samples are collected are Keldsnor (DK 5), Birkenes (N01), Råö (S02) and Jokioinen (SF2).

Only a few precipitation samples are received from Keldsnor, consequently a comparison of precipitation and air data based upon mean concentrations is not possible.

The aerosol data received from Råö are picked out to cover episodes, mean aerosol concentrations from the period are then estimated.

A general view over the data collected is given in Table I.

RELATIONSHIP BETWEEN AIR AND PRECIPITATION COMPOSITION
DURING SHORT PERIODS WITH HIGH CONCENTRATIONS

During the period May - August 1973 the number of days with precipitation is approximately 55 for all four stations. Air and precipitation samples analysed for strong acid, sulphate ammonium and nitrate, and with high concentrations of at least one of these components are presented in figures 3-6 as "short periods". The values of the sulphate concentrations are shown as reported and no subsequent corrections for sea spray have been carried out. The units are neq/m^3 and $\mu\text{eq/l}$. When the relative humidity in the air increases the larger particles will serve as condensation nuclei for cloud droplets. Assuming a near complete rainout and a water content in rainclouds of 1 g/m^3 , the concentration of a component of an aerosol expressed in neq/m^3 will be the same as the concentration of that component in precipitation expressed in $\mu\text{eq/l}$. The expression relative equal concentrations therefore apply to this situation. Evidently several important factors are not taken into account in this simplified picture.

The efficiency of rainout may be dependent on the amount of precipitation and the precipitation intensity. There may also be a washout of aerosols under the rainforming layer. Contribution from this process is probably dependent upon the intensity of precipitation.

The aerosol concentration may be different from one atmospheric layer to the other, and the concentrations determined at the ground are not necessarily representative for the concentrations in the rainforming levels.

Uptake of gases as sulphur dioxide, ammonia and nitrogen oxides is possible when the drops are not saturated with the particular gas. It is known that a absorption of sulphur dioxide in cloud droplets may be followed by an oxidation

to sulphate when the pH is not too low ($\text{pH} > 2$) (8). Ammonia is expected to be readily dissolved in acid rain due to its alkalinity. Absorption of nitrogen dioxide may be followed by an oxidation with ozone, and a hydration in the drop, resulting in nitric acid.

Evaporation of water from the raindrops as they are falling through the atmosphere may also occur, this process resulting in a concentration of the pollutants present.

The two periods presented from Keldsnor, 29th June and 1st September, presented in figure 3, are characterized by relatively larger sulphate concentrations in air than in precipitation. The strong acid concentrations in air and precipitation are almost equal. The sodium concentrations in precipitation are extreme, the 1st September the concentration in air is also very large.

The large amount of sodium in precipitation 29th June is probably due to seaspray in the sampler. The trajectories both days show strong winds from the North Sea.

The high concentration of ammonium in air at Keldsnor is probably due to local agricultural activities.

The difference between sodium in air and precipitation is smaller the 1st September. The low concentration of sulphate in precipitation may be due to a lower concentration in the rainforming levels than at the ground. This effect probably also has to be considered 29th June to explain the difference between the air and the precipitation concentrations.

The periods from Jokioinen are presented in figure 4. While the last measurement period from Jokioinen, presented on 18th August, shows a relative larger sulphate concentration in air than in precipitation, the opposite is the situation on the 28th June and the 18th July. All samples presented

show a relatively higher concentration of strong acid in precipitation than in air. With sulphur dioxide in and below the rainforming layers a scavenging of the gaseous sulphur dioxide may be expected, and consequently an increase of the strong acid and sulphate concentrations in the precipitation relatively to the air may take place. The acid may partly be neutralized by gaseous ammonia, if present.

The aerosol samples have not been analysed for ammonium. Due to the low sulphate concentrations the 28th June and the 18th July, and assuming a low nitrate concentration, it may be expected to be low these days. Particularly the 28th June a considerable amount of sulphur dioxide may have been absorbed by the droplets. The large increase in strong acid and ammonium concentrations in precipitation relative to air 18th August is difficult to explain.

The three periods presented from Birkenes (figure 5) are 20th-22nd April, 30th May and 26th June. All periods have in common a comparatively large concentration of nitrate in precipitation than in air.

A washout/rainout of nitrogen oxides may be considered in this periods. This may increase the concentration of strong acid and also the ammonium concentration in precipitation, if ammonia is present. An evaporation of raindrops should increase concentration of other components as for instance magnesium, this is not the case. A washout/rainout of nitrogen oxides and sulphur dioxide may explain the results obtained these periods.

The results 26th June may be caused by a lower concentration of pollutants at the rainforming levels than at the ground. Since the nitrate and the sum of ammonium and strong acid concentrations in precipitation increase relatively to air, a washout/rainout of nitrogen oxides should also be considered.

The three periods presented from Råö (figure 6) are 3rd-6th August, 19th September and 20th September. The sulphate concentrations in air and precipitation are relatively equal the two first periods, larger in precipitation the last period. The periods 3rd-6th August and 19th September are further characterized by relatively lower concentrations of ammonium and higher concentrations of strong acid in precipitation than in air.

The sodium concentration in air is large 3rd-6th August indicating a large chloride concentration. The low strong acid concentration in air is probably caused by interaction between acid particles and sodium chloride particles on the filter. Hydrogen chloride gas will escape through the filter and consequently reduce the strong acid content.

The last period 20th September a washout/rainout of sulphur dioxide may be a more dominant factor than in the preceding two periods.

Generally the number of processes determining the relationship between the concentrations of the different components in air and precipitation is large and the overall picture is complex. The absorption of sulphur dioxide in raindrops seems, however, to be a factor contributing to the acidification of rain. Differences in concentrations at different atmospheric layers also seem to be an important factor, which has to be considered to explain the results.

AVERAGE CONCENTRATION DATA AND RELATIONSHIP BETWEEN AIR AND PRECIPITATION CONCENTRATIONS

Figure 13 presents the mean concentrations of the reported aerosol components expressed in neq/m^3 .

Since the aerosol samples from Råö are from selected filters the obtained mean values may not be representative for the period. A simple estimation of mean values for the period was obtained by taking the ratio between LRTAP and the high-volume sulphate means and then multiplying each mean value with this factor.

The mean aerosol concentrations presented in figure 13 has a close resemblance to those obtained during the OECD 45-days advanced sampling programme 15th February - 31st March, 1974. Birkenes and Råö have relatively large concentrations of sodium, these may be assumed to be approximately equal to the chloride concentrations, which are not determined. As seen from the short periods presented the sum of the ammonium and the strong acid concentrations generally approximates the sum of the sulphate and nitrate concentrations, this is also seen from the mean values presented. The nitrate concentration measured at Keldsnor is considerably lower than that measured during the OECD 45-days programme.

The washout ratios in units 10^2 kg air/kg rain, based upon mean concentrations from the periods, are presented in Table II. The washout ratios of a component is defined as (concentration/kg rain)/(concentration/kg air) and gives information about the scavenging of the different species present in and below the rainforming levels. Following the approximations and discussions from the short periods a cloud water content of 1 g/m^3 , a complete rainout should correspond to 13×10^2 . When the ratio is significantly larger than this other effects must contribute. A rainout/washout of sulphur dioxide should increase both the strong acid ratio and also the sulphate washout ratio.

As also seen from the OECD 45-days programme 15th February - 31st March the washout ratio for nitrate is very large. This may be due to a washout of nitrogen oxides and corresponds to the high strong acid washout ratio.

CORRELATION AND REGRESSION ANALYSIS OF PRECIPITATION DATA

The components determined in the precipitation samples have been correlated by a simple correlation analysis and the results are presented in Tables III - VIII. Since generally components as the strong acid, sulphate, ammonia and nitrate are determined more frequently than other components, one matrix of correlation coefficients with a large sample size and a second, complete with all components, with a smaller sample size are presented in the tables.

The tables show that the NH_4^+/H^+ coefficients generally are lower than the $\text{SO}_4^{2-}/\text{NH}_4^+$ and the $\text{SO}_4^{2-}/\text{H}^+$ correlation coefficients. This is probably due to a similar tendency in the time variations of the sulphate and ammonia concentrations, and the sulphate and strong acid concentrations, and the last trend may be explained as SO_2 -oxidation resulting in sulphate and strong acid. A situation with a large proportion of ammonium will result in a reduction of the strong acid concentration. This contributes to an "out of phase" variation between the ammonium and the strong acid concentrations and reduces the correlation between these two components.

The high correlation between ammonium and sulphate is not unexpected. Already Junge and Ryan pointed to the effect of gaseous ammonia in the formation of sulphates from sulphur dioxide in the atmosphere (8). Further, ammonium sulphate particles have a long average residence time in the atmosphere, compared with gaseous ammonia and sulphur dioxide.

It is difficult to find any systematic variation in the correlations between nitrate and the components ammonium, sulphate and strong acid. The data from Birkenes (N01) shows high correlations between nitrate and strong acid, and nitrate and sulphate, the corresponding correlation coefficients obtained from the Råö data (S02) and the

Jokioinen data (SF 2) being quite variable. The correlations between ammonia and nitrate seem, however, to be rather low at all stations.

Laboratory experiments seem to indicate that wet surfaces may adsorb intermediates in the $\text{NO}_x - \text{NO}_3^-$ conversion. The hydration takes place on the surfaces (COX (9)). Aerosols as ammonium sulphate and ferric oxides are important in this process at a high relative humidity, particularly so when the aerosol is a droplet.

The aerosol then serves as a catalyst and the nitrate concentration obtained by this process will be mainly dependent upon the concentration of nitrogen dioxide and ozone in the atmosphere and consequently not correlated with other components to any extent.

A number of precipitation samples collected at Birkenes are analysed for heavy metals. The results show a high correlation between lead and the components sulphate, ammonium and in particular with nitrate, while iron is generally not correlated with the other components. The correlations of zinc with other elements is variable, ranging from 0.4 to 0.7, when iron is not included. The size of the sample is probably too small to permit any conclusion to be drawn, since the corresponding data are missing from the other stations.

It is interesting to note that the correlation coefficients between sodium and magnesium is 0.99 at Birkenes indicating a common source, which obviously is seaspray, while the corresponding coefficient at Jokioinen is merely 0.01 indicating different sources for sodium and magnesium.

To investigate the possibility for a grouping of the precipitation data analysed for strong acid, sulphate, ammonia and nitrate, the data from Birkenes, the station having the

largest number of analysed samples, were plotted in diagrams with the concentrations of two components in each diagram.

For all combinations of the components except ammonium and nitrate more than one straight line could be drawn in the diagram indicating episodes with different composition of the samples. This trend seems to be most pronounced for the strong acid/sulphate diagram. This diagram is presented in figure 14, the concentration units being $\mu\text{mol/l}$. The sulphate concentrations were corrected for seaspray using the corresponding sodium concentrations. The composition of each sample is indicated by a circle.

A very rough division in sectors centered at Birkenes with sector borders NW-SW, 1, SW-SE, 2, SE-NE, 3, and NE-NW, 4, were chosen, and each sample classified according to the sectors and trajectories (850 mb, arriving at 12 GMT) computed 48 hours backward. The number in the circle indicates the sector that the wind has been sweeping through, two numbers in a circle then indicating that the wind has been passing a sector border line.

In the period available the number of trajectories through sector 1 is 34, while 12 days has trajectories from sector 3. The remaining samples correspond to trajectories crossing the sector borders and trajectories from sector 4 and 2, wind from sector 2 being most common in this group. In figure lines corresponding to the composition of the HSO_4^- ion and H_2SO_4 are drawn. Only samples analysed for strong acid are plotted, six samples with pH measurements only are not included. In the low concentration part of the diagram several circles are not drawn due to coincidence, or nearly so, with other circles.

Since the circles corresponding to sector 1 and sector 3 seem to assemble in different regions of the diagram at

higher concentrations, two lines were fitted the data corresponding to sector 1 and 3, using a least square regression. The regression data are:

Regression line:	95% confidence limits		N	Corr. coeff	Sector
$(SO_4) = 0.850 \cdot (H^+) + 6.00$	1.094;	0.605	12	0.93	3
$(SO_4) = 0.448 \cdot (H^+) + 7.74$	0.557;	0.340	34	0.86	1

N is the sample size.

It is seen that the slope of the regression lines are not significant different from 1.0 and .5 corresponding to the composition of sulphuric acid and the bisulphate ion. This may be due to a difference in the ratio of sulphate to ammonia emitted from different source areas. Trajectories from the period March-September are presented in figures 23-27.

Among the results not included in figure 14, one sample, 13th June, gives a point distant from the other points in the diagram after calculating the strong acid concentration from pH. This may be due to contamination of the sample. The trajectories show that this measurement corresponds to sector 1. The remaining five measurements are located among those presented.

MAY EPISODE, 1973

The highest concentrations of acid particles occurred almost simultaneously at Råö and Birkenes. The concentration of particulate strong acid, sulphate and ammonium at Birkenes are reproduced in figure 12. This episode and the measurement results from Råö has already been commented by Brosset (2). Because of the importance of this episode the meteorological conditions during the period are discussed in the following.

Local weather

In early summer there is often a shallow layer of stable air over the cold sea. Local emission sources may be enhanced during such periods. If the large scale winds are weak, as in May 1973, mesoscale circulations will become more important than usual. In the coastal zone land and sea breeze transports may be responsible for most of the dispersion within the shallow stable surface layer (sometimes only a few hundred meter thick). The derivation of back trajectories will also become rather uncertain because of the weak winds with mesoscale features. The real winds may also deviate much from winds derived from the sea-level pressure distribution, etc.

In the actual episode there was haze and fog over Skagerak on 22nd and 23rd May. During the afternoon of 24th May and the next day a weak low gave precipitation over most of the region. The winds were variable, but mostly from the north. From 26th May on southwesterly winds were blowing until 28th May when the land-sea breeze became dominant near Gothenburg (NW). On 29th May local winds were mostly northeasterly. But near noon the land-sea effects had, at many stations, turned the wind sector to its typical direction.

Large scale transport patterns

During the days of 20th to 21st May an extended low was lying west of France and a southeasterly flow prevailed from the Balcan towards Scandinavia. On 22nd May, Atlantic air masses from SW-W penetrated towards southern parts of Scandinavia and for the next week the 850 mb back trajectories (4 days) indicated transport from both western Europe and Scandinavian sources towards N01 and S02. On 25th May and 26th weak N-NE winds carried relatively clean air towards the two stations. During the three days 26th to 28th May a high was centered near Denmark. Weak SW-W winds (850 mb) carried air over the United Kingdom (and the western part of the continent) towards southern Scandinavia. Figure 11 shows the back trajectories for these four days. The back trajectories for 28th to 29th May indicate that the paths of the N01 back trajectories do not pass any significant emission source during the four days. But the calculated SO_4 concentrations from the dispersion model for 24th and 25th May show that the starting points of the N01 back trajectories (West of Scotland and the central part of the North Sea, respectively) are lying air in regions with SO_4 concentrations of $15-20 \mu\text{g}/\text{m}^3$ and SO_2 concentrations of $30-40 \mu\text{g}/\text{m}^3$. The calculations indicate therefore that a significant part of the SO_4 aerosols on 28th to 29th May were more than four days old.

It might be of interest to see how the Lagrangian model (Eliassen and Saltbones, (10)) estimates the aerosol concentrations of sulphur on filter during the episode of 27th to 29th May, 1974. The mixing ratios in grid formal are reproduced directly in figures 7-10. The build-up of the episode concentrations agree reasonably well with the SO_4 records given in figure 12.

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TABLES

- I Data available March - October 1973.
- II Washout ratios based on mean values.
- III Correlation coefficients based upon precipitation data, Birkenes, May - June 1973, sample size 16.
- IV Correlation coefficients based upon precipitation data, Birkenes, May - June 1973, sample size 37.
- V Correlation coefficients based upon precipitation data, Råö, May - October 1973, sample size 21.
- VI Correlation coefficients based upon precipitation data, Råö, May - October 1973, sample size 58.
- VII Correlation coefficients based upon precipitation data, Jokioinen, March - August 1973, sample size 15.
- VIII Correlation coefficients based upon precipitation data, Jokioinen, March - August 1973, sample size 27.

FIGURES

- 1 High volume air sampler.
- 2 Precipitation sampler.
- 3-6 Short periods, mean concentrations in air and precipitation.
- 7-10 Mixing ratio of sulphate in air, computed from model. Aerosol episode, May 1973.
- 11 4-days trajectories, 850 mb. Aerosol episode, May 1973.
- 12 Concentrations of strong acid, ammonium and sulphate at Birkenes and Råö. Aerosol episode, May 1973.
- 13 Air samples, mean values in neq/m^3 .
- 14 Relation between sulphate and strong acid in precipitation at Birkenes.
- 15-22 Trajectories corresponding to the short periods presented in figures 3-6. Computed 2 days backward, 850 mb.
- 23-27 Trajectories from the period March-September 1973. Computed 2 days backward, 850 mb.

Air.

Country	TPM	H	NO ₃	NH ₄	SO ₄	Ca	K	Fe	Mg	Na	Cl	Zn	Pb	Cd	Si	Ti	Cr	Mn	Ni	Cu	Br	Sr	Al
Denmark	x	x	x	x	x	x	x	x		x		x	x		x	x	x	x	x	x	x	x	
Finland	x	x			x			x															
Norway	x	x	x	x	x	x	x	x	x	x		x	x	x									
Sweden	x	x	x	x	x			x		x	x												x

Precipitation.

Country	H	NO ₃	NH ₄	SO ₄	Ca	K	Fe	Mg	Na	Cl	Zn	Pb	Cd	Tot.N.
Denmark														
Finland	x	x	x	x	x	x	x	x	x					x
Norway	x	x	x	x	x	x		x	x		x	x	x	
Sweden	x	x	x	x	x	x			x					

Table I: Data available.

Sampling periods: (1973)
 Denmark A 22/3 - 11/9
 Finland A 13/6 - 20/8
 Norway A 23/3 - 30/6
 Sweden A 22/3 - 28/9

All components are not necessarily sampled throughout the whole period.

p 29/6, 1/10
 p 4/3 - 31/8
 p 25/3 - 27/6
 p 24/5 - 27/10

	H ⁺	SO ₄ ²⁻	NH ₄ ⁺	NO ₃ ⁻	Ca ²⁺	Mg ²⁺	Na ⁺	K ⁺
DK 5	34 ⁺	6 ⁺						
N 01	62	15*	15	101	34	51	13	18
S 02	110	8	3	6			18	
SF 2		12						

Table II: Washout ratio in units 10² kg air/kg rain.

Keldsnor: April - September 1973

Birkenes: April - June 1973

Råö: May - August 1973

Jokioinen: June - August 1973

* Based upon sulphate data corrected for seaspray.

+ Based upon LRTAP precipitation data.

H ⁺	1.00				
SO ₄ ²⁻	.52	1.00			
SO ₄ ²⁻ CORR	.66	.93	1.00		
Na	-.24	.36	-.02	1.00	
Int.	-.15	-.12	-.12	.00	1.00

H ⁺	SO ₄ ²⁻	SO ₄ ²⁻ CORR.	Na ⁺	Int.
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Table VI

Correlation coefficients based on precipitation data Råp (S 02),
May - October 1973.

Sample size: N = 58.

H ⁺	1.00						
SO ₄ ²⁻	.65	1.00					
SO ₄ ²⁻ CORR.	.66	1.00	1.00				
NH ₄ ⁺	.38	.76	.76	1.00			
NO ₃ ⁻	.60	.88	.89	.61	1.00		
Int.	-.06	-.23	-.23	-.24	-.27	1.00	
	H ⁺	SO ₄ ²⁻	SO ₄ ²⁻ CORR.	NH ₄ ⁺	NO ₃ ⁻	Int.	

Table VIII

Correlation coefficients based on precipitation data Jokioinen (SF 2),
March - August 1973.

Sample size, N = 27.

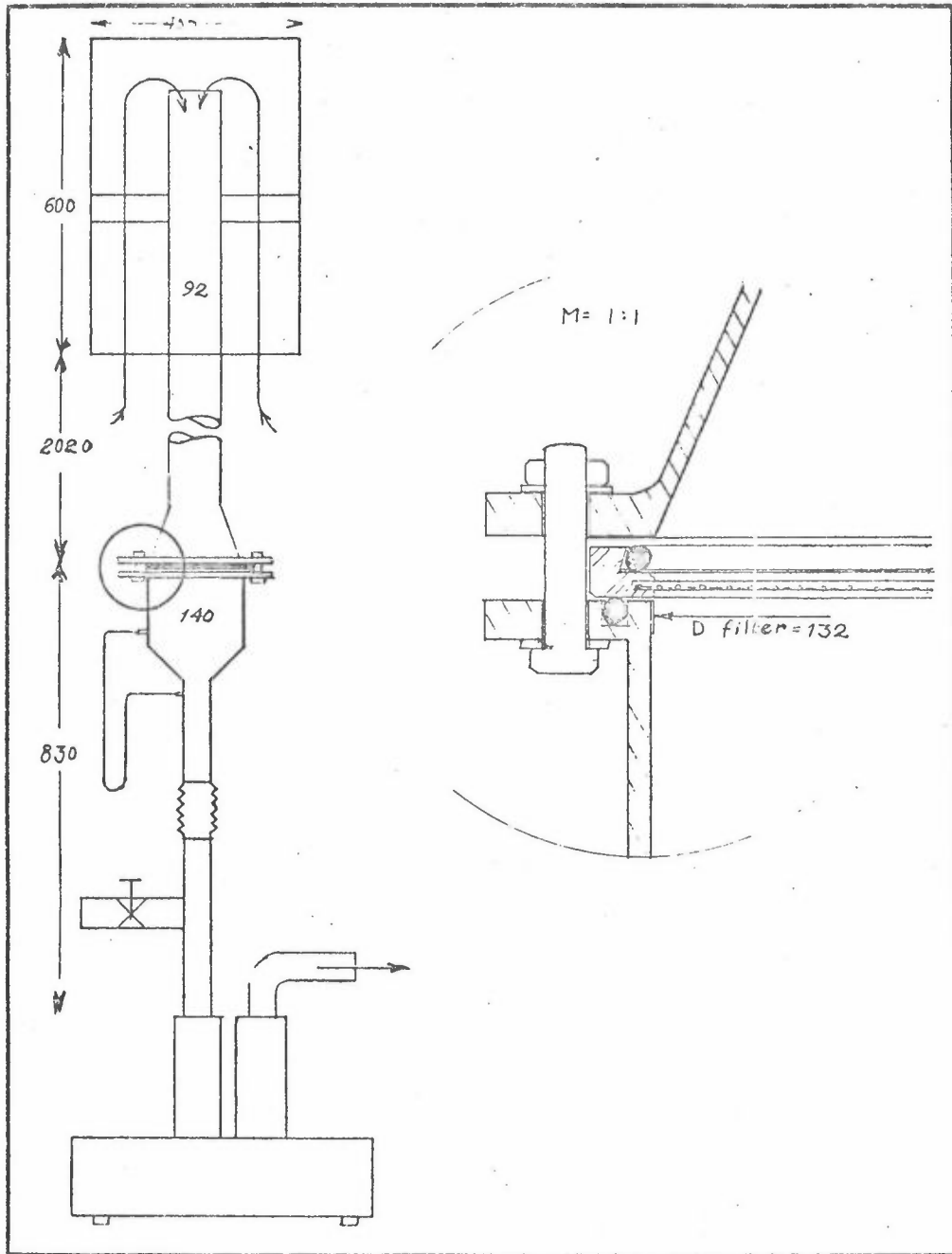
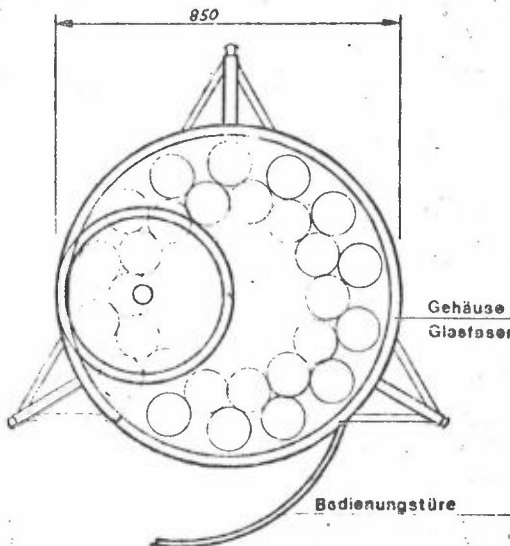
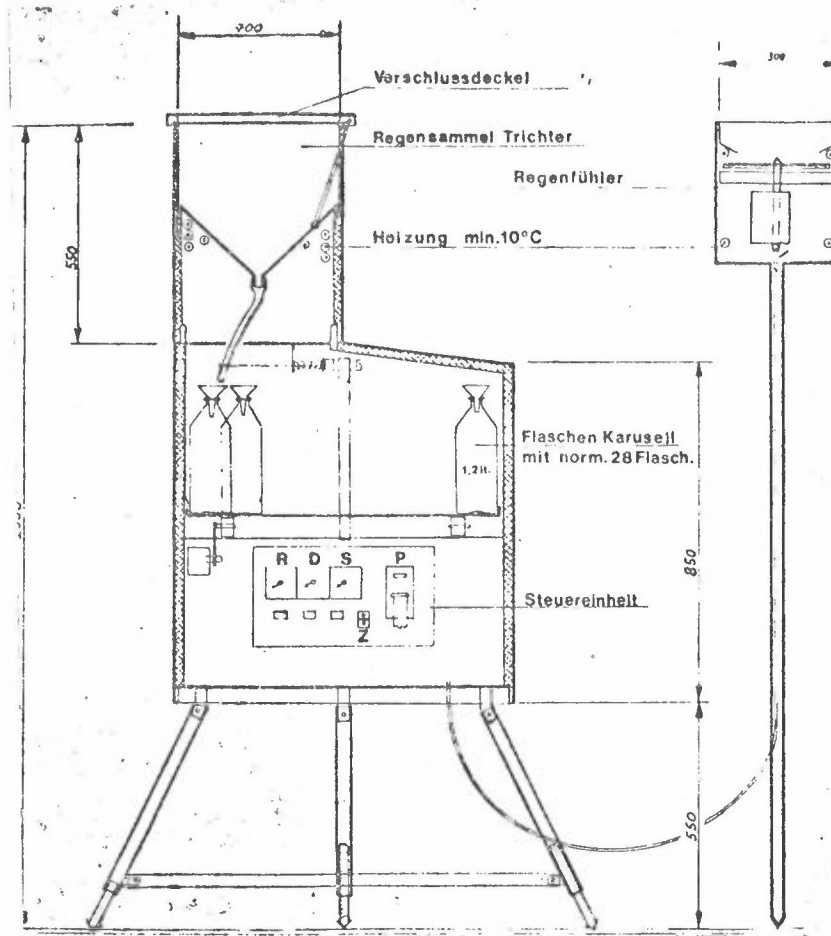


Figure 1: High-volume aerosol sampling apparatus.
Scale 1:1. Construction material
aluminium alloy. 57 S.



