Publikasjoner fra
DET NORSKE INSTITUTT FOR KOSMISK FYSIKK
Nr. 6

NORWEGIAN PUBLICATIONS FROM THE INTERNATIONAL POLAR YEAR 1932–33

No. 2

WORK ON TERRESTRIAL MAGNETISM, AURORA AND ALLIED PHENOMENA

UNDER THE AUSPICES OF

DET NORSKE INSTITUTT FOR KOSMISK FYSIKK

1 9 3 5
A.S JOHN GRIEGS BOKTRYKKERI, BERGEN

Publikasjoner fra
DET NORSKE INSTITUTT FOR KOSMISK FYSIKK
Nr. 6

NORWEGIAN PUBLICATIONS FROM THE INTERNATIONAL POLAR YEAR 1932—33

No. 2

WORK ON TERRESTRIAL MAGNETISM, AURORA AND ALLIED PHENOMENA

UNDER THE AUSPICES OF

DET NORSKE INSTITUTT FOR KOSMISK FYSIKK

1935
A.S JOHN GRIEGS BOKTRYKKERI, BERGEN

PART I.

The Norwegian Programme relating to the Polar Year Work on Terrestrial Magnetism and Allied Phenomena.

By

The Executive Commitee
of The Norwegian Institute of Cosmical Physics.

The preliminary arrangements regarding the participation of our country in the Polar Year work were in the hands of a committee consisting of Th. Hesselberg (vice president), A. Hoel, O. Krogness, C. Störmer, H. U. Sverdrup (president), S. Sæland and L. Vegard.

As regards that part of the Polar Year programme which concerns terrestrial magnetism, aurora etc., we were in the fortunate position that fairly extensive investigations in this field are continually kept up mainly under the auspices of The Norwegian Institute of Cosmical Physics. Thus the work at the Auroral Observatory Tromsö and at the Magnetic Station Dombås. as well as the auroral observations at lower latitudes by Störmer — with some modifications — could be made to fall into line with the Polar Year programme.

But apart from these more or less permanent observations undertaken in this country, the committee originally planned to take part in the Polar Year work by erecting new magnetic and auroral stations at the Haldde Observatory, Björnöya, and Myggbugta (East Greenland). The economic depression, however, finally made it necessary for us to make considerable reductions. A grant from our Government given in the Storting together with some support obtained through the International Polar Year Commission enabled us, however, to take up work in terrestrial magnetism and allied phenomena in accordance with the following programme.

1. At the Auroral Observatory, Tromsö, the work on aurora, terrestrial magnetism and earth currents, was to be conducted as usual with the addition of continual rapid magnetic records of the three magnetic elements.
2. Magnetic measurements and records at the Dombås station were to be kept as usual.
3. The auroral investigations in Southern Norway were to be continued by Störmer according to a somewhat extended programme, details of which will be given in a separate communication.[1])
4. At Bossekop — a locality well known from earlier magnetic and auroral work — ordinary 24 hour records as well as rapid magnetic records were to be carried out, and absolute measurements occasionally made. Earth-current registrations were to be made on two lines (N—S and E—W).
5. It was intended to make ordinary and rapid magnetic records together with some absolute measurements at a station to be established near the town of Bodö.

After the consent of the Norwegian Polar Year Committee had been obtained for the general plan, it was left to the Norwegian Institute of Cosmical Physics, through its executive Committee, to carry this plan into effect.

The International Polar Year Commission kindly lent us three sets of instruments of the la Cour type necessary for the rapid magnetic records, and granted the sum necessary for the purchase of instruments for the rapid records of earth currents including a rapid recorder and two galvanometers from Leeds & Northrup.

---

[1]) Cfr. C. Störmer: Archiv für Polarforschung. No. 1, June 1934.

Further the Polar Year Commission made contributions towards covering the expenses connected with a journey of Mr. Harang to Copenhagen, where he compared the absolute magnetic instruments of the Tromsö Observatory and obtained the necessary information regarding the handling of the new la Cour instruments.

For the ordinary 24 hour records at Bodö and Bossekop, we used sets of instruments belonging to the Tromsö Observatory.

The main object of the work at the stations Bodö and Bossekop was to obtain records for the study of the magnetic disturbances and the accompanying variations of the earth currents. These stations, however, were not intended to give hourly absolute values of the three magnetic elements.

In our publications of the results we must therefore limit ourselves to the treatment of perturbations, and as far as absolute magnetic values are concerned, we merely give those obtained from direct measurements. In our treatment and publication of the perturbations we follow the same procedure as that adopted for the results of magnetic observations given in the year-book of the Tromsö Observatory. The method here used for the determination of the perturbing force and storminess was described in the introduction to our series of magnetic year-books.

The results of magnetic and auroral observations during the Polar Year from the Tromsö observatory and the station at Dombås will be published in the ordinary way in magnetic year-books.

For Bodö and Bossekop tables will merely be given of the hourly perturbation-values obtained from the ordinary 24 hour records. For those who are interested in details regarding the variations of magnetism and earth currents, photographic copies of any part of the records may be obtained either from the Norwegian Institute of Cosmical Physics or through the central office of the Polar Year Commission at Copenhagen.

In conclusion we wish to give expressions of our indebtedness and thanks for the most valuable support obtained from the International Polar Year Commission and from its president Dr. L. Cour. Our thanks are also due to the Carnegie Institution for valuable assistance in connection with the equipment for the earth current records and for the excellent report by O. A. Gish and W. J. Rooney which gave us most valuable information regarding the procedure to be followed by earth current measurements.

L. Harang. *O. Krogness †.* *C. Størmer.* *S. Sæland.* *L. Vegard.*

PART II.

Results of Magnetic Observations at the two Norwegian recording Stations at Bossekop and Bodö during the Polar-Year 1932—33.

By

Leiv Harang and Einar Tönsberg.

Contents.

Chapter I.

General Remarks regarding Magnetic Rapid Registrations at the Tromsö Observatory and regarding the Publications from Bossekop and Bodö.

By

Leiv Harang and Einar Tönsberg.

§ 1. Remarks concerning the normal and rapid Registrations of Terrestrial Magnetism at the Auroral Observatory, Tromsö, during the Polar-Year.

The magnetic registrations at the Auroral Observatory ($\varphi = 69° 39'.8$ N, $\lambda = 18° 56'.9$ E Gr.) were commenced during the year 1929. Concerning details of the instrumental equipment, houses and registrations, we refer to No. 1 of publications from „Det norske institutt for kosmisk fysikk" and to No. 2 and No. 3 which contain the hourly values of the registrations during the years 1930 and 1931.

The rapid registration of the three components commenced in September 1932 and were continued during the Polar-Year. Since the end of the Polar Year these registrations have been continued as a permanent part of the observatory's programme for magnetic registrations.

The variometers for rapid registration consisted of a *D*- and *H*-variometer of the "variométre de Copenhague" pattern and a *V*-variometer, "Balance the Godhavn". The rapid recorder was of la Cour's construction, specially made for the Polar-Year. For time-marking we used the relay and the intervals of time which as a rule have been used during the Polar-Year, one time-mark each 5 minute and as hour marks, one mark each 59 min., 60 min. and 1 min. The time-marking device usually applied with the rapid recorder consists of an extra lamp which is illuminated at each moment when a time-mark is required and which produces vertical lines on the records. Instead of this extra lamp we used another device which produced the time-mark in the following way. The current to the register lamp went through a small resistanse of 3—5 ohms. This resistance was short-circuited by the central clock through a mercury relay when a time-mark was required and the register lamp would consequently flame up and make an intensified dot on the continuous curve on the record. The chief advantage of this system is that that it is easier to attend to, a point which was of importance for us at the stations at Bossekop and Bodö where assistants with limited experience had to see to the registrations. Further, these time-marks are free from parallaxes. The main disadvantages are that such time-marks are not so prominent on the curves, and that care must be taken that the register lamp is not burnt out by the intensified current.

The scale values for the set of variometers used for rapid registration were determined by Helmholz-Gauguin coils and were as follows:

D: $\varepsilon = 1'{\cdot}13$ per mm, which corresponds to
$= 3{\cdot}80\ \lambda/\text{mm}$,
H: $\varepsilon = 5{\cdot}75$ „
V: $\varepsilon = 5{\cdot}80$ „

In August 1934 we found it conveniant to increase the sensivity to the following values:

D: $\varepsilon = 3{\cdot}60\ \lambda/\text{mm}$,
H: $\varepsilon = 1{\cdot}40$ „
V: $\varepsilon = 4{\cdot}45$ „

Concerning scale values, absolute determinations and tabulations of the hourly mean values of the field and of the Storminess based on the normal registrations at the Auroral Observatory during the Polar Year, we refer to the Observatory's yearbooks for 1932 and 1933.

§ 2. Explanation of the tables for Bossekop and Bodö.

In the tables to be found at the end of this publication we give the hourly mean values of the storminess for the two stations Bossekop and Bodö, centered at half hours Gr. M. T. In *D* storminess is reckoned positive towards magnetic West, in *H* positive towards magnetic North, and in *V* positive downwards.

The column headed *M* gives the diurnal means. The columns headed *PS*, *NS* and *AS* give the diurnal sum of the positive, negative and absolute storminess respectively. The horizontal line marked *M* contains the monthly means, and the two lines marked *MPS* and *MNS* give the monthly means of the positive and negative storminess respectively.

In addition to the main tables, summary tables and diagrams are given. As a comparison the curves giving the annual course of the absolute storminess *(AS)* at Bossekop, Tromsö and Bodö have been drawn up. (See figs. 1—5.)

It is evident from the tables that hourly values are lacking for shorter or longer periods, a circumstance which makes some of the mean monthly values less representative, a certain number of these are therefore excluded in the summary tables and vector diagrams.

Chapter II.

Terrestrial Magnetism and Earth Currents at Bossekop.

By

Einar Tönsberg.

---

§ 1. Introduction.

Some years ago Dr. T. Birkeland, a brother of the late Professor Kr. Birkeland, donated his possession Rosenborg at Bossekop to the Auroral Observatory at Tromsö. The small dwelling house or hut, named "Aurora", has a position of about 40 metres above the sea-level, and its geographical coordinates are:

$$\varphi = 69°\,57'{\cdot}87\ \text{N and}\ \lambda = 23°\,14'{\cdot}92\ \text{E Gr.}$$

To be useful as a magnetic and earth-current recording-station at Bossekop during the International Polar-Year 1932—33, the old "Aurora" acquired a concrete floor inside and a wooden wainscot outside. This preparatory work was carried out at the beginning of September 1932. It was to be feared that the soil—which consisted of a rather thin layer of gravel upon clay—would fail under the weight of the concrete floor, and unfortunately, these suspicions were confirmed, especially during the first month and in the spring of 1933.

The daily inspection with the variometers, galvanometers and recorders and the changing of the recording papers was left to Mr. A. Samuelsen — a telegraphist at Bossekop — who did his task very well. In the middle of June, however, Mr. Samuelsen had a bad eye and his work at the recording station was undertaken and continued in the same satisfactory way by his colleague Miss Mölleskog.

During the Pola:-Year, I made 8 trips to Bossekop, staying there from 2 to 4 days, partly to readjust the variometers and partly to make absolute measurements and scale-value determinations.

As the records could be sent to the Auroral Observatory for development only twice a week some defects in the recording system were not detected until 3—4 days after they had taken place. The lacunas in the magnetic tables are the sad consequence of this particular fact.

§ 2. **Magnetic Instruments.**

Two sets of variometers were in operation, the "normal" set and the "rapid" set giving records of normal and high speed respectively. The former set consisted of a *D*-variometer a *H*-variometer Eschenhagen and a *V*-variometer Schulze, the latter of a *D*-variometer and a *H*-variometer Copenhague and a *V*-variometer Godhavn. The rapid recorder was of la-Cour's construction. The variometers were placed on marble plates resting on concrete piers.

§ 3. **Time-marking Scheme.**

The time-marking was effected by a pendulum clock provided with a contact mechanism for electrical impulses activating a time-relay. The pendulum clock and the time-relay were put at our disposal by director la Cour. The time-marking is evident as intensified dots on the continuous curves, every half-hour for the normal records and every five minutes for the rapid records. The dots are caused by short-circuiting a resistance in the register-lamp circle, this operation is automatically effected by the time-relay. As a matter of fact, however, the time-relay was deceptive now and then. The consequence of this was a disturbed and unsatisfactory time-marking. The pendulum clock showed a rather accurate rate, but when wound up it made no progress and consequently, the duration of this action had to be noticed and taken into account in the fixing of the time-correction. As to the latter, we had no opportunity to pick up wireless time-signals in the recording-station. The time-correction was determined by comparing the pendulum clock with a watch, again compared with our chronometer through the telephone. We must conclude that a quite exact time-correction is not probable.

§ 4. **Absolute Measurements.**

The instruments used for this purpose were a Carl Bamberg theodolite belonging to the Auroral Observatory, and a John Dover inclinatorium, kindly lent by Professor Sæland, Oslo. During the observations the instruments rested on a concrete pier at a distance of about 10 metres from the variometers. A tent surrounded the pier, as protection against rain and wind.

To be able to reduce the observations for variations in the magnetic elements we only have to procure intensified dots on the continuous curves at every observation moment. This is easily done by short-circuiting a resistance in the register-lamp circle.

Declination.

Absolute measurements were made on the following 3 dates.

27/9 1932: A series of 8 observations—mutually in god agreement—of the sun's azimuth, and a series of 5 complete readings of the declination, 2 at 8 o'clock Gr. M. T., and 3 at 11 o'clock. The results are respectively:

$$D_8 = 1^\circ 34' \text{ E.} \qquad D_{11} = 1^\circ 29' \text{ E.}$$

Rater quiet magnetic conditions during the observations.

1/6 1933: Three determinations of the sun's azimuth—mutually in good agreement—and two complete readings of the declination at 8 o'clock Gr. M. T. The result was:

$$D_8 = 1^\circ 40' \text{ E.}$$

Disturbed magnetic conditions during the observations.

24/8 1933: Three determinations of the sun's azimuth—mutually in good agreement—and 2 complete readings of the declination at 10 o'clock Gr. M. T. The result was:

$$D_{10} = 1^\circ 37' \text{ E.}$$

Rather quiet magnetic conditions during the observations.

Horizontal Intensity.

Absolute determinations were made on September 27. & 28. 1932, on May 30. & 31. and on August 23. 1933. The measurements on September 27. and especially on May 30. & 31. were made under such disturbed magnetic conditions that no very accurate values of the horizontal intensity can be expected from them.

28/9 1932: Two series of oscillations and 4 series of deflections in the time-interval 11—14 Gr. M. T. Rather quiet magnetic conditions during the observations. The mean of the calculated values of the horizontal intensity was:

$$H = 11\,400 \ \gamma.$$

The difference between the maximum and minimum value was 8 γ.

23/8 1933: One series of oscillations and two series of deflections in the time-interval 12—14 Gr. M. T. Some moderate magnetic disturbances during the observations. The two calculated values of H proved to be equal:

$$H = 11\,374 \ \gamma.$$

If we compare these values of H at Bossekop with the simultaneous values at at the Auroral Observatory, Tromsø, we find a difference of 125 γ in the first case and of 135 γ in the second case. Thus we may say that at present the horizontal intensity at Tromsö is about 130 γ greater than that at Bossekop.

Inclination and Vertical Intensity.

Observations of the inclination were made on the following dates:

14/10 1932: Two series of readings — under quiet magnetic conditions — which gave equal values:

$$I = 77^\circ 20'.$$

The coresponding value of the vertical intensity was calculated to:

$$V = 50\,560\ \gamma.$$

2/6 1933: Two series of readings — under somewhat disturbed magnetic konditions — which gave equal values:

$$I = 77^\circ 15'.$$

The corresponding value of V was calculated to:

$$V = 50\,600\ \gamma.$$

24/8 1933: Only one series of readings — under somewhat disturbed magnetic conditions — which gave the value:

$$I = 77^\circ 19'.$$

The corresponding value of V was calculated to:

$$V = 50\,490\ \gamma.$$

The means of these values are respectively:

$$I = 77^\circ 18'. \qquad V = 50\,550\ \gamma.$$

By comparison we find that V at Bossekop is say 350 γ greater than V at Tromsö.

As to the accuracy of the vertical intensity determinations we will mention that an error of 1′ in I corresponds to 70γ in V, and that an error of 1 γ in H corresponds to 4 γ in V.

§ 5. Secular Variations in the magnetic Elements at Bossekop.

Let us compare the results of our absolute measurements with the results gained in 1838/39 [1]) and 1882/83 [2]). The observation places are somewhat different, but measurements in 1883 have proved that the magnetic elements throughout the observation territory at Bossekop show no local differences. Thus we deal with the observed values as if referring to the same place.

The *Declination* has turned towards east from 10° 40′ W (1838/39) through 4° 5′ W (1882/83) to 1° 35′ E (1932/33). That is respectively 6° 35′ or 395′ during 44 years and 5° 40′ or 340′ during the last 50 years. The mean annual variation is about 9′ and 7′ respectively.

The *Horizontal Intensity* has decreased from 12 250 γ (1838/39) through 12 100 γ (1882/83) to 11 400 γ (1932/33).

The *Vertical Intensity* has increased from 50 300 γ (1838/39) through 50 450 γ (1882/83) to 50 550 γ (1932/33).

The *Inclination* measurements show 76° 18′ 1838/39, 76° 30′ 1882/83 and 77° 18′ 1932/33.

---

[1]) Voyages en Scandinavie, en Laponie, au Spitzbergen et au Feröe pendant les années 1838, 1839 et 1840 sur la corvette La Recherche.

[2]) Beobachtungsergebnisse der Norwegischen Polarstation Bossekop in Alten. Christiania 1887.

§ 6. Scale-Values for the Magnetic Curves.

For the "normal"-set the scale values have been determined by means of a deflecting magnet. The following values are the results of 3 series of observations taken on 3 separate dates:

D-curves: $\varepsilon'_D = 1'{\cdot}95$ per mm, which corresponds to

$\varepsilon^{\gamma}_D = 6{\cdot}48\,\gamma$ per mm

H-curves: $\varepsilon_H = \dfrac{11{\cdot}33 + 11{\cdot}42 + 11{\cdot}50}{3} = 11{\cdot}45\,\gamma$ per mm

V-curves: $\varepsilon_V = \dfrac{21{\cdot}7 + 22{\cdot}1 + 22{\cdot}4}{3} = 22{\cdot}1\,\gamma$ per mm

For the "rapid" set the scale values have been determined by means of a Helmholst-Gauguin coil. The following values are the results of 4 series of observations taken on 4 separate dates.

D-curves: $\varepsilon'_D = 1'{\cdot}05$ per mm, which corresponds to

$\varepsilon^{\gamma}_D = 3{\cdot}48\,\gamma$ per mm.

H-curves: $\varepsilon_H = \dfrac{5{\cdot}85 + 5{\cdot}65 + 5{\cdot}75 + 5{\cdot}70}{4} = 5{\cdot}75\,\gamma$ pr. mm.

V-curves: $\varepsilon_V = \dfrac{5{\cdot}25 + 5{\cdot}45 + 5{\cdot}45 + 5{\cdot}30}{4} = 5{\cdot}35\,\gamma$ pr. mm.

§ 7. On the Quality and Treatment of the "normal" magnetic Records.

Considering the records we now and then observe sudden and even slow displacements of the magnetic curves in relation to their base-lines. The reasons why are most probably settings and movements in the soil and basement. In this connection, however, we also have to take temperature variations in the recording-hut into consideration. The minority of observed base-line values and the frequent changes in the same values, must exclude a continuous fixing. In other words, we have to give up the ordinary hourly mean values of the magnetic components, and be content to gain the "Storminess" values. As to the definition of the Storminess ("average perturbing force") and the fundamental method for separating it, we refer to Nos. 2 and 4 in the present series of publications.