ELINAP CH 8306 Brüttisellen
Regen und Schnee
Sammler Typ ARS 72

Konst. 12.3.72 MI

Gehäuse aus Polyester mit
 Glasfaser-Einlage

Bedienungstüre

Steuereinsatz enthaltend:

3 Zeitschaltwerke R,D,S

1 Protokolldrucker P für Datum und Uhrzeit, Regen-anfang- und
 ende sowie Probenwechselanzeige

1 Empfindlichkeitssteller Z für den Regenfühler

Figure 2: Precipitation sampler.

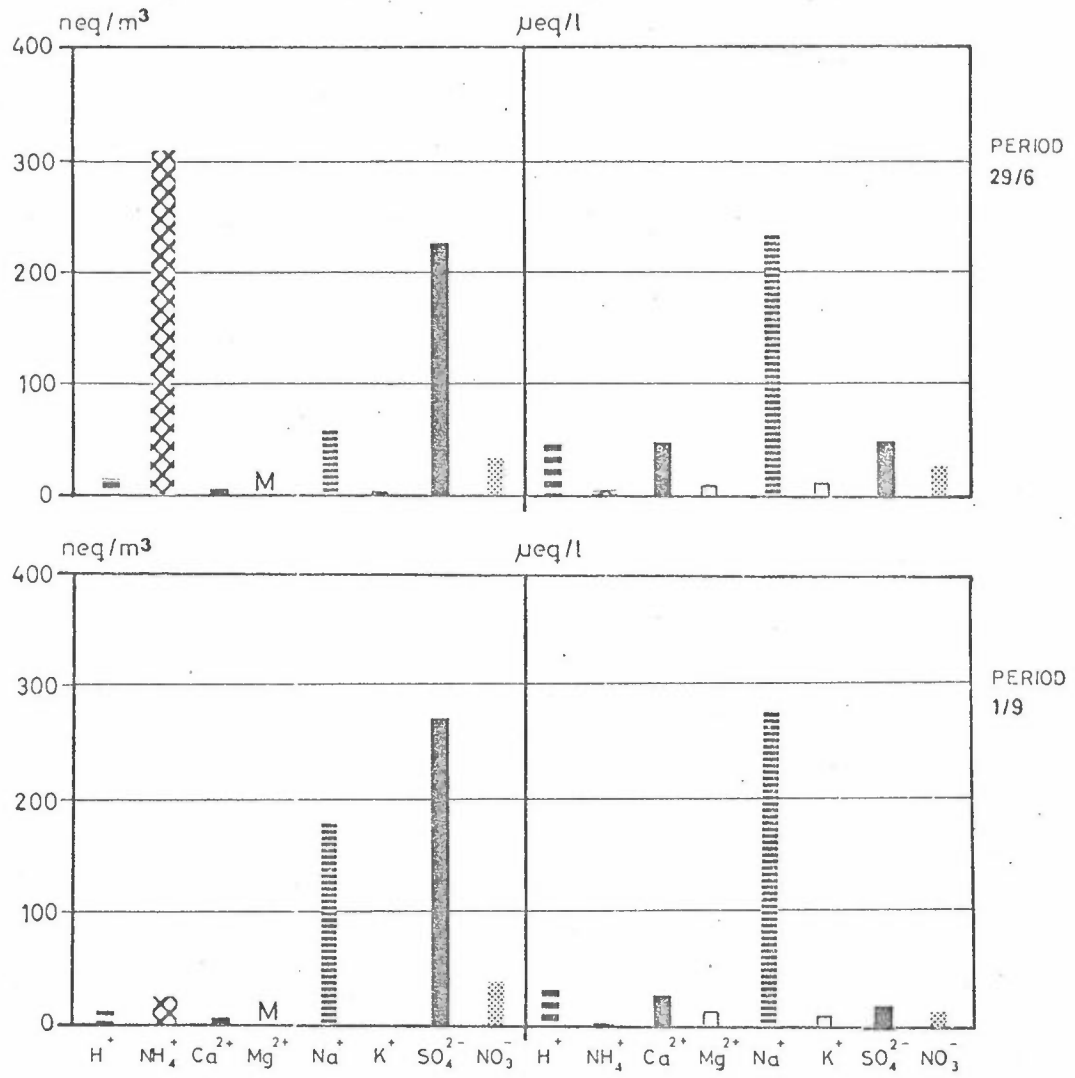


Figure 3: Station DK 5, Keldsnor. Short periods, mean concentrations in air and precipitation samples.

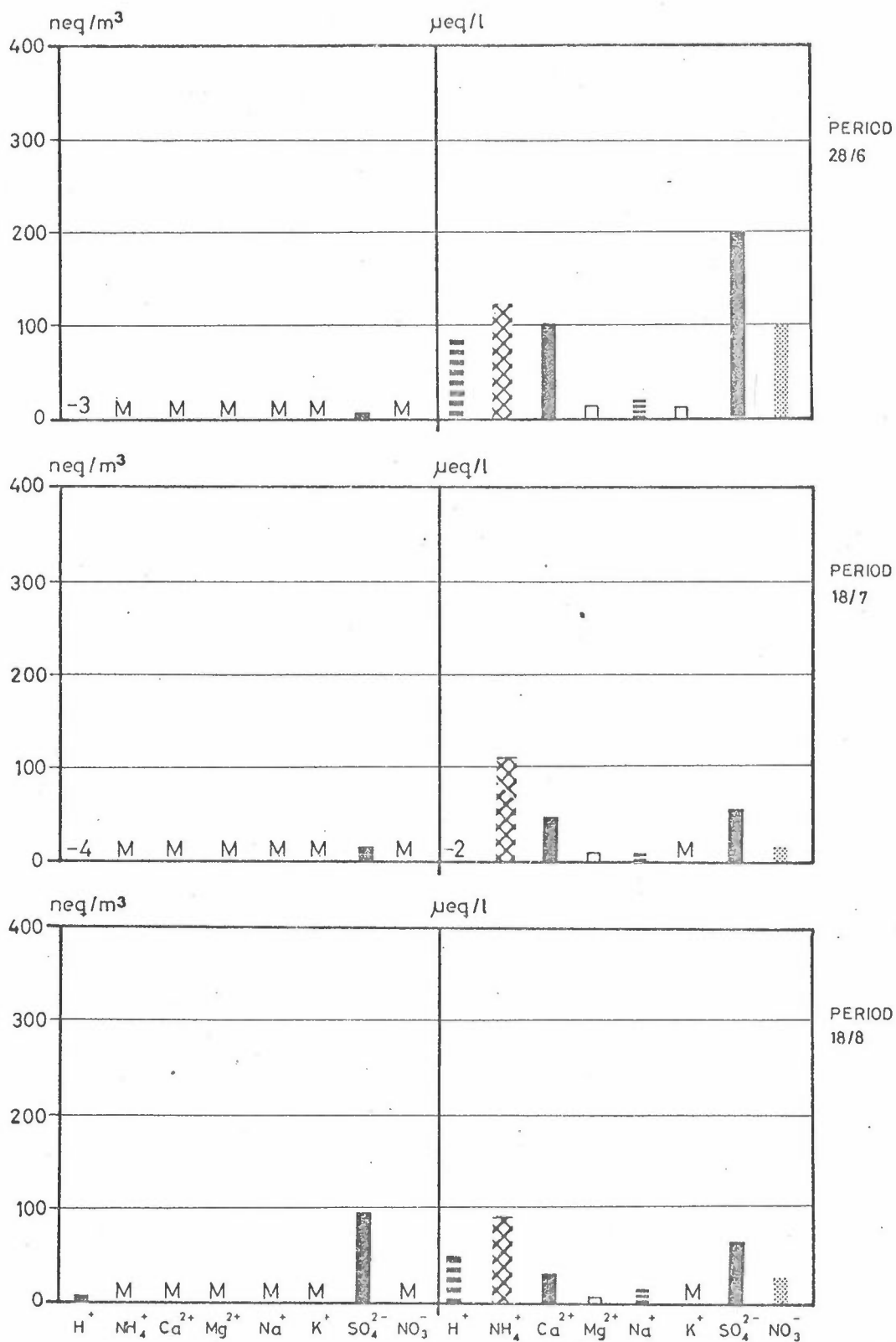


Figure 4: Station SF 2, Jokioinen. Short periods, mean concentrations in air and precipitation samples.

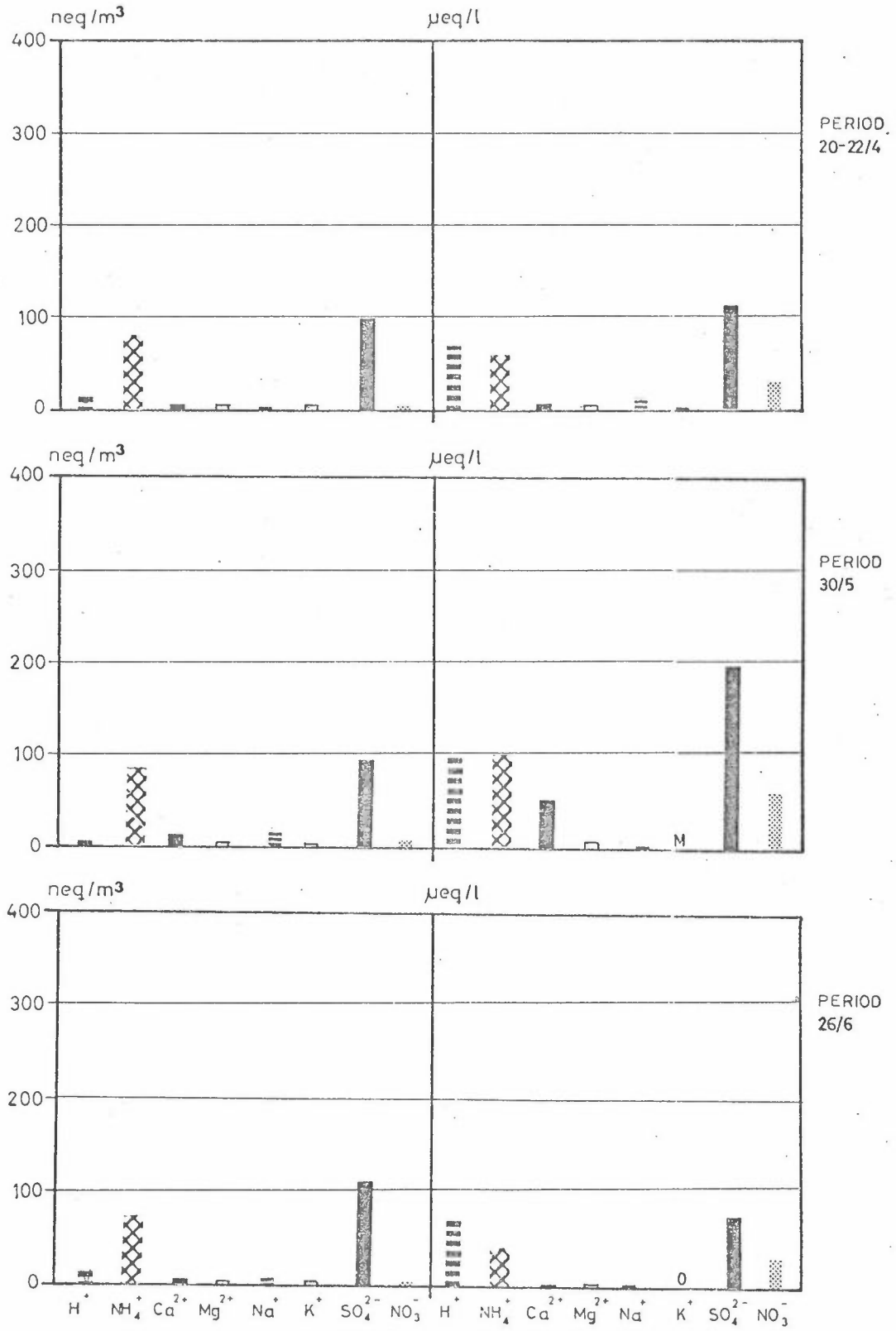


Figure 5: Station N01, Birkenes. Short periods, mean concentrations in air and precipitation samples.

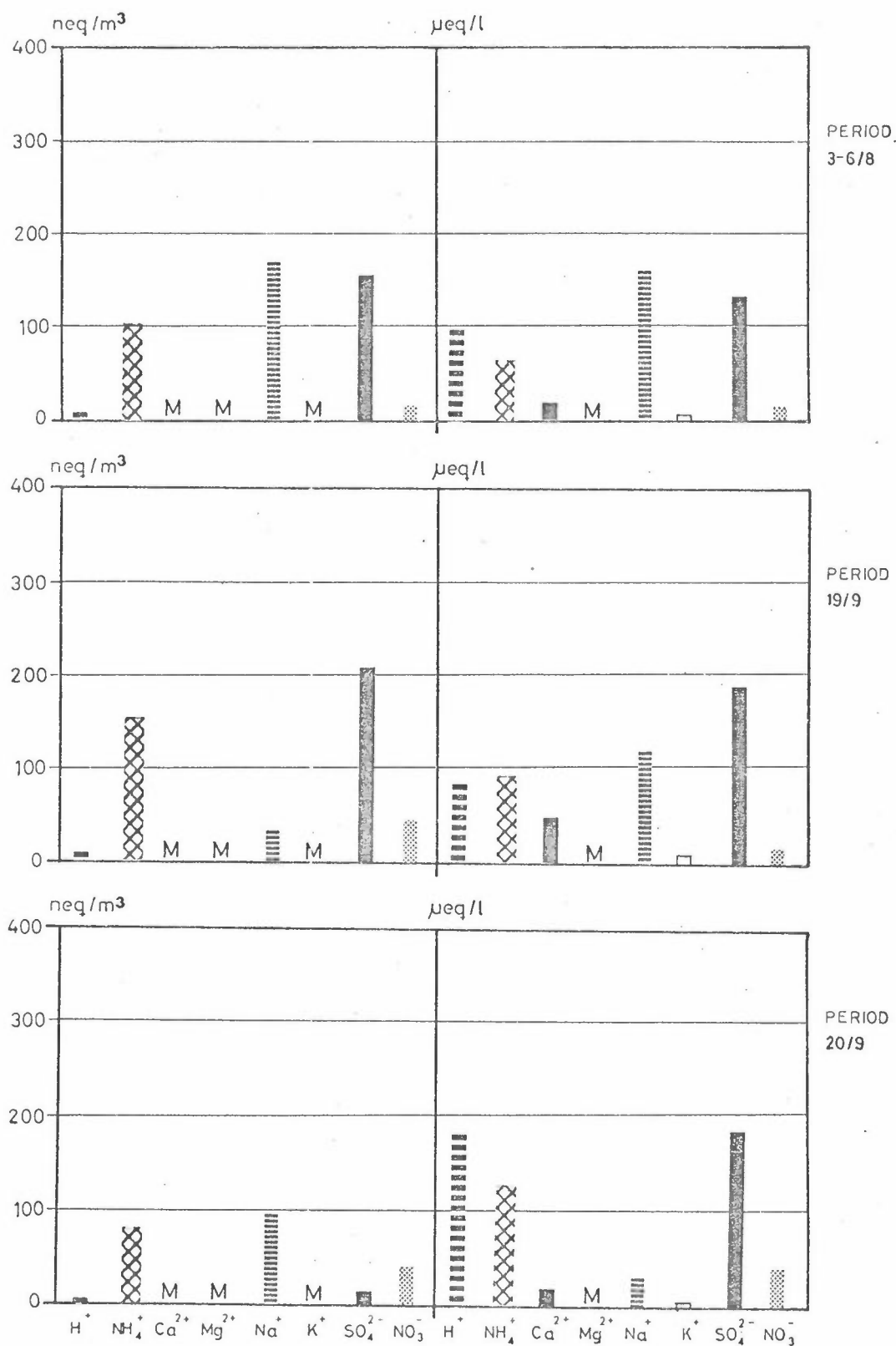


Figure 6: Station S02, Råö. Short periods, mean concentration in air and precipitation samples.

DENNE UTSKRIFTEN GJELDER 180 TIMER EFTER START, OG VI HAR BRUKT 180 STEP
 TIDSPUNKTET 73 5 26 12

23 FELT GJELDER SO4-BLANDINGSFORHØLDET

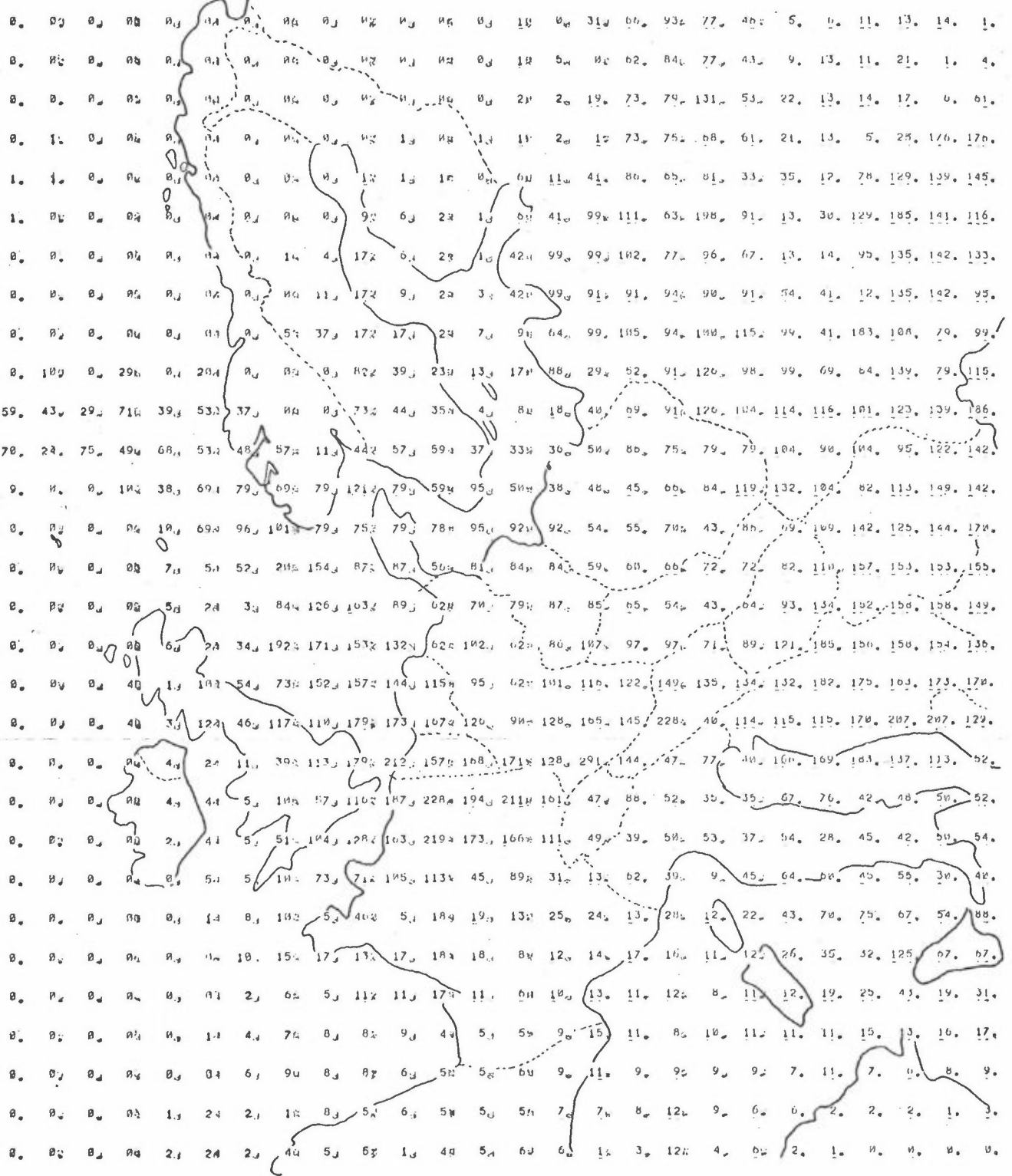


Figure 7: Mixing ratios, for sulphate particles, in grid format. Unit: 0.1 µg SO₄/kg air. Date: 730526, 12 GMT.

DENNE UTSKRIFTEN GJELDER 204 TIMER ETTER START, OG VI HAR BRUKT 204 STEP
TIDSPUNKTET 73 5 27 12

25 FELT GJELDER SO4-BLANDINGSFORHOLDET

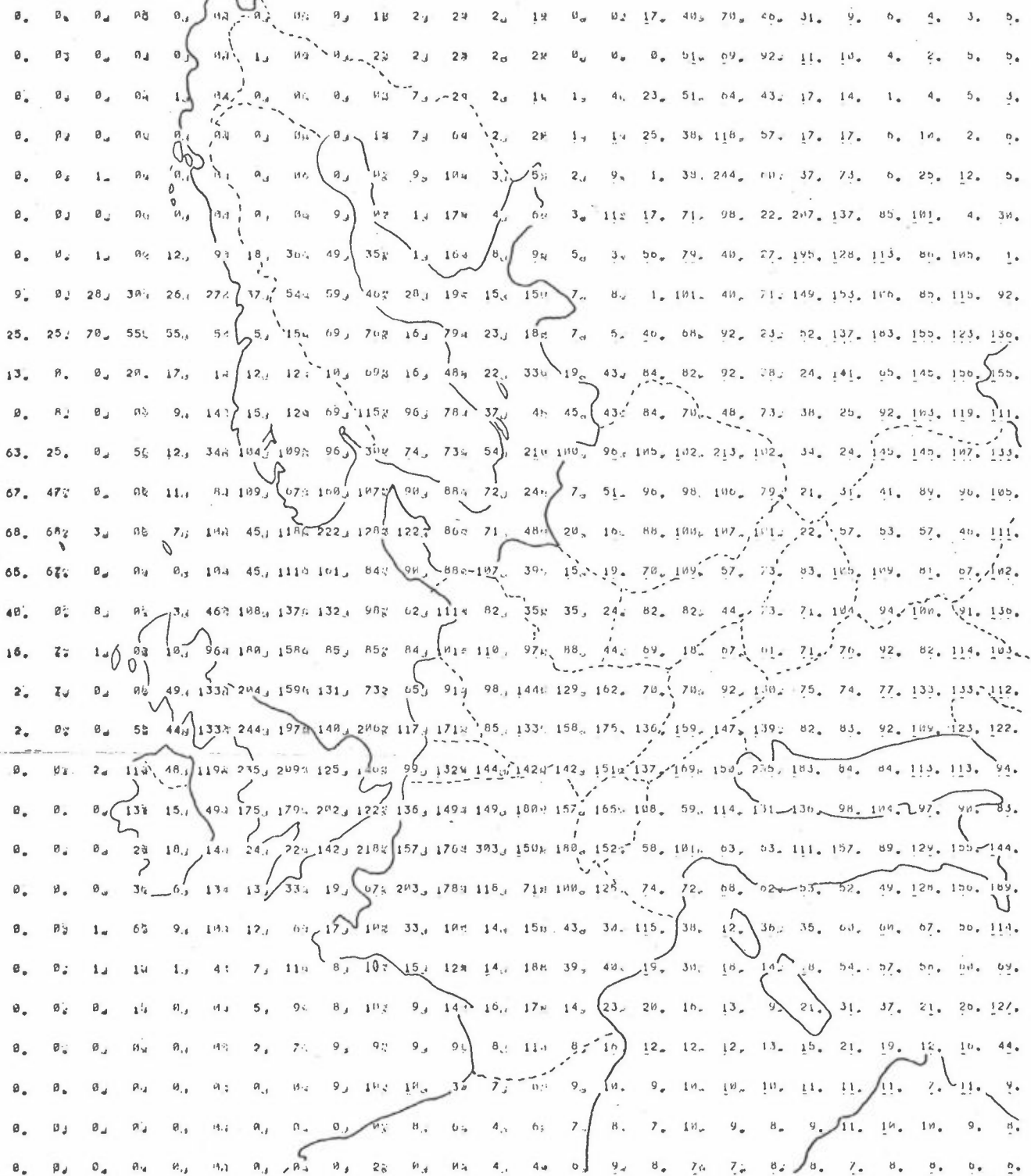


Figure 8: Mixing ratios, for sulphate particles, in grid format. Unit: 0.1 µg SO₄/kg air. Date: 730527, 12 GMT.

DENNE UTSKRIFTEN GJELDER 228 TIMER ETTER START, OG VI HAR BRUKT 228 STEP
TIDSPUNKTET 73 5 28 12

24 FELT GJELDER SO4-BLANDINGSFORHOLDET

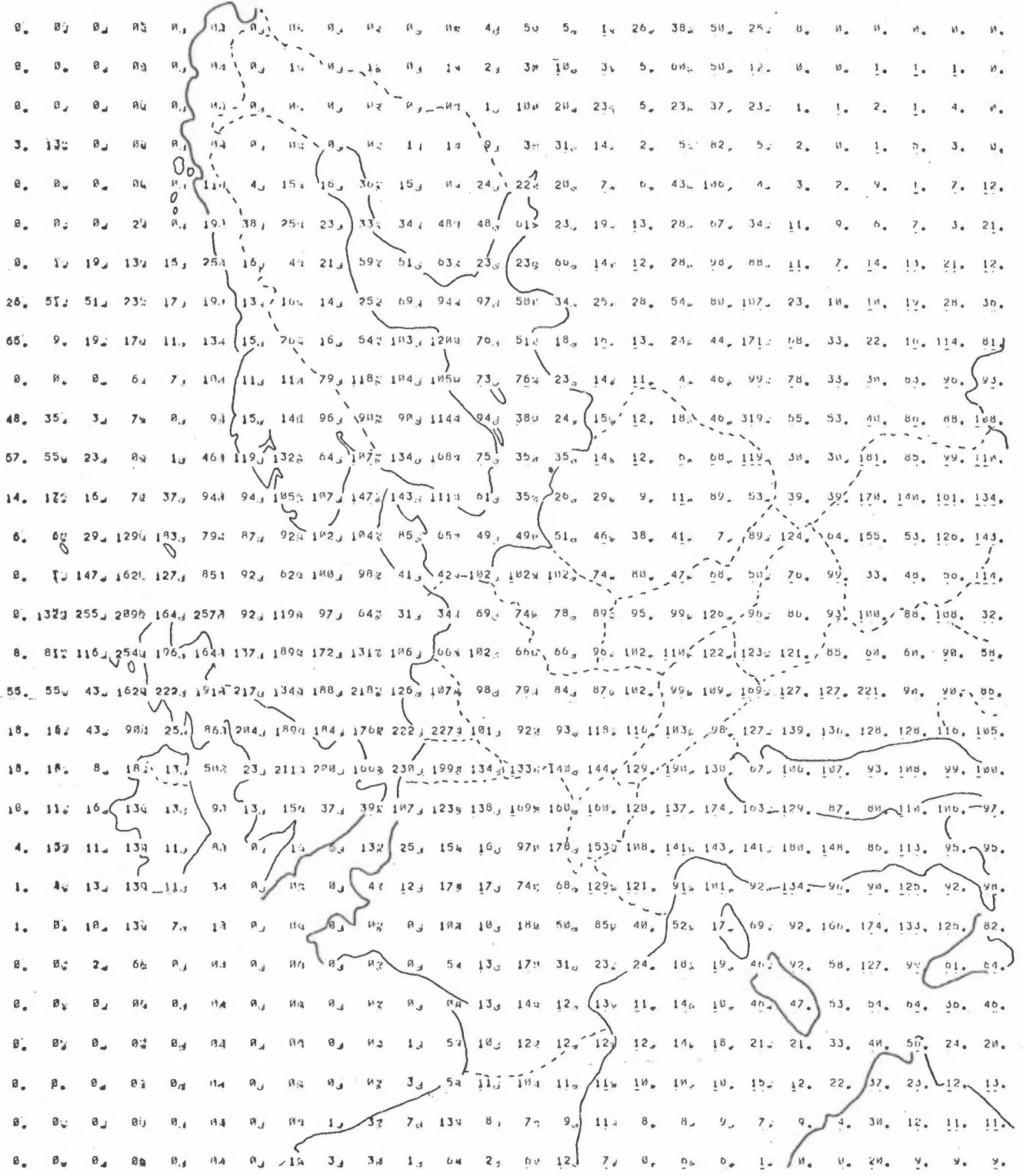


Figure 9: Mixing ratios, for sulphate particles, in grid format. Unit: 0.1 µg SO₄/kg air. Date: 730528, 12 GMT.

DENNE UTSKRIFTEN GJELDER 252 TIMER ETTER START, OG VI HAR BRUKT 252 STEP
 TIDSPUNKTET 73 5 29 12

2. FELT GJELDER SO4-BLANDINGSFORHØLDET

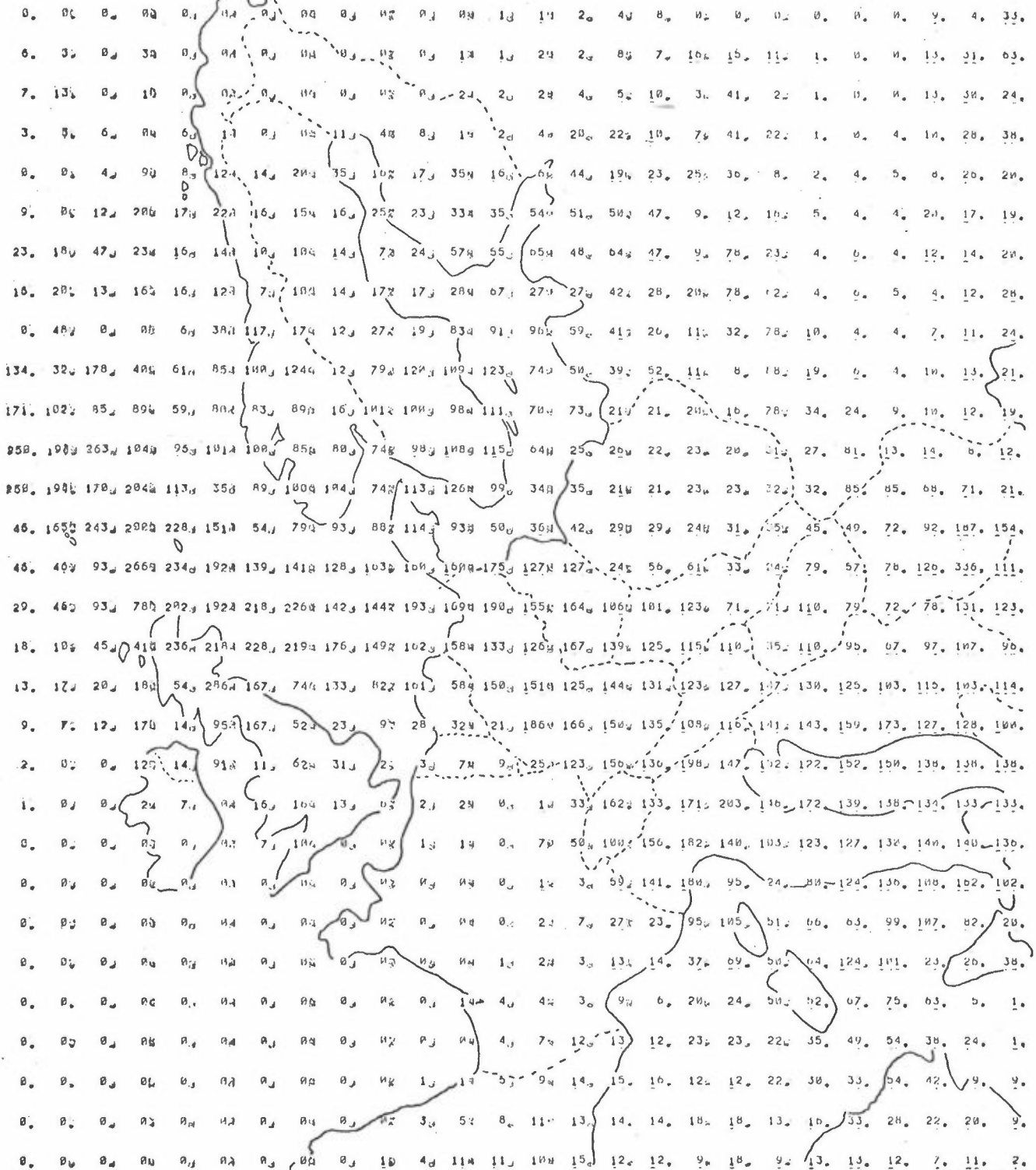
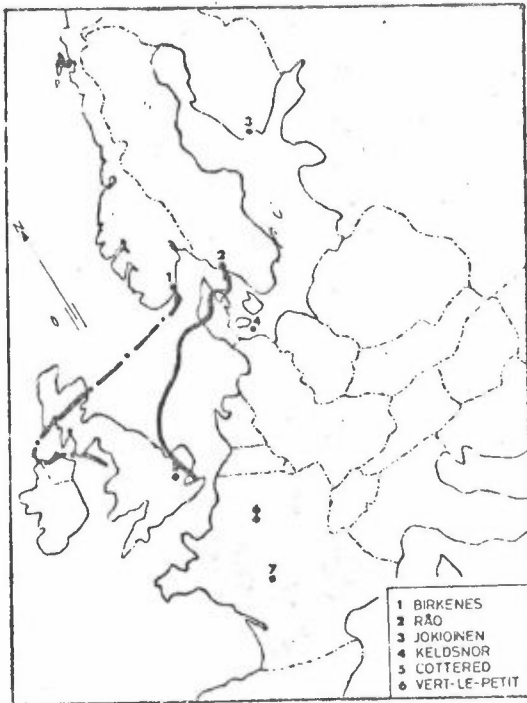
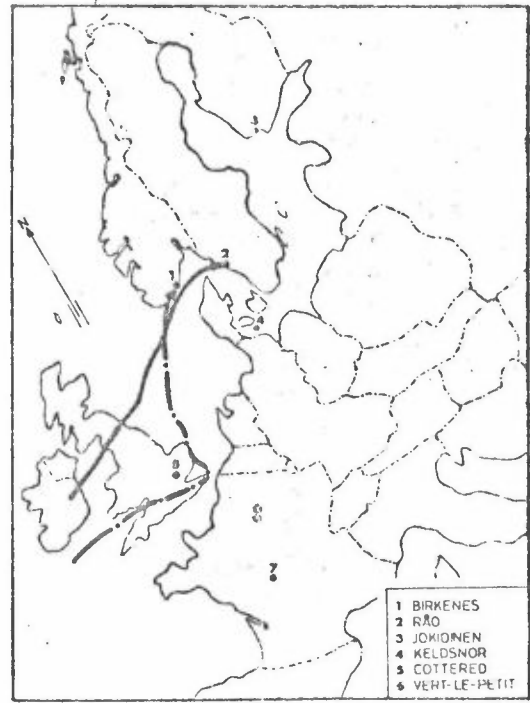


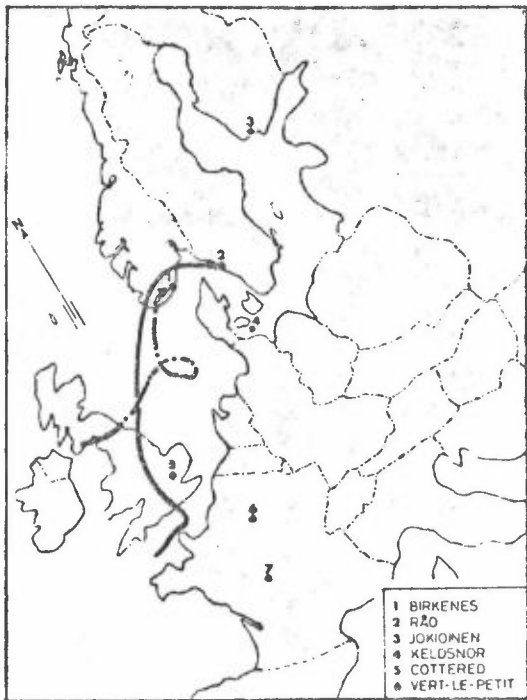
Figure 10: Mixing ratios, for sulphate particles, in grid format. Unit: 0.1 µg SO₄/kg air. Date: 730529, 12 GMT.



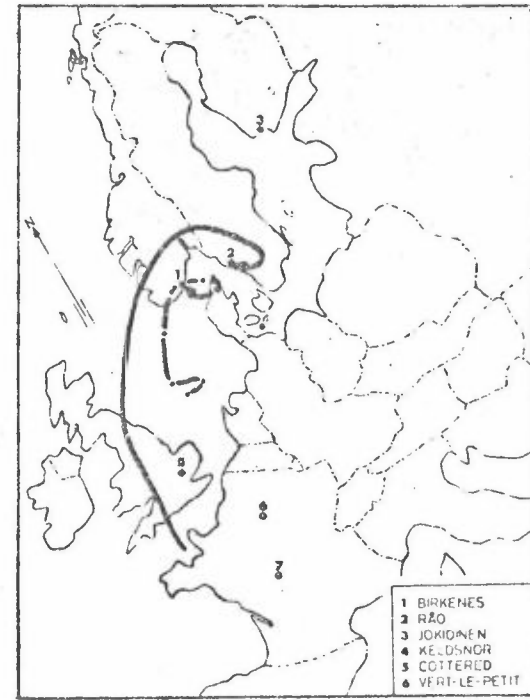
Date 730526.



Date 730527.



Date 730528.



Date 730529.

Figure 11: 96 hours back trajectories for N01 and S02, arriving at 18 GMT. Positions every 12 hours for N01 (850 mb).

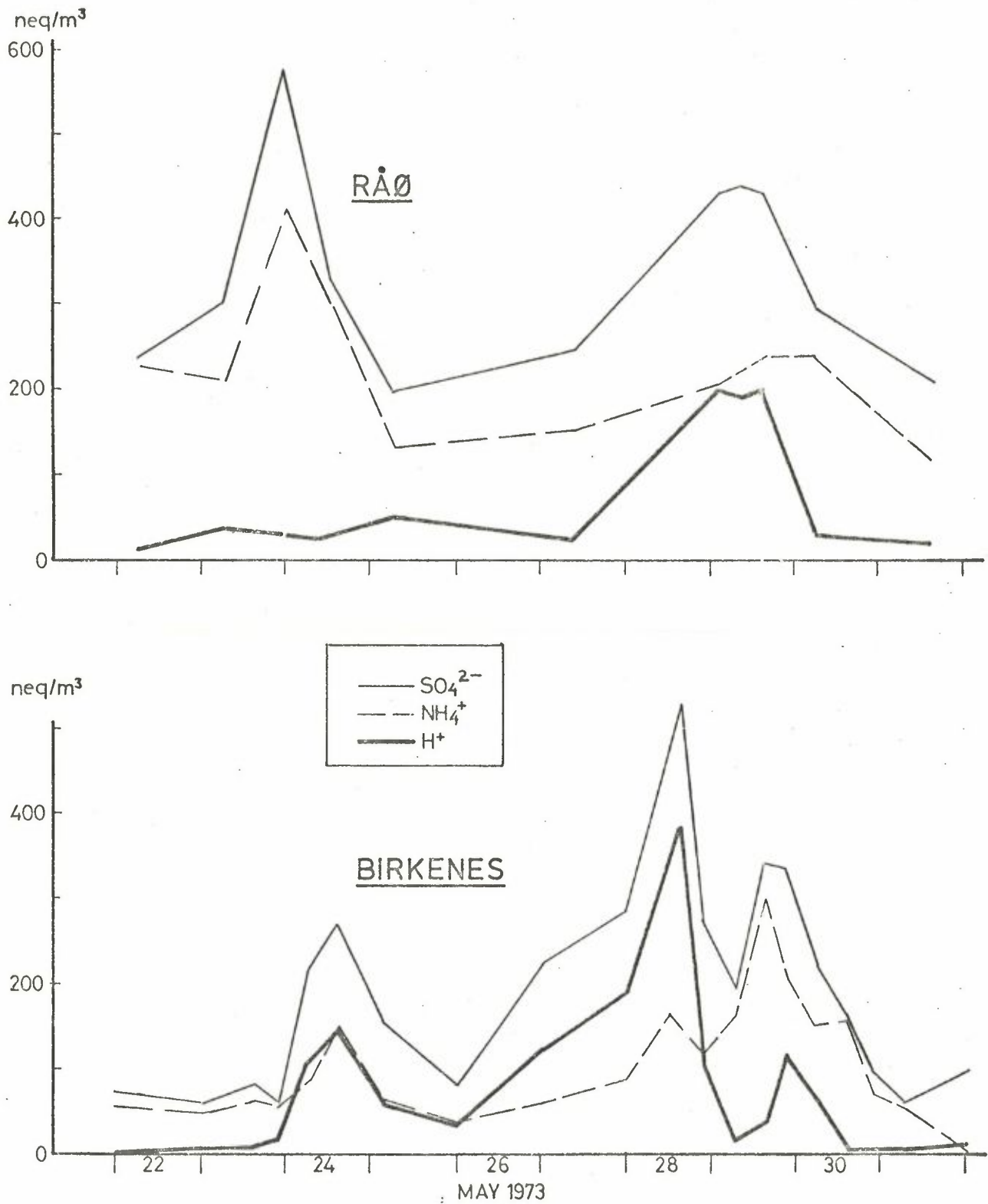


Figure 12: Concentrations of strong acid, ammonium and sulphate in air at Birkenes and Råö. Aerosol episode, May 1973.

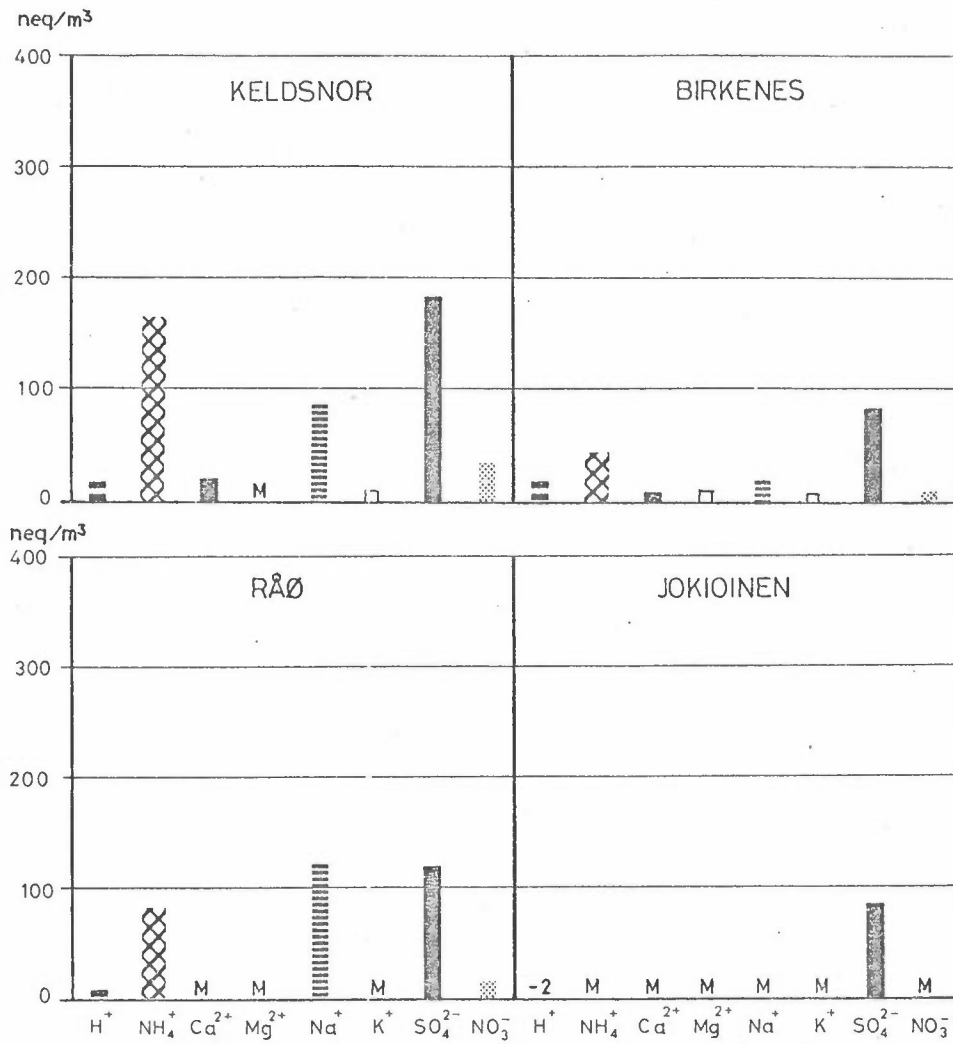


Figure 13: Air samples, mean values in neq/m³.

Keldsnor : April - September 73
 Birkenes : April - June 73
 Rådø : May - August 73 (estimates only)
 Jokioinen: June - August 73

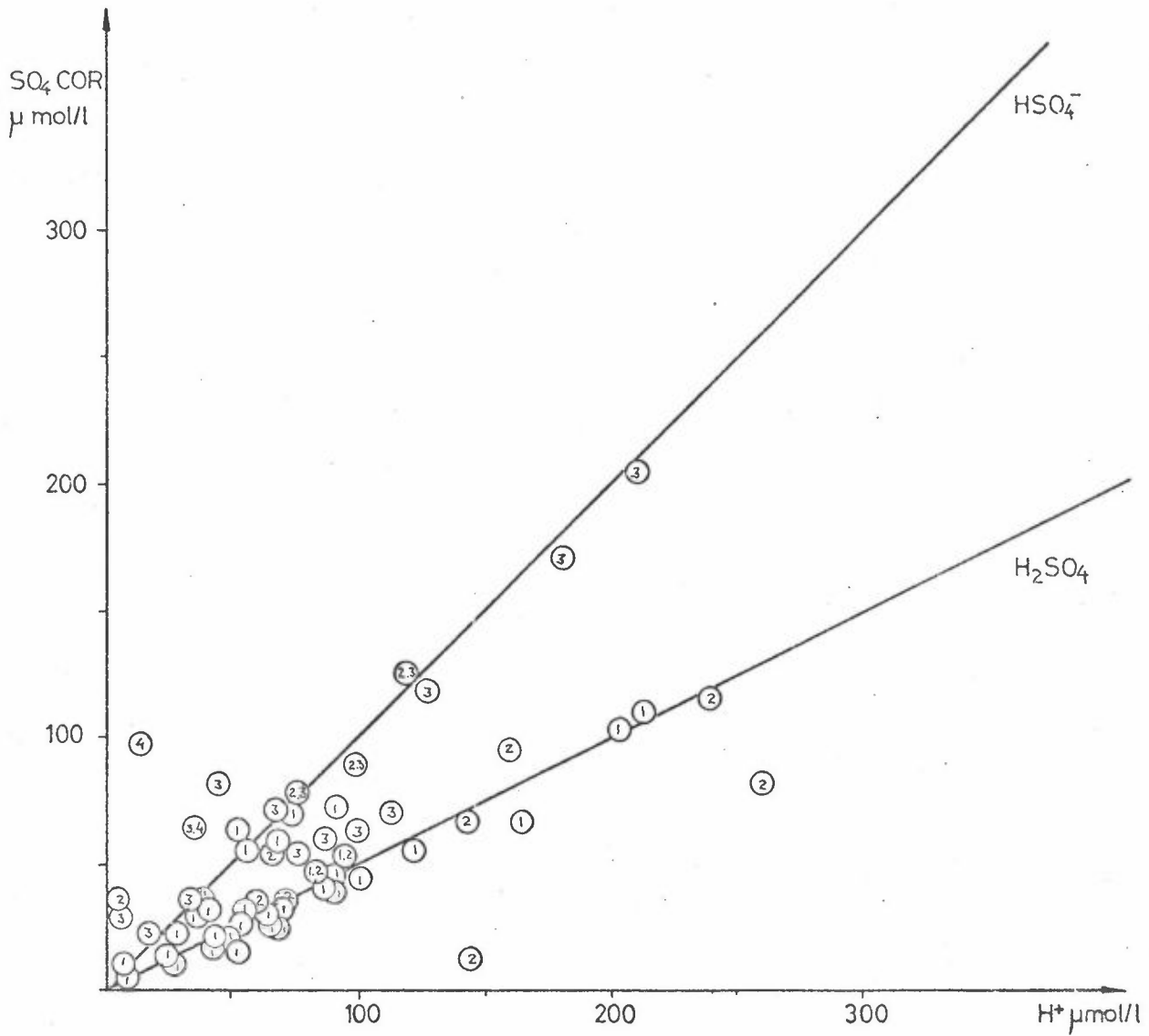
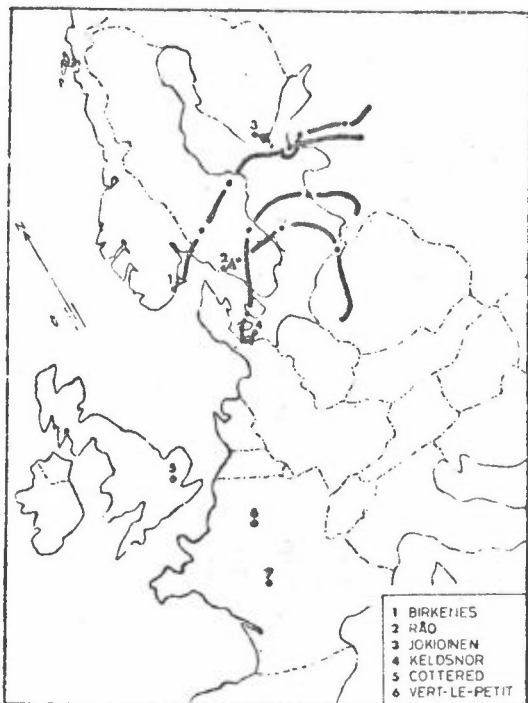
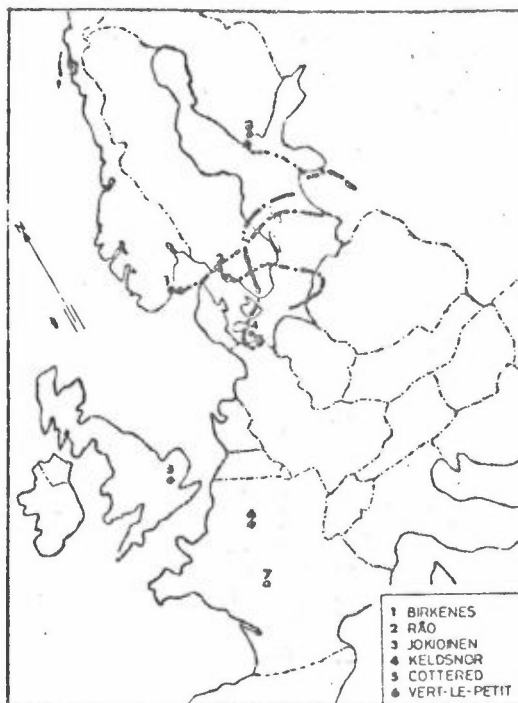


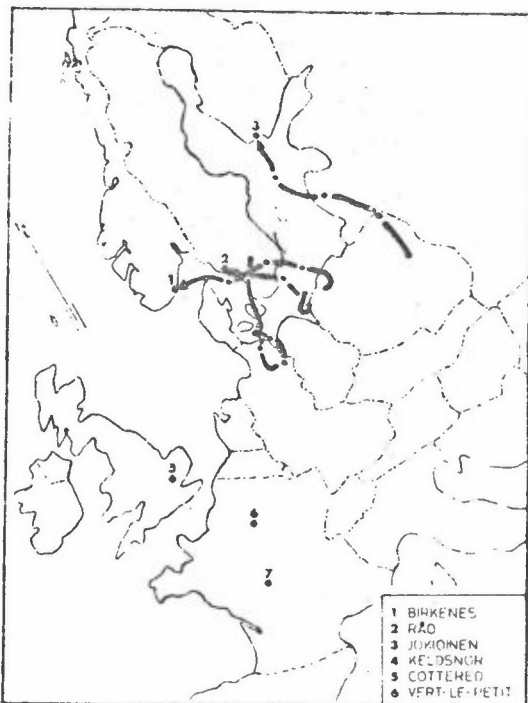
Figure 14: Relation between sulphate and strong acid in precipitation at Birkenes, April - June 1973.



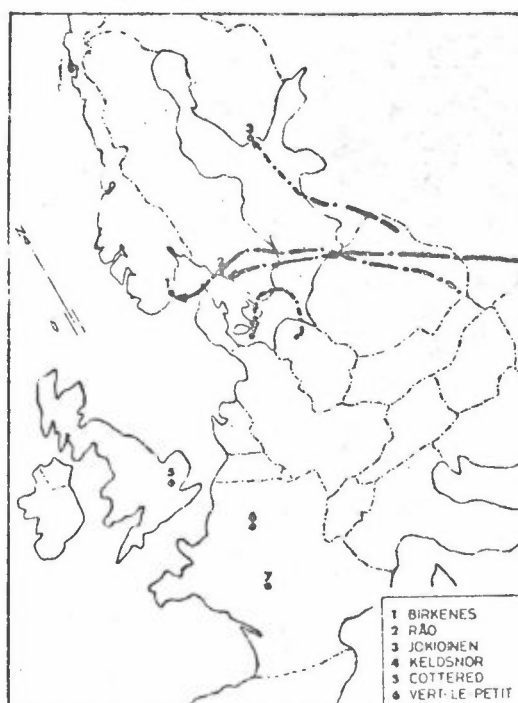
Trajectories arriving at 730420, 6 GMT. Timestep 12 hours.



Trajectories arriving at 730420, 18 GMT. Timestep 6 hours.