In practice two somewhat different methods for the determination of the storminess values have been employed. Using the prinsipal method we deal with the hourly *normal-line values*, (quiet-day values), and the actual hourly mean values; using the second method we draw the *normal-line itself* (quiet-day course) in relation to the disturbed curve in question. The second method is inferior to the principle, allowing a certain margin to personal judgment by the drawing of the normal-lines. In the present case it was found possible to make use of the principle method for declination and horizontal intensity, in spite of the fact that we had to work with arbitrary base-line values. The great scale-value (22·1 γ) and an enormous temperature-coefficient (37 γ) of the V-variometer-excluding any high degree of accuracy—brought us to take only considerable disturbances of the vertical intensity into account, and consequently, the second method was the favourable one.

Direct determinations of the temperature-coefficients of the *H*-variometer and *V*-variometer have not been made. But by comparing simultaneous values of *H* and *V* at Tromsö and Bossekop—especially on occasions with great temperature-variations at Bossekop, we have found a great number of temperature-coefficient values, mutually in good agreement. The mean value for the *H*-variometer was determined to 4·6 γ per degree Celsius, and for the *V*-variometer to 37 γ per degree Celsius. The temperature was not recorded but only read off once a day.

§ 8. Earth Currents.

Only a short description of the earth-current potential recording system at Bossekop will be given.

The potentials were recorded between two pairs of electrodes, each pair only 100 metres apart. The straight lines of directions N—S and E—W joining the two pairs crossed at their centres, thus forming a cross with equal arms. According to the recommendation of W. J. Rooney, each electrode consisted of a grid of pure lead wire of 3 mm diameter, built up at the bottom of a cross-shaped trench of 1 metre's depth and 1 metre's armlength. The electrodes rested on an equal level—40 metres above the sea—and in homogeneous soil approximately. The wires connecting the electrodes and galvanometers required the best insulation as they had to be hidden under the earth surface.

In every recording circuit a wire-resistance and two galvanometers were series-coupled, the one galvanometer reflecting the register-lamp light to an ordinary recorder, the other galvanometer reflecting it to a rapid recorder of the la-Cour construction. The galvanometers were placed on a marble plate resting on concrete piers. In the N—S circuit we started with two Leeds & Northrup galvanometers with a series-resistance of about 1 meg-ohm, but owing to certain difficulties with these highly sensitive apparatuses they were later on replaced by two Edelmann galvanometers with a series-resistance of 50 000 ohm. In the E—W circuit were put two Edelmann galvanometers with a series-resistance of 100 000 ohm. The circuits were calibrated by introducing, in place of the earth-potentials, a source of variable potential measured with an accurate millivoltmeter. Calibration observations vere made several times with results mutually in good agreement. For the "normal" records the scale-values found are:

E—W circuit:	$15{\cdot}5 \cdot 10^{-3}$	volt/km per mm deflection.
N—S circuit:	$2{\cdot}2 \cdot 10^{-3}$	—„—
From 5/1 33:	$9{\cdot}4 \cdot 10^{-3}$	—„—

And for the "rapid" records:

E—W circuit:	$14{\cdot}4 \cdot 10^{-3}$	volt/km per mm deflection.
N—S circuit:	$3{\cdot}0 \cdot 10^{-3}$	—„—
From 5/1 33:	$11{\cdot}0 \cdot 10^{-3}$	—„—

On the records are time-marks obtained in the same way as for the magnetic records, and "zero"-marks by breaking the circuits twice a day.

Unfortunately, no measurements have been made to determine the contact-resistances of the electrodes. Particularly this circumstance, in connection with the very short electrode-distances, makes an absolute determination of the eart-current potential from the present records problematic and even unjustifiable. The disturbances, however, must be expected generally to be correctly recorded.

Chapter III.

Terrestrial Magnetism at Bodö.

By

Leiv Harang.

§ 1. Introduction.

Several places in the vicinity of Bodö were inspected and as a place suitable for the site of the variometer hut the farm Solheim in Bodin, "gårdsnr. 32, bruksnr. 1" was chosen, which lies in the lee of the Rönvik mountains ca. 3·5 km outside the centre of the town Bodö. The geographical coordinates of the site were: $\varphi = 69° 17'.9$ N, $\lambda = 14° 25'.3$ E. Gr.

Through the courtesy of the owner of the farm, Mr. A. Holm, a member of the Norwegian Parliament, we were given permission to build up our variometer hut on a suitable place about 80 m from the dwelling house of the farm. We also obtained permission to place the pendulum-clock and the relay for the time-marking in the dwelling house of the farm. The register lamps in the variometer hut were fed by alternate current at low tension taken from a small transformer through a cable from the relay in the dwelling house to the hut. The pillars for the variometers consisted of water piles of cement which were cemented to the mountain ground and at the top covered with marble plates fastened by gypsum.

Nevertheless the pillars appeared to change position a little during the period of registration and the variometers have during some intervals been out of function when the light spots from the mirrors were deflected out of the registrator. For this reason it has been impossible to obtain fixed base line values.

The daily inspection of the variometers and the changing of the recording papers was left to Mr. Andreas Holm who did this work to our great satisfaction.

§ 2. Magnetic Instruments.

Two sets of variometers were in function, the one for normal registration and the other for rapid registration. The normal set consisted of a *D*- and *H*-variometer of the Eschenhagen pattern and an old Carpentier *V*-variometer. The set of variometers and the recorder for rapid registration were of the same type as those used in Tromsö, two "Variométre de Copenhague" for *D*- and *H*-, and a "Balance de Godhavn" for *V*-registration. The recorder was of la Cour's construction. The time-marking device was of the same system as that used in Tromsö. The rate of the pendulum-clock was controlled by radio signals which were picked up and read off on a watch in the dwelling house, this watch being again compard with the pendulum-clock.

§ 3. Absolute Measurements.

The instruments used for absolute determinations of *D* and *H* was a Carl Bamberg theodolite and for *V*-determination a Schulze earth-inductor. The absolute determinations were taken in a tent at a distance of 25 m from the variometer hut. Absolute determinations were taken on the following two days:

31/8 1932: $D = 5° 59'$ W. $H = 12\,270\ \gamma$. Conditions: a small disturbance during the measurements.

1/6 1934: $D = 5° 42'$ W. $H = 12\,233\ \gamma$. $V = 76° 8'$. Conditions: quiet.

Scale values.

The scale values were determined by means of a Helmholtz-Gauguin coil. The scale values were constant within the limit of error during the period of registration. The following values are the mean values of the determinations during the year:

Set of variometers for normal registration:	Set of variometers for rapid registration:
D: $\varepsilon = 1'{\cdot}06$ per mm, which corresponds to 3·80 γ/mm	D: $\varepsilon = 1{\cdot}08$ per mm, which corresponds to 3·86 γ/mm
H: $\varepsilon = 18{\cdot}2$ „	H: $\varepsilon = 6{\cdot}19$ „
V: $\varepsilon = 23{\cdot}1$ „	V: $\varepsilon = 4{\cdot}10$ „

§ 4. **On the Quality and the Principles for Tabulation of the Material.**

As previously mentioned, the base lines, on account of the small movements of the pillars show displacements during the whole period of registration and it is therefore impossible with the few absolute determinations available to take out of the records the actual hourly values of the field. Further, we had several times to readjust the variometers when the light spots had heen deflected out of the recorder, and the base lines consequently by each readjustment recieved new values. As mentioned in the preface, the point of view for the tabulation of the material will be to separate the storminess from the „normal course" of the curves. In No. 4 of Publications from „Det norske institutt for kosmisk fysikk", the year-book from the Auroral Observatory for 1932, an interpolation method for separation of the hourly values of the storminess has been explained and used. Birkeland in his original treatment of the records, used a more direct method which consisted in drawing the "normal line" on the records directly, *i. e.*, the course of the curve which was to be expected if no perturbations had occurred. It is evident that this operation involves a certain personal judgment. Regarding the records from Bodö, we found it most convenient to separate the storminess using the second method—by drawing the "normal lines" on the records directly.

PART III.

Report on sinusoidal Oscillations which occurred on the rapid Registration Records in Bossekop, Tromsö and Bodö

by

Leiv Harang.

§ 1. Introduction.

It is a wellknown fact that more or less pronounced perturbations or oscillations always occur on the magnetograms from all observatories if the variometers used are sufficiently sensitive. Eschenhagen[1]) who first investigated these small perturbations, used an *H*-variometer with a sensitivity of 0·3 γ/mm and a rate of speed of the registration of 4 mm/min. The registrations showed that these smallest perturbations consisted of fairly regular developed sinusoidal oscillations. The time of duration of one oscillation varied, but was most frequently of a period of 30—40 sec. and an amplitude of 1—2 γ. Eschenhagen also showed that if one increased the sensivity of the variometers one did not get further details on the curves. Eschenhagen called these smallest perturbations "elementary waves" as they, in his opinion, represented the limit in the analysis of the perturbations in the earth magnetic field. These "elementary waves" of Eschenhagen are especially interesting as in the multitude of forms of earth magnetic perturbations they exhibit a simple geometric form.

A type of similar appearance but of greater amplitudes and time of oscillations, which occurred on the earth magnetic registrations from the Haldde Observatory in 1900 and 1911, was first described by Birkeland.[2])

The oscillations observed by Birkeland in 1911 consisted of about 50 sinusoidal waves and a time of duration of one oscillation of 120 sec. The oscillations which were beautifully developed in *D* also occurred in two earth current cables which were laid out in N—S and E—W directions. After Birkeland the study of this simple type of perturbations has been neglected, mainly because their occurrence seems to be connected with the auroral zone where no permanent earth magnetic observatory has been in function until recent years.

During the earth magnetic registrations at the Auroral Observatory in Tromsö in the years 1929—1930, a number of such sinusoidal oscillations of the same type described by Birkeland has been observed. Due to the time-marking system used at the observatory, one could show that there was a phase difference between the waves in the three earth magnetic components.[3]) It also appeared that the amplitude of the oscillations decreased with increasing distance from the auroral zone,[4]) oscillations which in Tromsö and Abisko may have amplitudes up to 20 γ are not visible on the curves from the observatories at lower latitudes as Copenhagen and Potsdam.

On account of the simple geometric character of these oscillations they are especially interesting and the simultaneous rapid registrations of the earth magnetic

---

[1]) Sitzungsber. d. Berliner Akad. Nr. XXXIX, 965, 1896 and Sitzungsber. d. Berliner Akad. Nr. XXXII, 678, 1897. H. Ebert: Sitzungsber. d. Akad. d. Wiss. zu Munchen. XXXVI, 527, 1906.

[2]) "Expédition Norvégienne de 1899—1900", p. 7—12. Vid. Skr. 1901, Oslo, and "The Norwegian Aurora Polaris Expedition 1902—1903", Vol. 1, Second Section p. 756. Oslo 1913.

[3]) Leiv Harang: Terr. Mag. *37*, 57, 1932.

[4]) B. Rolf: Terr. Mag. *36*, 9, 1931.

elements at Tromsö, Bossekop and Bodø, offer a unique opportunity of a synoptic study. From Bossekop also rapid registrations of the earth currents will be used.

A description of the oscillations occurring on the rapid registrations in the period September 1932—September 1933 from the three observatories mentioned, will be given, below.

The scale-values of the variometers used for rapid registrations were:

	Tromsö	*Bossekop*	*Bodö*
D:	$\varepsilon = 3{\cdot}80\ \gamma/\text{mm}$,	$\varepsilon = 3{\cdot}50\ \gamma/\text{mm}$,	$\varepsilon = 3{\cdot}90\ \gamma/\text{mm}$
H:	$\varepsilon = 5{\cdot}75$ „	$\varepsilon = 5{\cdot}70$ „	$\varepsilon = 6{\cdot}20$ „
V:	$\varepsilon = 5{\cdot}80$ „	$\varepsilon = 5{\cdot}30$ „	$\varepsilon = 4{\cdot}10$ „

The scale-value of the earth current registrations at Bossekop were:

E—W cable .... = 14·5 millivolt/km per mm
N—S „ .... = 3·3 „ - „

The linear speed of the rapid register drum was 3·1 mm per minute.

The description of the oscillations will be given on the following lines:

A study of the oscillations in the three components, their amplitudes, time of oscillations and relative phase differences. By means of these quantities we are able to give the perturbing vector at each moment during *one* oscillation. In case of pure sinusoidal oscillations the perturbing vector is represented by the following system of equations:

$$\Delta D = A_D \sin \frac{2\pi t}{T}$$

$$\Delta H = A_H \sin \left(\frac{2\pi t}{T} + \alpha\right)$$

$$\Delta V = A_V \sin \left(\frac{2\pi t}{T} + \beta\right)$$

Where ΔD, ΔH and ΔV are the perturbing forces expressed in γ in the three earth magnetic components D, H and V respectively. A_D, A_H and A_V are the maximal amplitudes and T is the time of duration of one period expressed in seconds. The perturbing vector is as previously mentioned, in D reckoned positive towards W in H positive towards N and in V positive downwards. α is the phase difference between the waves in D and H and β is the phase difference between the waves in D and V.

Similarly, we may express the sinusoidal earth current oscillations in the S—N and E—W cables by the following equations:

$$E_N = J_N \sin \frac{2\pi t}{T}$$

$$E_W = J_W \sin \left(\frac{2\pi t}{T} + \varphi\right)$$

where E_N and E_W are the perturbing currents expressed in millivolt/km. The perturbing current, or voltage, is reckoned positive towards N in the S—N cable and positive towards W in the E—W cable. In the tables λ denotes the phase difference between the waves in *D* and the waves in the S—N cable at Bossekop.

Regarding the phase differences, two sources of error may appear and have to be considered. The one is the period of the free oscillations of the suspended magnet in the variometers. Now the ratio between the periods of the free oscillations of the magnet and the earth magnetic oscillations occurring is about $^1/_{100}$ or less, and it is evident that if the earth magnetic oscillations occur as smooth waves, the amplitudes and the effect of the free oscillations of the magnet are negligible. The other source of error is an eventual wrong orientation of the suspended magnets in the variometers. The magnets in the three variometers are to be suspended with their axes at right angles to the mean direction of the component of the earth magnetic field, the variation of which is to be recorded. If, for instance, the *H*-magnet, has been turned a certain angle out of the right position, the maximum deflection of the oscillation will appear at the moment when the direction of the perturbing force coincides with the orientation of the suspended magnet. It is therefore evident that a wrong orientation of the suspended magnets will have an influence on the phase, which will accordingly depend on the angle between the actual orientation of the magnet and the direction of the component. Now we are justified in assuming this angle to have a small value, and the influence on the phase caused by the amount of wrong orientation of the magnets which may appear on our variometers, will be negligible.

When measuring out the groups of oscillations, copies of the curves were taken on contrast plates and the copies were measured out in a microscope on a comparator used for measuring out spectra. The amplitudes and time of duration of one oscillation were measured out by means of the time-marks which appear as intensified dots super imposed upon the continuous curves. The phase differences were determined by measuring out the distances from one time-mark to the nearest crest on the oscillations in the three earth magnetic components. Usually, these distances were different in *D*, *H* and *V* due to the relative phase differences.

In order to give an impression of the way in which the oscillations have been measured out, a detailed description of the groups of oscillations which occurred, the 9. and 21. September 1932 will be given. The description of the oscillations occurring later is given in a more condensed form.

§ 2. Description of the Groups of sinusoidal Oscillations.

No. 1. *9/10 1932.*

Group of oscillations occurring between 5^h and 6^h G. M. T. In Tromsö the time-markings are lacking as the relays was out of order between midnight and 10^h. From Bossekop registrations both of the earth magnetic components and the earth currents are available. In Bodö the oscillations are so small that they are impossible to measure out.

The waves are, as all sinusoidal oscillations, especially pronounced in *D*. In *H* the deflections are so small that the waves are impossible to measure out. In *V* the deflections are greater. There is a distinct phase-difference between the waves in *D* and *V*. The waves in the earth current cables show a little but systematic phase-difference.

The time of duration of one oscillation was 78 sec. The oscillations were measured out at six time-intervals. Table 1 gives the results of the measurements.

Table 1.

Bossekop								Tromsö	
Time G. M. T.	$2A_D$ γ	$2A_V$ γ	β °	$2J_N$ mv./km °	$2J_W$ mv./km °	φ °	λ °	$2A_D$ γ	$2A_V$ γ
5^h $4{\cdot}6^m$	4·5	1·1	208	21	43	29	153	2·2	1·7
8·6	—	—	215	—	—	10	142	—	—
9·6	5·9	1·6	207	25	51	6	133	2·2	1·7
10·6	—	—	—	—	—	3	—	—	—
14·6	5·9	2·1	219	30	86	19	132	2·6	1·7
19·6	7·0	2·6	222	26	65	10	141	4·6	2·6
24·6	5·9	2·1	221	23	43	4	129	5·7	3·0
Mean:	5·8	1·8	215	25	58	10	138	3·5	2·1

No. 2. *20/10 1932.*

A group of oscillations occurring between 0^h 30^m and 2^h 55^m G. M. T. The waves are specially pronounced in *D*. In *H* there is at the same time a small disturbance which deforms the waves and makes it difficult to measure them out. In *V* the waves are more pronounced than in *H*. The earth current records from Bossekop exhibit a well developed syncronous series of oscillations.

$T = 92$ sec. 0^h 55^m—2^h 0^m G. M. T.							
	$2A_D$ γ	$2A_V$ γ	β °	$2J_N$ mv./km	$2J_W$ mv./km	φ °	λ °
Bossekop......	10·9	4·2	209	57	112	1	153
Tromsö........	5·1	2·8	210	—	—	—	—
Bodö..........	2·8	1·5	234	—	—	—	—

No. 3. *21/10 1932.*

The group of oscillations occurring between 21. and 22. October was the most regular and persistant group of oscillations which was recorded during the Polar Year. Copies of the records are reproduced on Plate I. The oscillations continued from 22^h to 23^h 30^m G. M. T. The oscillations occurred after a small magnetic storm which was accompanied by aurorae of medium strength. During the oscillations we had no or faint aurorae. In table 2 and table 3 the results of the measurements of the records from the three observatories are given in a more detailed form than otherwise will be given. In the tables we have divided the oscillations in three groups corresponding to the variation of the amplitudes during the oscillations.

The time of duration of one period was 90 sec.

Table 2.

Bossekop									
Time G. M. T.	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °	$2J_N$ mv./km	$2J_W$ mv./km	φ °	λ °
22h 10m	(9·8)	(2·6)	(3·1)	255	191	43	80	35	156
15	12·9	4·0	4·8	268	186	58	123	24	131
20	11·2	4·0	3·7	290	193	38	85	32	139
25	10·5	3·4	4·0	270	197	40	85	22	136
30	8·7	2·8	2·3	283	188	35	58	36	162
Mean:	10·8	3·5	3·7	273	191	43	86	30	145
45	7·0	1·7	2·1	276	194	30	50	25	157
50	9·8	2·8	2·8	289	200	38	73	23	148
55	10·8	3·4	3·4	289	198	38	80	33	151
23 0	8·4	2·8	2·1	290	198	32	44	22	141
5	3·5	1·1	1·2	260	194	21	29	—	147
Mean:	7·9	2·4	2·3	281	197	32	55	26	159
20	4·8	2·0	—	274	—	—	—	—	—
25	3·5	1·7	—	273	—	—	—	—	—
30	3·8	1·7	—	236	—	—	—	—	—
Mean:	4·0	1·9	—	261	—	—	—	—	—

	Tromsö					Bodö				
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °
22h 5m	(2·2)	—	—	—	—	(3·5)	—	—	—	—
10	(2·9)	—	—	—	—	(4·7)	(2·5)	—	—	—
15	6·4	4·4	3·0	270	184	5·4	4·6	6·6	201	260
20	6·8	3·7	4·0	271	188	8·0	5·6	9·8	181	247
25	5·7	4·4	4·0	275	195	5·9	6·8	15·2	178	261
30	5·7	2·8	3·5	288	183	5·5	6·2	13·0	164	250
Mean:	6·2	3·8	3·6	276	187	6·2	5·8	11·1	186	254
45	2·6	2·1	1·7	269	181	3·2	2·2	5·3	—	260
50	6·4	4·0	3·0	280	181	6·1	5·6	9·8	141	264
55	7·2	4·4	3·0	276	190	8·2	5·6	9·6	140	259
23 0	5·9	4·2	3·0	270	196	6·1	5·6	9·4	126	255
5	4·2	2·1	1·7	276	180	5·1	3·1	5·7	122	260
Mean:	5·3	3·4	2·5	274	186	5·7	4·4	8·0	132	260
20	2·6	1·8	—	261	—	—	—	—	140	257
25	2·8	2·5	—	242	—	(2·4)	—	(3·3)	130	252
30	3·7	3·1	—	248	—	(4·3)	(3·1)	(5·7)	129	249
Mean:	3·0	2·5	—	250	—	(3·3)		(4·5)	133	253

The duration of one oscillation, which was 90 sec., was constant during the whole period. A comparison between the waves in *D* showed that the waves were syncronous at the three observatories within the limit of error which is 6—8 sec.