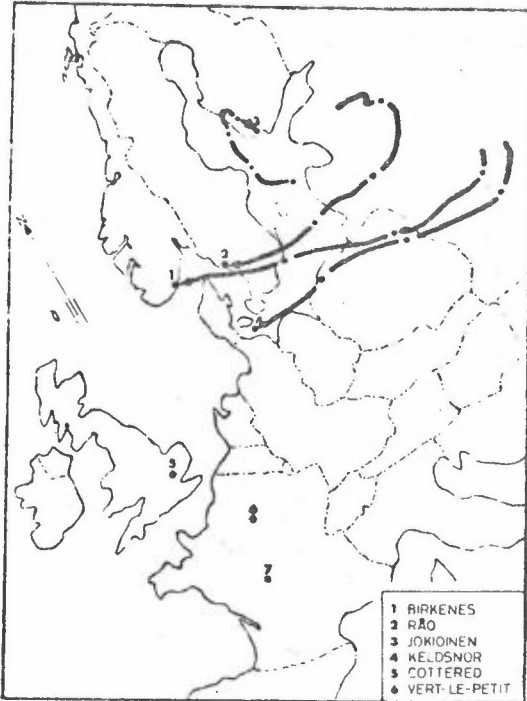
Trajectories arriving at 730421, 6 GMT. Timestep 12 hours.



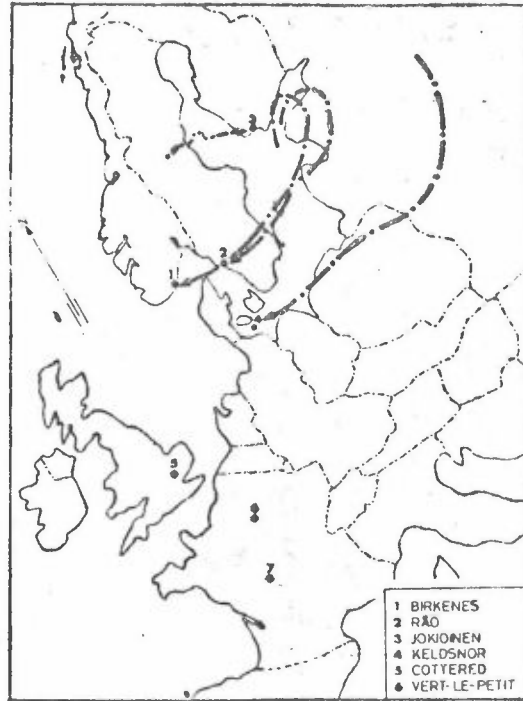
Trajectories arriving at 730421, 18 GMT. Timestep 6 hours.

FIGURE 15

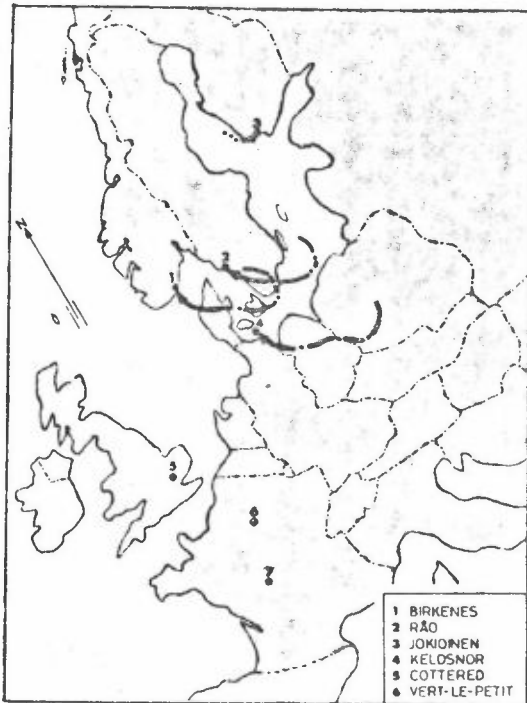
Trajectories corresponding to the short periods presented.



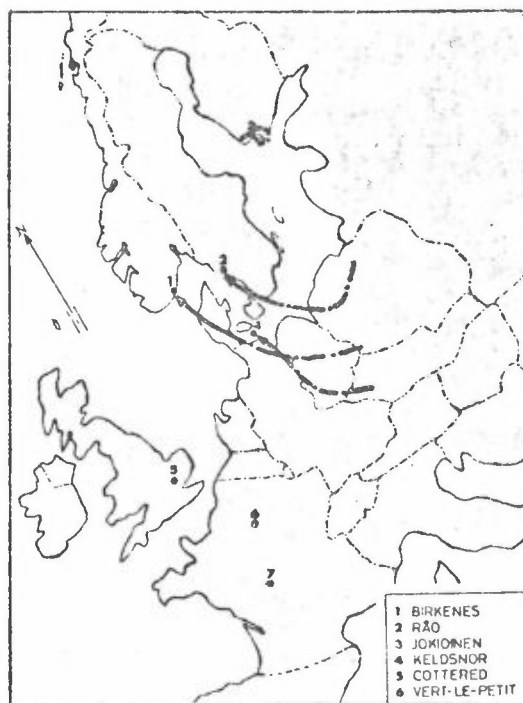
Arriving at 730422, 6 GMT.
Timestep 12 hours.



Arriving at 730422, 18 GMT.
Timestep 6 hours.



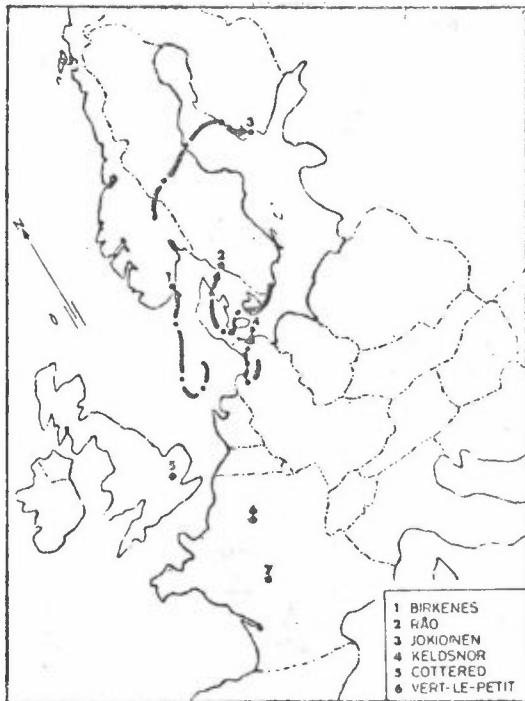
Arriving at 730530, 6 GMT.
Timestep 12 hours.



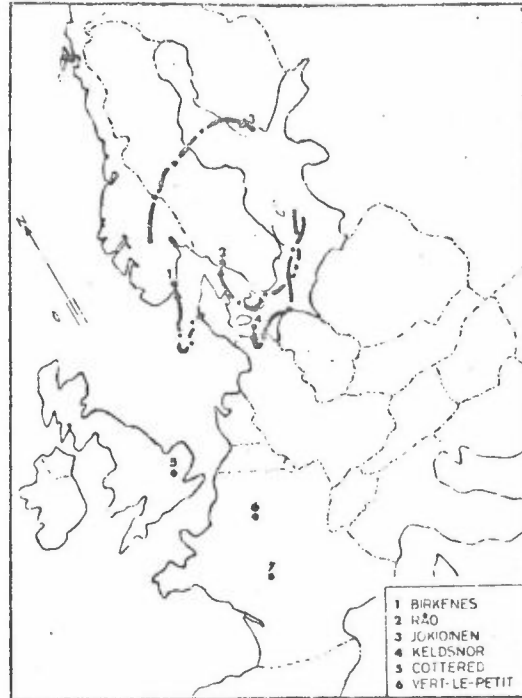
Arriving at 730530, 18 GMT.
Timestep 12 hours.

FIGURE 16

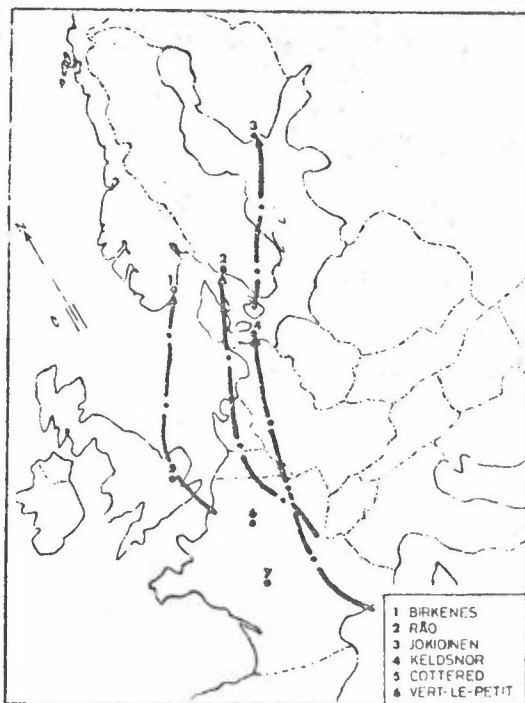
Trajectories corresponding to the short periods presented.



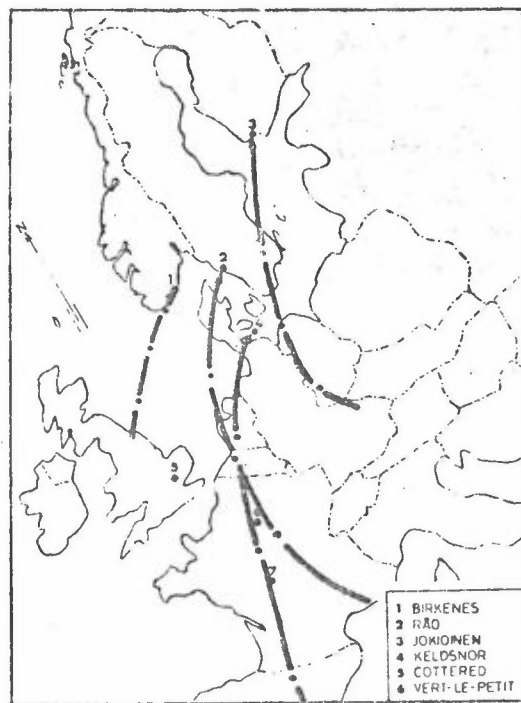
Arriving at 730626, 6 GMT.
Timestep 12 hours.



Arriving at 730626, 18 GMT.
Timestep 12 hours.



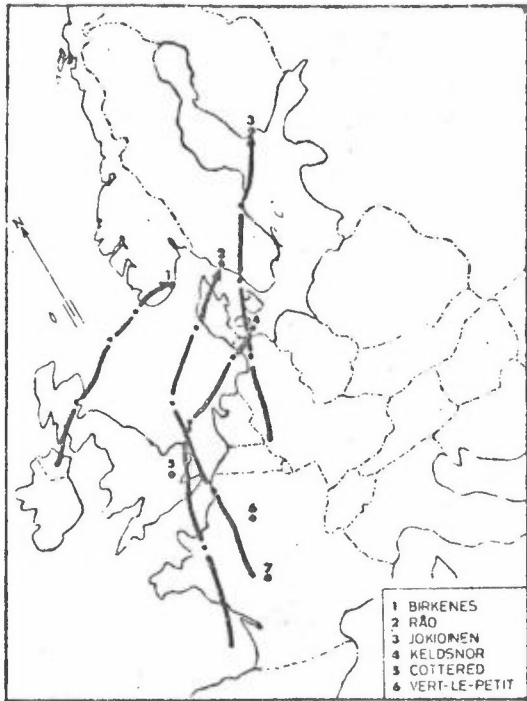
Arriving at 730628, 6 GMT.
Timestep 12 hours.



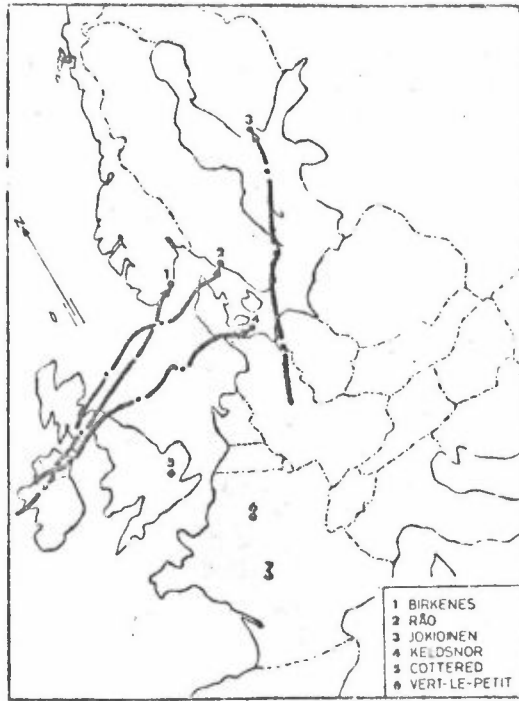
Arriving at 730628, 18 GMT.
Timestep 12 hours.

FIGURE 17

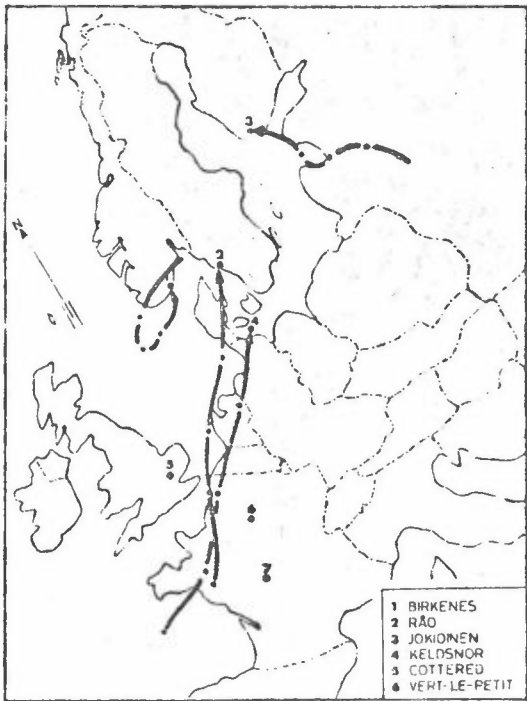
Trajectories corresponding to the short periods presented.



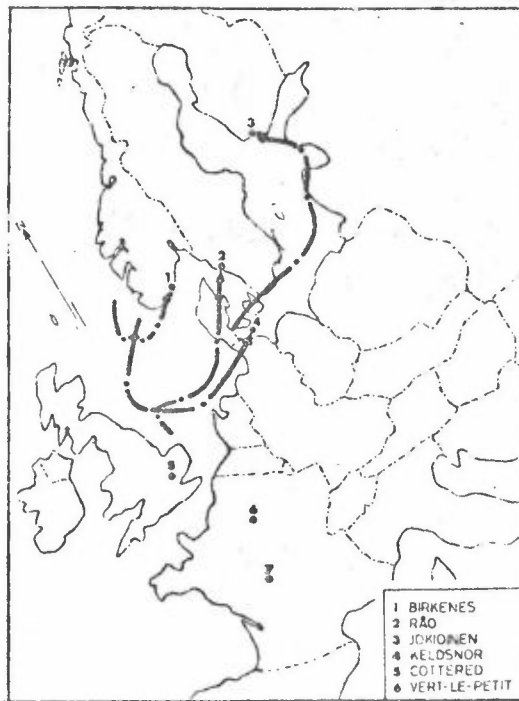
Arriving at 730629, 6 GMT.
Timestep 12 hours.



Arriving at 730629, 18 GMT.
Timestep 12 hours.



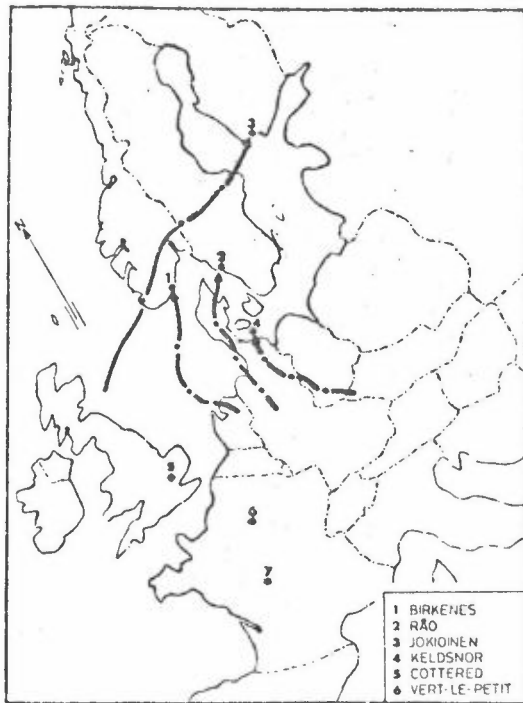
Arriving at 730718, 6 GMT.
Timestep 12 hours.



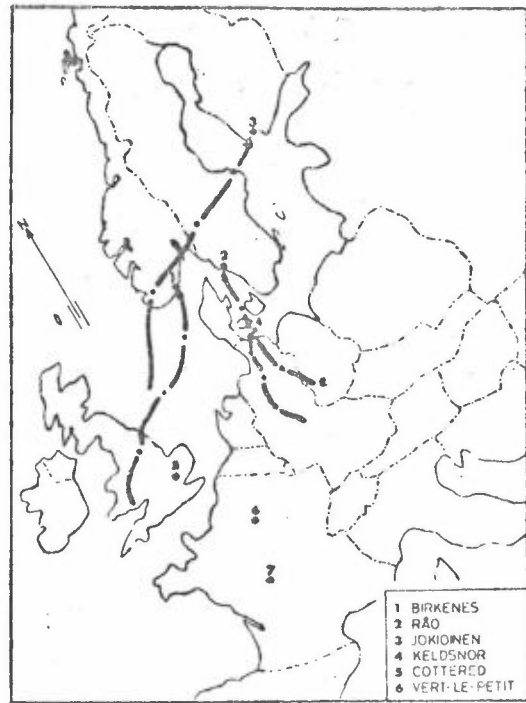
Arriving at 730718, 18 GMT.
Timestep 12 hours.

FIGURE 18

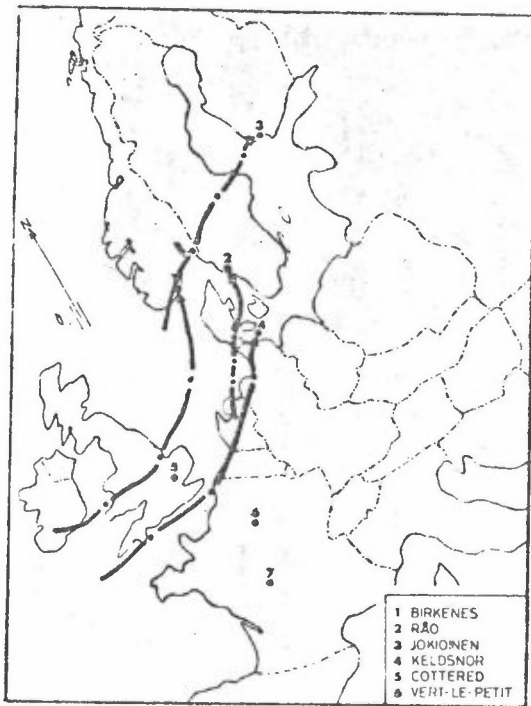
Trajectories corresponding to the short periods presented.



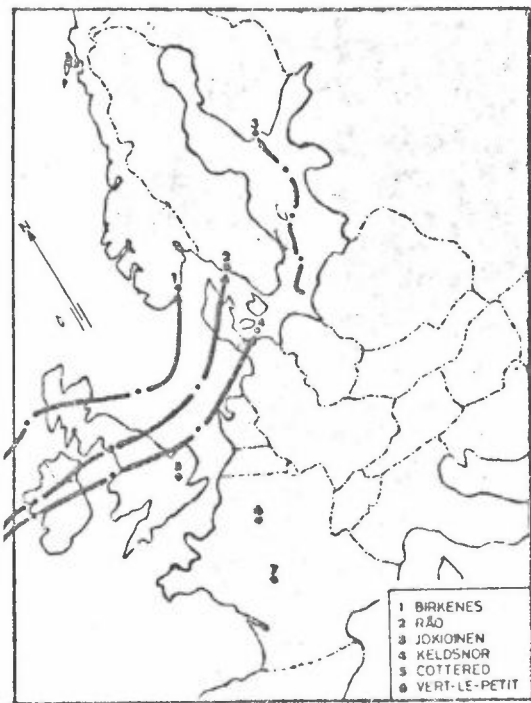
Arriving at 730803, 6 GMT.
Timestep 12 hours.



Arriving at 730803, 18 GMT.
Timestep 12 hours.



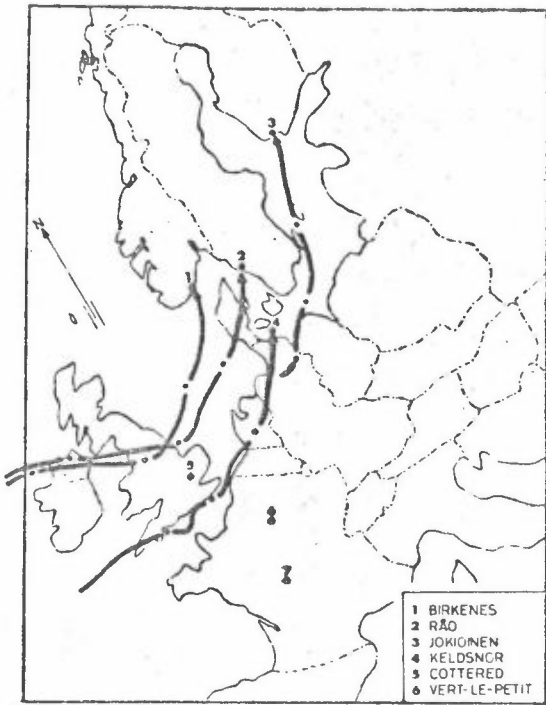
Arriving at 730804, 6 GMT.
Timestep 12 hours.



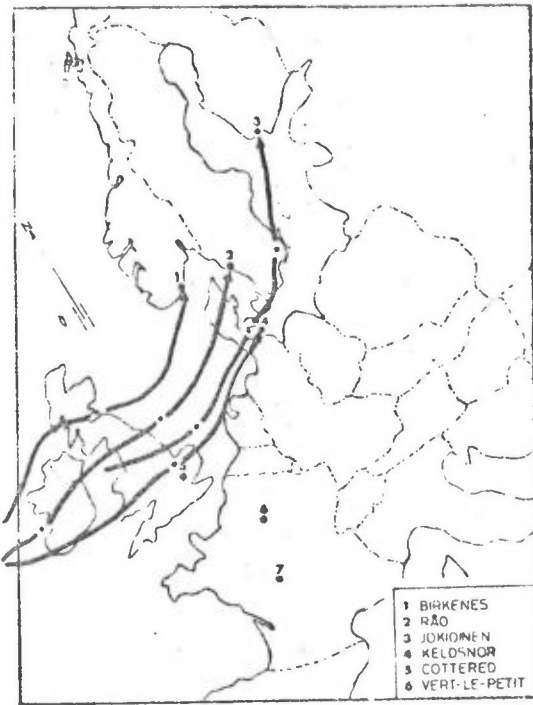
Arriving at 730804, 18 GMT.
Timestep 12 hours.

FIGURE 19

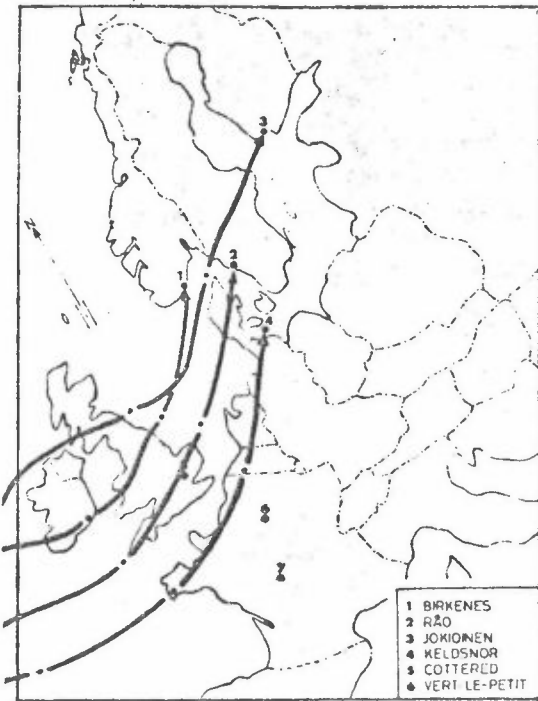
Trajectories corresponding to the short periods presented.



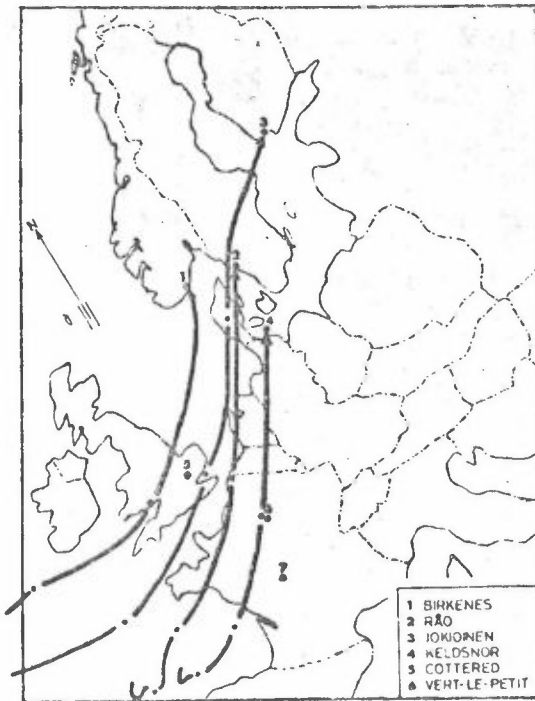
Arriving at 730805, 6 GMT.
Timestep 12 hours.



Arriving at 730805, 18 GMT.
Timestep 12 hours.



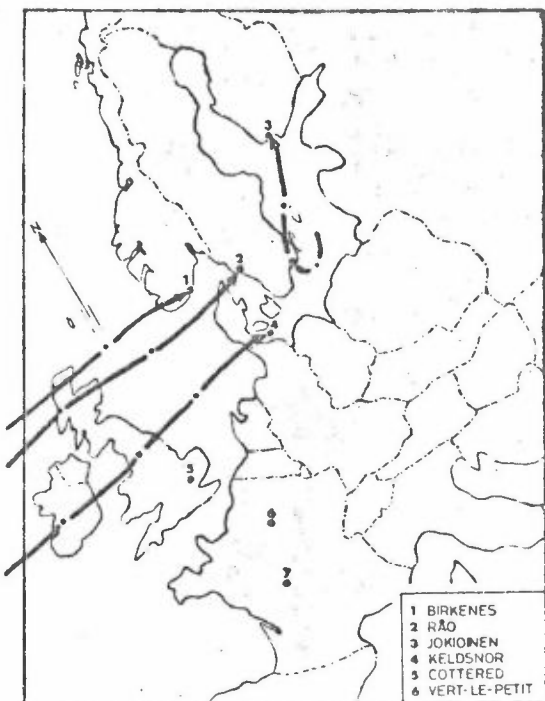
Arriving at 730806, 6 GMT.
Timestep 12 hours.