From the tables is is evident that the waves in D have decreasing amplitudes from Bossekop to Tromsö and Bodö, where as the amplitudes in H are slightly increasing and in V still more so. The phase-differences are of the same magnitude in Bossekop and Tromsö; in Bodö there is a marked difference between Tromsö and Bossekop. In table 3 the mean amplitudes at two time-intervals are tabulated.

Table 3.

	25h 15m—23h 30m G. M. T.					23h 45m—24h 5m G. M. T.				
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	$2J_N$ mv./km	$2J_W$ mv./km	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	$2J_N$ mv./km	$2J_W$ mv./km
Bossekop	10·8	3·5	3·7	43	86	7·9	2·4	2·3	32	55
Tromsö. „	6·2	3·8	3·6	—	—	5·3	3·4	2·5	—	—
Bodö ...	6·2	5·8	11·1	—	—	5·7	4·4	8·0	—	—

No. 4. *25—26/10 1932.*

A small group of oscillations occurring between 23h 10m and 0h 10m G. M. T. at Tromsö and Bossekop. In Bodö the waves are so small that they are impossible to trace on the records. The oscillations on the earth magnetic records were accompanied by small sinusoidal waves in the earth current records at Bossekop. The amplitudes of the earth current waves were too small to be measured out, but the phase differences could be determined.

	$T = 101$ sec. 23h 20m – 0h 10m G. M. T.						
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °	φ °	λ °
Bossekop	4·0	1·5	1·4	140	208	15	139
Tromsö	2·4	2·1	1·2	148	233	—	—

No. 5. *31/10 1932.*

Two groups of oscillations occurring on the registrations from Bodö, the one occurring between 4h and 5h 30m the other between 6h and 6h 15m G. M. T. In the second group of oscillations the waves in H are impossible to measure out as the H-curve is masked by the base line curve. In Bossekop, the waves are deformed by irregular perturbations from a small storm. In Tromsö the rapid registrations are lacking for this day.

	$T = 96$ sec. 4h 0m—4h 30m G. M. T.				
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °
Bodö	4·8	3·1	6·3	146	256
	6h 0m—6h 15m G. M. T.				
„	4·9	—	5·3	130	246

No. 6. *9/2 1933.*

A group of oscillations occurring between 7^h and 8^h G. M. T. The records from Bossekop are lacking for this day. In Bodø the amplitudes are so small that they are impossible to measure out.

T = 78 sec. 7^h 40^m—8^h 5^m G. M. T.			
	$2A_D$ γ	$2A_V$ γ	β °
Tromsö	4·3	2·8	221
Bodö	—	—	273

No. 7. *28/2 1933.*

A small group of oscillations occurring on the records at Tromsø between 21^h 25^m and 22^h G. M. T. The waves are only depeloped in *D* and *V*, in *H* they are washed out by small irregular perturbations. The curves from Bossekop and Bodö are lacking for this day.

T = 108 sec. 21^h 25^m — 21^h 50^m G. M. T.			
	$2A_D$ γ	$2A_V$ γ	β °
Tromsö	2·2	2·5	230

No. 8. *23/3 1933.*

A group of oscillations occurring between 2^h 55^m and 3^h 30^m G. M. T. on the curves from Tromsö and Bossekop, the curves from Bodö are lacking for this day. The oscillations are deformed as they were superimposed by small irregular perturbations which reduce the accuracy of measurements and we therefore will not give data.

No. 9. *5/4 1933.*

A short group of oscillations occurring at the three observatories between 4^h 50^m and 5^h 10^m G. M. T. The waves are only developed in *D* and *V*, in *H* no oscillations are visible. The oscillations also occur on the earth current record from Bossekop. In Bodö only *D* was in order.

T = 136 sec. 4^h 50^m — 5^h 10^m G. M. T.				
	$2A_D$ γ	$2A_V$ γ	β °	λ °
Bossekop	7·4	1·6	189	149
Tromsö	4·5	1·9	203	—
Bodö	2·8	—	—	—

No. 10. *9/4 1933.*

A short group of oscillations occuring between $0^h 55^m$ and $1^h 15^m$ G. M. T. on the registrations from Tromsö. The registrations from Bossekop and Bodö are lacking for this day. The oscillations are well developed in *D* and *V*, but irregular in *H* due to small irregular perturbations.

T = 94 sec. $0^h 59^m$ — $1^h 10^m$ G. M. T.			
	$2A_V$ γ	$2A_D$ γ	β °
Tromsö	4·1	3·3	235

No. 11. *11/4 1933.*

A group of oscillations occurring between $0^h 55^m$ and $1^h 50^m$ G. M. T. at the three observatories. The oscillations are beautifully developed in *D*. In Bossekop the time-marks are lacking for some hours during the night, unfortunately during the oscillations. Phase differences are therefore only measured out on the registrations from Tromsö and Bodö.

T = 94 sec. $0^h 0^m$—$1^h 35^m$ G. M. T.					
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °
Bossekop	12·2	5·1	(5·3)		
Tromsö	7·8	5·9	5·0	133	210
Bodö	1·5	1·9	1·3	117	237

No. 12. *25/4 1933.*

A small group of oscillations occurring between $1^h 40^m$ and $2^h 10^m$ G. M. T. on the registrations from Tromsö. The registrations from Bossekop and Bodö are lacking for this day. The oscillations are well developed in *D* and *V*, but irregular in *H*, due to small irregular pertubations.

T = 79 sec. $1^h 45^m$ — $1^h 59^m$ G. M. T.				
	$2A_D$ γ	$2A_V$ γ	α °	β °
Tromsö	6·0	4·5	106	232

No. 13. *9/5 1933.*

Two groups of oscillations occurring at $3^h 20^m$ — $3^h 40^m$ and $4^h 50^m$ — $5^h 30^m$ G. M. T. The oscillations occur on the records from Bossekop and Tromsö, the records from Bodø are lacking for this day. The waves are somewhat deformed by other irregular perturbations especially in the earth currents, which are too irregular to be measured out.

$T = 138$ sec. $3^h 20^m - 5^h 30^m$ G. M. T.					
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °
Bossekop	5·7	2·6	2·2	95	180
Tromsö	4·1	3·5	3.4	165	220
	$4^h 50^m - 3^h 40^m$ G. M. T.				
Bossekop	6·6	4·4	2·1	77	179
Tromsö	5·5	4·1	3·8	128	219

No. 14. *17/6 1933.*

A group of oscillations occurring between $0^h 30^m$ and $2^h 15^m$ G. M. T. at the three observatories.

$T = 110$ sec. $1^h 5^m - 2^h 1^m$ G. M. T.							
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °	φ °	λ °
Bossekop......	10·8	3·4	4·7	116	191	14	161
Tromsö	8·0	5·5	4·6	126	222	—	—
Bodö..........	3·4	4·7	2·6	122	236	—	—

The rapid registrations at Bossekop and Bodö were stopped at the end of July. The oscillations occurring later have therefore only been recorded at Tromsö.

No. 15. *30/7 1933.*

A group of oscillations occurring on the records from Tromsö between $1^h 16^m$ and $2^h 52^m$ G. M. T.

$T = 110$ sec. $1^h 16^m - 2^h 52^m$ G. M. T.					
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °
Tromsö	5·4	3·2	2·0	166	185

No. 16. *16/8 1933.*

A group of oscillations occurring on the records from Tromsö between 1^h and $1^h 25^m$ G. M. T.

$T = 161$ sec. $1^h 5^m - 1^h 20^m$ G. M. T.					
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °
Tromsö	5·7	5·9	2·6	87	188

No. 17. *26-27/8 1933.*

A very short and interesting group of oscillations which occurred at Tromsö between $0^h\,58^m$ and $1^h\,5^m$ G. M. T. The group only consisted of 5 waves.

$T = 72$ sec. $0^h\,59^m$—$1^h\,1^m$ G. M. T.					
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °
Tromsö	8·2	13·0	2·6	— 43	171

No. 18. *2/9 1933.*

A group of oscillations occurring on the Tromsö records between $3^h\,20^m$ and $4^h\,15^m$ G. M. T.

$T = 67$ sec. $3^h\,20^m$—$4^h\,5^m$ G. M. T.					
	$2A_D$ γ	$2A_H$ γ	$2A_V$ γ	α °	β °
Tromsö	7·6	4·9	4·1	220	250

§ 3. Discussion.

a. Annual and diurnal Variation of the Occurrence of the sinusoidal Oscillations.

On the previous pages we have described 18 groups of oscillations which have been recorded during the period Sep. 1932—Sep. 1933. In order to get a more extensive material for a statistical study of the occurrence of the oscillations we have inspected the magnetic records from Tromsö for the period March 1929—Aug. 1934. On Plate II some of the most regular groups of oscillations occurring on the normal registrations from Tromsö in this time-interval, have been reproduced. Fig. 6 shows the annual variation and Figs. 7 and 8 show the diurnal variations of the occurrence of the oscillations.

The annual variation shows two maxima in the months March—April and September—October. The diurnal variation exhibits a distinct maximum at 0^h—2^h G. M. T. It is noteworthy that the annual maxima at the equinoxes and the diurnal maximum at 0^h—2^h coincide with the occurrence of maximum in the negative magnetic storminess at Tromsö. It would be of interest to investigate a possible secular variation or connection with sun-spot activity when a more extensive material is available.

b. Variations of the perturbing Vector at the three Observatories Bossekop, Tromsö and Bodö.

The usual development of the sinusoidal oscillations is that the waves start with minute amplitudes which gradually increase and the waves oscillate about the quiet progress of the curve. An interesting exeptional case from this is a short group of oscillations which was recorded 28. 8. 1933, and reproduced on Plate II. where the oscillations start with a sudden outswing and decrease as damped oscillations. In a number of cases the oscillations exhibit "Schwebungen", thus indicating that the oscil-

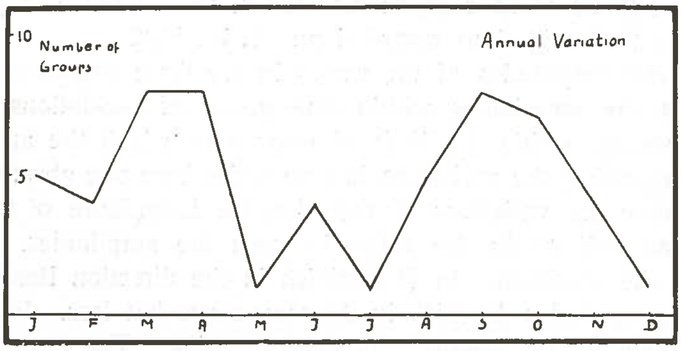


Fig. 6.

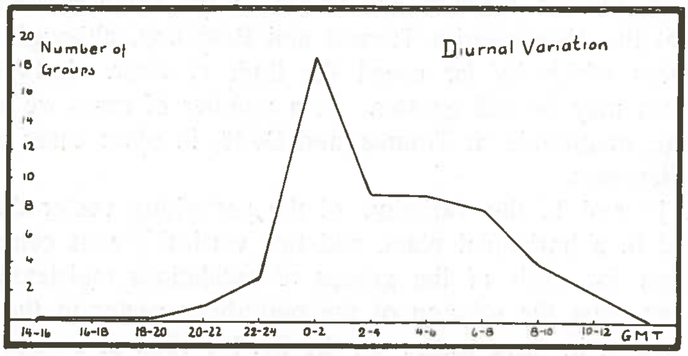


Fig. 7.

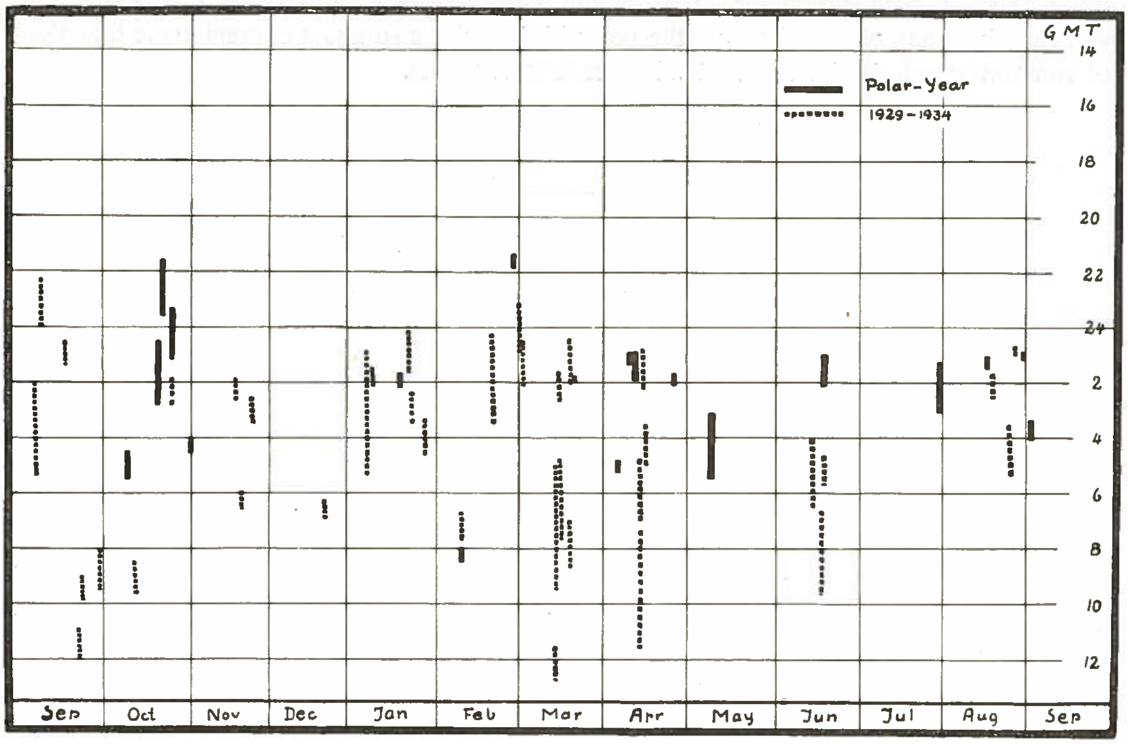


Fig. 8.

lations consist of two or more components with some difference in periods. This is distinctly visible in the oscillations recorded on 21. 10. 1932.

Regarding the amplitudes of the waves in the three components *D*, *H* and *V*, the ratio between the amplitudes within one group of oscillations recorded at one observatory is constant within the limit of error with which the amplitudes may be measured out. Regarding the variations in amplitudes from one observatory to another, we notice that there are variations of the absolute magnitude of the amplitudes in one component as well as in the ratios between the amplitudes. We notice as a general rule that the amplitudes in *D* diminish in the direction Bossekop—Tromsö—Bodö. In *H*, the amplitudes diminish in the same sense but less. In *V* the amplitudes are in some cases slightly decreasing, in others, increasing. The error in determination of the amplitudes is in *H*, and especially in *V*, comparatively greater than in *D* owing to the small deflections of the waves ln *H* and *V*.

The phase-differences between the waves in the three components are of the same magnitude at the observatories Tromsö and Bossekop, although in several cases there are differences which by far exeed the limit of error. Between Tromsö and Bodö the differences may be still greater. In a number of cases we have phase-differences of the same magnitude at Tromsø and Bodö, in other cases we have entirely different phase-differences.

In figs. 9, 10 and 11 the variation of the perturbing vector during one period has been indicated in a horizontal plane and two vertical planes containing the E—W and N—S direction for each of the groups of oscillations registered. From figs. 9, 10 and 11 we notice that the rotation of the perturbing vector in the horizontal plane is anticlockwise, except in three cases: on the 21. 10. 1932 at Bossehop, Tromsö and Bodö, and 27. 8. 1933 and 2. 9. 1933 on the records from Tromsö; the registrations at Bossekop and Bodö had ceased at that time. In the vertical plane containing the E—W and vertical directions, and in the vertical plane containing the N—S and vertical directions, we notice that the perturbing vector also has a characteristic direction of rotation which is the same at all three observatories.