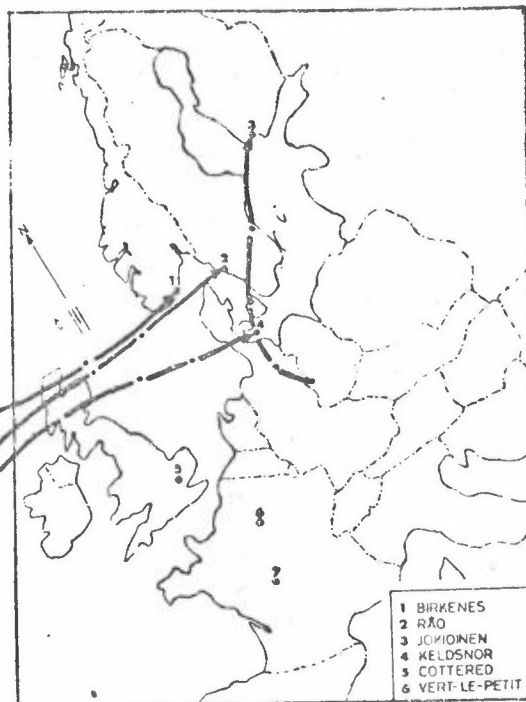
Arriving at 730806, 18 GMT.
Timestep 12 hours.

FIGURE 20

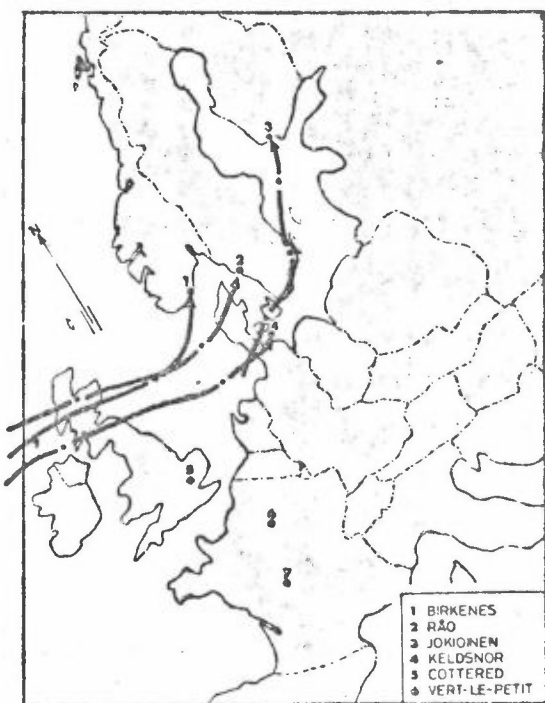
Trajectories corresponding to the short periods presented.



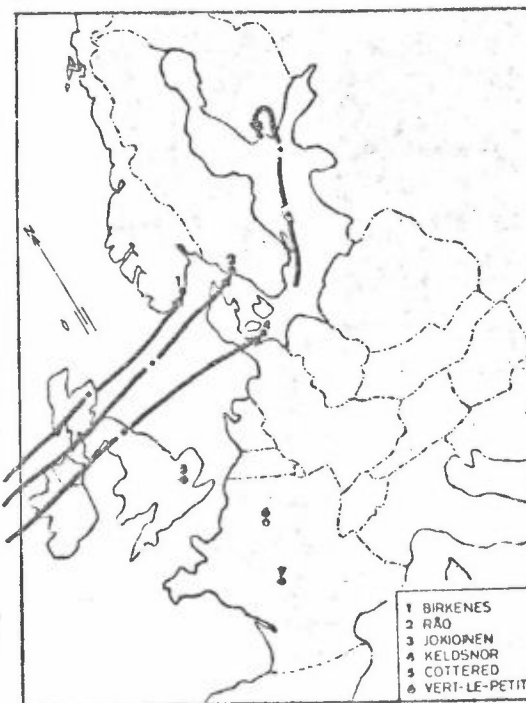
Arriving at 730818, 6 GMT.
Timestep 12 hours.



Arriving at 730818, 18 GMT.
Timestep 12 hours.



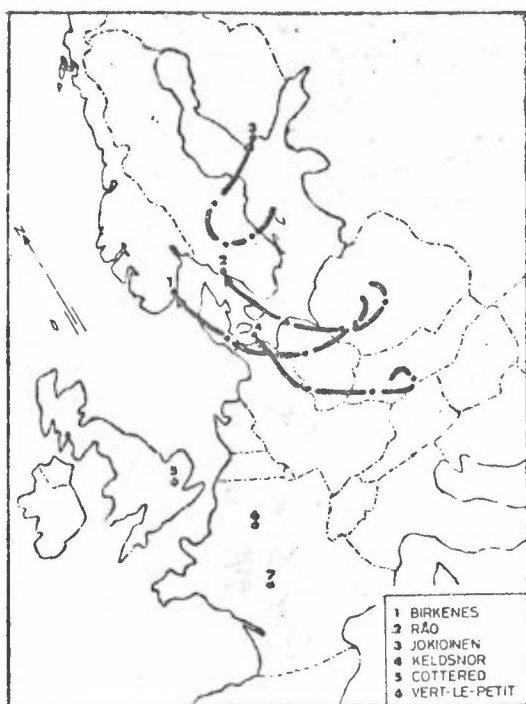
Arriving at 730901, 6 GMT.
Timestep 12 hours.



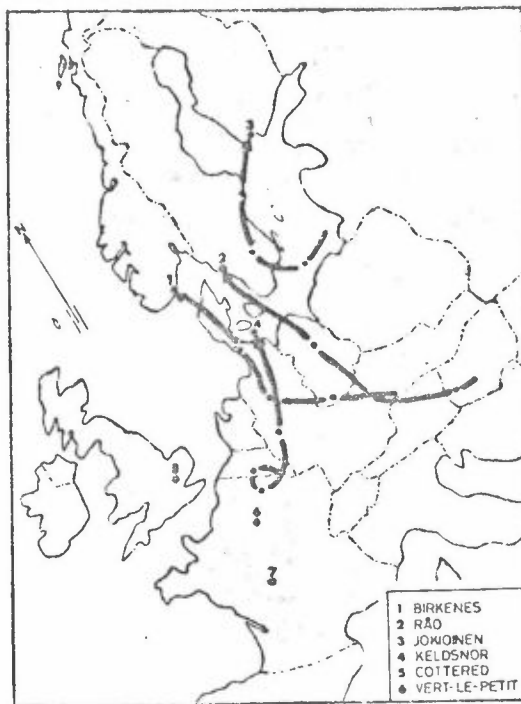
Arriving at 730901, 18 GMT.
Timestep 12 hours.

FIGURE 21

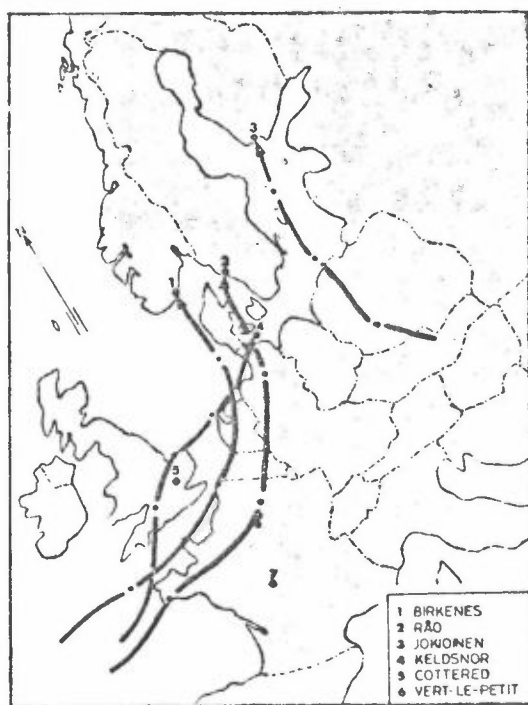
Trajectories corresponding to the short periods presented.



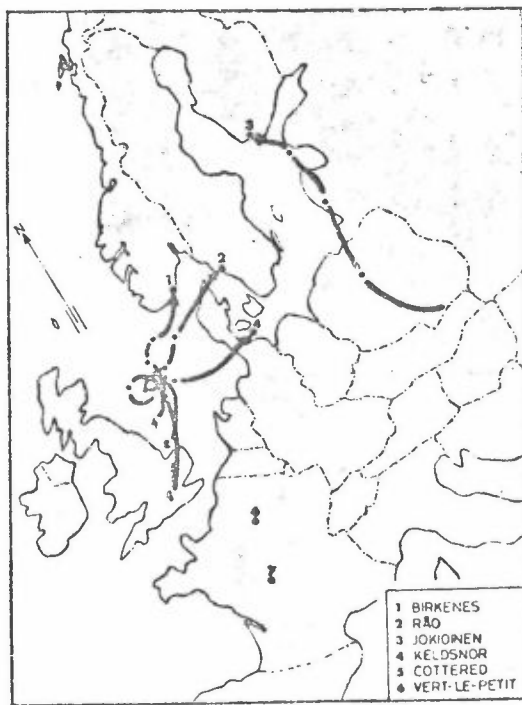
Arriving at 730919, 6 GMT.
Timestep 12 hours.



Arriving at 730919, 18 GMT.
Timestep 12 hours.



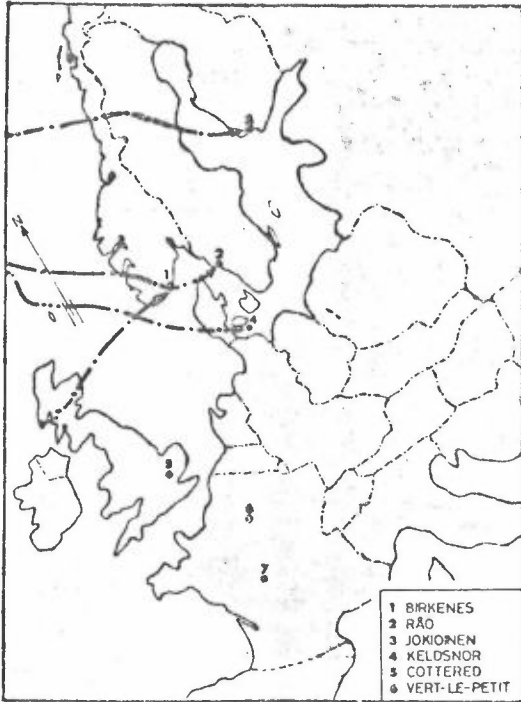
Arriving at 730920, 6 GMT.
Timestep 12 hours.



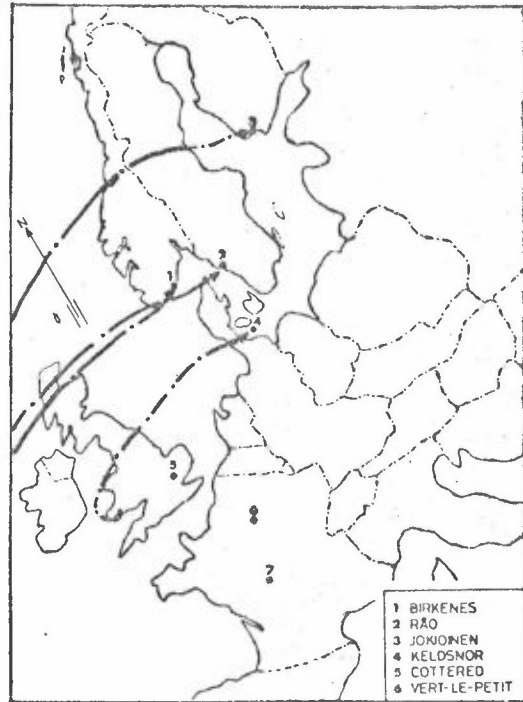
Arriving at 730920, 18 GMT.
Timestep 12 hours.

FIGURE 22

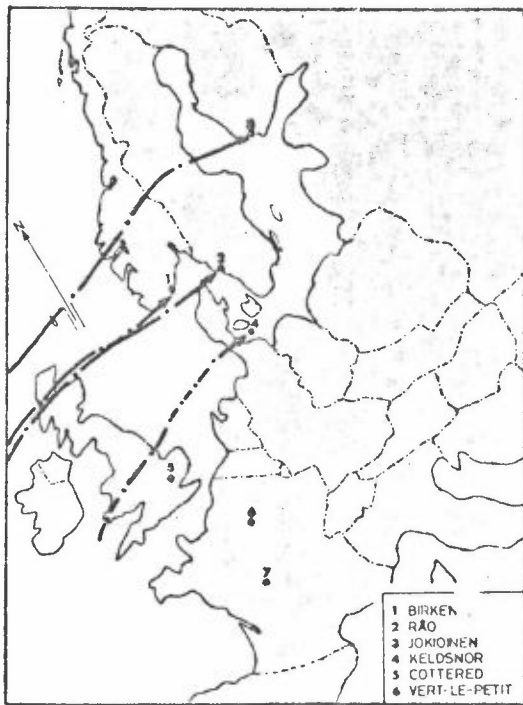
Trajectories corresponding to the short periods presented.



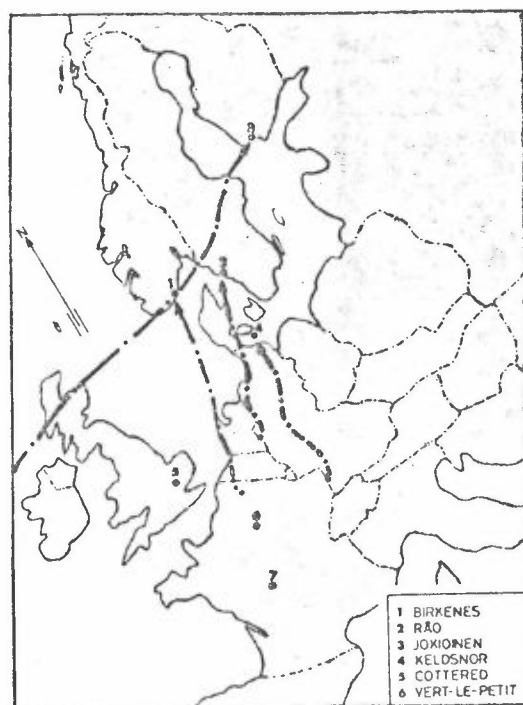
Date 730321.



Date 730322.



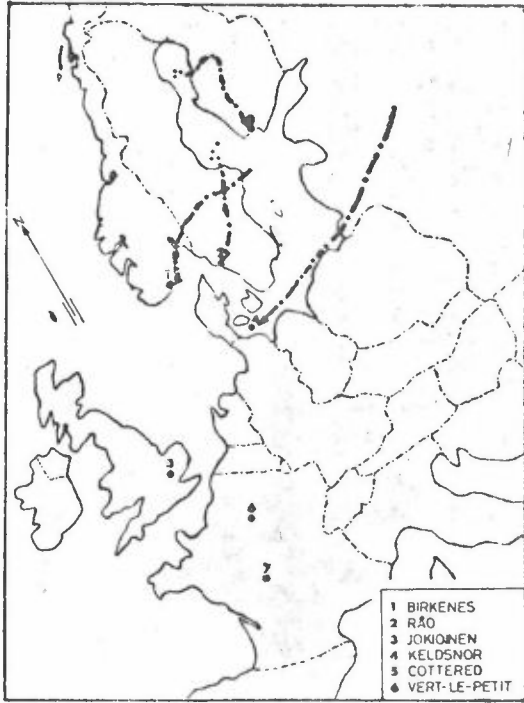
Date 730323.



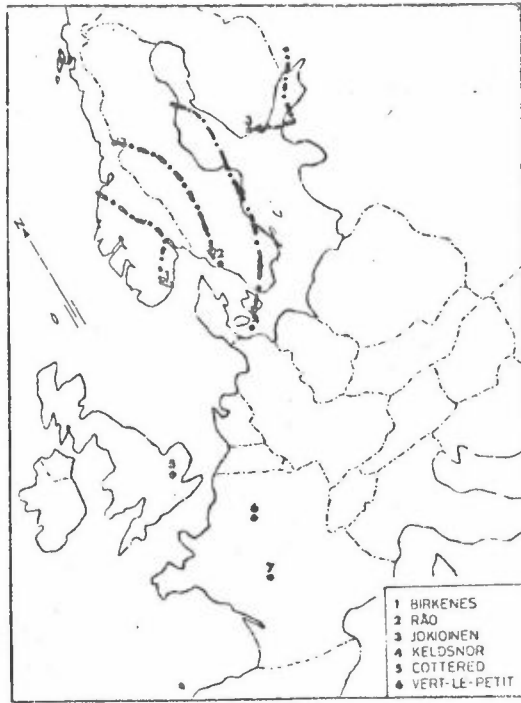
Date 730324.

FIGURE 23

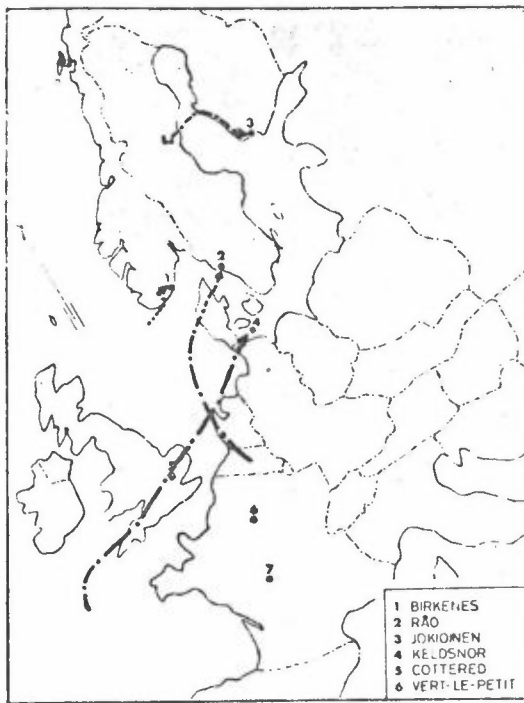
Trajectories arriving at 18 GMT, 6 hours timestep.



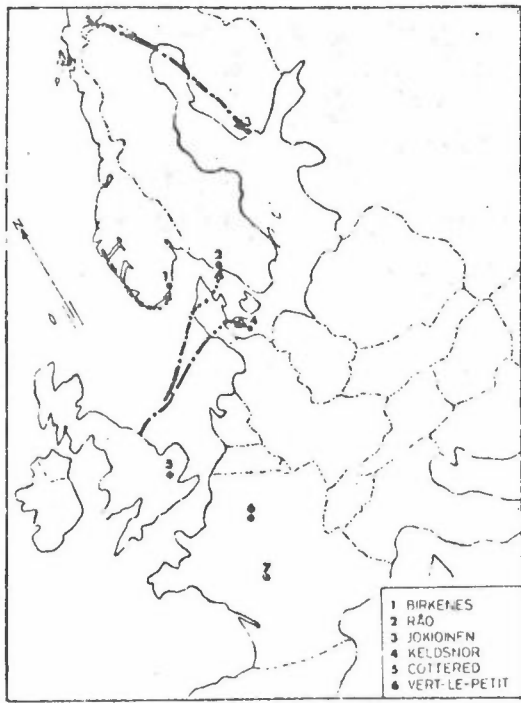
Date 730423.



Date 730424.



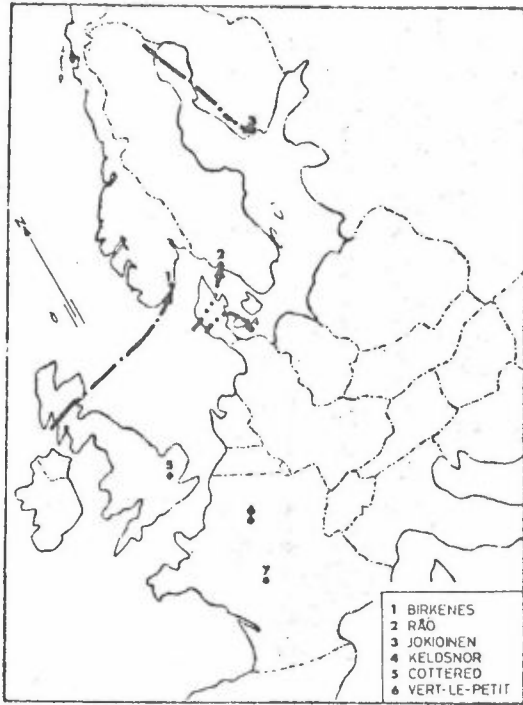
Date 730524.



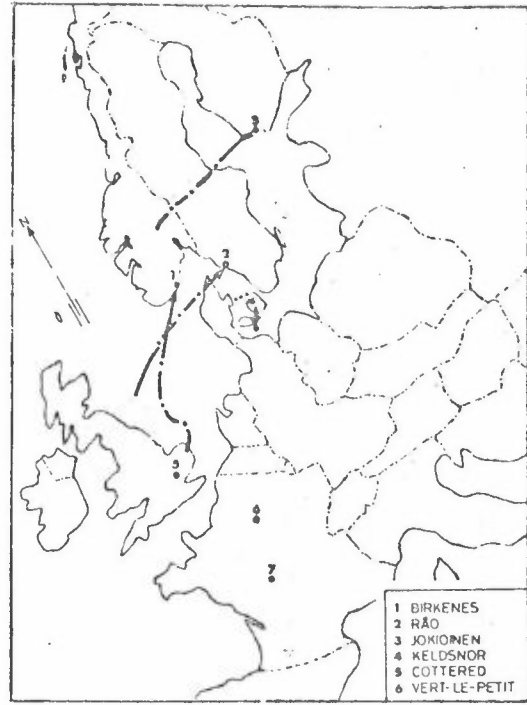
Date 730525.

FIGURE 24

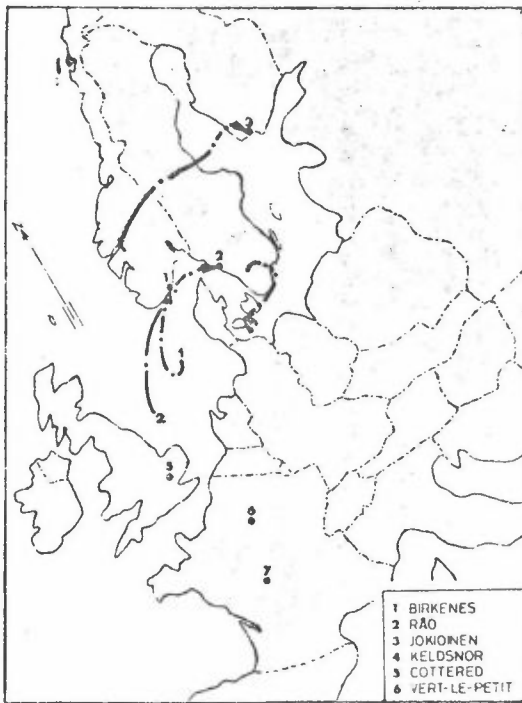
Trajectories arriving at 18 GMT, 6 hours timestep.



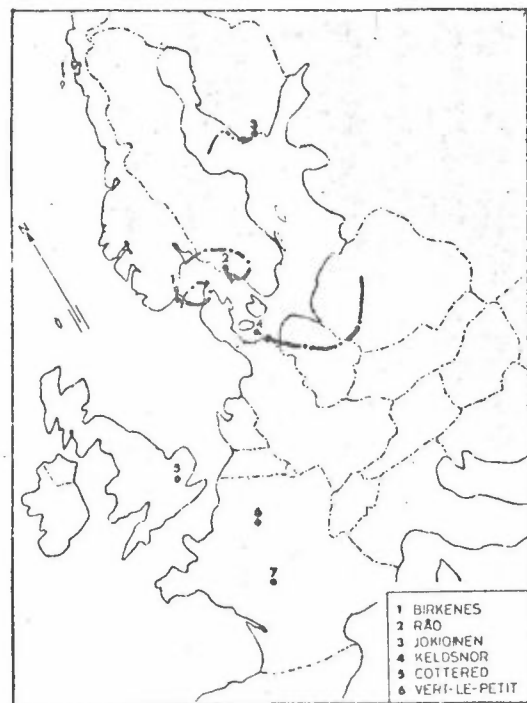
Date 730526.



Date 730527.



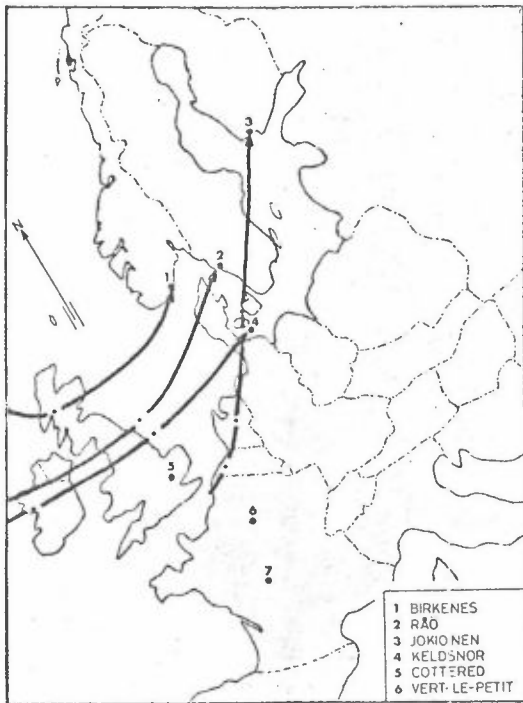
Date 730528.



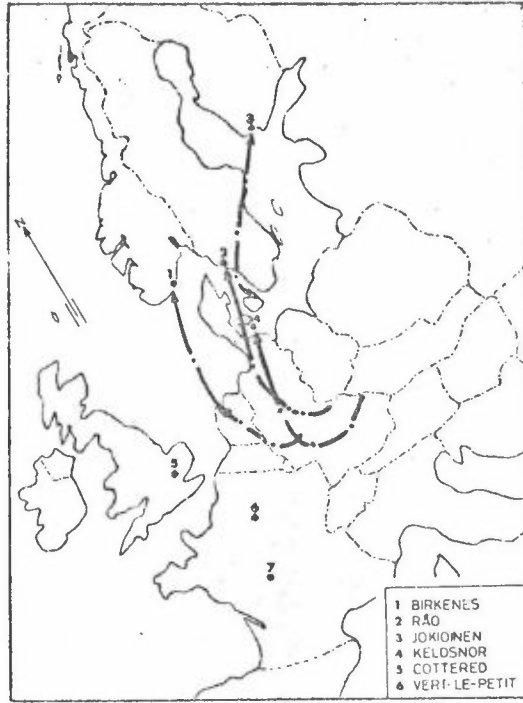
Date 730529.