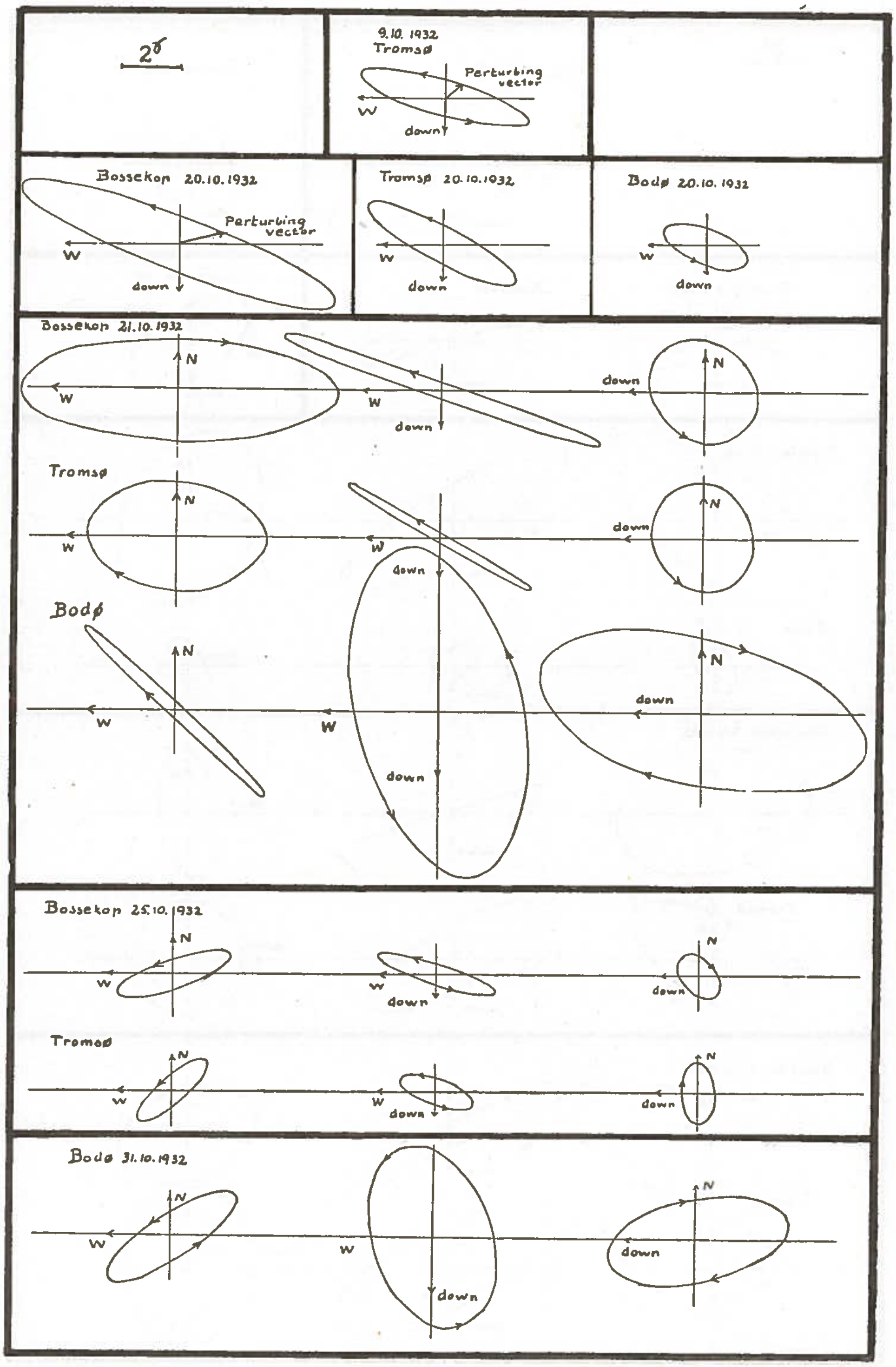
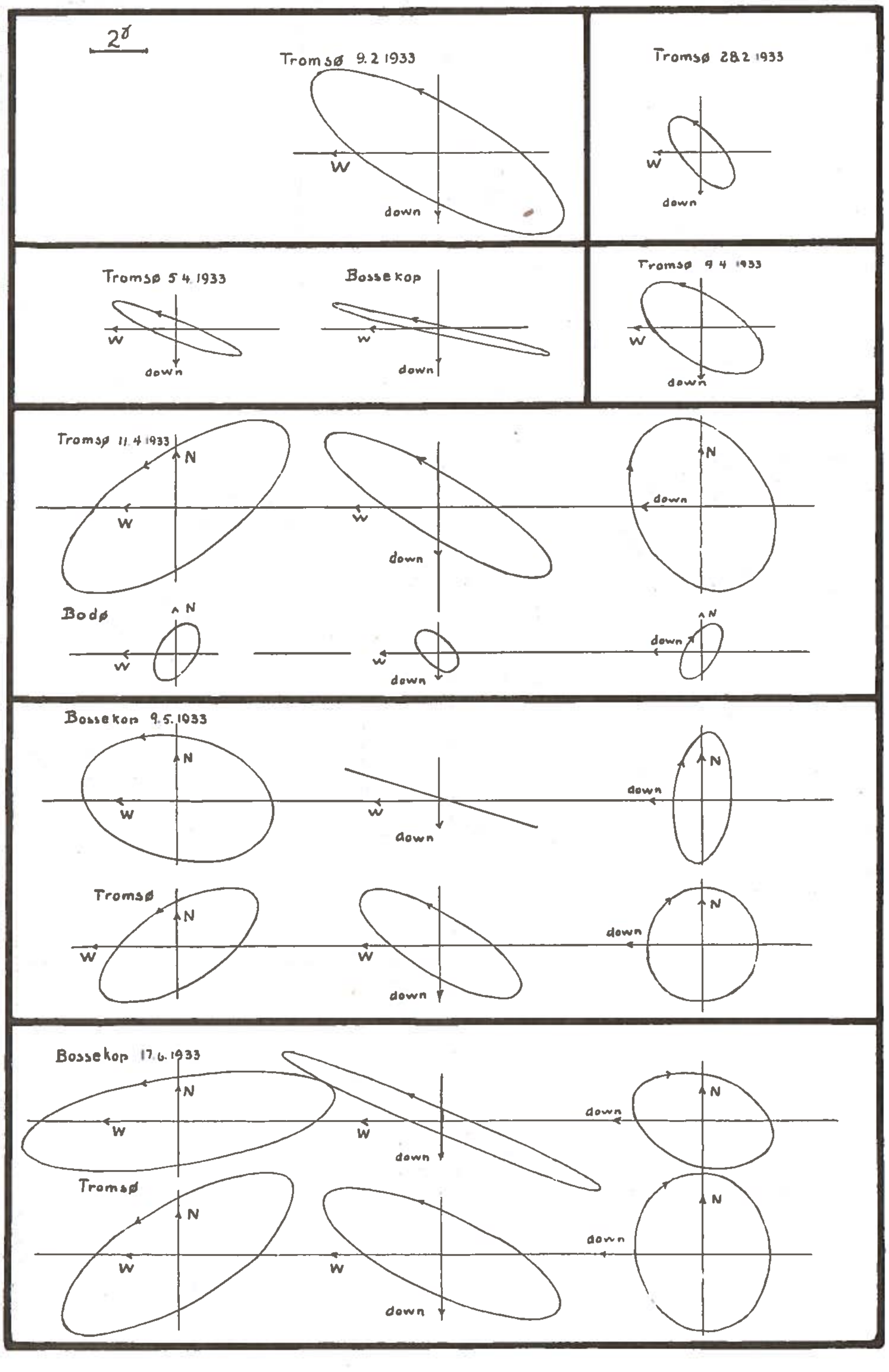

2°
9.10.1932
Tromsø
Perturbing vector
W
down
Bossekop 20.10.1932
Perturbing vector
W
down
Tromsø 20.10.1932
W
down
Bodø 20.10.1932
W
down
Bossekop 21.10.1932
N
W
down
Tromsø
N
W
down
Bodø
N
W
down
Bossekop 25.10.1932
N
W
down
Tromsø
N
W
down
Bodø 31.10.1932
N
W
down

Fig. 9



2γ
Tromsø 9.2 1933
W
down
Tromsø 28.2 1933
W
down
Tromsø 5.4.1933
W
down
Bossekop
W
down
Tromsø 9.4 1933
W
down
Tromsø 11.4 1933
N
W
W
down
N
down
Bodø
N
W
W
down
N
down
Bossekop 9.5.1933
N
W
W
down
N
down
Tromsø
N
W
W
down
N
down
Bossekop 17.6.1933
N
W
W
down
N
down
Tromsø
N
W
W
down
N
down

Fig. 10.

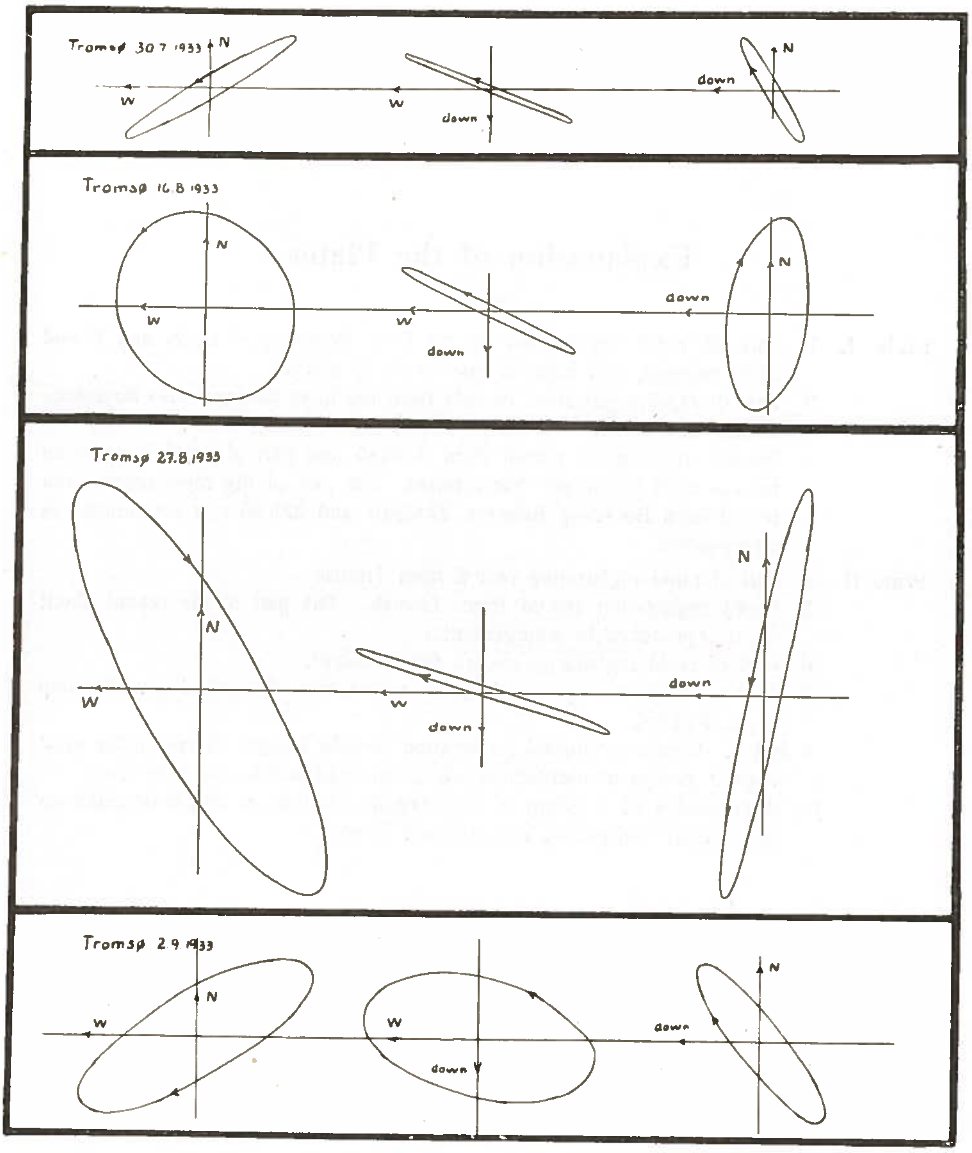

Tromsø 30.7.1933
N
W
W
down
down
N
Tromsø 16.8.1933
N
W
W
down
down
N
Tromsø 27.8.1933
N
W
W
down
down
N
Tromsø 2.9.1933
N
W
W
down
down
N

Fig. 11.

Explanation of the Plates.

Plate I. 1. Part of rapid registration record from Bossekop of *D*, *H* and *V* and earth currents, and from Tromsö of *D*, *H* and *V*.

2. Part of rapid registration records from the three observatories Bossekop, Tromsö and Bodö.

3. Normal registration record from Tromsö and part of rapid registration records from the three observatories. The part of the rapid registration record from Bossekop between $22^h 20^m$ and $22^h 25^m$ is reproduced in enlargement.

Plate II. 4. Part of rapid registration record from Tromsö

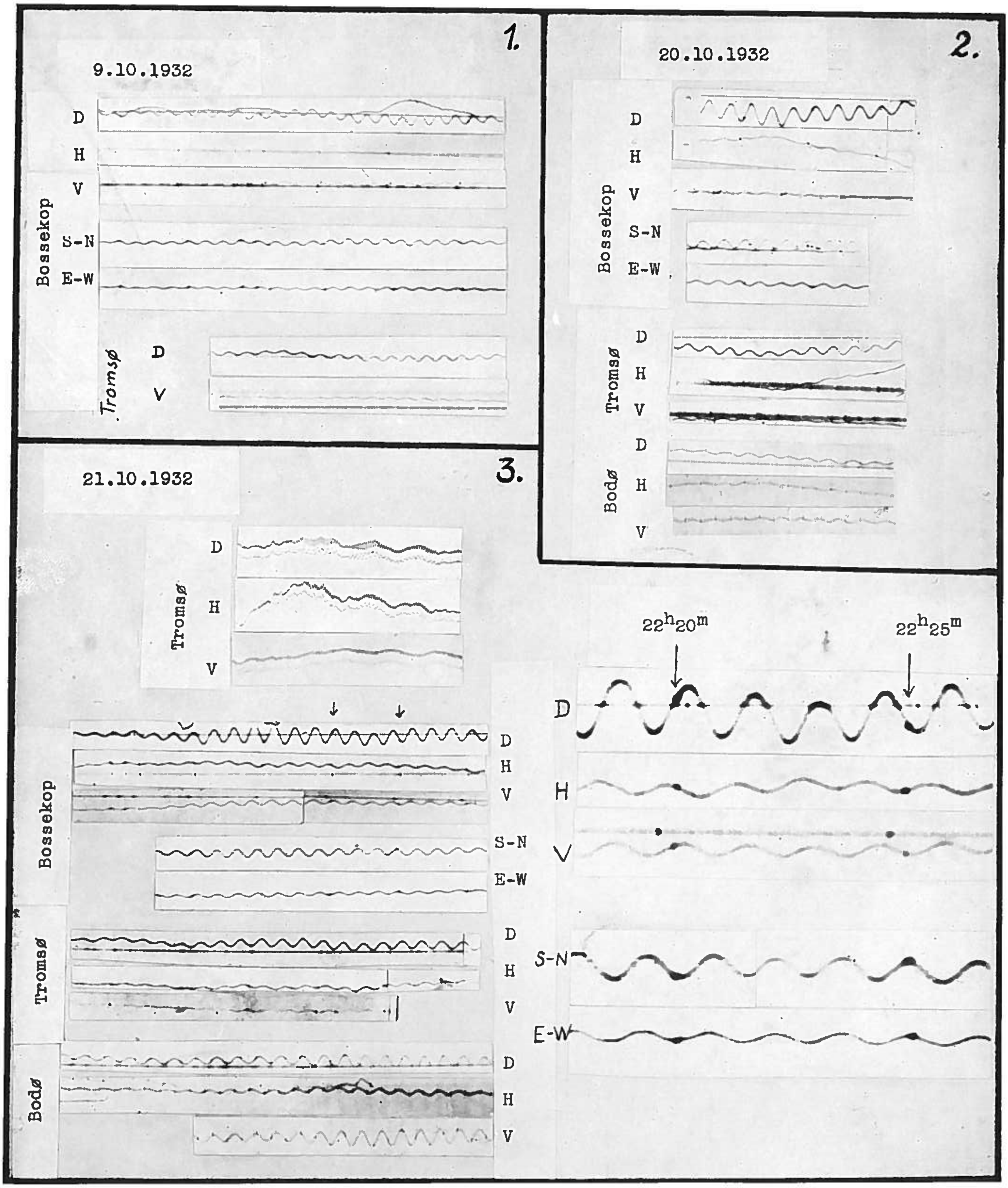
5. Rapid registration record from Tromsö. The part of the record about 0^h is reproduced in enlargement.

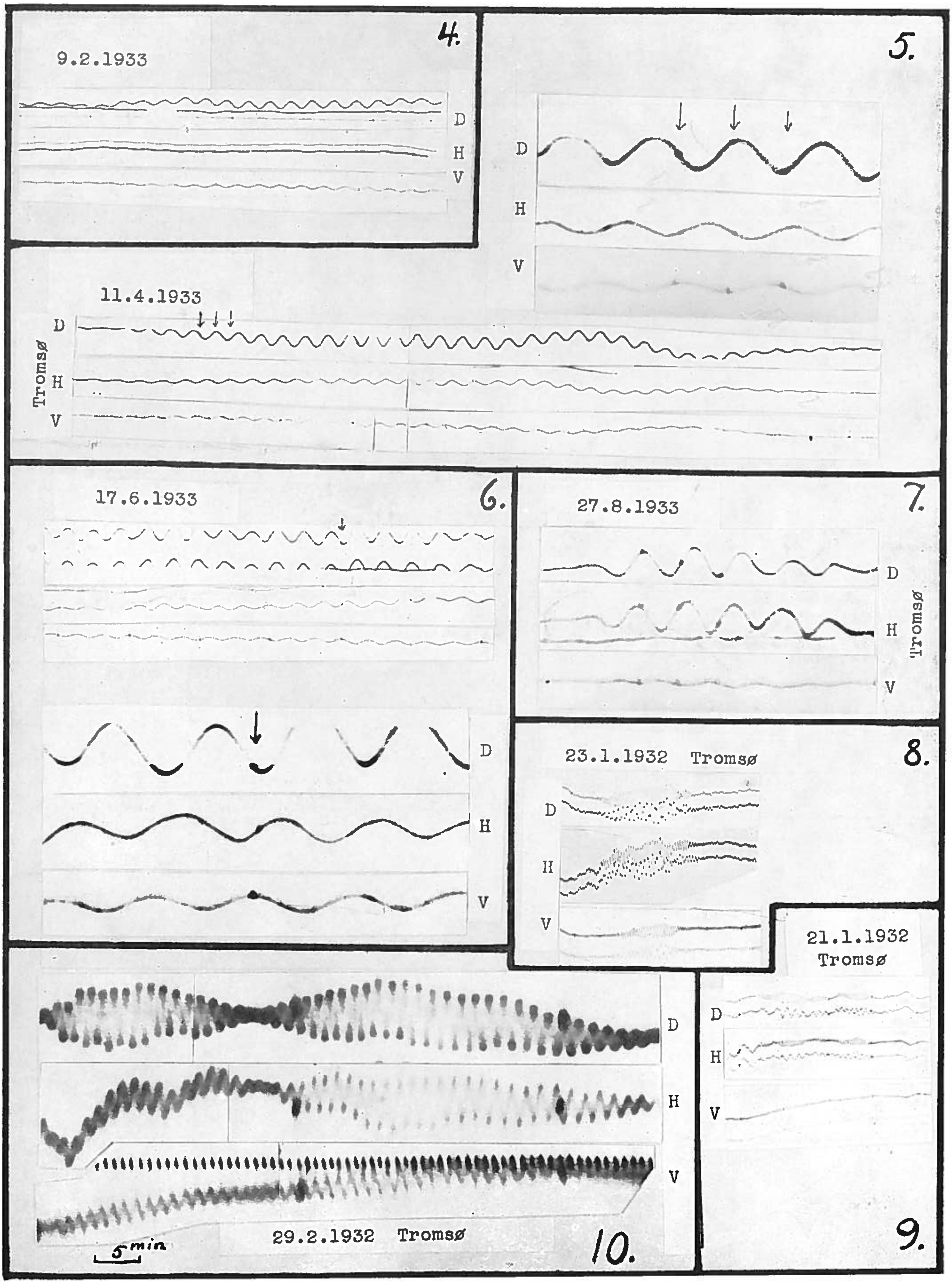
6. Part of rapid registration record from Tromsö.

7. Enlarged copy of rapid registration record from Tromsö of a small group of oscillations.

8 and 9. Copies of normal registration records Tromsö of two of the most regular groups of oscillations which occurred before the Polar-Year.

10. Microphotos of a group of very regular oscillations which occurred on the normal registration records from Tromsö.


1.
9.10.1932
D
H
V
Bossekop
S-N
E-W
Tromsø
D
V
2.
20.10.1932
Bossekop
D
H
V
S-N
E-W
Tromsø
D
H
V
Bodø
D
H
V
3.
21.10.1932
Tromsø
D
H
V
Bossekop
D
H
V
S-N
E-W
Tromsø
D
H
V
Bodø
D
H
V
22h20m
22h25m
D
H
V
S-N
E-W


4.
9.2.1933
D
H
V
5.
D
H
V
11.4.1933
Tromsø
D
H
V
6.
17.6.1933
D
H
V
7.
27.8.1933
D
H
V
Tromsø
8.
23.1.1932 Tromsø
D
H
V
21.1.1932
Tromsø
D
H
V
9.
D
H
V
5 min
29.2.1932 Tromsø
10.

Bossekop. Horizontal Intensity. Storminess (+ N). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

OCTOBER 1932

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-35	-50	-14	0	0	0	0	0	0	-7	-15	-7	0	0	3	-7	6	12	4	-6	-12	-57	-130	-35	-15	25	375	400
2	0	0	0	0	0	0	0	0	0	8	27	80	80	135	40	10	0	0	20	-15	-72	-45	-20	-40	9	400	192	592
3	-190	-115	-25	-45	0	0	0	0	0	18	0	-5	10	30	20	15	20	0	0	0	0	0	-12	-92	-15	113	484	597
4	-55	-73	-60	-15	0	0	0	0	0	0	0	5	10	0	3	10	55	60	85	77	30	-18	-127	-110	-4	355	458	813
5	-35	-33	-40	0	5	2	4	7	10	10	10	0	0	0	5	10	-2	18	2	-12	0	-30	-140	-165	-16	83	457	540
6	-85	-35	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-5	0	5	-35	-55	-30	-10	-22	-11	7	277	284
7	-165	-57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7	-12	-12	-11	0	253	253
8	-10	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	40	15	-140	-48	-67	-35	-42	-12	57	350	407
9	-45	-57	0	0	0	0	0	0	0	0	0	0	0	0	30	155	110	20	10	5	17	-102	-155	-235	-10	347	594	941
10	-168	-10	2	-20	20	10	15	20	20	10	10	23	30	35	40	85	110	20	30	5	-257	-75	-43	-10	-4	485	583	1068
11	0	-15	0	8	20	20	25	18	7	0	0	0	0	0	0	5	0	0	10	-20	-127	-120	-88	-115	-16	113	485	598
12	-120	-63	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	43	45	-42	-50	-30	-10	-8	118	320	438
13	-3	0	0	0	0	0	0	0	0	0	0	0														0	3	3
14	-10	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	10	-5	-115	-40	-7	10	170	180
15	-12	-23	-60	-35	-10	0	7	0	-5	85	133	160	260	370	420	200	-10	- 0	-80	-125	-173	-137	-415	-575	-4	1635	1730	3365
16	-275	-158	-130	0	10	-85	-15	-15	53	15	33	50	0	7	55	40	60	20	-5	-10	-8	-12	-40	-45	-19	343	798	1141
17	-285	-137	-20	-5	0	0	0	5	10	0	0	0	10	92	65	25	55	10	-100	-150	-268	-300	-110	-175	-53	272	1550	1822
18	-285	-120	-5	0	0	0	0	0	0	0	5	-10	-15	-3	-5	-3	5	30	8	0	-22	-58	-100	-95	-28	48	721	769
19	-30	-5	0	0	0	-15	-8	0	0	0	0	0	20	45	10	35	30	30	30	10	2	-22	-50	-35	2	212	165	377
20	-35	-12	0	0	0	0	0	0	0	0	15	38	65	135	70	140	-20	-110	-30	-80	-178	-525	-620	-450	-67	463	2060	2523
21	-520	-760	-430	-280	0	10	30	5	80	155	95	45	85	45	40	75	60	35	-2	-40	-78	-35	5	2	-57	767	2145	2912
22	0	0	0	0	0	0	0	0	0	0	0	0	12	35	25	95	120	100	20	-100	-440	-160	-105	-95	-21	407	900	1307
23	-185	-140	-37	-18	-25	15	10	10	10	30	90	70	65	25	140	120	100	140	30	-270	-260	-195	-355	-95	-30	855	1580	2435
24	-15	-13	-13	-13	-25	-5	-3	5	8	-10	-5	0	93	30	-15	7	0	5	-55	-115	-375	-120	-120	-30	-33	148	932	1080
25	-10	-10	-15	-5	-3	0	0	0	0	20	20	28	115	150	105	80	-5	-15	-10	-5	-3	-25	-18	-20	16	518	144	662
26	-20	-5	0	0	0	-3	0	0	0	0	0	0	0	-3	-3	-5	0	0	0	-15	-50	-20	-15	0	-6	0	139	139
27	0	0	0	0	7	22	15	0	-10	-10	15	105	3	60	190	115	15	25	20	0	-30	-110	-92	-45	12	592	297	889
28	-60	0	0	0	8	28	30	10	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	86	60	146
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	20	5	-15	-150	-205	-14	30	370	400
30	-85	-27	-15	5	10	2	-13	-30	-37	-5	25	-7	-8	0	50	95	50	0	0	5	-30	-85	-70	-75	-10	242	487	729
31	-45	-67	-10	0	0	0	-5	-5	0	0	0	13	35	52	65	10	-10	-10	-10	-10	-6	0	-15	-20	-2	175	213	388
M	-90	-64	-28	-14	1	0	3	1	5	10	15	19	29	41	45	44	25	14	2	-33	-82	-81	-106	-96	-14	287	622	910
MPS	0	0	0	0	3	4	4	3	7	11	15	20	30	42	46	44	27	20	11	6	2	0	0	0				
MNS	90	64	28	14	2	3	1	2	2	1	1	1	1	0	1	1	2	7	10	38	84	81	106	96				

NOVEMBER

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-20	-25	-38	-65	-132	-107	-57	25	-45	-12	40	40	70	15	20	30	5	40	50	55	50	0	-10	-40	-5	440	551	991
2	-220	-112	-63	-15	13	13	23	25	7	8	0	5	0	0	-2	0	0	8	20	15	12	0	0	0	-11	149	412	561
3	0	0	0	0	0	-3	-4	7	-3	-10	3	0	0	5	5	3	0	0								23	20	43
4																												
5																												
6																												
7																												
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	15	5	-50	-115	-45	-30	-8	50	240	290
9	-43	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	8	13	30	32	25	10	-35	-5	0	1	118	103	221
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	-30	-15	-10	0	-1	20	55	75
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	20	15	10	0	0	0	2	50	0	50
12	0	-3	0	8	10	13	0	0	0	0	0	0	28	45	30	150	160	110	60	5	-80	-37	-5	0	21	619	125	744
13	0	0	-10	-20	-18	15	15	13	0	0	0	5	25	53	90	130	130	50	25	-10	-15	-107	-85	-5	12	551	270	821
14	0	0	0	0	0	0	-30	-18	33	15	22	17	85	33	100	130	150	10	-30	-20	-25	-150	-500	-205	-16	595	978	1573
15	-7	0	0	0	0	-3	0	5	0	0	0	3	0	5	10	10	20	40	50	35	30	-50	-86	-75	-1	208	220	428
16	-22	-10	-110	-250	-70	-50	-90	-23	-27	60	75	75	63	160	190	130	85	-170	-110	10	-250	-590	-410	-117	-60	848	2299	3147
17	28	10	5	5	10	10	0	-8	13	30	45	55	133	190	90	20	50	35	20	-90	-210	-270	-108	-132	-3	749	818	1567
18	-42	0	-10	10	10	15	15	18	-5	0	15	0	3	10	35	90	60	50	50	10	-170	-270	-22	5	-5	396	519	915
19	-5	-15	-27	20	15	10	0	0	0	0	12	13	13	30	95	110	55	25	-10	10	-30	-70	-175	-125	-2	408	457	865
20	-77	0	0	0	0	0	-13	-12	0	0	0	5	3	-3	5	50	5	25	20	0	0	-10	-60	-115	-7	113	290	403
21	-30	-7	7	0	-5	0	0	0	-10	-8	0	0	0	0	0	0	0	0	0	0	0	-45	-27	0	-5	7	132	139
22	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	0	0	16	17	8	0	0	0	0	0	2	41	5	46
23	0	0	0	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	57	165	70	15	20	3	-5	-57	-145	6	340	207	547
26	-80	-7	0	0	0	0	0	0	-10	-2	0	0	0	0	5	5	0	0	0	0	0	0	0	0	-4	10	99	109
27	0	0	0	0	-5	-5	5	0	0	0	0	0	0	0	0	0	0	0	0	-15	-23	-15	0	0	-2	5	63	68
28	-15	0	0	0	5	2	-10	-8	0	0	0	5	28	95	38	5	40	53	18	0	0	-11	-5	-10	10	289	59	348
29	-23	-18	-30	5	10	15	0	-3	5	10	15	15	15	10	40	100	120	115	60	60	0	-80	-60	-77	13	595	291	886
30	-35	-38	-20	10	67	0	0	0	0	0	-7	3	0	0	0	0	0	5	13	5	0	0	0	0	0	103	100	203
M	-23	-9	-11	-12	-3	-3	-6	1	-2	3	8	9	18	25	29	40	41	21	13	6	-31	-75	-67	-43	-3	259	320	579
MPS	1	0	0	2	5	4	2	4	2	5	9	9	18	25	29	40	41	28	19	11	5	0	0	0				
MNS	24	10	12	14	9	6	8	3	4	1	0	0	0	0	0	0	0	7	6	5	35	75	67	43				

DECEMBER

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	N	PS	NS	AS
1	0	0	0	-8	0	0	0	0	0	0	0	0	0	0	0	0	43	22	-5	-85	-75	-63	3	-10	-7	68	246	314
2	-15	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	15	55	15	-5	-23	0	0	2	90	53	143
3	0	-5	-5	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	-43	-43	-20	-80	-8	15	216	231
4	-100	-100	-32	0	15	15	7	0	0	0	0	0	0	0	5	20										62	232	294
5													0	0	0	0	0	0	0	3	0	-3	-57	-70		3	130	133
6	-45	-35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	-10	-155	-135	-15	12	380	392
7	-35	-13	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-15	-3	0	78	78
8	-30	7	7	5	5	-17	-13	20	25	20	15	0	0	10	12	2	0	0	0	0	0	-58	-77	-210	-12	128	405	533
9	-270	-250	-25	-25	20	15	-8	5	28	35	30	13	5	32	25	35	55	15	5	-135	-265	-103	-15	-30	-34	318	1126	1444
10	-150	-75	-20	0	0	0	0	0	0	0	0	5	0	8	35	27	0	10	-10	-25	-75	-48	-18	-30	-15	85	451	536
11	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-50	-107	-40	-25	-9	0	227	227
12	-15	0	0	0	-8	0	0	0	0	0	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	28	28
13	0	0	0	0	0	5	0	0	0	0	0	4	5	10	50	127	145	-55	115	35	-53	-200	-77	-145	-1	496	530	1026
14	-25	-8	-5	25	25	15	7	7	10	18	0	63	160	230	67	45	-85	-255	-30	-185	-285	-550	-410	-450	-67	672	2288	2960
15	-540	-510	-300	-335	-225	-70	-15	7	0	13	25	28	10	30	27	40	125	85	5	-325	-255	-275	-270	-190	-121	395	3310	3705
16	-280	-260	-100	-95	-55	-15	-10	-13	-10	8	5	33	30	20	7	35	75	15	-15	-35	-95	-270	-70	-65	-48	228	1388	1616
17	-115	-160	-50	-35	-15	-15	-15	-10	-10	5	15	73	90	130	160	85	105	120	25	-175	-15	-33	-65	-160	-3	808	873	1681
18	-20	-8	-35	-95	5	-2	-2	10	10	23	25	33	30	45	40	3	-13	-3	5	7	-23	-30	-10	-12	-1	236	253	489
19	0	-3	-5	-13	7	5	5	6	0	5	3	0	0	17	45	40	45	5	5	0	-135	-55	-17	-12	-2	188	240	428
20	-12	-28	-30	2	5	5	5	6	5	0	10	10	5	0	0	0	0	0	0	0	0	0	0	0	-1	53	70	123
21	-5	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	15	15
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	25	30	5	10	-25	0	0	0	2	73	25	98
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15	0	0	-15	-17	0	25	32	57
24	-55	-30	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	0	20	15	5	0	0	0	0	-2	40	90	130
25	0	0	0	0	0	0	10	10	5	0	0	5	0	5	20	8	13	40	65	5	-130	-55	-40	-100	-6	186	325	511
26	-175	-140	-60	-10	10	10	20	10	0	0	0	0	0	0	15	40	10	10	30	35	70	47	25	25	-1	357	385	742
27	10	-260	-340	-55	5	-5	-3	-2	0	-8	-5	7	55	27	0	0	7	3	3	-60	-15	27	15	30	-24	189	753	942
28	-15	-8	-10	0	0	0	0	0	0	0	0	0	5	-10	120	20	0	30	80	30	-10	-270	-120	-85	-10	285	528	813
29	17	7	0	-5	0	0	0	0	0	0	0	0	0	0	0	0										24	5	29
30																												
31															20	35	25	75	85	-35	5	0	5	-210		250	245	495
M	-67	-68	-36	-24	-7	-2	0	2	2	4	4	10	14	19	22	19	21	6	16	-31	-53	-76	-51	-71	-14	176	498	674
MPS	1	1	0	1	3	2	2	3	3	5	5	10	14	19	22	19	24	18	18	7	3	3	2	2				
MNS	68	68	37	25	11	4	2	1	1	0	1	0	0	0	0	0	3	11	2	38	55	78	53	73				

Bossekop. Horizontal Intensity. Storminess (+ N). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

JANUARY 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-140	-20	-8	-15	-15	15	15	5	8	5	5	10	10	12	10	45	105	95	105	-140	-155	-100	25	0	-5	470	593	1063
2	0	-220	-100	0	10	5	5	0	-10	15	10	15	20	17	10	5	5	15	0	30	-25	-105	-35	-30	-15	162	525	687
3	-40	-55	-40	-15	0	0	10	0	0	0	0	0	0	0	0	0	0	0	5	25	0	0	-35	-15	-7	40	200	240
4	5	-5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	15
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	-12	-30	-30	-30	-10	-25	0	5	5	8	0	45	65	190	210	50	15	10	5	-90	-80	-35	-70	-225	-1	608	637	1245
7	-190	-45	-15	-30	-5	15	0	0	0	0	0	0	0	-5	-7	5	30	50	70	100	50	10	-7	-40	-1	330	344	674
8	-27	-15	-8	-5	0	5	5	0	0	0	0	0	0	0	0	0	0	0	8	0	0	-12	-25	-48	-12	18	140	158
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	40	15	12	10	10	-23	-65	-20	-1	92	108	200
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	0	8
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-15	-7	-5	-1	0	27	27
12	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7	-30	-2	0	47	47
13	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	45	18	0	0	0	3	83	15	98
14	-5	-10	-17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	10	-110	-95	-120	-55	-16	40	412	452
15	20	20	33	20	-10	-60	-75	-30	10	42	25	5	-8	-20	15	5	-5	-5	-5	-20	-65	-280	-220	-10	-26	195	813	1008
16	-17	-27	-60	-15	5	-5	0	5	0	-17	2	17	-5	8	13	0	0	0	0	0	0	0	0	0	-4	50	146	196
17	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	-15	-30	-2	7	45	52
18	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	-18	-15	-33	-10	-3	7	86	93
19	0	0	0	0	-5	0	5	0	10	10	0	0	20	27	140	115	75	75	5	-135	-25	-35	-120	-190	-1	482	510	992
20	-165	-40	25	-10	-180	-125	0	-15	0	-10	5	0	0	20	0	0	15	20	0	-10	-10	-15	-30	-60	-24	85	670	755
21	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-18	-1	0	33	33
22	0	0	0	0	-10	8	0	0	-3	5	5	0	5	8	10	150	170	-30	-200	-80	-120	-330	-200	-85	-29	361	1058	1419
23	-185	-190	30	45	15	0	10	30	30	0	13	13	15	33	50	15	35	85	30	-190	-65	-40	-470	-370	-44	449	1510	1959
24	-210	-290	-135	40	15	5	0	0	0	5	13	15	15	33	10	10	45	105	50	60	50	30	-30	-65	-10	501	730	1231
25	-80	-100	-30	15	23	17	10	2	0	20	5	7	20	23	80	115	155	50	80	70	-100	-50	-90	-200	2	692	650	1342
26	-60	-73	-255	-155	-15	5	10	5	0	7	15	15	25	17	85	85	95	90	-55	-105	-300	-155	-145	-140	-42	454	1458	1912
27	-170	-155	-40	0	-25	15	20	15	5	7	10	30	20	17	25	20	80	110	60	-140	-190	-240	-225	-15	-32	434	1200	1634
28	-85	-140	-220	-90	0	10	5	0	0	0	45	25	45	32	10	55	40	60	-40	20	-195	-180	-260	-280	-48	347	1490	1837
29	-180	-60	-20	5	0	0	5	0	0	0	-12	-5	5	32	80	70	60	70	-25	-115	-270	-155	-65	-35	-26	327	962	1289
30	-10	-120	-210	-50	-40	5	5	5	-10	-5	5	-5	0	0	15	20	30	0	0	0	-50	-260	-110	-55	-35	85	925	1010
31	-95	-100	-20	5	0	0	0	0	0	0	-5	-5	0	10	10	7	20	15	0	-8	-15	-200	-155	-55	-25	67	656	725
M	-55	-55	-36	-9	-8	-4	1	1	1	3	5	6	8	15	25	25	33	27	5	-21	-54	-74	-81	-67	-13	207	516	723
MPS	1	1	3	4	2	3	3	2	2	4	5	6	9	15	25	25	33	28	15	12	4	1	1	0				
MNS	56	55	39	13	10	7	2	1	1	1	1	0	0	1	0	0	0	1	10	33	58	75	82	67				

FEBRUARY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-7	-10	0	0	0	0	0	0	0	0	0	-5	-5	0	0	0	0	0	0	0	0	-15	-70	-62	-7	0	174	174
2	-47	-30	0	-15	-25	5	10	0	-15	-5	0	20	10	15	20	35	85	85	50	60	25	-50	-50	-7	7	420	244	664
3	0	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	-70	-150	-9	8	235	243
4	-50	0	0	0	0	0	0	0	0	0	-5	-5	0	0	0	5	12	30	-5	-60	-10	-50	-37	-30	-9	47	252	299
5	-40	-27	-105	-70	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	247	247
6	0	-10	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	18	18
7	0	0	0	0	0	0	0	0	0	0	0	13	5	-5	-5	8	12	40	12	5	12	8	0	0	4	115	10	125
8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	5	-7	-65	-70	-63	-8	13	205	218
9	-15	-10	-25	-35	-25	-18	0	0	0	0	0	2	5	0	13	30	25	15	30	70	40	20	-10	-25	4	250	163	413
10	-40	-20	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	20	0	0	-2	25	75	100
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	30	18	-3	-5	-3	0	2	56	11	67
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	2	5	5	5	5	5	5	5	0	0	0	0	0	0	0	2	37	0	37
14	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	0	0	5	5	-45	-245	-365	-45	7	-10	-29	17	715	732
15	-10	0	-5	20	15	-2	15	10	3	0	0	10	0	15	0	15	30	100	10	0	-30	-205	-65	-20	-4	243	337	580
16	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	15	15
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	35	25	-90	-105	-132	-100	-14	80	427	507
19	-65	-117	-50	0	3	0	5	0	-5	-5	15	-5	63	180	230	160	130	45	-290	-450	-190	-150	-170	-550	-51	831	2047	2878
20	-620	-430	-170	-30	0	10	-5	-10	-5	-8	5	15	60	30	25	130	90	30	10	-10	-10	-55	-110	-390	-60	405	1853	2258
21	-155	-130	-290	-430	-290	-65	30	8	-5	5	12	55	120	155	140	60	-10	90	20	-50	10	-230	-530	-310	-75	705	2495	3200
22	-510	-370	-310	-110	-85	10	-30	10	50	60	35	15	30	40	40	50	10	15	-10	-130	-60	-40	-260	-430	-83	365	2345	2710
23	-280	-30	-170	-30	-10	0	-5	-20	-20	15	15	15	10	70	150	10	-50	-80	-10	-470	-170	-370	-290	-370	-87	285	2375	2660
24	-150	-100	-60	-20	30	15	-10	-10	-40	10	55	135	70	130	140	150	5	-30	-70	20	-10	-530	-570	-150	-41	760	1750	2510
25	-190	-100	-90	-80	-10	20	10	5	20	35	55	45	20	20	30	60	30	10	70	30	15	-220	-400	-240	-36	475	1330	1605
26	-230	-330	-180	-190	5	-5	60	15	25	20	55	55	30	50	70	40	20	15	15	5	-110	-580	-240	-60	-60	480	1925	2405
27	-35	-10	-70	-40	10	30	20	35	20	20	17	7	0	-3	10	10	15	20	50	30	0	-110	-230	-210	-17	294	708	1002
28	-130	-30	-10	8	15	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-110	-70	-13	33	350	383
M	-92	-63	-56	-36	-13	0	4	2	1	5	9	13	15	25	31	27	15	15	-3	-41	-34	-99	-122	-116	-21	212	725	937
MPS	0	0	0	1	3	4	5	3	4	6	10	14	15	26	31	27	17	18	12	10	4	2	0	0				
MNS	92	63	56	37	16	3	2	1	3	1	0	1	0	0	0	0	2	4	15	51	38	101	122	116				