FIGURE 25

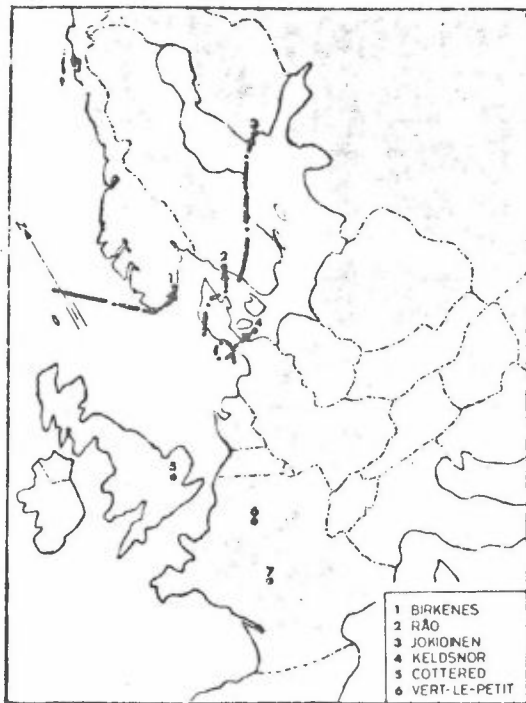
Trajectories arriving at 18 GMT, 12 hours timestep.



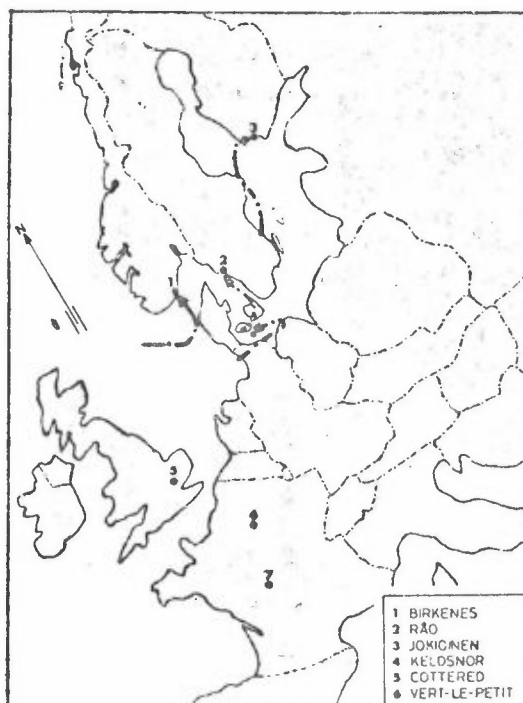
Date 730613.



Date 730627.



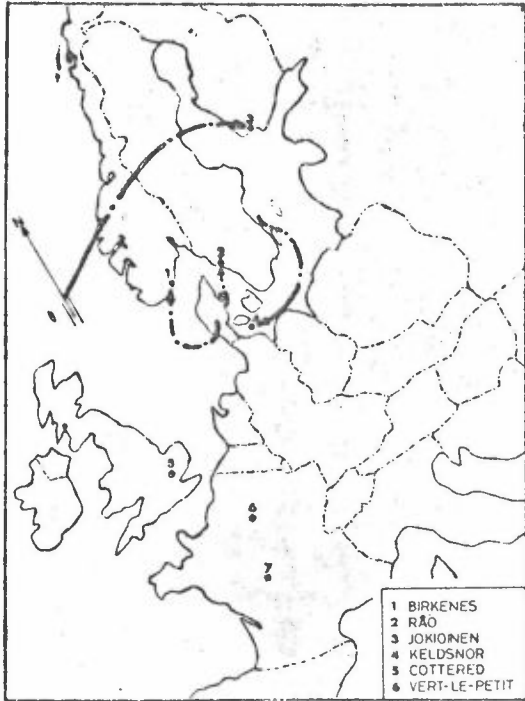
Date 730713.



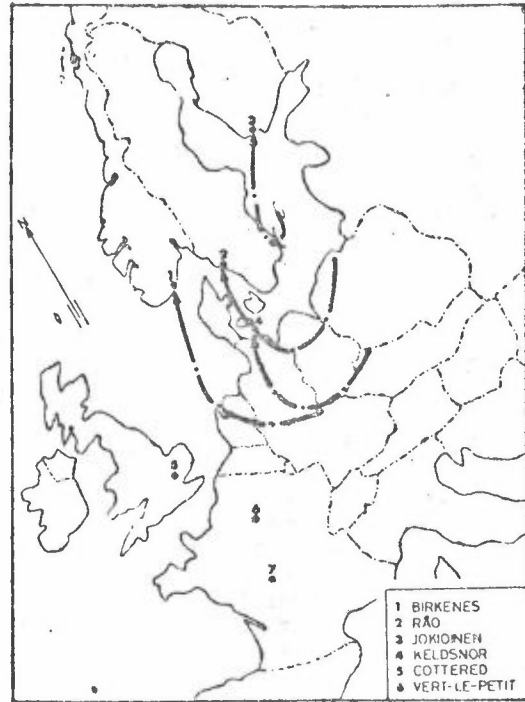
Date 730714.

FIGURE 26

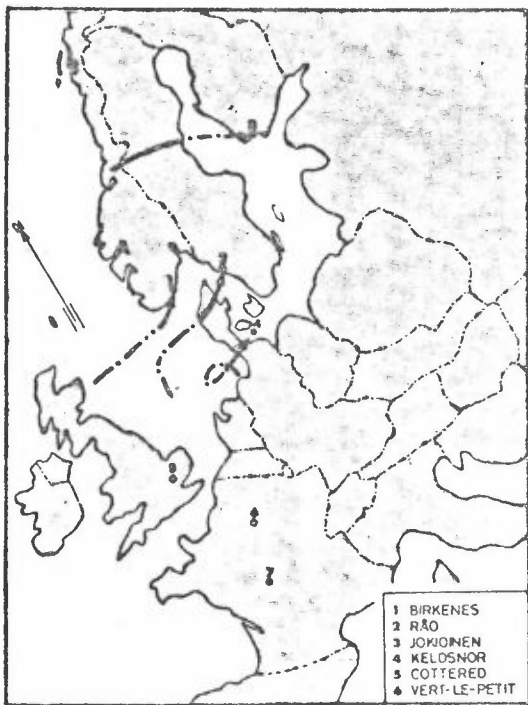
Trajectories arriving at 18 GMT, 12 hours timestep.



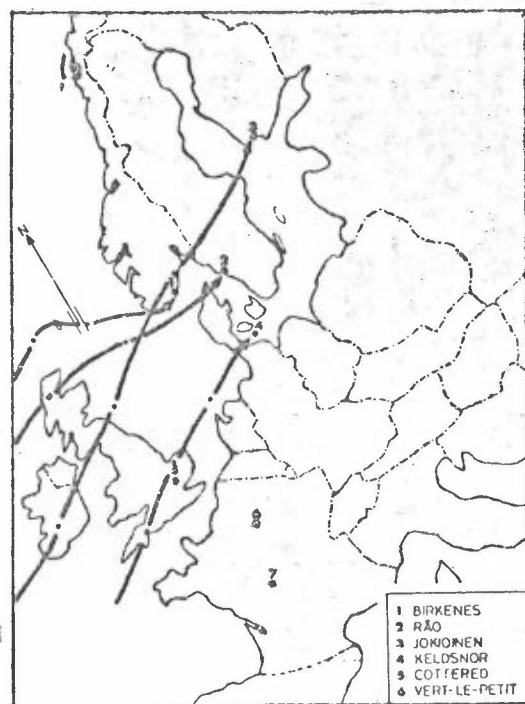
Date 730815.



Date 730817.



Date 730829.



Date 730905.

FIGURE 27

Trajectories arriving at 18 GMT, 12 hours timestep.

APPENDIX.

STATION DK F, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SEPTEMBER 1973

SAMPLING PERIOD

FROM TO
DAY GMT DAY GMT
1 0000 1 0500

COMPONENTS

DURATION MIN	AMOUNT MM	PH	H+	SO4	NH4-N	NO3-N	CA	MG	NA	K	FE
			UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
	5.2	4.60	35	1.1	.01	.19	.57	.20	6.6	.5	.04

STATION DK F, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

JUNE 1973

SAMPLING PERIOD

FROM TO
DAY GMT DAY GMT
29 0600 29 1300

COMPONENTS

DURATION MIN	AMOUNT MM	PH	H+	SO4	NH4-N	NO3-N	CA	MG	NA	K	FE
			UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
	4.1	4.67	43	2.3	.02	.14	.05	.09	5.3	.4	.04

STATION OK 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

MAY 1973

SAMPLING PERIOD		COMPONENTS												
FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	NFO/M3	H+ NFO/M3	S04 UG/M3	NH4-N UG/M3	N03-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3
1 0700	2 0700	29.00		16	19.6	1.56	.33	.44	.21	.1	.1	.3	.48	.33
2 0700	3 0700	24.00		23	5.2	.55	.65	.85	.21	.1	.1	.3	.48	.21
20 0700	21 0700	54.00		43	6.5	1.68	.74	.85	.21	.1	.1	.3	.48	.21
21 0700	22 0700	49.00		40	18.6	5.82	.38	.43	.21	.1	.1	.3	.48	.21
22 0700	23 0700	44.00		29	7.5	6.15	.42	.27	.21	.1	.1	.3	.48	.21

STATION OK 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

JUNE 1973

SAMPLING PERIOD		COMPONENTS												
FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	NEO/M3	H+ NEO/M3	S04 UG/M3	NH4-N UG/M3	N03-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3
25 0700	26 0700	50.00		7	5.0	1.91	.42	.97	.21	.1	.1	.3	.48	.21
26 0700	27 0700	39.00		9	2.9	1.65	.33	.52	.21	.1	.1	.3	.48	.21
27 0700	28 0700	123.00		44	12.3	13.19	.74	1.30	.21	.1	.1	.3	.48	.21
28 0700	29 0700	60.00		27	12.1	5.01	1.15	.13	.21	.1	.1	.3	.48	.21
29 0700	30 0700	42.00		15	10.2	4.35	.44	.10	.21	.1	.1	.3	.48	.21

STATION K 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

JULY 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	H+ NFO/M3	S04 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3
3 0700	4 0700	51.00		31	7.4	4.53	.77	.27			.1		.32
4 0700	5 0700	43.00		32	23.7	2.08	.42	.22			.1		.25
5 0700	6 0700	56.00		22	9.3	1.00	.43	.86			.3		.57
6 0700	7 0700	69.00		39	11.1	2.27	.35	.75			.3		.72
7 0700	8 0700	55.00		40	14.4	4.20	.40	.25			.2		.40

STATION BK F, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

AUGUST 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	H+ NFO/M3	S04 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FF UG/M3
15 0700	16 0700	40.00		4	21.8	.29	.29	.20		.9	.6		.19
16 0700	17 0700	41.00		2	8.5	.42	.40	.45		1.1	.3		.77
17 0700	18 0700	96.00		22	15.9	4.81	1.04	.87		1.2	.6		1.18
18 0700	19 0700	26.00		6	5.0	.26	.61	.17		1.5	.4		.14
19 0700	20 0700	50.00		18	7.8	2.90	.74	.15		1.5	.4		.32
20 0700	21 0700	19.00		-4	8.8	.10	.10	.17		2.1	.2		.06
21 0700	22 0700	20.00		-6	2.5	.04	.10	.08		3.6	.1		.39
22 0700	23 0700	26.00		-2	5.0	.02	.24	.19		2.2	.7		.10
23 0700	24 0700	169.00		6	3.7	.20	.75	.98		1.8	1.2		.44
24 0700	25 0700	46.00		9	4.8	1.77	.76	.17		3.0	.4		.14
25 0700	26 0700	25.00		-1	4.1	.66	.29	.19		3.7	.2		.17
26 0700	27 0700	32.00		-2	2.5	.18	.23	.45		4.1	.2		.31
27 0700	28 0700	61.00		10	10.9	.88	.49	.67		2.1	.3		.50
28 0700	29 0700	80.00		24	9.7	1.82	.98	.76		1.7	.8		.73
29 0700	30 0700	102.00		49	12.7	5.07	.68	.51		1.5	.7		.45
30 0700	31 0700	32.00		23	8.0	2.05	.56	.14		1.8	.3		.16
31 0700	1 0700	85.00		-7	8.9	.47	.39	.59		3.0	2.0		.07

STATION DK 5, NORDBORSK 103-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

SEPTEMBER, 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.M. HG/M ³	PH	H+	SO ₄	NH ₄ -N	NO ₃ -N	FA	MC	NA	K	CL	FF
			UG/M ³	MEQ/M ³	UG/M ³	UG/M ³	UG/M ³	UG/M ³	UG/M ³	UG/M ³	UG/M ³	UG/M ³	UG/M ³
1 0700	1 0700	32.00	10	13.3	0.38	0.55	0.07	0.07	4.1	0.1	0.1	0.13	
2 0700	3 0700	22.00	5	5.4	1.9	0.38	0.09	3.0	0.0	0.0	0.04		
3 0700	4 0700	23.00	23	5.4	1.90	0.44	0.07	1.5	0.1	0.1	0.11		
4 0700	5 0700	35.00	27	8.7	3.70	0.85	0.06	1.0	0.1	0.1	0.11		
5 0700	6 0700	123.00	44	7.9	4.91	2.00	0.70	1.4	0.8	0.2	0.18		
6 0700	7 0700	38.00	35	11.8	4.32	0.51	0.11	1.4	0.2	0.2	0.18		
7 0700	8 0700	48.00	25	12.4	3.23	0.45	0.24	1.8	0.2	0.2	0.25		
8 0700	9 0700	19.00	17	10.0	1.77	0.26	0.07	0.9	0.1	0.1	0.10		
9 0700	10 0700	20.00	2	9.8	1.07	0.26	0.10	2.0	0.1	0.1	0.01		
10 0700	11 0700	20.00	2	6.3	0.16	0.23	1.64	2.2	0.1	0.1	0.10		

STATION DK 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

MARCH, 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI NG/M3	SO4 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	RR NG/M3	SR NG/M3	PB NG/M3
26 0700	27 0700	1.34	21	1.9	0	13	2	2	32	9	0	79
27 0700	28 0700	1.33	17	4.1	0	8	4	2	418	8	0	81
28 0700	29 0700	.51	8	2.4	2	7	2	3	42	7	0	73
29 0700	30 0700	1.05	22	5.1	0	18	4	5	72	10	0	144
30 0700	31 0700	.93	16	2.1	0	13	3	3	56	8	0	92
31 0700	1 0700	.60	14	1.6	0	11	1	3	42	8	2	54

STATION DK 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

APRIL, 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI NG/M3	SO4 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	RR NG/M3	SR NG/M3	PB NG/M3
17 0700	18 0700	3.43	20	3.9	0	10	0	0	7	12	12	11
18 0700	19 0700	.89	12	1.1	0	6	2	0	10	3	3	23
19 0700	20 0700	.34	0	1.8	0	6	0	0	10	4	4	33
20 0700	21 0700	1.40	19	1.3	2	4	2	2	12	3	3	42
21 0700	22 0700	1.05	11	2.3	0	5	1	0	17	4	4	38
22 0700	23 0700	2.20	33	2.1	0	13	3	0	18	8	8	27
23 0700	24 0700	.83	13	1.2	0	6	1	0	14	7	2	19
29 0700	30 0700	.47	10	2.0	3	10	3	3	47	6	0	98

STATION DK 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

MAY 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI NG/M3	SO4 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	HP NG/M3	SR NG/M3	PB NG/M3
1 0700	2 0700	.73	16	2.6	3	14	4	6	59	6	2	77
2 0700	3 0700	.39	10	1.5	0	13	2	2	49	5	0	62
20 0700	21 0700	4.30	74	2.8	6	25	5	3	68	6	4	98
21 0700	22 0700	2.32	31	2.7	4	17	3	4	72	7	0	165
22 0700	23 0700	2.71	41	4.4	3	19	4	6	59	4	0	105

STATION DK 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER.

JUNE 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI NG/M3	SO4 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	HP NG/M3	SR NG/M3	PB NG/M3
25 0700	26 0700	3.20	91	2.3	2	12	4	1	23	6	5	41
26 0700	27 0700	1.99	64	2.0	0	0	4	0	14	5	6	25
27 0700	28 0700	3.73	121	5.1	4	49	5	0	111	9	16	113
28 0700	29 0700	1.62	66	3.0	2	16	3	4	55	8	4	93
29 0700	30 0700	.54	61	2.8	4	6	2	2	58	7	2	58

STATION DK 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.
HIGH VOLUME SAMPLER.

AUGUST 1972

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI NG/M3	SO4 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	BP NG/M3	SP NG/M3	PO NG/M3
15 0700	16 0700	1.64	57	1.4	3	10	2	0	19	9	2	34
16 0700	17 0700	2.25	77	1.2	5	16	1	1	17	7	4	24
17 0700	18 0700	3.65	84	3.8	6	38	5	12	16	14	11	205
18 0700	19 0700	.95	54	1.1	1	5	1	1	7	6	3	135
19 0700	20 0700	1.42	60	2.3	3	10	1	1	14	11	2	62
20 0700	21 0700	.50	49	.9	3	2			17	6	2	6
21 0700	22 0700	.34	42	.7	1	3			1	7	2	3
22 0700	23 0700	.77	55	.8	1	3			3	0	3	5
23 0700	24 0700	3.01		1.1	2	15	1	0	15	11	8	20
24 0700	25 0700	.82	44	2.5	1	7			15	10	2	25
25 0700	26 0700	1.78	35	1.4	1	6	1	0	8	8	3	12
26 0700	27 0700	2.85	53	.9	2	11	1	0	7	9	6	10
27 0700	28 0700	3.36	76	2.4	2	17	3	5	21	8	8	48
28 0700	29 0700	5.80	110	2.5	2	25	4	5	29	14	1	57
29 0700	30 0700	3.91	73	4.3	3	16	4	5	60	16	5	96
30 0700	31 0700	1.33	80	1.7	1	8	1	5	32	12	3	57
31 0700	1 0700	2.03	78	2.1	2	3	2	4	6	37	8	12

STATION DK 5, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.
HIGH VOLUME SAMPLER

JULY 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI NG/M3	SO4 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	BR NG/M3	SR NG/M3	PB NG/M3
3 0700	4 0700	1.40		3.3	4	13	4	2	44	8	1	57
4 0700	5 0700	1.60		1.7	2	9	3	2	29	5	1	35
5 0700	6 0700	4.53		2.1	0	16	4	3	43	6	3	47
6 0700	7 0700	5.09		2.5	3	22	4	3	27	7	6	42
7 0700	8 0700	2.49		3.4	2	14	2	4	31	7	2	51

STATION OK F, NORFOLK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER.

SEPTEMBER 1977

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI NG/M3	SO4 UG/M3	CR NG/M3	MN NG/M3	NT NG/M3	CU NG/M3	ZN NG/M3	SP NG/M3	OR NG/M3
1 0700	2 0700	1.17	74	13.3	3	6	5	4	28	11	3
2 0700	3 0700	.80	46	5.4	1	2	5	2	3	3	3
3 0700	4 0700	1.25	55	5.4	1	3	5	3	0	2	3
4 0700	5 0700	1.17	59	8.7	3	8	2	8	28	2	2
5 0700	6 0700	3.32	68	7.9	5	26	5	13	81	8	8
6 0700	7 0700	1.22	44	11.8	1	6	2	3	26	1	1
7 0700	8 0700	1.90	75	12.4	1	12	2	5	35	2	2
8 0700	9 0700	1.10	49	10.0	2	4	1	2	11	5	2
9 0700	10 0700	1.26	53	9.8	2	6	8	2	12	2	2
10 0700	11 0700	1.30	66	6.3	1	5	1	1	3	7	3

STATION S 02, NORDFURSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

JULY 1973

SAMPLING PERIOD				COMPONENTS										
FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L		
6 1943	6 2245		2.5		32	3.3	.15	.07	.36		3.4	1.8		
7 1230	7 1523		2.7		40	2.1	.004	.08	.40		1.6	1.4		
10 0406	10 0556		.8		-5	11.1					32.5			
10 0717	10 1017		1.1		-248	7.0					20.0			
16 2240	17 0156				13	1.6					2.5			
17 0156	17 0209				19	3.0					1.8			
20 0910	20 0916		1.4		32	2.8					.9			
20 1306	20 1446		.7		59	6.2					3.0			
20 1631	20 1832		2.2		77	4.3					.6			
21 0211	21 0242		.1		56									
21 1847	21 2054		6.3		29	.8					.7			
24 0113	24 0423		7.2		36	2.5					.3			
24 1403	24 1409		1.4		32	14.5					36.8			
24 2209	25 0115		1.3		20	2.7					.5			
25 1621	25 1526		7.5		28	1.4					.5			
26 1337	26 1541		4.7		22	5.2					15.5			
27 0952	27 1303		2.8		42	2.3					.4			
27 1756	27 1927		1.5		78	3.8					.3			

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STATION 5 02, NORDFURSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

AUGUST 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H ⁺ UEQ/L	SO ₄ MG/L	NH ₄ -N MG/L	NO ₃ -N MG/L	CA MG/L	Mg MG/L	NA MG/L	K MG/L
3 2333	4 0152		.5		126	7.8	.20	.26	.60		1.5	3.0
4 0252	4 0302		2.7		92	12.2					1.3	
4 1005	4 1037		1.2		138	6.7	.11	.36	.30		2.6	2.3
4 1314	4 1332		2.6		224	8.4	.12	.31	.59		3.6	2.9
5 0737	5 1049				85							
5 1042	5 1323		5.5		63	3.4	.54	.12	.26		3.0	1.8
5 1459	5 1535		1.8		80	5.1	.54	.10	.19		3.6	2.5
6 0454	6 0748		1.9		40	4.9	.49	.11	.60		6.9	3.5
6 2048	7 2355		5.3		27	6.4	.14	.16	.66		4.8	2.7
7 1625	7 1708		.3		93	8.3						
7 1904	7 2213		1.1		47	6.4	.09	.21	.83		8.9	4.0
7 2214	8 0118		8.5		13	1.3	.06	.03	.06		3.8	1.6
9 2222	10 2342		2.9		163	11.0					12.6	
10 0435	10 0529		1.1		138	7.9					8.0	
18 0108	18 0207				55	5.3	.52	.14	.54		5.9	3.1
20 2309	20 0212		6.5		27	3.5					7.0	
21 0433	21 0436		.1		26	1.6						
30 0248	30 0433				442							
30 1028	30 1341				121	9.9					1.5	

STATION 5 02. NORUFURSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SEPTEMBER 1973

SAMPLING PERIOD			COMPONENTS										
FROM DAY GMT	TO DAY GMT	DURATION AMOUNT	PH	H+	SO4	NH4-N	NO3-N	CA	MG	NA	K		
DAY GMT	DAY GMT	MIN	MM	UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L		
19 0531	19 0551	2.2		87	9.3	.14	.24	.98		4.9	3.4		
20 0143	20 0234	.2		277	20.1	1.98	.55	.34		.7	2.1		
20 1323	20 1637	1.2		183	9.0	.26	.15			.4	.5		
21 1756	21 2103	2.5		77	2.5	.06	.14			.1			
21 2103	22 0006			23	0.0	.21	.09			.3	.5		
22 0006	22 0310	1.5		24	2.2	.39	.11	.12		1.1	.8		
22 0310	22 0613	2.8		52	3.4	.56	.25	.06		3.1	1.3		
22 0639	22 1145	2.6		164	5.6	.34	.14			.1			
22 1149	22 1451	2.5		97	4.6								
22 1452	22 2100	.4		68	6.1								
22 2100	23 0000	.4		73									
23 0310	23 0511	.1		134									
23 0700	23 0757	2.0		32	3.3	1.15	.09			1.4	1.9		
28 1656	28 1726	1.5		-15	3.4	.41	.10	.20		6.0	3.7		
29 1025	29 1331	2.1		40	3.6					4.6			
29 2032	30 2339			44	1.2					1.5			
30 0726	30 1036	2.5		32	1.9					5.0			

STATION S 02, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

OCTOBER • 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L
8 1448	8 1753		.2		262	27.9						
9 0346	9 0700	8.1			13	2.7						
9 0700	9 1010	2.5			30	2.1						
9 1019	9 1337	3.3			12	7.7						
9 1337	9 1948	.9			-40	56.7						
9 2031	10 2339	.6			-127	35.4						
10 1213	10 1239	.2			-26							
12 1704	12 1734	.5			479	69.6						
17 2203	18 0112	6.0			28	3.6						
18 0112	18 0400	.1			26							
18 1126	18 1222	.1			18							
19 0734	19 1043	2.6			3	2.4						
19 1355	19 1458	5.9			4	.3						
24 1552	24 1904	.2			28	12.4						
27 0223	27 0842	.2			215	111.4						

STATION S 02. NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

MARCH 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	H+ NFO/M3	SO4 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3	AL UG/M3
22 1135	23 92.20	14	19.1	5.68	1.30					8.4		7.77	.29	.46
27 1130	28 1115	10	9.7	2.93	.05					.8		.07	.12	.15

STATION S 02. NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

MAY 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	H+ NFO/M3	SO4 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3	AL UG/M3
30 1350	2 1420	21.30		2	4.6	1.30	.27			2.6		2.66	.02	.08
2 1430	3 1150	13.10		-1	2.6	.53	.31			1.9		1.67	.01	.04
7 1410	8 1125	22.90		4	7.0	1.81	.34			1.4		1.46	.05	.05
25 1430	28 1420	27.00		20	11.9	2.45	.01			1.2		.08	.07	.14
28 1420	28 2300	53.70		219	22.1	2.48	.06			.8		.23	.25	1.11
29 2300	29 0500	55.80		212	22.5	2.77	.04			.8		.43	.20	.78
29 0500	29 1100	58.90		214	21.5	3.00	.03			1.0		.21	.34	.94
29 1100	30 1100	35.90		27	14.3	3.04	.02			.5		.18	.14	.24

STATION S 02. NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

JUNE 1973

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	H+ NFG/M3	S04 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3	AL UG/M3
1 1800	4 1245	22.10		2	5.3	.76	.29			2.0		.75	.02	.05
4 1410	5 1330	30.90		-4	5.8	1.11	.12			1.7		.50	.02	.06

STATION S 02. NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

JULY 1973

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	H+ NFG/M3	S04 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3	AL UG/M3
16 1400	17 1205	23.70		2	13.7	.78	.11			2.6		1.42	.03	.17
17 1210	18 1015	27.80		6	7.6	1.58	.29			2.5		1.14	.03	.13

STATION S 02, NURDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

AUGUST +1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	NFQ/M3	H+	SO4 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3	AL UG/M3
1 1600	2 1515	29.70		31	12.5	2.86	.02				16.3		.12	.07	.12
2 1520	3 1145	43.80		14	11.0	3.35	.31				10.4		.22	.10	.20
3 1300	6 1150	36.50		6	8.4	1.50	.24				3.9		2.49	.05	.11
6 1315	7 1005	38.90		0	4.9	.41	.35				7.1		6.43	.03	.15
7 1010	10 1200	25.20		1	3.6	.77	.31				3.3		3.16	.03	.09
17 0000	17 0530	28.60		-1	3.6	.92	.20				.5		.43	.11	.32
17 0630	17 1100	39.30		3	5.7	1.36	.41				1.2		.67	.15	.40
17 1200	17 1700	43.10		-4	9.1	1.43	.25				1.5		.78	.26	.73
17 1900	17 2300	59.60		1	9.5	1.34	.55				2.0		1.31	.27	.70

STATION S 02, NURDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER

SEPTEMBER +1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	NFQ/M3	H+	SO4 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3	AL UG/M3
18 1155	19 1105	19.80		0	3.2	.48	.11				.6		.46	.01	0.00
19 1110	20 1130	37.90		12	10.4	2.14	.66				.8		.85	.09	.02
20 1205	21 1255	27.30		5	1.3	1.18	.71				2.3		3.34	.03	.05
21 1300	24 1215	13.00		4	.7	.66	.38				.9		.71	.02	.27
27 1210	28 1230	22.00		6	6.4	1.40	.18				1.3		2.56	.03	.05

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

JUNE 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UFG/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	Ca MG/L	Mg MG/L	NA MG/L	K MG/L	FE MG/L
2	3	0700				1.18	.63	1.40		1.4	.5	.20
4	5	0700				.08	.05					
10	11	0700				.25	.06	1.00		.2	.3	.30
12	13	0700				.55	.31			1.1		
28	29	0700				1.59	1.33	2.00		.3	.4	.80
29	30	0700				.83	.80					.11

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

JULY 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UFG/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	Ca MG/L	Mg MG/L	NA MG/L	K MG/L	FE MG/L
18	19	0700				1.50	.20	.90		.2		.07
19	20	0700				1.20	.19			.2		
21	22	0700				1.70	.32	.60		.3		
23	24	0700				.44	.15	.40		.1	.1	.05
24	25	0700				.45	.17	.10		.2	.1	.03
25	26	0700				1.30	.35	.60		.3		

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

AUGUST 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UFG/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	Ca MG/L	Mg MG/L	NA MG/L	K MG/L	FE MG/L
3	4	0700				.42	.21					.16
5	6	0700				.75	.37					.04
8	9	0700				.48	.28					.34
18	19	0700				1.29	.48					.29
31	1	0700				1.35	.70					

STATION SF 1, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP.