MARCH

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-25	-75	-45	-5	0	0	0	0	0	0	0	7	5	7	10	22	35	32	25	55	0	10	-3	-115	-3	208	268	476
2	-138	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	40	40	-30	-40	-150	-150	-18	90	513	603
3	-50	8	10	10	0	0	0	0	5	10	15	8	-10	-15	-17	40	95	105	75	-20	-160	-110	-37	-30	-3	381	449	830
4	-20	-27	-40	-35	-20	0	0	0	0	-8	-5	0	0	0	0	0	0	25	40	30	10	0	-8	0	-2	105	163	268
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	-5	0	-3	0	7	8	15
6	-10	-5	0	0	0	0	0	0	0	0	0	0	3	5	23	20	0	0	5	12	-15	-20	-10	-5	0	68	65	133
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10	0	0	0	-53	-30	-3	15	83	98
8	-20	-5	0	10	10	7	0	0	0	0	0	0	0	0	10	17	10	0	0	0	8	-10	-75	-85	-5	72	195	267
9	-75	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	-3	5	85	90
10	-25	-15	-8	-3	-5	3	10	5	0	0	0	0	0	0	0	0	0	0	12	5	25	-50	-55	-10	-5	60	171	231
11	-240	-400	-195	-5	20	12	0	0	0	0	-5	15	25	60	20	0	0	0	0	-13	-60	-48	-10	0	-34	152	976	1126
12	5	3	0	0	0	0	0	5	0	0	0	0	0	8	2	2	25	32	35	5	5	7	-25	-15	4	134	40	174
13	-10	0	-5	-5	-8	8	8	-7	-10	-5	0	13	15	20	17	65	125	65	15	-35	-30	-30	-20	-20	7	351	185	536
14	0	0	0	-5	-23	-47	-5	3	5	0	0	13	10	10	12	15	15	20	45	5	0	-5	0	0	3	153	85	238
15	0	0	0	0	0	0	0	0	0	0	0	5	0	8	10	-5	-3	0	0	0	0	0	-10	0	0	23	18	41
16	-22	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	-1	5	27	32
17	0	0	0	0	0	0	0	0	0	0	0	0	7	37	70	8	10	25	30	23	-35	-115	-95	-50	-4	210	295	505
18	10	-12	-155	-230	-220	-220	-35	30	30	20	25	20	35	20	55	165	80	10	95	25	0	-40	-390	-600	-53	620	1902	2522
19	-400	-70	-95	-20	-25	30	35	30	30	35	40	45	55	60	10	10	140	100	-80	-460	-220	-550	-210	-130	-68	620	2260	2880
20	-140	-350	-215	-170	-25	-15	-15	10	20	25	60	60	95	80	30	25	115	-20	-75	-320	-260	-190	-350	-190	-76	520	2335	2855
21	-130	-230	-135	-190	-100	-30	-15	30	45	50	120	60	25	10	75	30	60	50	10	-10	-30	-140	-300	-290	-43	565	1600	2165
22	-420	-530	-315	-50	-25	-20	-35	0	45	50	60	160	85	130	90	75	45	50	-200	-80	-300	-370	-150	-40	-73	790	2535	3325
23	-115	-210	-25	-20	-40	-85	-40	5	15	20	40	100	155	20	90	215	0	-120	-100	-100	-260	-460	-300	-280	-62	660	2155	2815
24	-370	-230	-115	-120	0	-80	5	5	15	40	70	70	45	50	130	135	120	-140	-150	-130	-105	-320	-450	-540	-86	685	2750	3435
25	-420	-250	-225	-60	-70	0	5	-10	55	50	65	35	55	80	55	85	40	15	-10	-40	-50	-95	-120	-90	-38	540	1440	1980
26	-60	-20	-5	5	10	5	5	-5	0	15	-20	15	0	-15	-5	15	20	50	50	15	-5	10	10	-5	4	225	140	365
27	-15	5	5	0	0	0	-15	-17	-10	-17	40	75	215	210	210	35	15	40	-45	-100	-60	0	-20	-70	20	850	369	1219
28	-90	-20	-55	-80	-30	10	-5	-5	-5	7	-5	0	5	50	60	45	55	30	-15	-100	-240	-50	-210	-290	-39	262	1200	1462
29	-110	0	2	-5	-3	0	-2	3	-5	40	55	40	20	70	130	115	100	35	15	-30	-20	-60	-290	-150	-2	625	675	1300
30	0	0	-35	-20	-13	-20	-10	-10	-17	-10	7	5	-15	20	110	90	10	-13	-15	-8	0	-50	-100	-130	-9	242	466	708
31	-70	-125	-175	-30	5	10	10	10	10	20	0	12	0	-10	10	30	0	25	15	0	0	0	-60	-230	-23	157	700	857
M	-95	-83	-59	-33	-18	-14	-3	3	7	11	18	24	27	30	39	41	36	14	-6	-39	-59	-88	-113	-114	-20	303	779	1082
MPS	0	1	1	1	1	3	3	4	9	12	19	24	28	31	40	41	36	23	17	7	2	1	0	0				
MNS	96	84	59	34	20	17	6	2	2	1	1	0	1	1	1	0	0	9	22	47	61	89	113	114				

Bossekop.

Horizontal Intensity. Storminess (+ N). Unit Gamma.

Gr. M. T.

HOURLY MEAN VALUES

APRIL 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-90	-33	-30	-100	-85	-20	-8	10	5	13	25	-17	-5	-8	10	20	7	35	0	-20	-100	-53	-117	-235	-33	125	921	1046
2	-75	-3	-5	-2	3	15	15	12	10	10	0	5	13	0	0	7	5	3	10	10	-100	-145	-200	-135	-23	118	665	783
3	-135	-78	0	-15	-15	-10	25	13	3	20	15	200	115	0	-5	20	30	60	60	20	-10	-20	-50	-113	5	581	451	1032
4	-155	-240	-240	-60	10	10	13	12	15	18	-5	-2	-15	-20	-23	-20	3	40	80	20	5	5	0	-13	-23	231	793	1024
5	-45	-58	-65	-30	-10	0	0	0	0	0	0	0	0	25	30	52	60	50	20	-20	-120	-115	-140	-215	-24	237	818	1055
6	-275	-200	-20	20	10	0	-5	5	-20	12	12	13	-5	0	0	0	0	0	10	0	-160	-260	-160	-55	-45	82	1160	1242
7	-37	-20	-15	0	-5	0	0	0	-5	0	0	0	15	-10	85	160	100	40	40	-60	-400	-210	-25	-25	-16	440	812	1252
8	-15	-20	-30	0	0	0	-3	-18	-15	-15	0	-15	-3	20	15	75	60	75	-80	-40	-30	-100	-80	-175	-16	245	639	884
9	-155	-50	7	20	15	5	5	-10	-15	0	50	15	7	70	45	50	10	0	0	-5	-8	-17	-42	-42	-2	299	344	643
10	-10	0	0	0	0	-5	-10	-10	-22	0	0	15	35	30	50	75	5	5	15	-35	-5	0	0	0	6	230	97	327
11	0	0	0	0	0	0	0	0	-12	-7	-15	-15	10	5	3	0	5	13	17	15	12	0	-20	0	0	80	69	149
12	8	12	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	35	0	35
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10	5	0	0	0	0	1	20	0	20
14	0	0	0	0	0	0	0	0	0	0	3	5	22	45	30	47	90	95	75	45	-5	-28	-120	-90	9	457	243	700
15	-35	-30	-25	-18	-25	-38	-20	3	0	10	20	25														58	191	249
16																												
17													130	165	80	175	95	60	15	-45	-105	-230	-350	-305		720	1035	1755
18	-300	-355	-155	-5	-40	-20	-15	-35	-20	15	15	25	20	45	120	105	65	5	-35							415	980	1395
19															70	105	65	75	-65	-285	-245	-100	-440	-400		315	1535	1850
20	-40	15	15	18	-5	-85	-40	30	5	40	70	75	50	85	140	155	175	75	15	-105	-335	-180	-80	-100	0	963	970	1933
21	-130	-105	-5	-15	-15	0	-10	-10	-5	20	70	45	20	5	10	5	5	75	15	-165	-125	-120	-560	-300	-54	270	1565	1835
22	-200	-185	10	0	-25	-5	-40	25	10	70	40	75	80	105	120	45	55	15	5	-25	-560	-380	-190	-310	-53	655	1920	2575
23	-150	-20	-15	-25	-15	-25	-20	-5	-10	-5	-5	-10	40	155	130	65	35	35	15	-50	-300	-320	-310	-330	-48	475	1615	2090
24	-200	-70	-10	15	0	0	20	10	5	3	3	8	0	30	50	120	55	50	10	-30	-80	-110	-320	-335	-32	379	1155	1534
25	-230	-15	10	10	0	0	0	-10	-13	10	17	3	25	40	45	55	100	50	25	-20	-85	-75	-100	-100	-11	390	646	1036
26	-210	-160	-10	20	15	5	0	-10	-15	-15	-13	20	75	170	25	-5	40	80	40	-105	-200	-65	-40	-10	-15	490	858	1348
27	0	0	-10	-15	-5	-5	-5	-10	-10	-10	-8	-10	-5	0	10	20	50	40	30	0	-60	-240	-200	-300	-31	150	893	1043
28	-200	-140	-45	20	20	10	5	5	5	-10	3	10	5	0	-13	-7	0	10	40	15	-22	-100	-120	-175	-29	148	832	980
29	-105	-18	0	0	10	0	0	0	0	10	10	13	15	10	25	10	10	15	22	10	0	-28	-50	-60	-4	160	261	421
30	-35	10	12	13	12	0	0	0	0	0	0	0	0	0	5	15	50	120	40	15	-160	-360	-130	-180	-24	292	865	1157
M	-104	-65	-23	-5	-6	-6	-3	0	-4	7	11	18	24	36	38	48	42	40	15	-32	-118	-120	-142	-146	-21	312	770	1083
MPS	0	1	2	5	4	2	3	5	2	9	13	20	25	37	39	49	42	40	22	6	1	0	0	0				
MNS	105	67	25	11	9	8	7	4	6	2	2	3	1	1	1	1	0	0	6	37	119	121	142	148				

MAY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-15	-10	20	20	10	5	-5	10	25	50	35	85	255	310	65	-110	-80	-100	-100	-150	-110	-60	-160	-85	-4	890	985	1875
2	-135	-280	-60	0	15	10	5	5	10	10	23	0	-5	2	5	25	52	60	20	15	-20	-100	-280	-215	-35	257	1095	1352
3	-235	-260	-120	15	0	-5	-5	10	15	12	30	40	45	20	25	10	35	75	-30	-20	-20	-5	-60	-170	-25	332	930	1262
4	-65	0	0	-55	-50	-20	5	20	0	15	10	0	5	0	55	120	150	35	-35	-170	-40	-20	-20	-5	-3	415	480	895
5	-20	-30	0	20	0	-20	-15	0	5	10	10	-5	55	50	75	60	30	65	80	0	-160	-160	-75	-185	-10	460	710	1170
6	-155	-260	-540	-120	-60	5	5	-5	15	20	20	90	80	125	110	50	40	47	65	0	-80	-70	-60	-320	-42	672	1670	2342
7	-620	-160	30	30	20	0	-5	-5	-15	0	35	40	45	45	40	30	-5	0	0	0	-5	-10	-17	-5	-23	315	867	1182
8	0	0	0	0	0	0	0	0	0	-5	0	7	10	25	40	40	55	60	10	0	0	0	0	0	10	247	5	252
9	12	15	15	10	10	5	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	3	77	0	77
10	0	-5	0	0	0	0	0	0	-5	0	-5	0	5	0	0	-5	-5	0	5	5	0	0	0	0	0	15	25	40
11	-5	-13	-25	0	-10	0	0	0	0	0	0	0	10	30	35	50	45	50	45	0	-10	0	0	0	8	265	63	328
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	-25	-50	-3	5	75	80
13	-15	0	0	0	0	-15	-40	0	20	10	10	15	5	-10	-15	0	30	50	40	10	-5	-120	-55	-70	-6	190	345	535
14	-300	-65	20	10	5	5	0	0	0	0	15	25	25	25	55	100	195	80	0	-20	-240	-340	-175	-190	-32	560	1330	1890
15	-45	5	5	-100	-210	-65	20	35	50	55	75	20	0	5	0	0	15	40	60	0	5	-150	-425	-290	-37	390	1285	1675
16	-170	-15	20	15	5	5	5	10	15	15	15	15	15	50	20	0	15	35	30	-60	-45	-180	-170	-170	-22	285	810	1095
17	-90	-75	-25	15	10	0	0	0	5	20	35	20	0	2	5	40	45	60	25	-20	-40	-65	-215	-200	-19	282	730	1012
18	-350	-205	-150	-40	-180	-135	-30	20	50	85	185	80	65	0	25	25	15	-5	-5	-60	-25	-100	-130	-120	-41	550	1535	2085
19	-50	-20	-20	-15	-15	-20	-10	0	5	0	15	30	50	80	70	20	25	50	-120	-180	-210	-140	-5	0	-19	345	805	1150
20	-5	-35	-35	-20	-15	-15	-5	5	20	15	5	3	15	20	5	10	30	40	25	0	-20	-40	-105	-60	-7	193	355	548
21	0	5	5	0	-13	-10	-20	-5	0	-15	0	0	0	5	0	5	15	25	40	-10	0	0	0	-5	1	100	78	178
22	-35	-40	-10	10	0	0	0	15	0	0	0	20	15	40	55	65	65	40	10	10	-5	-40	-155	-50	0	345	335	680
23	-5	15	5	0	0	0	0	0	0	0	17	10	0	-5	-5	5	22	10	0	-10	-30	-170	-145	-60	-14	84	430	514
24	-5	0	0	0	0	0	0	0	0	10	15	10	15	10	25	20	10	0	0	-10	-20	-35	-30	-15	0	115	115	230
25	-30	-75	-50	-10	-15	-15	-20	-20	-20	-20	-15	0	-10	20	10	20	15	10	10	10	0	-20	-15	0	-10	95	335	430
26	0	0	0	0	0	0	0	0	0	0	5	8	0	0	0	0	0	0	0	0	0	0	0	5	1	18	0	18
27	0	0	0	0	0	0	0	0	0	0	5	20	25	0	0	15	25	80	30	15	0	-75	-250	-175	-12	215	500	715
28	-215	-390	-155	-25	10	5	0	0	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-32	15	790	805
29	0	0	0	0	0	0	0	0	5	15	5	10	20	45	120	225	150	130	50	-50	-270	-270	-110	-105	-1	775	805	1580
30	-125	-160	-215	-215	-90	-5	10	-5	0	30	100	115	140	175	160	125	130	170	95	65	30	10	-10	-85	19	1355	910	2265
31	-175	-70	-10	-55	-145	-85	40	20	5	20	35	50	90	265	320	135	50	30	50	-30	0	-60	-110	-185	8	1110	925	2035
M	-92	-69	-42	-16	-23	-12	-2	4	6	11	22	23	32	43	42	35	38	37	13	-21	-43	-72	-90	-91	-11	354	623	977
MPS	0	1	4	5	3	1	3	5	8	13	23	23	32	44	43	39	41	40	22	4	1	0	0	0				
MNS	92	71	46	21	26	13	5	1	1	1	1	0	0	0	1	4	3	3	9	25	44	73	90	91				

JUNE

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-25	10	-175	-375	-110	-85	-35	5	45	40	40	55	65	85	120	155	115	80	30	-125	-230	-20	-15	-5	-15	845	1200	2045
2	0	-5	5	5	0	0	5	15	20	15	20	135	70	35	50	17	30	35	-10	-30	-80	-90	-85	-30	5	457	330	787
3	-40	-80	-30	-10	-10	-10	-5	5	10	30	10	40	40	55	65	25	20	30	15	5	-15	-25	-10	5	5	355	235	590
4	0	-10	-15	0	0	0	10	20	17	22	23	18	30	35	40	15	10	20	30	10	-5	0	-5	-20	10	300	55	355
5	-70	-50	-15	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	-5	10	135	145
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-7	0	-1	0	17	17
7	0	0	0	0	0	0	0	0	0	0	20	20	40	50	40	25	30	30	20	15	15	15	-5	-40	11	320	45	365
8	-80	-65	10	20	12	20	20	22	15	32	65	90	40	5	25	25	20	5	20	-35	-110	-245	-190	-220	-21	446	945	1391
9	-155	-195	-50	-60	-60	0	5	0	20	5	20	45	40	70	50	25	60	65	50	-15	-40	-50	-40	-20	-10	455	685	1140
10	-70	-60	0	0	-5	-15	-8	-10	0	5	0	0	0	0	0	30	70	50	15	-15	-100	-30	-35	-20	-8	170	368	538
11	0	0	0	5	0	0	0	0	5	0	15	20	30	15	17	5	0	0	0	0	-10	-70	-30	-15	-1	112	125	237
12	-5	-15	0		0	0	0	0	0	0	0	10	0	0								-140	-205	-260		10	625	635
13	-200	-250	-330	-650	-230	45	10	10	-10	25	25	30	20	90	150	165	105	95	-35	-55	-130	-130	-225	-600	-86	770	2845	3615
14	-440	-370	-80	5	0	5	-25	-35	25	15	25	65	25	5	5	-15	5	0	5	-40	-50	-90	-185	-300	-60	185	1630	1815
15	-120	-390	-260	-170	-50	-5	0	-10	5	-5	-20	0	-20	-10	-10	-5	15	25	5	-10	-15	-130	-255	-70	-63	50	1555	1605
16	-5	0	0	0	0	0	0	0	0	-20	-15	-15														0	55	55
17																			0	-5	-5	-10	-20	-10		0	50	50
18	0	-5	-10	-10	-8	-3	0	0	10	25	35	25	10	-5	-5	0	0	0	0	0	0	-10	-60	-145	-7	105	261	366
19	-120	5	20	15	-10	-15	5	15	15	10	15	20	10	45	75	90	110	110	80	-5	-45	-100	-190	-120	1	640	605	1245
20	-250	-440	-300	-140	-80	-85																				0	1295	1295
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30	-20	15	0	-30	0	0	0	0	0	0	5	5	30	35	35	30	40	80	50	15	10	-5	-30	-45	9	350	130	480
M	-80	-95	-62	-70	-28	-7	-1	2	9	10	15	30	24	29	39	35	37	37	15	-16	-45	-60	-84	-101	-15	266	628	894
MPS	0	2	2	3	1	4	3	5	10	12	17	30	25	29	40	36	37	37	18	3	1	1	0	0				
MNS	80	97	63	72	28	11	4	3	1	1	2	1	1	1	1	1	0	0	3	19	46	61	84	101				

Bossekop. Horizontal Intensity. Storminess (+ N). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