APRIL 1973

SAMPLING PERIOD		COMPONENTS												
FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS/L	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L	
5 700	6 700	6.4	7.74	7.74	5.7	5.0	4.3	5.50	.24	1.4	.3	.12		
16 700	17 700	2.0	3.75	3.75	5.9	1.10	8.3	3.50	.22	.5	.3	.30		
25 700	27 700	5.4	6.88	6.88	3.9	1.10	4.3	1.50	.10	.4	.8	.61		
29 700	30 700	8.2	4.33	4.33	60	2.50	1.13	2.00	.22	.3	.3	.30		
30 700	1 700	6.5	4.39	4.39	46	5.6	.97	.60	.06	.2	.3	.13		

STATION SF 1, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP AND NORDFORSK 100-DAY

MAY 1973

SAMPLING PERIOD		COMPONENTS												
FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS/L	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L	
5 700	6 700	4.1	4.31	4.31	23	4.3	2.30	4.3	.47	.3	.3	.29		
10 700	11 700	2.4	4.12	4.12	93	9.6	1.60	1.35	.15	.5	.6	.56		
18 700	19 700	10.1	5.22	5.22	2.1	2.1	.56	1.1	.10	1.9	.6	.09		
19 700	20 700	12.0	5.35	5.35	.9	.9	.31	.07	1.00	.2	.1	.01		

STATION SF 1, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP AND NORDFORSK 100-DAY

JUNE 1973

SAMPLING PERIOD		COMPONENTS												
FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS/L	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L	
1 700	2 700	15.2	4.49	4.49	37	5.2	.55	.34	1.10	.04	.9	.6	.27	
3 700	4 700	4.4	4.42	4.42	38	2.5	1.14	.53	.80	.07	1.5	.6	.20	
9 700	10 700	3.4	5.19	5.19	10	5.2	2.96	.75	.10	.07	.5	.39		
10 700	11 700	1.0	4.90	4.90	17	8.1	1.96	.53	.15	.57	.6	.33		
28 700	29 700	4.4	5.02	5.02	11	3.0	1.96	1.23	.26	.4	.4	.33		
29 700	30 700	27.8	4.30	4.30	56	2.5	.56	.33	.07	.2	.3	.21		

STATION SF 1, NORDFORSK 10J-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SJPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP.

OCTOBER 1973

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION MM	P4	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	N03-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
8	700	9	5.7	4.37	52	3.3	.67	.27	.60	.08	.4	.3	.17
10	700	11	2.4	5.35	14	.8	.15	.03	3.10	.16	2.3		
21	700	22	4.1	5.34	10	.5		.13	1.60	.02	1.3		
22	700	23	3.8	4.72	28	1.6		.03	1.00	.27	.6	.1	
28	700	29	5.7	4.42	52	3.1	.79	.33	.60	.05	.3	.5	
29	700	30	6.0	5.40	10	.2		.14	.60	.15	.2		

STATION SF 1, NORDFORSK 10J-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SJPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP.

SEPTEMBER 1973

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION MM	P4	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	N03-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
3	700	4	1.3	7.14	-70	2.9	.34	.13	.13	.07	.5	.1	
5	700	7	3.2	5.54	6	1.0	.51	.13	.06	.05	.3	.4	.02
8	700	9	6.3	5.47	10	1.3	5.07	.03	.10	.18	1.7	.8	
9	700	10	5.4	7.12	-75	1.3	1.00	.03	.06	.26	.9	.4	
11	700	12	3.9	5.99	3	.6	1.86	.03		.54	4.7	.1	.04
12	700	13	3.7	6.79	-49	1.2	.27	.13	.10	.05	.3	.1	.04
25	700	26	9.0	5.01	30	1.7	.80	.53		.07	.5	.4	
26	700	27	2.0	4.13	102	5.8		.53	.06	.10	.7	.4	
28	700	29	6.0	4.11	168	5.7	.77	.53		.10	.7	.4	
29	700	30	4.9	4.50	40	1.3	.39	.41		.05	.7	.1	.04

STATION SF 1, NORDFORSK 10J-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SJPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP.

JULY 1973

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	N03-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
11	700	12	3.2	6.17	-29	5.9	2.70	.43	2.50	.18	.7	.6	
19	700	20	30.8	6.43	-17	1.5	1.20	.11		.09	.2	.3	.05
23	700	24	8.8	4.68	28	2.2	.61	.22	.60	.04	.2	.3	.05
25	700	26	9.2	5.08	15	1.6	.62	.13	.10	.06	.2	.1	.05
25	700	27	11.5	5.19	13	1.1	.29	.07	.10	.02	.2	.1	.05

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SJPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP AND NORDFORSK 100-DAY

APRIL 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS/L	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
5 700	6 700	5.4	4.78	25	4.4	.63	.21	.60	.67	2.2	3.1	.57
6 700	7 700	1.0	4.54	23	3.4	.67	.22	1.40	.10	.3	.4	.12
10 700	11 700	4.1	6.12			1.70	.22	.40	.80	.3	.4	.19
11 700	12 700	1.9	5.79	34	1.4	1.70	.43	.40	.48	.3	.1	.09
12 700	13 700	2.4	4.57	20	2.4	.46	.22	.40	.14	.3		.16
13 700	14 700	2.1	4.70	54	5.6	1.70			.10	.2		.07
17 700	18 700	3.0	4.31	50	7.7	1.70	1.03	1.50	.02	.4	.2	.19
18 700	19 700	5.9	4.34	60	5.3	.81	.53	.10	.15	.3	.3	.22
26 700	27 700	5.1	4.29	65	13.7	2.70	1.33	1.90	.16	.3		.39
29 700	30 700	2.3	4.32									

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SJPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP AND NORDFORSK 100-DAY

MAY 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS/L	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
1 700	2 700	3.9	4.48	42	9.6	2.40	.15	5.60	.14	.3		.30
2 700	3 700	2.9	4.59	28	3.3	.60	.85	3.30	.27	.3		.08
6 700	7 700	2.1	4.09	80	9.0	1.90	.45	2.30	.10	.1		.15
12 700	13 700	2.9	4.25	59	6.1	3.10	.45	1.30	.22	.3	.3	.17
13 700	14 700	3.5	4.46	41	4.6	1.30	.21	.50	.02	.9	.1	.07
15 700	17 700	4.1	4.93	10	2.1	.21	.27	1.30	.12	3.5	.7	.11
16 700	18 700	2.0	5.33					.60	.07	.7	.3	.11
17 700	18 700	4.2	4.92	15	2.9	.49	.21	.60	.04	.3	.3	.04
18 700	19 700	9.9	4.95	13	2.3		.15	.60		.3	.3	

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SJPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP AND NORDFORSK 100-DAY

JUNE 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS/L	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
2 700	3 700	8.4	4.15	76	8.3	1.18	.53	1.40	.14	1.4	.5	.20
4 700	5 700	2.3	7.34			.08	.05		.30			
10 700	11 700	13.0	5.44			.25	.35	1.00	.04	.2	.3	.30
12 700	13 700	1.9	4.55	32	4.2	.65	.31		.15	1.1	.4	.80
28 700	29 700	6.2	3.71	83	9.5	1.69	1.33	2.00	.15	.3		.11
29 700	30 700	14.9	4.30	56	4.1	.83	.81		.07			

SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP.

OCTOBER 1973

SAMPLING PERIOD

FROM DAY GMT		TO DAY GMT		DURATION AMOUNT	PH		H+		SO4		NH4-N		NO3-N		CA		MG		NA		K		FE	
				MIN	MM		UEQ/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L	
1	700	2	700	4.1	4.53	40	2.0	.17	.24	.10	.05	.8	.09											
9	700	10	700	4.6	5.13	16	2.4	.23	.27	.66	.23	1.4	.09											
12	700	13	700	3.7	4.75	26	1.4	.12	.21	1.50	.05	.9	.08											
15	700	16	700	5.0	4.44	44	2.6	.33	.32	.60	.04	.3	.04											
19	700	20	700	8.3	5.25	12	.5	.07	.07	.40	.02	.7	.04											
20	700	21	700	2.5	5.70	3	1.1	.11	.07	1.30	.04	.9	.1											

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP.

SEPTEMBER 1973

SAMPLING PERIOD

FROM DAY GMT		TO DAY GMT		DURATION AMOUNT	PH		H+		SO4		NH4-N		NO3-N		CA		MG		NA		K		FE	
				MIN	MM		UEQ/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L	
1	700	2	700	5.4	4.39	55	1.8	.34	.34	.06	.02	.2	.03											
2	700	3	700	20.2	4.60	40	1.4	1.11	.64	.10	.02	.3	.03											
5	700	6	700	17.8	4.18	80	4.4	.64	.21	.06	.02	.2	.03											
7	700	8	700	2.3	5.41	7	.8	.21	.98	.10	.02	.3	.03											
8	700	9	700	2.4	6.02	-4	1.4	.19	.06	.06	.02	.5	.02											
9	700	10	700	7.1	5.08	15	.6	.25	.56	.10	.02	.3	.02											
12	700	13	700	7.7	5.53	14	.6	.9	.83	.06	.02	.1	.02											
15	700	16	700	4.1	4.90	23	4.6	.24	.24	.50	.05	.2	.05											
21	700	22	700	2.3	4.85	37	4.1	.47	.47	.06	.16	.2	.05											
25	700	27	700	7.7	4.15	98	4.1	5.11	7.7	.44	.44	.4	.05											
26	700	28	700	5.7	3.85	178	7.0	.90	.90	.05	.05	.5	.11											
28	700	29	700	1.5	4.07	124	3.1	.48	.48	.10	.03	.3	.11											
29	700	30	700	9.2	4.23	72	3.1	.48	.48	.10	.03	.3	.11											

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP.

JULY 1973

SAMPLING PERIOD

FROM DAY GMT		TO DAY GMT		DURATION AMOUNT	PH		H+		SO4		NH4-N		NO3-N		CA		MG		NA		K		FE	
				MIN	MM		UEQ/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L		MG/L	
18	700	19	700	19.8	5.80	-2	2.6	1.50	1.50	.90	.07	.2	.07											
19	700	20	700	25.2	5.05	19	4.0	1.20	1.70	.60	.07	.2	.07											
21	700	22	700	7.9	4.58	37	5.3	.44	.44	.40	.02	.1	.05											
23	700	24	700	24.6	4.75	37	2.0	.45	.45	.10	.02	.2	.03											
24	700	25	700	9.4	4.75	27	1.7	.45	.45	.10	.02	.2	.03											
25	700	26	700	12.8	4.47	40	1.7	.45	.45	.10	.02	.2	.03											

STATION SF 3, NORDFORSK 100-DAYS PROGRAMME, PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, DECED-PROJECT LRTAP AND NORDFORSK 100-DAYS PROGRAMME.

APRIL 1973

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
9 0700	10 0700	1.8	5.52			5.3	.50	.75	1.50	.22	.6		.18
10 0700	11 0700	4.6	5.01	13		1.4	.39	.14	.40	.06	.1	.1	.33
11 0700	12 0700	1.6	5.22			6.3		.37	2.30	.16	.9		
18 0700	19 0700	3.7	6.68			2.6	1.20	.23	.90	.05	.5		.08
19 0700	20 0700	6.2	6.05			2.9	.36	.20	.60	.03	.2	.1	.12
20 0700	21 0700	4.9	5.94			1.8	.25	.11	.40		.4	.3	.05
28 0700	29 0700	2.1	5.53							4.80			.30

STATION SF 3, NORDFORSK 100-DAYS PROGRAMME, PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, DECED-PROJECT LRTAP AND NORDFORSK 100-DAYS PROGRAMME.

MAY 1973

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
2 0700	3 0700	3.6	4.64	30		7.1	.52	.22	1.50	.06	.2	.3	.17
6 0700	7 0700	13.5	4.64	38		3.3	.74	.24	.60	.03	.1	.1	.09
12 0700	13 0700	7.7	6.83	28		2.5		.29	1.00	.10	.1	.1	.37
14 0700	15 0700	1.9	4.62	27		4.8	.56	.18	.50	.04	3.5	.3	.09
16 0700	17 0700	8.1	4.60	27		3.0		.33	2.60	.12	4.2	.5	.16
17 0700	18 0700	3.2	6.64			6.8							

STATION SF 3, NORDFORSK 100-DAYS PROGRAMME, PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, DECED-PROJECT LRTAP AND NORDFORSK 100-DAYS PROGRAMME.

JUNE 1970

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
10 0700	11 0700	6.1	7.09			4.8	1.85	.39	1.50	.16	.3		.33
11 0700	12 0700	4.7	5.23			2.5	.83	.16	.50	.07	.2		.16
12 0700	13 0700	13.9	5.22			.5	.17	.04	.50	.15	.2	.4	.20
23 0700	24 0700	1.9	6.74			2.5	.44	.25	.50	.07	.3	.4	
27 0700	28 0700	3.0	6.25			1.4	4.76	.90		.07	1.0	.4	
28 0700	29 0700	6.7	3.79	73		16.9	.97	.33	.50	.18	.3	.4	.17

STATION SF 3, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECD-PROJECT LRTAP.

OCTOBER 1973

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
2 700	3 700	5.1	6.23	-13	1.5	1.08	.2	.10	.02	.2	.5	.10	
9 700	10 700	27.2	5.60	4	.7	.66	.1	.10	.03	1.1	.15		
12 700	13 700	3.3	5.55	7	.7	.30	.17	.60	.05	.4			
15 700	16 700	9.0	5.10	15	1.7	.34	.2	1.00	.02	1.3		.10	
20 700	21 700	3.6	5.70	5	.4	.27	.13	1.30	.03	2.9		.12	
25 700	26 700	5.5	4.77	31	1.6	.38	.21	1.00	.07	.5			

STATION SF 3, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECD-PROJECT LRTAP.

SEPTEMBER 1973

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
2 700	3 700	12.8	5.83	4	.5	.87	.15	.10	.02	.2	.1	.02	
5 700	6 700	12.4	4.93	26	2.2	.22	.1	.10	.05	.1	.3	.02	
9 700	10 700	35.8	5.78	2	2.3	.31	.3	.10	.02	.2	.1	.02	
10 700	11 700	2.6	6.80	16	1.5	2.29	.03	.02	.02	.6			
12 700	13 700	22.3	5.30	0	.8	.18	.07	.10	.02	.1	.1	.03	
13 700	14 700	4.9	6.30	0	.7	.48	.33	.06	.05	.2	.1	.14	
29 700	30 700	7.0	4.21	99	5.5	.81	.23	.10	.05	.6	.4	.15	
30 700	31 700	16.6	4.52	50	2.8	.64	.23	.10	.03	.2	.1		

STATION SF 3, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECD-PROJECT LRTAP.

JULY 1973

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
23 0700	24 0700	5.5	5.59	5	1.7	1.20	.27	1.30	.14	.2	.3		
31 0700	1 0700	4.0	4.24	88	7.0	.21	.12	.06	.06	.4			

SJPLEMENTARY ANALYSES, OECD-PROJECT LRTAP AND NORDFORSK 100-DAY

JUNE 1973

SAMPLING PERIOD

FROM DAY GMT		TO DAY GMT		DURATION AMOUNT	PH	H+	SO4	NH4-N	NO3-V	CA	MG	NA	K	FE
				MIN	MM	UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
1	700	2	700	2.2	7.25	44	3.7	.37	.65	1.60	.50	1.5	5.9	.07
2	700	3	700	6.7	4.39	44	3.1	.37	.23	1.10	.07	.1	.3	.26
3	700	4	700	3.9	4.42	38	8.5	1.35	.53	2.30	.40	3.0	.3	.15
4	700	5	700	11.8	6.14	14	4.3	1.87	.23	.40	.07	.1	.4	.12
9	700	9	700	19.5	5.16	14	1.4	.30	.21	.90	.04	.1	.4	.58
9	700	10	700	4.3	4.95	10	1.2	.30	.15	2.30	.10	.3	.4	
15	700	16	700	2.2	6.80	1.3	7.0	2.43	.22	.50	.10	.3		.09
27	700	28	700	2.1	8.27	7.0	6.7	.68	.22	.50	.04	.5		.27
28	700	29	700	23.9	4.14	82		.36	.27					

STATION SF 4, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SJPLEMENTARY ANALYSES, OECD-PROJECT LRTAP AND NORDFORSK 100-DAY

MAY 1973

SAMPLING PERIOD

FROM DAY GMT		TO DAY GMT		DURATION AMOUNT	PH	H+	SO4	NH4-N	NO3-V	CA	MG	NA	K	FE
				MIN	MM	UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
1	700	2	700	6.8	4.24	69	5.9	2.10	.55	.40	.22	.4	.3	.39
6	700	7	700	11.2	4.34	52	4.8	.60	.32	.40	.02	.1	.1	.23
11	700	12	700	3.8	3.80	260	14.0	3.20	.43	1.60	.50	.3	.3	.27
12	700	13	700	3.2	4.17	72	5.8	.74	.43	.08	.08	.1		.11
16	700	17	700	1.8	7.12	2.2	3.2		.15	1.40	.04	5.2		
17	700	18	700	1.2	4.71	18	2.2	1.14	.22	2.80	.04	7.6		.28
19	700	20	700	4.6	4.96	11	2.2		.15	1.10	.07	2.6	.3	
22	700	23	700	1.9	4.93	20	7.1		.43	3.10	.24	3.2	1.1	
27	700	28	700	2.3	4.01	117	7.2		.58	1.90	1.02	4.9		

STATION SF 4, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SJPLEMENTARY ANALYSES, OECD-PROJECT LRTAP.

APRIL 1973

SAMPLING PERIOD

FROM DAY GMT		TO DAY GMT		DURATION AMOUNT	PH	H+	SO4	NH4-N	NO3-V	CA	MG	NA	K	FE
				MIN	MM	UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
2	700	3	700	2.7	5.03	17	.4		.27	.40	.41	.2	.1	.05
5	700	6	700	3.0	4.47	36	2.2		.77	.40	.05	.7	.1	.06
7	700	8	700	2.7	5.80	1.4	1.4	.20	.22	.40		.3	.3	.07
8	700	9	700	4.7	4.80	30	1.5		.15	.40	.10	.1	.1	.27
11	700	12	700	7.9	5.22	-0	.6	.21	.07	.40	.13	.2	.1	.26
12	700	13	700	5.5	4.38	56	1.4	.81	.39	.10	.05	.1	.1	.36
19	700	20	700	5.6	5.17	.5	.5	.32	.05	.50	.12	.1	.1	.20
20	700	21	700	3.3	4.90	12	.6	.24	.23	.60	.04	.1	.1	.09
26	700	27	700	6.6	4.71	28	2.8	.24	.33	.60		.1	.1	.00
28	700	29	700	1.7	4.65	26	3.2		.25	.90		.3		.00

STATION SF 4, NORDFORSK 100-DAYS PROGRAMME, PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP.

OCTOBER 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MIN	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-V MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
2 700	3 700	2.0	5.22	18	1.9		.21	1.30	.05	1.1	.6	
9 700	10 700	12.7	5.05	21	5	.21	.13	.10	.03	1.5	.1	.07
14 700	15 700	8.2	4.39	51	1.7	.35	.37	.60	.03	1.1		.07
20 700	21 700	4.2	5.34	10	.4	.14	.05	1.00	.03			
25 700	26 700	3.8	4.92	22	.8	.21	.13	.60	.03	.3		
28 700	29 700	6.8	4.62	34	1.7	.60	.21	.10	.05	.7		.06

STATION SF 4, NORDFORSK 100-DAYS PROGRAMME, PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP.

SEPTEMBER 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MIN	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-V MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
5 700	6 700	14.6	4.74	34	1.5	.54	.11	.10	.02	.1	.3	.03
7 700	7 700	1.3	6.29	-17	1.3	1.02	.13		.07	1.2		
9 700	10 700	26.1	5.49	10	.3	.13	.13	.06		.1	.1	.02
11 700	12 700	5.8	5.52	14	.6	.45	.03	.06	.02	.2	.1	.06
12 700	13 700	8.8	5.89	4	.1	.66	.33	.10	.05	.2	.1	.06
13 700	14 700	4.7	5.29	14	.6	.21	.03	.06	.02	.1	.1	.20
29 700	30 700	8.8	4.53	47	1.7	.19	.24	.10	.03	.3	.1	.15
30 700	1 700	14.2	4.38	60	2.3	.52	.31	.10	.03	.1	.1	

STATION SF 4, NORDFORSK 100-DAYS PROGRAMME, PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, DEC0-PROJECT LRTAP.

JULY 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MIN	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-V MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
16 700	17 700	5.5	4.45	49	5.1	1.40	.23		.10			
18 700	19 700	9.0	4.38	76	8.4	.89	.41	2.30	.15	.1	.12	
22 700	23 700	4.6	5.19	24	1.7	1.10	.23	1.50	.07	.4		
24 700	25 700	3.6		1.1	.64	.21	.10		.02	.1	.1	
27 700	28 700	7.5	4.64	48	1.5	.46	.11	.10	.09	.1	.07	
30 700	31 700	6.1	4.67	52	1.1	.30	.11	.60	.03	.1	.05	
31 700	1 700	6.2	4.85	32	1.0	.29	.39	.60	.04	.1	.05	.05

STATION SF 5, NORJFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, OECD-PROJECT LRTAP AND NORJFORSK 100-DAY

JUNE 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS3-	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
3 JUL 4	700 700	1.7	4.63	24	3.8		.23	1.00	.07	4.0		
10 JUL 11	700 700	14.5	6.30		.6	.23	.07	.50	.62	.2	.3	.30
13 JUL 14	700 700	3.0	4.75	19	.9	1.16	.15	1.50	.31	.6	.4	
19 JUL 20	700 700	3.2	7.51		3.2	.29	.11	.50	.15	.3	.5	.17
22 JUL 23	700 700	4.3	5.22		.8	1.16	.41		.15	.8		
27 JUL 28	700 700	3.8	4.53	33	3.2	1.80	.83	2.80	.07	.5	.6	
28 JUL 29	700 700	4.4	4.31	55	5.4	.53	.27	.30	.11	.2	.4	.21

STATION SF 5, NORJFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SUPPLEMENTARY ANALYSES, OECD-PROJECT LRTAP AND NORJFORSK 100-DAY

MAY 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS3-	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
1 JUL 2	700 700	3.0	5.05	10	1.1	.33	.13	.40	.09	.3		.04
2 JUL 3	700 700	2.4	6.09		2.2				.43	.1	.1	.08
6 JUL 7	700 700	4.3	4.58	27	.4	.59	.23	.40	.08	.1	.1	.08
12 JUL 13	700 700	3.1	4.18	73	3.3	.33	.25	.10	.08	.1	.1	.08
13 JUL 14	700 700	2.3	4.84	19	1.0	2.10	.13	.40	.08	.1	.3	.05
14 JUL 15	700 700	5.2	4.82	15	.8		.07	1.00	.12	1.5	.3	.03
15 JUL 16	700 700	2.9	4.95	12	.8			1.10	.07	4.7	.3	.03
23 JUL 24	700 700	7.8	4.54	30	2.1	.75	.11	.30	.10	.7	.3	.07

STATION SF 5, NORJFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

SUPPLEMENTARY ANALYSES, OECD-PROJECT LRTAP AND NORJFORSK 100-DAY

APRIL 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MS3-	CA MS/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
2 JUL 3	700 700	1.8	4.75	15	1.9		.43	.60	.04	.3	.4	.03
5 JUL 6	700 700	3.1	5.22		.5	.07	.25	.40	.04	.1	.6	.10
7 JUL 8	700 700	2.2	5.04	13	1.2		.13	.40	.04	.3	.3	.02
8 JUL 9	700 700	3.1	4.90	13	1.2	.31	.14	.40	.04	.1	.1	.07
12 JUL 13	700 700	7.8	5.10		.4		.13	.10	.04	.3	.2	.07
26 JUL 27	700 700	6.5	5.35	17				.10	.04	.3	.2	.07

STATION SF 5, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP.

OCTOBER 1973

FROM DAY GMT			TO DAY GMT			DURATION AMOUNT		COMPONENTS										
DAY	GMT	MIN	DAY	GMT	MIN	MM	P4	H+	SO4	NH4-N	NO3-N	CA	MG	NA	K	FE		
							UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L		
2	700	3	700	3	4	3.4	5.34	9	.3		.03	.10		.1	.1			
3	700	4	700	3	7	3.7	5.22	10	.2		.03	.10		.5	.1			
14	700	15	700	4	5	4.5	5.19	15	.1	.14	.03	1.90	.03	.3				
15	700	17	700	2	1	2.1	5.47	6	1.1		.23	1.30	.05	.3				
25	700	26	700	3	7	3.7	6.11	0	.2		.07	2.40	.03	.4	.1			

STATION SF 5, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP.