JULY 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-50	0	0	0	0	0	0	0	0	0	0	25	15	8	35	40	40	45	40	35	-65	-85	-80	-185	-8	283	465	748
2	-175	-15	20	12	0	-2	-5	0	10	12	12	10	15	20	25	30	35	30	25	15	15	0	0	-5	4	286	202	488
3	-95	-230	-10	0	0	0	0	0	0	0	0	0	0	10						0	0	-20	-18	-5		10	378	388
4	5	0	-20	-25	0	0	0	0	0	0	0	0											-40	-30		5	115	120
5	-20	-47	-55	-15	0	0	0	0	0	0	0	10	0	0	0	0	15	15	0	0	0	0	0	-5	-4	40	142	182
6	-30	-13	-5	0	10	20	15	5	0	0	0	-15	0	-5	-10	-5	10	32	42	20	0	-20	-15	0	2	154	118	272
7	0	0	0	0	0	0	0	0	0	0	0	0	0	3	15	25	45	60	40	20	15	15	7	-20	9	245	20	265
8	-50	7	20	20	10	0	0	0	0	0	0	0	17	30	45	50	70	70	50	40	25	35	22	-115	14	511	165	676
9	-275	-260	-20	30	35	25	5	-15	5	90	75	120	175	120	25	25	35	50	45	-45	-45	-40	-58	-60	2	860	818	1678
10	-5	-10	5	-5	-45	0	-5	15	20	10	35	-15	5	25	5	0	10	30	40	-80	-95	-200	-260	-175	-29	200	895	1095
11	-115	-230	-40	0	0	0	0	0	0	0	5	10	35	50	135	190	90	20	0	0	-15	-30	-38	-55	1	535	523	1058
12	-125	-30	-60	-60	-5	0	0	0	0	0	0	0	0	15	30	5	10	27	27	0	-20	-35	-18	-35	-11	114	388	502
13	-25	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	20	40	40	10	0	-10	-18	-38	-45	-2	110	146	256
14	-85	-50	-5	0	-5	-10	0	0	0	-8	0	0	0	0	0	0	0	0	0	15	0	-10	-15	-45	-9	15	233	248
15	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-12	-15	-8	-3	0	65	65
16	0	0	0	0	0	0	0	0	0	0	0	0	-20	5	10	0	2	20	25	25	35	10	10	0	5	142	20	162
17	-15	-67	-10	15	10	15	10	8	13	20	30	60	120	215	160	50	15	15	20	3	-105	-125	-120	-90	10	779	532	1311
18	-120	-240	-175	-45	-10	-5	5	0	10	0	20	70	80	120	50	25	25	35	25	-15	-95	-30	-10	2	-12	467	745	1212
19	0	0	-5	-10	0	0	0	0	10	0	0	-10	0	25	50	55	27	7	-5	-10	-22	-72	-135	-90	-8	174	359	533
20	-110	-32	0	-15	-18	-10	0	15	15	2	5	15	25	30	50	60	40	20	7	55	-5	-17	-17	-22	4	339	246	585
21	-35	-25	-30	0	12	13	3	5	10	20	20	30	22	20	15	35	30	40	30	10	0	0	0	-10	9	315	100	415
22	-10	-10	-65	-40	0	0	7	15	15	12	20	25	50	60	75	70	25	-5	-10	-18	-10	-15	-10	-5	7	374	198	572
23	-12	-75	-35	0	0	0	0	0	0	15	10	55	65	180	325	170	135	5	10	-100	-135	-25	-470	-350	-10	970	1202	2172
24	-280	-105	-205	-320	-80	10	0	-45	35	-5	70	100	105	90	135	190	45	-5	-15	-30	-20	-85	-130	-130	-28	780	1455	2235
25	-50	-15	0	0	0	0	0	0	10	35	35	70	185	60	45	25	15	30	5	-20	-35	-65	-60	-80	8	515	325	840
26	0	0	0	0	-5	-8	5	17	25	20	10	0	5	20	30	60	115	20	20	0	0	-10	-110	-370	-7	347	503	850
27	-320	-70	-5	0	-35	0	0	5	10	5	-20	30	155	150	60	20	-5	0	20	-5	-90	-170	-350	-280	-37	455	1350	1805
28	35	15	5	0	-5	0	5	10	10	5	15	12	5	0	0	0	0	0	-5	-20	-20	-20	-12	-35	0	117	117	234
29	-10	-18	-15	-15	0	0	0	0	0	0	0	20	15	50	35	60	60	35	10	5	5	-5	-30	-30	7	295	123	418
30	-25	0	0	0	0	0	0	0	0	10	20	15	25	40	10	0	0	0	0	0	-10	-70	-90	-15	-4	120	210	330
31	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	-5	0	0	23	-15	0	0	0	0	1	38	20	58
M	-65	-49	-23	-15	-4	2	1	1	6	8	12	21	37	45	47	41	32	22	17	-4	-24	-37	-68	-74	-3	310	393	702
MPS	1	1	2	2	2	3	2	3	6	8	12	22	37	45	47	42	32	22	18	8	3	2	1	0				
MNS	66	50	25	18	7	3	0	2	0	0	1	1	1	0	0	0	0	0	1	12	27	39	69	74				

AUGUST

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	17	-10	-10	12	10	10	0	10	15	0	-30	-110	-40	0	-5	74	200	274
3	0	0	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-10	-5	-1	0	35	35
4	0	0	0	0	0	0	0	0	0	0	0	0	0	15	10	15	15	8	10	20	20	15	0	-80	2	128	80	208
5	-25	0	0	0	0	0	0	18	10	10	50	75	330	460	450	440	280	180	-170	-370	-100	40	-20	-80	66	2343	765	3108
6	-15	-60	-240	-140	-10	-25	20	25	20	25	40	65	50	70	35	5	20	65	-120	-75	-60	-10	-15	-15	-14	440	785	1225
7	-40	-60	-90	-35	0	8	10	7	10	0	10	25	40	45	20	25	15	15	-15	-15	-10	-20	-120	-210	-16	230	615	845
8	-60	-115	-10	-8	0	0	0	0	0	-10	-15	-15	10	30	10	0	20	5	-18	-15	-15	-27	-80	-150	-19	75	538	613
9	-95	-20	0	0	0	0	0	0	0	0	10	5	10	30	5	0	13	35	25	5	0	-18	-25	-60	-4	138	238	376
10	-20	-10	-5	-10	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	10	45	55
11	0	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	-15	-75	-30	-6	10	150	160
12	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	5	-5	-15	-50	-2	20	75	95
13	-65	-30	0	0	0	0	0	0	0	35	20	15	35	80	105	135	75	90	100	-360	-260	-130	-250	-280	-29	690	1375	2065
14	0	-23	-80	20	10	10	-10	-5	-5	20	20	50	65	140	225	160	100	60	15	5	-80	-200	-240	-75	7	890	718	1608
15	-5	-18	-50	-30	-20	-15	10	5	15	35	20	35	30	45	35	10	20	45	5	-50	-8	-8	-13	0	4	310	217	527
16																						-50	-100	-50		0	200	200
17	-10	-20	-50	-85	-22	-15	-30	-30	15	10	0	0	35	100	105	10	10	35	50	-135	-105	-55	-50	-50	-12	370	657	1027
18	-120	-45	0	0	-5	-20	-40	-25	5	10	5	3	0	-5	20	130	170	130	120	-390	-540	-350	-200	-210	-57	593	1950	2543
19	-300	-310	-110	-40	-65	-10	-30	-20	-5	5	20	70	135	60	15	10	10	10	30	5	-60	-90	-55	-50	-32	370	1145	1515
20	-80	-20	-25	-15	25	15	25	50	25	25	10	30	30	25	40	55	55	55	-35	-45	-55	-200	-380	-180	-24	465	1035	1500
21	-65	-30	-45	-40	5	20	30	45	20	65	80	145	190	135	160	200	-15	65	30	-115	-215	-115	-120	-70	15	1190	830	2020
22	-70	-5	0	5	0	0	0	-5	-5	5	0	-5	0	-5	-15	-20	-15	-5	0	0	0	0	0	0	-6	10	150	160
M	-46	-37	-35	-18	-4	-2	-1	3	5	11	14	23	46	59	59	56	37	38	3	-72	-72	-62	-82	-76	-6	380	537	916
MPS	0	0	0	1	2	3	5	7	6	12	14	25	46	59	59	57	38	38	20	2	1	3	0	0				
MNS	46	37	35	19	6	4	5	4	1	0	1	1	0	0	1	1	1	0	17	75	73	64	82	76				

Declination. Storminess (+ W). Unit Gamma.

HOURLY MEAN VALUES

OCTOBER 1932

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-20	-10	-10	-10	-10	0	0	0	3	0	3	5	-5	5	0	5	10	8	18	10	0	0	-10	0	0	67	75	142
2	3	0	0	-2	-5	0	0	0	8	5	10	27	28	5	20	15	5	10	-10	-7	-15	-10	-2	-5	3	136	56	192
3	-58	-42	-12	-10	0	2	5	2	10	3	5	5	15	-10	0	0	0	0	0	0	0	0	0	-10	-4	47	142	189
4																												
5																												
6																												
7																												
8																												
9																												
10																	-50	-7	2	-7	-5	-32	-18	-5		2	124	126
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	0	5	-5	0	-20	-25	-18	-40	-5	5	113	118
12	-30	-20	-10	-5	0	0	0	-3	-5	0	0	0	0	0	0	0	0	5	5	10	-42	-35	-22	-5	-7	20	177	197
13	0	0	0	0	0	0	0	0	0	7	15	15														37	0	37
14	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7	-15	-10	-1	5	32	37
15	-25	-40	-35	-48	20	25	10	5	-3	-3	15	20	33	85	45	-55	155	55	15	7	-20	-45	-52	-105	2	490	431	921
16	-140	-120	-60	20	30	30	47	45	15	15	10	0	8	-3	-5	-5	-25	-15	0	0	0	-3	-5	-10	-7	220	391	611
17	-35	-15	-17	0	0	10	15	12	0	-5	0	0	10	35	-5	-10	-15	-17	-5	-23	-65	-55	-52	-95	-14	82	414	496
18	-70	-30	0	0	0	0	0	0	0	8	10	3	0	0	0	-3	-2	-30	-10	-13	-12	-23	-23	-8	-8	21	224	245
19	-10	-15	-5	0	5	3	22	15	10	15	10	13	15	13	15	30	15	-3	3	7	0	-2	-8	-12	6	191	55	246
20	-10	-5	0	0	0	-5	0	0	0	0	0	15	30	35	40	65	55	55	45	-3	-32	-210	-240	-180	-14	340	685	1025
21	-260	-190	-150	-130	-10	10	8	10	10	-10	15	20	8	-5	10	5	10	2	-7	-23	-25	-20	0	0	-30	108	830	938
22	0	0	0	0	0	0	-8	-5	0	0	5	0	5	-5	10	20	15	55	25	-5	-30	-70	-45	-45	-3	135	213	348
23	-90	-100	-30	-10	-10	5	-7	-5	-5	-5	0	20	28	30	45	-15	15	15	0	-15	-95	-70	-70	-40	-17	158	567	725
24	-10	-8	0	0	10	20	15	12	10	10	5	12	33	30	10	10	5	-25	25	-65	-136	-50	-100	-20	-9	207	413	620
25	-5	0	7	-5	0	0	0	0	0	-10	-5	0	15	50	35	0	5	0	0	-23	-20	-15	-2	0	1	112	85	197
26	0	3	0	-5	-2	5	5	0	0	0	0	5	0	0	-5	0	0	0	0	-3	-20	-8	-8	0	-1	18	51	69
27	0	0	0	0	0	2	0	0	0	10	10	25	5	33	55	22	5	3	-5	-35	-33	-40	-40	-38	-1	170	191	361
28	-20	-20	-5	-8	0	10	5	0	0	5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	20	58	78
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	-10	-115	-80	-8	3	205	208
30	-53	-45	-37	0	5	8	10	18	10	0	15	30	15	13	15	15	15	5	0	-15	-2	-25	-17	-25	-2	174	219	393
31	-20	-20	-5	5	5	8	10	-5	0	0	0	5	10	13	25	7	0	0	0	0	-5	0	-2	2	1	90	57	147
M	-35	-28	-15	-9	2	6	6	4	3	2	5	9	11	14	13	5	9	5	4	-8	-24	-31	-36	-30	-5	114	232	347
MPS	0	0	0	1	3	6	6	5	3	3	5	9	11	15	14	8	13	9	6	1	0	0	0	0				
MNS	36	28	16	10	2	0	1	1	1	1	0	0	0	1	1	4	4	4	2	9	24	31	36	31				

Bossekop. Declination. Storminess (+ W). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

NOVEMBER 1932

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-12	-5	-40	-35	-45	-35	-30	15	8	15	25	25	20	20	18	10	10	15	15	15	0	10	-10	-20	0	221	232	453
2	-73	-60	-45	-25	-12	7	-10	0	-10	-5	0	-5	5	0	0	0	0	0	-30	-18	-5	-3	5	0	-12	17	301	318
3	-5	0	0	0	0	7	5	5	0	-10	0	0	0	0	0	0	0	0	0	-5	-5	0	0	5	0	22	25	47
4																												
5																												
6																												
7																												
8													0	0	0	0	0	0	0	-15	-15	-40	-10	0		0	80	80
9	0	0	0	-3	5	0	0	0	0	0	0	0	0	0	0	0	3	5	0	0	0	-20	0	0	0	13	23	36
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-10	-12	-5	-5	-2	0	37	37
11	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-50	-5	0	0	0	-2	5	55	60
12	0	10	0	0	0	0	0	0	0	0	5	10	5	0	13	0	45	5	0	-43	-50	-32	-10	0	-2	93	135	228
13	0	0	0	10	15	8	10	0	0	0	0	0	15	10	15	5	25	-5	-13	-5	-30	-38	-35	-2	-1	113	128	241
14	0	0	0	0	0	0	17	5	3	5	5	10	-20	-5	20	10	20	-20	-13	-10	-15	-43	-130	-100	-11	95	356	451
15	-15	-5	0	3	8	20	22	15	8	5	0	0	0	-10	-5	0	0	-30	-28	0	15	-8	-40	-25	-3	96	166	262
16	0	-10	-50	-50	40	22	40	30	13	15	10	15	25	20	-10	-10	30	-50	-58	15	-15	-250	-190	-40	-19	275	733	1008
17	10	0	0	0	10	25	20	20	8	20	20	20	20	0	-30	10	-10	-10	7	10	-5	-10	-15	-40	3	200	120	320
18	-10	0	-5	0	0	0	0	0	0	0	0	5	0	-5	0	-60	-30	-15	-25	0	-50	-30	-20	-5	-10	5	255	260
19	-7	-5	-8	0	0	0	0	0	0	0	5	5	10	0	5	3	-5	-5	-25	-42	-10	-35	-40	-10	-7	28	192	220
20	-10	0	-8	-3	0	0	7	5	0	0	0	0	0	0	0	-40	0	0	0	0	0	0	-15	-5	-3	12	81	93
21	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	0	0	-5	-20	-10	0	-2	5	50	55
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	-8	-10	0	0	0	0	0	0	0	8	18	26
23	0	0	0	0	-5	0	0	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	15	15
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	30	17	25	10	7	3	-5	-25	-60	0	97	90	187
26	-27	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	0	0	0	0	0	0	0	-1	15	27	42
27	0	0	0	0	0	13	0	0	-5	-10	-10	-8	-8	0	0	0	0	-5	-7	-8	-12	-7	-5	0	-3	13	85	98
28	10	0	0	0	0	0	5	10	0	0	0	0	0	20	15	5	5	-17	0	0	0	0	0	0	-2	70	17	87
29	-12	0	5	-12	-10	-7	0	0	0	0	0	0	0	5	20	-43	-17	18	20	0	10	0	-15	0	-2	78	116	194
30	0	-15	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	-15	0	0	0	0	0	0	20	30	50
M	-6	-3	-6	-5	0	2	3	4	1	2	3	3	3	2	3	-3	3	-4	-6	-6	-8	-21	-22	-12	-3	58	130	187
MPS	1	1	0	1	3	4	5	4	2	3	3	3	4	3	4	3	6	3	2	2	1	0	0	0				
MNS	7	4	6	5	3	2	2	0	1	1	0	1	1	1	2	6	3	7	8	8	9	21	22	12				

DECEMBER

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	0	0	-3	0	0	0	0	0	0	0	5	10	0	0	0	0	-20	-17	-45	-25	-30	-10	-5	-10	-6	15	165	180
2	-13	-10	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	12	-45	-40	-15	3	3	-4	28	123	151
3	3	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	-28	-3	-30	-2	23	61	84
4	-40	-60	-12	-5	5	0	0	0	0	0	0	0														5	117	122
5													0	0	0	0	0	0	-10	-7	-5	-15	-15	-45		0	97	97
6	-20	0	0	0	0	0	0	0	0	5	7	5	0	0	0	0	0	0	0	-5	-7	-10	-25	-50	-4	17	117	134
7	-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	30	30
8	0	0	0	-15	-15	0	3	0	0	0	0	8	10	5	5	0	0	0	0	0	0	-15	-35	-75	-5	31	155	186
9	-105	-85	-30	-12	13	28	13	0	-8	0	0	-8	-18	0	-10	-38	-3	-10	-7	-10	-105	-55	-10	-15	-20	54	529	583
10	-20	-15	0	-3	0	0	0	0	0	10	5	5	7	0	7	7	0	-20	-2	-40	-35	-35	-27	-15	-7	41	212	253
11	0	0	0	0	0	0	0	0	0	0	0	0	-10	-5	0	0	-8	-10	3	-2	-15	-35	-17	0	-4	3	102	105
12	7	5	7	10	12	15	10	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	78	0	78
13	0	0	0	0	0	0	0	0	0	0	0	0	15	10	25	25	63	5	25	-5	-5	-35	-40	-50	1	168	135	303
14	-30	-5	-10	0	0	5	0	0	0	10	10	10	0	15	30	40	65	150	55	-25	-35	-155	-135	-240	-10	390	635	1025
15	-430	-200	-60	-40	-20	-15	0	0	0	5	5	0	0	0	-10	20	30	60	25	-5	-60	-55	-75	-90	-38	145	1060	1205
16	-130	-110	-50	-40	-15	20	25	15	5	5	5	0	0	0	0	20	10	-22	85	95	15	-45	-35	-25	-7	300	472	772
17	-40	-20	-10	0	5	20	20	12	5	10	12	22	0	25	40	40	-45	13	35	-85	0	0	-15	-27	1	259	242	501
18	-13	-2	-5	-22	5	-10	0	0	0	5	5	10	5	3	-5	0	-5	3	-5	-10	-8	0	0	0	-2	36	85	121
19	0	0	0	0	0	0	0	0	0	0	0	0	5	0	-8	-3	-37	0	0	-27	-35	-45	-8	0	-7	5	163	168
20	5	8	-7	0	0	5	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	33	7	40
21	0	5	5	0	0	0	0	0	0	0	0	0	0	-5	-5	0	0	0	0	0	0	0	0	0	0	10	10	20
22	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	13	0	-5	-10	-30	-10	0	0	-1	33	55	88
23	0	0	0	0	0	0	0	0	0	0	0	8	7	0	0	0	0	0	-5	3	0	0	0	0	1	18	5	23
24	7	-7	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	-8	-10	0	0	0	-1	15	30	45
25	0	0	0	0	0	0	2	5	5	0	0	0	-5	5	18	5	10	15	20	15	-30	-40	-20	-50	-2	100	145	245
26	-80	-95	-25	0	0	0	0	0	0	0	0	0	3	3	8	20	5	12	-45	5	30	10	10	10	-5	116	245	361
27	0	-80	-65	-20	-5	-5	-2	2	3	12	0	3	3	5	7	3	7	10	5	40	0	10	0	5	-3	115	177	292
28	0	-10	-20	-17	-17	-15	-5	2	-5	-8	-5	-5	3	10	7	10	5	20	-10	-10	10	-25	-60	-45	-8	67	257	324
29	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	-5	0	-10	0	1	28	15	43
30	0	-2	-5	0	-8	0	8	0	0	0	0	0	5	0	17	18	10	12	10	-5	0	5	-30	-80	-2	85	130	215
31	-40	0	-15	-10	2	5	20	8	20	10	13	8	0	5	10	-5	15	25	0	35	-40	-15	5	65	5	246	125	371
M	-32	-22	-10	-6	-1	2	3	2	1	2	2	3	1	3	5	6	4	8	5	-4	-14	-21	-18	-25	-4	79	184	263
MPS	1	1	1	1	1	3	4	2	2	3	2	3	2	3	6	8	8	11	9	6	2	1	1	3				
MNS	33	23	11	6	3	2	0	0	0	0	0	0	1	0	1	2	4	3	4	11	16	21	19	28				