SEPTEMBER 1973

FROM DAY GMT			TO DAY GMT			DURATION AMOUNT		COMPONENTS										
DAY	GMT	MIN	DAY	GMT	MIN	MM	P4	H+	SO4	NH4-N	NO3-N	CA	MG	NA	K	FE		
							UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L		
5	700	6	700	5	1	5.1	4.75	26	.5	1.98	.03	.10	.50	.2	.1			
20	700	21	700	5	4	5.4	5.25	22	1.1	.32	.03	.50	.02	.1				
29	700	30	700	7	7	7.7	4.65	36	1.1	.51	.15	.10	.03	.2	.3	.13		
33	700	1	700	2	2	2.2	4.35	72	2.8	.36	.27		.03					

STATION SF 5, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.
 SUPPLEMENTARY ANALYSES, JECO-PROJECT LRTAP.

JULY 1973

FROM DAY GMT			TO DAY GMT			DURATION AMOUNT		COMPONENTS										
DAY	GMT	MIN	DAY	GMT	MIN	MM	P4	H+	SO4	NH4-N	NO3-N	CA	MG	NA	K	FE		
							UEQ/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L		
31	700	1	700	3	2	3.2	5.02	24	.8	1.20	.43	.10	.04	.3				

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

PLUVIOGRAPH RESULTS.

MARCH 1973

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MIN	MM	PH	H+ UEG/L	SO4 MG/L	TOTAL-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
4 0630	4 1300	390	.5	5.19					.15			
4 1650	4 1720	30	.5		45	2.4	.68	.13	.12	1.8		.33
5 1210	5 1340	90	1.5	4.43								
5 1700	5 2110	250	1.0		8	.7	.30	.04	.03	2.2		
6 0000	6 0500	360	.5	5.07					.03	.3		
6 0300	6 0500	180	1.0	5.31								
7 0640	7 0710	30	.5		236	2.4						
7 1310	7 1710	240	.5	3.74								
10 0100	10 0500	300	.5	5.40					.20			
19 2030	19 2210	100	.5		13	1.3	.45	.03	.03	.4	.2	.48
20 2230	21 0200	210	.5	4.94								
21 2250	22 0310	260	.5	5.40					.16	.6		
22 0100	22 0400	180	.5	3.97					.10			
23 1630	23 1710	40	1.0		124	12.1	2.50					
31 1640	31 2100	260	1.0									

STATION SF 2, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

PLUVIOGRAPH RESULTS.

APRIL 1973

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MIN	MM	PH	H+ UEG/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
1 1630	2 0200	570	4.0	4.14	76	6.6				.24			
2 0400	2 0500	60	.5		25	4.4	.63		.67				
5 1410	5 1540	150	1.5	4.78									
5 1820	6 0500	640	3.0		23	3.4	.20	.06	.10	2.2	3.1	.57	
6 1700	6 1730	30	.5	4.54									
7 0210	7 0310	60	.5										
7 0440	7 0500	20	.5	6.12					.14	.3	.4	.12	
10 0030	10 0500	270	2.5	5.79					.40	.3	.4	.19	
11 1650	11 2300	370	.5		34	2.0	.44	.49	.14	.3	.1	.09	
11 0000	12 0140	100	1.0										
12 0430	12 0530	60	.5	4.57					.14	.3	.1	.09	
12 1150	12 1300	70	.5		20	2.4	.46	.22	.10	.2		.16	
12 1450	12 1530	40	1.0	4.70					.02	.4		.07	
12 1640	12 1720	40	.5	4.31									
12 2300	13 0510	370	.5		50	7.7	1.70	1.08	.15	.2	.2	.19	
13 1230	13 1300	30	.5	4.34									
13 1640	13 1800	80	1.0		60	5.3	.81	.63	.10	.3	.3	.22	
17 1500	17 1720	140	2.0	4.29									
17 2030	17 2150	80	1.0	4.32					.16	.3		.39	
18 0440	18 0500	80	1.0										
18 0640	18 0900	140	1.0	4.37									
18 1330	18 1500	90	2.0										
18 1630	18 1710	40	.5										
18 1840	18 2110	150	1.0										
26 1500	26 1710	130	3.0										
26 1840	26 2100	140	1.5										
29 2240	30 0230	230	1.5										
30 0430	30 0600	90	.5										
30 0620	30 0800	100	2.5										
30 0900	30 1020	80	1.0										

STATION N 01, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

MARCH 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MIN MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
25 0704	25 1229	93	5.65	180	22.8	2.99	.01	.97	.63	1.0	.5	
28 1314	28 1906	151	3.85	68	16.9	3.07	1.80	.97	.21	1.0	.5	
30 1700	30 2034	214	4.25	41	6.5	1.28	1.73	.26	.32	1.8	.2	
31 1529	1 0159	363	4.50	41	3.6	.51	.26	.26	.32	1.8	.2	

STATION N 01, NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

APRIL 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION AMOUNT MIN MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
1 0159	1 0924	179	4.90	18	17.7	.16	.08	.12	.20	1.1	.1	
10 1715	10 2009	83			7.4				2.00			
17 1203	17 1435	33			2.8	.16	.15		.14			
18 0952	18 1217	31	4.70	18	2.3	.19	.19	.15	.03	.1	.1	
19 1512	19 1548	14	4.05	100	6.2	.93	.54	.15	.07	.4	.1	
20 2003	20 0029	165	4.05	113	7.0	1.01	.58	.13	.07	.4	.1	.05
21 0029	21 0355	191	4.15	88	5.9	.93	.41	.08	.05	.3	.1	.02
21 0355	21 0705	190		76	5.4	.31	.26		.07			
21 0705	21 1038	190		128	11.4	.54	.38		.05			
21 1038	21 1453	183		5	2.9	.35	.15		.03			
21 1802	21 2113	189		66	7.2	1.87	.72	.63	.08	.2	.2	
21 2113	22 0020	187	4.50	45	7.8				.06			
22 0020	22 0254	153		14	37.8				.70			
24 1552	24 1711	54			10.2				.36			
27 1043	27 1328	61	-0.00	212	40.2	1.28	1.02	.44	1.60	1.2	.1	
28 1504	28 1832	193		165		.47	.84		.04			
28 1832	28 2147	189	3.80	42	11.1				.22			
28 2147	29 0101	194	3.90	42	6.4				.04			
29 0101	29 0353	151		42	9.2	.51	.23	.05	.37	.2	.1	.01
30 2244	1 0213	183	4.40	42	2.9				.02	.2	.1	.01

STATION N 01. NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

MAY • 1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H+ UEQ/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
1 0214	1 0526	192	31.8	4.30	59	5.6	.70	.59	.12	.08	.5	.1	.02
1 0526	1 0834	183	11.1	4.20	91	7.4	1.67	1.00	.26	.19	1.1	.2	.03
1 0834	1 1557	201	23.9	4.20	72	7.4	1.56	.82	.29	.31	2.0	.2	
1 1557	1 2037	171	4.8		64	10.1	.39	.36	1.15	3.30	1.0	1.0	
5 1152	5 1526	181	28.6	4.20	83	4.7	.78	.49	.20	.02	.1	0.0	.01
5 1526	5 1838	192	31.8	4.10	93	5.4	1.01	.65	.14	.04	.2	.1	.02
5 1839	5 2146	187	5.6	3.75	238	11.9	1.87	2.20	.46	.35	1.8	.2	.06
7 0040	7 0422	190	9.5	4.35	54	2.7	.19	.18	.12	.02	.1	0.0	
7 0422	7 0732	190	7.2	4.10	101	4.2	.27	.28	.06	.02	.1	0.0	
7 0732	7 1040	185	25.5	4.35	54	2.3	.16	.19	.10	.01	0.0	0.0	
7 1040	7 1350	190	4.8	4.60	28	2.4	.19	.19	.57	.04	0.0	0.0	.08
7 1350	7 1549	119	3.2	4.40	52	1.5	.89	.26	.03	.01	.1	0.0	.01
8 0227	8 1848	185	4.0	5.10	0	.5	.12	.03	.07	.01	.1	0.0	.25
9 1727	9 1848	81	31.8	4.45	41	2.1	.19	.11	.02	.02	.1	0.0	
9 2310	10 0215	185	31.8	4.30	66	2.4	.31	.20	.02	.02	.1	0.0	
10 0215	10 0528	193	14.3	4.40	48	2.1	.16	.10	.02	.02	.1	0.0	
10 0528	10 0833	185	4.8	4.40	41	1.8	.08	.10	.05	.01	.1	0.0	
10 0833	10 1510	165	4.8	4.10	87	4.3	.27	.09	.17	.23	1.2	.2	
10 2250	11 0103	132	1.6	4.20	68	4.2	.16	.30	.07	.54	.5	.1	
11 0719	11 1107	63	4.0	4.60	25	1.5	.16	.06	.07	.32	.08	.1	
11 1641	11 1846	5	.3	4.10		6.5				.10	.6	.1	
12 1547	13 0121	94	5.6	4.55	36	3.2	.31	.18	.08	.10	.6	.1	
13 0324	13 0538	194	4.8	4.80	24	1.1	.04	.05	.03	.01	.1	0.0	
18 2236	19 0157	191	27.1	5.60	-2	1.0	.02	.14	.07	.09	.2	.3	.03
19 0526	19 0902	85	2.4	4.65	33	6.5	.39	.34		.19			
21 1410	21 1821	185	5.6	4.05	119	12.4	.58	.55	.60	.09	.1	.1	
21 1822	21 2205	192	4.8	4.10	100	8.6	1.36		.35	.06	.1	.1	
21 2205	22 0229	187	.8	4.10		11.7	.62			.12	0.0	0.0	
25 0910	25 1400	187	31.8	4.30	54	3.1	.43	.36	.08	.02	0.0	0.0	
25 1501	25 1547	45	1.6	4.30	74	2.6				.03			
30 1205	30 1845	184	6.4	3.75	210	20.4	2.41	1.80	2.95	.28	.3	.4	
30 1845	31 0848	191	31.8	4.15	77	7.7	1.24	.68	.70	.08	.1	.1	
31 0648	31 0954	185	31.8	4.35	58	3.5	.70	.44	.11	.02	.1	.1	
31 0954	31 1307	189	1.6	3.90		5.3	.54		.12	.01	.2	.1	
31 1307	31 1511	111	3.2	3.60	260	7.8	1.24	2.10	.15	.02	.2	.4	
31 1636	31 2013	193	15.9	3.90	143	6.2	1.24	1.24	.09	.01	.1	.1	
31 2013	31 2322	189	22.3	4.20	66	2.8	.39	.42	.02	.01	0.0	0.0	
31 2322	1 0238	185	6.4	4.20	69	2.9	.16	.28	.02	.01	0.0	0.0	

STATION N 01, NORDFORSK 100-DAYS PROGRAMME, PRECIPITATION SAMPLES.

JUNE • 1973

SAMPLING PERIOD		COMPONENTS											
FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H+ UEU/L	SO4 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	FE MG/L
1 0228	1 0822	63	.3	3.70		14.4			.07	.08			
2 1742	2 2118	189	4.8	4.00	121	5.3	.43	.58	.01	.01	.1	0.0	.05
2 2118	3 0225	182	3.2	4.15	89	3.5	.16	.43	.01	.02			.08
3 0225	3 0418	113	1.6	4.10	88	4.1	.43		.36				.05
3 1155	3 1339	102	.8	3.70	204	10.8		.75		.45			
11 2255	12 0157	180	.2			5.0							
13 0602	13 1028	182	.5	3.70	39	34.2	1.13	.76	.68	.32	1.9	.8	.34
13 1319	13 1737	115	6.4	4.50	51	8.1	.27	.33	.98	2.30	12.1	.8	.20
13 2220	17 1737	191	3.2	4.40	67	6.5	.86	.44	.38	.22	1.0	.6	
17 1737	17 2109	189	2.4	4.30	67	5.6	.43			.09			
17 2109	18 0018	184	.8	3.90	160	9.3	.47			.06			
16 0018	18 0312	174	6.4	4.50	39	3.0	.16	.15	.08	.02	.1	.2	.17
26 1652	27 0532	191	31.8	4.20	71	3.7	.62	.43	.05	.03	0.0	0.0	.04
27 0532	27 0842	190	31.8	4.35	57	3.3	.43	.17	.01	.02	0.0	0.0	
27 0134	27 1146	183	1.9	3.95	144	1.1		.42		.03			

STATION N 01. NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

MAY 1973

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	ZN UG/L	BR UG/L	SR UG/L	PH UG/L	CD UG/L
1 0214	1 0526	40			11	0
1 0526	1 0834	90			33	1
5 1152	5 1526	55			15	0
5 1526	5 1838	55			22	1
5 1839	5 2146	155			42	2
7 1040	7 1350	55			8	1
7 1350	7 1549	20			3	0
8 0227	8 0714	15			11	0
18 2236	19 0157	40			1	0
30 1205	30 1845	185			40	2
30 1845	31 0648	75			16	1
31 1307	31 1511	105			54	2
31 1636	31 2013	65			34	0
31 2013	31 2322	35			11	0
31 2322	1 0238	25			8	1

STATION N 01. NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

APRIL 1973

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	ZN UG/L	HR UG/L	SR UG/L	PH UG/L	CD UG/L
21 0029	21 0355	90			14	0
21 0355	21 0705	45			11	0
22 0020	22 0254	85			11	1
30 2244	1 0213	30			8	0

STATION N 01. NORDFORSK 100-DAYS PROGRAMME. PRECIPITATION SAMPLES.

JUNE 1973

SAMPLING PERIOD COMPONENTS

FROM DAY GMT	TO DAY GMT	ZN UG/L	BR UG/L	SR UG/L	PH UG/L	CD UG/L
2 1800	2 2100	60			12	1
2 2118	3 0225	75			9	3
3 0225	3 0418	130			8	1
13 1319	13 1737	100			16	1
13 2220	17 1737	65			8	1
17 1737	17 2109	135			29	3
17 2109	18 0018	140			18	10
18 0018	18 0312	80			3	0

STATION N 01, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER.

MARCH 1973

SAMPLING PERIOD		COMPONENTS												
FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	NFQ/M3	H+	S04 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3
23 0700	24 0700	26.00	4.10	8	7.1	1.43	.09	.08	.06	.4	.2	.8	.90	
24 0700	25 0700	126.00	3.75	45	31.4	5.07	3.08	.62	.11	1.0	.2	.8		
25 0700	26 0700	42.00	4.80	1	8.3	.96	.62	.16	.24	2.0	.2	.2		
26 0700	27 0700	53.00	4.30	4	10.2	.79	.17	.20	.32	2.4	.2	.2		

STATION N 01, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER.

APRIL 1973

SAMPLING PERIOD		COMPONENTS												
FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	NFQ/M3	H+	S04 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3
7 0700	8 0700	5.00	5.20	0	.4	.09	.01	.02	.02	.02	.1	0.0		
8 0700	9 0700	6.00	5.20	0	.8	.15	.02	.03	.03	.02	.1	0.0		
9 0700	10 0700	8.00	4.70	1	1.3	.23	.02	.05	.05	.03	.1	0.0		
10 0700	11 0700	5.00	4.30	3	1.1	.14	.01	.03	.03	.02	.1	0.0		
11 0700	12 0700	5.00	3.90	11	3.6	.73	.02	.15	.03	.03	0.0	.1		
12 0700	13 0600	5.00	3.75	15	1.8	.18	.00	.03	.03	.03	0.0	0.0		.02
13 0600	14 0700	8.00	5.20	0	1.6	.26	.02	.04	.04	.04	.2	0.0		
14 0700	15 0700	4.00	4.10	6	.7	.12	.00	.02	.02	.01	0.0	0.0		
15 0700	16 0700	8.00	3.80	11	1.6	.18	.00	.03	.03	.02	0.0	0.0		
16 0700	17 0700	6.00	4.65	1	1.1	.11	.00	.04	.04	.05	.3	0.0		
17 0700	18 0700	5.00	5.45	0	.5	.09	.01	.03	.03	.03	.2	0.0		
18 0700	19 0600	3.00	5.05	0	.5	.10	.00	.01	.01	.01	0.0	0.0		
19 0600	20 0600	3.00	4.20	3	1.0	.12	0.00	.03	.03	.01	0.0	0.0		
20 0700	21 0700	9.00	3.70	17	3.7	.65	.01	.04	.04	.02	.1	0.0		
21 0700	22 0700	12.00	3.65	25	4.8	1.16	.03	.08	.08	.02	.1	.1		.02
22 0700	23 0700	27.00	4.40	4	6.7	1.78	.05	.32	.32	.05	.1	.2		.06
23 0700	24 0700	21.00	3.95	9	6.8	1.61	.02	.24	.24	.04	.1	.1		
24 0700	25 0700	15.00	3.80	15	4.4	.85	.03	.10	.10	.04	0.0	.1		
25 0700	26 0700	5.00	4.70	1	1.6	.23	.01	.04	.04	.04	0.0	0.0		
26 0700	27 0700	5.00	4.70	1	1.4	.21	.01	.03	.03	.03	.2	0.0		
27 0700	28 0700	5.00	4.40	3	1.3	.16	.01	.04	.04	.03	.2	0.0		
28 0700	29 0700	6.00	5.00	0	2.9	.18	.08	.08	.08	.14	.8	.1		
29 0700	30 0700	6.00	5.25	0	1.2	.14	.04	.04	.04	.14	.5	0.0		
30 0700	1 0700	17.00	4.35	4	4.2	.54	.15	.10	.10	.13	.2	.1		.04

STATION N 01, NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER.

MAY .1973

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	NFQ/M3	H+ UG/M3	SO4 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3
1 0700	2 0700	17.00	4.95	0	4.7	0	.37	.06	.01	.30	2.4	.1		
2 0700	3 0600	7.00	5.10	0	14.0	0	.13	.04	.05	.09	.8	0.0		
3 0600	4 0700	10.00	5.20	0	1.1	0	.12	.04	.04	.04	.4	0.0		
4 0700	5 0700	16.00	4.30	4	2.3	4	.40	.03	.07	.04	.2	0.0		
5 0700	6 0600	16.00	3.35	42	6.7	36	.96	.05	.05	.06	.2	.1		.03
6 0700	7 0700	17.00	3.90	12	7.1	12	.72	.03	.10	.18	1.5	0.0		
7 0700	8 0600	18.00	3.35	40	4.9	40	.51	.02	.03	.04	.5	.1		.03
8 0700	9 0600	9.00	3.35	39	5.2	47	.01	.01	.04	.03	.1	0.0		
9 0700	10 0700	13.00	3.60	16	6.0	43	.02	.06	.06	.09	.5	.1		
10 0700	11 0700	12.00	4.80	1	2.4	18	.03	.03	.05	.09	.5	.1		
11 0700	12 0700	2.00	5.20	0	.8	.11	.02	.03	.03	.06	.3	0.0		
12 0700	13 0700	10.00	4.80	1	1.9	.33	.03	.03	.07	.03	.2	.1		
13 0700	14 0600	3.00	5.20	0	.7	.10	.01	.01	.03	.05	.3	0.0		
14 0700	15 0600	3.00	5.35	-1	.8	.09	.01	.01	.03	.08	.8	0.0		
15 0600	16 0700	2.00	5.10	1	.3	.09	.01	.01	.02	.02	.1	0.0		
16 0700	17 0700	12.00	4.75	2	.8	.09	.05	.05	.03	.03	.2	0.0		
17 0700	18 0700	12.00	5.20	-1	1.2	.16	.07	.07	.05	.04	.3	.1		
18 0700	19 0700	6.00	4.10	7	2.1	.30	.01	.01	.06	.03	.1	0.0		
19 0700	20 0700	9.00	3.90	11	2.4	.25	.01	.01	.04	.02	.1	0.0		
20 0700	21 0700	12.00	4.50	2	.8	.12	.00	.00	.02	.01	0.0	0.0		
21 0700	22 0700	14.00	4.60	2	3.7	.83	.06	.06	.20	.04	.1	.1		
22 0700	23 0600	14.00	4.25	5	3.1	.69	.03	.03	.10	.03	.1	.1		
23 0700	23 1300	26.00	4.50	10	4.1	.93	.04	.04	.09	.03	.2	.1		
23 1300	23 1900	22.00	4.05	24	3.0	.84	.01	.01	.06	.02	.1	.1		
23 1900	24 0700	46.00	3.20	107	10.4	1.23	.04	.04	.05	.03	.1	.1		
24 0700	24 1300	45.00	3.35	148	13.1	2.10	.02	.02	.12	.04	.2	.1		.06
24 1300	25 0700	26.00	3.30	61	7.6	.92	.02	.02	.06	.02	.2	.1		
25 0700	26 0700	18.00	3.45	33	4.0	.54	.02	.02	.02	.01	.1	0.0		
26 0700	27 0700	35.00	2.90	124	10.9	.80	.01	.01	.06	.05	.4	.1		
27 0700	28 0700	34.00	2.70	190	13.9	1.21	.01	.01	.11	.03	.2	.1		
28 0700	28 1300	61.00	2.95	380	25.6	2.29	.00	.00	.20	.06	.3	.2		.20
28 1300	28 1900	42.00	3.46	113	13.3	1.58	.01	.01	.14	.06	.3	.1		
28 1900	29 0700	24.00	3.95	20	9.6	2.27	.02	.02	.06	.02	.2	.1		
29 0700	29 1300	32.00	3.90	42	16.5	4.18	.07	.07	.24	.05	.4	.2		
29 1300	29 1900	32.00	3.40	116	16.1	2.92	.02	.02	.26	.04	.3	.2		
29 1900	30 0700	25.00	3.40	66	10.7	2.12	.02	.02	.13	.03	.2	.1		
30 0700	30 1300	38.00	4.65	7	8.2	2.25	.17	.17	.44	.09	.5	.3		.13
30 1300	30 1900	23.00	4.60	8	5.1	1.00	.24	.24	.50	.13	.7	.2		.11
30 1900	31 0700	36.00	4.35	7	3.2	.82	.07	.07	.15	.04	.2	.1		.05
31 0700	1 0700	18.00	3.90	14	5.0	.12	.09	.09	.06	.02	.2	.1		.04

STATION N 01. NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.
HIGH VOLUME SAMPLER.

JUNE 1973

SAMPLING PERIOD		COMPONENTS												
FROM DAY GMT	TO DAY GMT	T.P.M. UG/M3	PH	NEQ/M3	H+	504 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3
1 0700	2 0700	11.00	3.40	27	3.1	3.7	.01	.03	.03	.03	.3	0.0		
2 0700	3 0700	7.00	4.35	2	1.0	.15	.02	.02	.02	.01	.1	0.0		
3 0700	4 0700	15.00	3.75	15	4.2	.65	.02	.06	.07	.07	.6	.1		
4 0700	5 0700	15.00	3.45	26	5.0	.62	.01	.07	.08	.08	.7	.1		
5 0700	6 0700	19.00	3.70	15	3.2	.54	.02	.04	.04	.04	.2	.1		
6 0700	7 0700	10.00	5.35	-1	.8	.15	.01	.01	.01	.01	.1	0.0		
7 0700	8 0700	20.00	5.70	-2	.9	.18	.01	.03	.03	.01	.1	.1		
8 0700	9 0700	13.00	5.05	0	.7	.22	.01	.03	.01	.01	.1	.1		
9 0700	10 0700	18.00	3.65	16	2.2	.32	.00	.05	.03	.03	.2	.1		
10 0700	11 0700	17.00	5.70	-2	.4	.05	.00	.05	.11	.08	.7	0.0		
11 0700	12 0700	7.00	5.40	-1	1.5	.19	.04	.04	.04	.14	.1	.1		
12 0700	13 0700	25.00	3.60	21	9.3	1.36	.05	.18	.08	.16	.6	.1		.03
13 0700	14 0700	11.00	4.45	3	1.8	.57	.04	.02	.02	.03	.4	.1		.01
14 0700	15 0700	5.00	4.60	1	.3	.82	.01	.01	.01	.01	.1	0.0		
15 0700	16 0700	5.00	6.50	-2	.9	.08	.01	.01	.01	.01	.1	0.0		
16 0700	17 0700	16.00	5.25	0	.3	.14	.04	.04	.04	.03	.2	0.0		
17 0700	18 0700	13.00	4.25	5	3.0	.70	.05	.11	.03	.03	.2	.1		
18 0700	19 0700	12.00	4.60	2	1.7	.44	.02	.06	.06	.02	.1	.1		
19 0700	20 0700	16.00	4.75	1	2.9	.68	.04	.10	.03	.02	.2	.1		
20 0700	21 0700	14.00	4.80	1	2.1	.55	.03	.10	.02	.02	.2	0.0		
21 0700	22 0700	15.00	4.75	2	1.7	.41	.02	.09	.09	.02	.1	0.0		
22 0700	23 0700	19.00	4.40	3	2.5	.34	.01	.09	.09	.00	.1	.1		
23 0700	24 0700	16.00	4.50	3	2.4	.65	.02	.07	.07	.02	.1	.1		
24 0700	25 0700	21.00	4.60	1	4.4	.72	.07	.10	.10	.09	.7	.1		
25 0700	26 0600	35.00	5.15	-2	3.0	.36	.09	.09	.09	.10	1.5	.1		
26 0700	27 0700	22.00	3.80	14	5.6	1.06	.01	.09	.09	.03	.2	.1		
27 0700	28 0700	28.00	4.70	0	8.1	.75	.09	.17	.09	.09	.6	.2		
28 0700	29 0600	26.00	3.70	24	5.2	1.14	.02	.03	.02	.02	.1	.1		
29 0700	30 0700	17.00	3.45	33	5.4	.82	.02	.06	.06	.06	.4	.1		
30 0700	1 0700	15.00	3.60	19	4.8	.82	.02	.06	.06	.06	.5	.1		

HIGH VOLUME SAMPLER.

MARCH 1973

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI UG/M3	504 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	BR NG/M3	SR NG/M3	PB NG/M3	CD NG/M3
24 0700	25 0700								443			490	5

STATION N 01. NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER.

APRIL 1973

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI UG/M3	504 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	BR NG/M3	SR NG/M3	PB NG/M3	CD NG/M3
10 0700	11 0700								4			3	0
21 0700	22 0700								36			13	0
22 0700	23 0700								21			19	0
30 0700	1 0700								173			21	0

STATION V 01. NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER.

MAY 1973

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI UG/M3	504 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	BR NG/M3	SR NG/M3	PB NG/M3	CD NG/M3
5 0700	6 0700								331			34	0
7 0700	8 0700								555			30	0
23 1900	24 0700								621			30	0
24 0700	24 1300								25			29	0
28 0700	28 1300								106			100	1
30 0700	30 1300								49			55	1
30 1300	30 1900								15			21	0
30 1900	31 0700								58			18	0
31 0700	1 0700								127			56	1

STATION N 01. NORDFORSK 100-DAYS PROGRAMME. AIR SAMPLE.

HIGH VOLUME SAMPLER.

JUNE 1973

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	SI UG/M3	TI UG/M3	504 UG/M3	CR NG/M3	MN NG/M3	NI NG/M3	CU NG/M3	ZN NG/M3	BR NG/M3	SR NG/M3	PB NG/M3	CD NG/M3
2 0700	3 0700								6			3	0
13 0700	14 0700								12			9	0
14 0700	15 0700								1			1	0
17 0700	18 0700								3			16	0