JANUARY 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-55	-30	-15	-20	-10	5	0	3	2	0	5	-3	0	17	18	25	0	7	15	25	-45	-65	23	-10	-5	145	253	398
2	-10	-90	-40	-10	0	0	0	0	0	0	10	5	5	0	0	0	0	12	-10	-50	-5	-5	-7	-20	-9	32	247	279
3	-15	-10	0	-10	-10	0	0	0	0	5	0	0	10	5	0	0	0	0	0	0	0	0	-3	-5	-1	20	53	73
4	-10	-15	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	0	-2	0	40	40
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	-10	0	15	23	12	10	15	20	20	25	25	0	23	5	-15	-8	-7	-30	-30	-35	-77	-1	193	212	405
7	-80	-40	0	0	15	8	0	0	0	0	0	0	0	0	0	5	7	20	30	45	10	0	-5	-13	0	140	138	278
8	-5	0	0	0	0	5	5	0	0	0	2	7	0	0	0	0	0	5	0	0	-2	-13	0	0	0	24	20	44
9	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	-2	12	12	10	5	0	-30	-10	-12	-5	-1	39	61	100
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	0	-7	-8	-10	-3	-1	0	31	31
11	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	-5	0	0	0	5	5	10
12	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-3	-18	-1	10	31	41
13	-12	-5	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	10	10	12	0	-7	0	1	46	24	70
14	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	40	-45	-30	-60	-40	-5	54	185	239
15	-23	20	20	10	5	5	50	13	-2	27	30	22	7	0	12	0	0	0	-8	-12	0	-40	-50	-10	3	221	145	366
16	-10	-5	0	-13	-2	10	0	-5	-3	0	5	10	0	-5	2	-12	0	0	0	-15	-5	0	0	0	-2	27	75	102
17	0	0	0	0	0	0	0	0	0	-7	0	8	0	0	-5	0	0	0	0	0	0	0	0	0	0	8	12	20
18	0	-3	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-8	-12	-10	-10	-7	5	-2	5	53	58
19	8	5	7	10	18	13	10	12	7	15	15	15	30	25	45	-15	30	30	25	-65	-5	-8	-30	-75	5	320	198	518
20	-65	-7	20	-5	-20	65	38	38	17	10	10	10	10	10	0	3	0	0	0	0	0	0	0	-5	5	231	102	333
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-5	-2	1	0	17	17
22	0	0	0	0	-5	-5	5	10	0	-5	0	0	5	0	10	40	70	40	25	5	-5	-75	-115	-50	-2	210	260	470
23	-45	-45	15	12	5	15	15	15	7	10	10	0	0	35	25	35	40	30	35	-25	-15	25	65	-105	7	394	235	629
24	-70	-83	-75	0	-5	0	0	0	0	3	5	5	-5	5	3	5	22	10	5	0	0	8	-35	-45	-10	71	318	389
25	-75	-50	-20	-15	0	0	0	0	-8	0	0	0	0	0	-5	10	10	0	0	-7	-30	-7	-90	-140	-18	20	447	467
26	-58	-45	-50	-80	-35	-15	0	0	0	-10	-5	0														0	298	298
27													-5	5	15	-3	25	-90	-20	65	-35	-85	-55	-32		110	325	435
28	-55	-100	-120	0	-20	-10	-5	-2	-7	-8	-5	-10	5	-75	5	-33	-40	15	-50	-20	-55	-55	-85	-75	-34	25	830	855
29	-80	-60	-10	5	0	0	0	0	0	0	-5	5	5	10	30	12	0	-5	10	-7	-45	-55	-25	-30	-10	77	322	399
30	-10	-30	-40	-40	-20	-5	0	0	0	0	-5	0	5	5	8	0	0	0	0	0	25	35	-45	-37	-6	78	232	310
31	-60	-50	-20	-10	0	0		-5	-7	0	-5	0	5	17	-5	12	10	-25	-5	-2	0	5	-35	-25	-9	49	254	303
M	-24	-21	-11	-6	-3	4	5	3	1	2	3	3	3	3	5	4	6	2	2	-1	-11	-15	-21	-27	-4	82	175	257
MPS	0	1	2	1	1	5	5	3	1	3	4	4	4	5	6	6	8	6	6	6	2	2	3	0				
MNS	25	22	13	7	4	1	0	0	1	1	1	0	0	3	1	2	1	5	4	7	12	17	24	27				

Bossekop. Declination. Storminess (+ W). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

FEBRUARY 1933

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	-12	-10	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	0	0	-8	-10	-25	-3	0	70	70
2	-12	-15	-10	-20	-2	-8	0	7	10	15	13	12	8	-7	8	8	5	35	7	5	0	-15	-10	0	1	133	99	232
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	-30	-50	-3	5	80	85
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	8	15	32	-30	0	-5	-20	-5	0	55	65	120
5	-18	-10	-35	-20	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	10	83	93
6	5	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-15	-5	0	0	0	17	20	37
7	0	0	0	0	0	0	0	0	-3	3	0	12	5	0	0	0	10	3	-5	-5	-15	0	0	0	0	33	28	61
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-10	-35	-20	-20	-4	0	90	90
9	0	-12	-13	-13	0	10	3	0	0	0	0	0	5	0	5	18	10	5	7	12	0	-5	-17	-20	0	75	80	155
10	-20	-20	-27	-13	-5	-5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	-12	-3	0	-4	3	105	108
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	10	5	0	0	0	0	1	22	0	22
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	-5	-10	-20	-25	-20	-15	-10	0	0	0	0	0	0	-5	-5	0	110	110
14	0	0	-5	-3	0	0	0	0	10	8	3	5	5	2	5	5	0	0	-7	-25	-105	-30	-5	-8	-6	43	188	231
15	0	3	0	0	3	5	7	8	8	5	0	17	15	12	5	-10	-27	13	-5	-5	-12	-10	-25	-5	0	101	99	200
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7	0	0	0	0	0	7	7
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	17	10	20	-25	-10	-30	-30	-1	62	95	157
19	-20	-55	-20	-15	0	0	10	8	5	5	25	30	30	50	55	25	47	18	-40	-190	-20	-20	-35	-100	-9	308	515	823
20	-315	-260	-140	-30	-5	5	0	0	0	-5	10	10	30	15	20	10	25	20	-20	20	5	-5	-15	-50	-28	170	845	1015
21	-15	-65	-110	-10	-10	20	5	5	10	10	15	30	30	60	10	45	-5	45	-20	50	30	10	-190	-120	-7	375	545	920
22	-15	15	-105	-65	-80	5	20	5	25	5	5	-10	5	-30	-5	-65	-20	-20	-20	-25	-5	35	-15	-65	-18	120	545	665
23	-25	-15	-95	15	5	15	20	25	15	10	0	10	15	30	35	15	40	30	10	25	95	-5	-115	-85	3	410	340	750
24	-65	-55	-45	5	15	20	20	35	35	10	15	20	20	40	45	5	20	-10	-70	45	35	-85	-105	-35	-4	385	470	855
25	-95	-10	-55	-50	0	20	25	15	10	5	-5	10	5	5	10	-5	-10	10	-55	10	35	-30	-30	-80	-11	160	425	585
26	-115	-160	-110	0	0	20	25	20	15	5	25	15	15	25	5	0	5	5	0	15	0	-130	-100	-30	-19	195	645	840
27	-15	-10	-30	-10	10	10	15	10	10	7	10	2	0	-3	5	0	0	0	10	15	5	-10	-50	-55	-3	109	183	292
28	-50	-45	-25	-15	0	0	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-50	-9	0	215	215
M	-28	-26	-29	-9	-2	5	5	5	5	3	4	5	6	6	7	1	4	7	-6	-2	0	-13	-30	-30	-4	100	212	312
MPS	0	1	0	1	1	5	5	5	5	3	4	6	7	9	8	5	7	8	3	8	7	2	0	0				
MNS	28	26	30	9	4	0	0	0	0	0	0	1	1	2	1	3	3	1	9	10	8	15	30	30				

MARCH

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	-15	-55	-20	-17	-5	0	0	0	0	0	0	0	12	10	17	5	10	15	12	0	-15	0	0	0	-2	81	127	208
2	0	-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-25	-38	-40	-55	-65	-10	0	230	230
3	-20	-15	-12	-10	-5	0	0	0	0	5	15	10	5	8	5	17	30	20	20	23	-10	-25	-15	-15	1	158	127	285
4	-10	-10	-20	-15	0	0	0	0	0	0	0	5	0	0	-10	0	0	10	25	8	-8	0	0	0	-1	48	73	121
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7	0	0	0	0	0	0	7	7
6	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-12	0	0	0	0	-5	-10	-3	0	-1	0	35	35
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	-35	-40	-4	0	88	88
9	-32	-10	-17	-5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	10	64	74
10	-12	12	-12	-10	5	0	0	-5	0	0	0	0	0	0	0	0	0	0	0	0	-15	-42	-27	-13	-5	17	136	153
11	-80	-130	-80	-20	-7	2	-3	0	0	5	0	15	15	17	10	0	0	0	0	-5	-20	-10	0	0	-12	64	355	419
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	7	10	7	8	15	10	-5	2	57	7	64
13	-5	-5	-3	0	0	0	0	5	0	0	0	15	10	7	10	23	5	12	10	-3	-3	2	-5	-5	3	99	29	128
14	0	-5	-3	-2	3	0	20	0	-13	-10	-8	0	-12	0	0	-20	-7	-2	-3	0	0	0	0	0	-3	23	85	108
15	0	0	0	0	0	0	0	0	0	0	5	10	15	8	0	0	0	0	0	0	0	0	-5	0	1	38	5	43
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-13	0	0	0	0	0	-1	0	13	13
17	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	0	0	5	0	5	10	-20	-20	-15	0	50	55	105
18	0	-15	-50	-55	-30	5	0	-10	-10	-5	8	10	15	10	35	45	25	15	10	10	10	0	-20	-190	-8	198	385	583
19	-330	-50	-80	-20	-15	0	0	0	0	0	10	22	20	40	20	15	45	15	35	65	-10	-410	-100	-60	-33	287	1075	1362
20	-80	-150	-50	-80	-30	0	10	5	0	0	-5	5	10	10	-10	5	-30	-90	-20	-40	-15	-15	-95	-90	-31	45	800	845
21	-80	-60	-70	-40	-20	-20	-5	-10	-15	-25	-40	-5	0	-5	-10	-20	-10	-40	0	2	-10	-30	-70	-120	-29	2	705	707
22	-120	-340	-190	-55	-25	10	20	5	-5	-20	-5	-20	10	10	-15	0	-20	0	10	-5	-75	-80	-30	-30	-40	65	1035	1100
23	-65	-90	-10	0	-35	10	25	20	0	-5	0	10	5	0	20	5	0	-20	40	5	-45	-190	-10	-110	-18	140	580	720
24	-190	-110	-110	-70	25	20	5	15	0	0	0	0	0	0	10	15	15	-50	-20	-5	-15	-80	-40	-190	-32	105	880	985
25	-160	-110	-145	-20	-10	5	5	-8	-20	-15	-10	0	0	-20	-10	-10	-20	-15	-5	-30	-15	-25	-20	-5	-28	10	673	683
26	-10	-10	0	-5	0	0	0	0	-8	5	0	10	0	0	-5	0	-3	0	5	0	0	0	0	0	-1	20	41	61
27	0	0	0	0	0	0	0	10	0	10	20	35	50	55	50	30	45	15	-5	-15	-10	0	0	-20	11	320	50	370
28	-20	-5	-25	-30	-20	0	0	0	0	0	0	0	0	20	10	0	-5	-35	-10	-10	-38	-15	-60	-40	-12	30	313	343
29	-45	0	0	-10	0	0	0	0	0	0	5	25	25	35	20	35	25	5	5	-10	0	-5	-100	-30	-1	180	200	380
30	0	-3	-10	0	0	0	0	0	0	0	15	15	5	15	22	10	15	5	0	0	0	0	-5	-15	3	102	33	135
31	-5	-30	-70	-30	-5	0	0	0	0	0	0	15	0	0	10	10	0	5	-30	0	0	0	-10	-30	-7	40	210	250
M	-41	-39	-32	-16	-5	1	2	1	-2	-2	0	6	6	8	6	5	4	-4	2	-1	-11	-32	-23	-35	-8	71	271	342
MPS	0	0	0	0	1	2	3	2	0	1	2	7	6	8	8	7	7	4	6	4	1	1	0	0				
MNS	41	39	32	16	7	1	0	1	2	3	2	1	0	1	2	2	3	8	3	5	12	32	23	35				

APRIL

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	0	-15	-10	-45	-5	2	20	7	-2	5	15	7	10	10	10	10	0	0	-10	-13	-13	-5	-25	-15	-3	96	158	254
2	-17	-2	-5	-5	5	0	0	0	0	0	0	5	10	10	10	0	0	0	7	-40	-55	-65	-80	-70	-12	47	339	386
3	-30	-20	-15	-12	-10	13	5	5	0	0	0	25	25	30	25	20	22	25	35	20	0	10	-5	-20	6	260	112	372
4	-40	-130	-40	-22	0	0	0	0	0	0	0	0	0	0	0	0	10	20	35	10	0	0	0	0	-7	75	232	307
5	-13	-18	-32	-20	-15	-8	-8	-10	-10	0	5	15	10	20	18	20	10	25	20	15	-10	-10	-35	-60	-4	158	249	407
6	-100	-100	-10	0	0	0	0	0	10	0	8	12	3	3	0	0	0	0	0	8	-50	-85	-57	-12	-15	44	414	458
7	-12	-5	-15	-15	-10	0	0	0	0	0	5	0	5	5	35	20	-15	15	10	30	-120	-70	-5	-8	-6	125	275	400
8	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10	18	25	15	-10	-15	0	-10	-5	-20	1	73	60	133
9	-70	-40	0	0	5	5	0	10	5	-7	15	10	10	10	15	-10	0	0	0	0	0	0	0	0	-2	85	127	212
10	0	0	0	0	0	0	0	0	0	0	0	5	10	10	8	-15	0	0	-17	0	0	0	0	0	0	33	32	65
11	0	0	0	0	0	0	0	0	0	0	0	5	10	0	0	0	0	0	0	0	0	0	0	0	1	15	0	15
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	0	5	5
14	0	0	0	0	0	0	0	0	0	0	12	15	20	20	10	15	25	25	40	25	-20	-5	-40	-45	4	207	110	317
15	-15	-15	-20	-10	-10	0	20	20	12	5	10	15														82	70	152
16																												
17														55	60	85	0	40	40	35	5	-60	-30	-60		320	150	470
18	-180	-130	-25	0	0	10	15	15	15	20	15	10	15	15	40	15	-5	5	-5	-35	-45				-11	190	425	615
19															15	5	15	20	40	5	-15	-20	-80	-50		100	165	265
20	-30	-12	-5	5	0	-10	0	0	0	-10	10	-5	10	30	-10	35	35	25	35	15	-5	-50	-20	-30	1	200	187	387
21	-60	-40	5	0	5	0	0	0	0	0	15	20	0	0	0	0	0	30	-15	-45	-55	-20	20	-130	-11	95	365	460
22	-120	-60	-10	0	0	0	0	-10	-10	0	0	10	10	15	10	15	-5	5	5	0	0	40	-80	-90	-11	110	385	495
23	-80	-15	-20	-20	-20	-20	-5	0	0	0	0	5	20	45	25	20	7	-5	10	-35	-30	-80	-50	-105	-15	132	485	617
24	-45	-35	-8	0	0	-5	0	0	0	0	0	0	-5	0	0	-25	-5	0	-10	-20	-15	-30	-65	-105	-16	0	373	373
25	-115	-20	0	0	0	0	0	0	0	0	0	10	5	-5	0	10	5	-5	5	-5	-5	-10	-25	-35	-8	35	225	260
26	-55	-60	-25	0	0	-5	-10	-5	0	0	0	15	20	35	0	5	15	15	13	-40	-55	-20	-22	0	-7	118	297	415
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	-15	7	3	-90	-70	-105	-10	30	280	310
28	-145	-105	-35	-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	5	-35	-40	-30	-17	5	402	407
29	-15	-10	-12	-15	-7	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	-5	5	0	-10	-20	-4	5	99	104
30	-15	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	10	20	-15	-35	55	-20	-160	-5	-105	-12	85	370	455
M	-43	-31	-11	-6	-2	-1	1	1	1	0	4	7	7	11	10	9	6	9	6	-1	-18	-29	-27	-41	-2	94	220	314
MPS	0	0	0	0	1	1	2	2	2	1	4	7	7	12	10	11	7	10	11	8	1	2	1	0				
MNS	43	31	11	6	3	2	1	1	1	1	0	0	0	0	0	2	1	1	4	9	18	31	28	41				

Bossekop. **Declination. Storminess (+ W). Unit Gamma.** *Gr. M. T.*

HOURLY MEAN VALUES

MAY 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-35	-18	-5	-13	-12	-22	-5	-5	-3	10	22	53	120	110	70	180	170	140	55	75	25	-70	-120	-50	28	1030	358	1388
2	-105	-110	-25	-5	-10	-13	-15	-15	-5	-15	-10	0	0	0	0	0	0	0	12	15	5	-10	-70	-90	-19	32	498	530
3	-85	-75	-35	-8	10	0	0	0	0	0	5	0	0	0	5	0	7	25	-45	0	7	0	-3	-45	-10	59	296	355
4	-20	-8	0	-5	17	10	2	10	0	0	0	0	0	0	0	20	65	20	0	-55	-10	2	0	0	2	146	98	244
5	0	0	0	0	0	0	20	10	5	0	0	7	20	20	20	15	15	15	15	12	-35	-35	-25	-40	2	174	135	309
6	-40	-130	-55	-15	5	0	0	0	-5	0	7	-5	15	0	10	15	8	8	30	-15	-35	-17	-15	-100	-14	98	432	530
7	-95	-120	-5	0	-10	-18	-17	-10	5	5	5	5	5	0	-12	0	0	0	0	0	0	0	0	0	-11	25	287	312
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	-7	-8	12	18	5	7	7	12	17	18	10	7	0	0	0	0	0	0	0	0	0	0	0	4	113	15	128
11	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	12	0	0	0	0	0	0	1	27	0	27
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	10	13	17	0	-30	1	47	30	77
13	-8	3	0	-5	0	5	17	15	7	0	0	0	0	0	0	0	0	0	18	12	15	-40	-20	-40	-1	92	113	205
14	-85	-40	0	5	0	0	0	0	0	7	12	17	22	25	30	50	85	75	45	30	-50	-60	-70	-120	-1	403	425	828
15	-60	-22	-10	-45	-40	15	0	0	10	8	10	10	0	0	0	0	5	15	10	8	0	-20	-80	-110	-12	91	387	478
16	-130	-80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	-30	-8	-50	-70	-75	-16	10	393	403
17	-60	-40	0	0	0	0	0	0	0	0	0	0	0	0	15	20	20	40	0	15	20	15	-70	-25	-2	145	195	340
18	-45	-110	-65	-30	-95	-40	-5	0	15	0	10	25	25	15	25	13	15	20	-5	25	20	-15	-20	-20	-10	208	450	658
19	-10	-2	0	0	0	0	0	0	0	0	0	0	0	0	5	7	10	25	165	5	-30	-20	0	0	6	217	62	279
20	0	0	-5	-10	-13	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-20	-37	-4	0	105	105
21	-15	-5	7	0	0	0	0	12	15	12	13	13	10	0	0	0	0	0	8	0	0	0	0	0	3	90	20	110
22	-7	0	0	0	0	0	0	0	5	0	0	0	0	0	-18	0	0	0	0	0	0	-8	-25	-20	-3	5	78	83
23	0	0	0	0	0	0	0	0	10	15	10	5	0	-8	-10	-8	-10	-5	10	5	-5	-15	-30	-25	-3	55	116	171
24	-25	-13	0	0	0	-5	0	-5	0	0	0	0	-10	-15	0	0	0	0	0	0	0	0	-5	0	3	0	78	78
25	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	15	20	10	0	0	2	58	5	63
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	25	23	-10	0	8	-25	-85	-75	-5	71	195	266
28	-105	-140	-105	-30	-10	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-17	0	405	405
29	0	0	0	0	0	0	0	0	0	0	0	0	0								-85	-90	-40	-50		0	265	265
30	-65	-60	-100	-130	-30	0	5	-5	-15	0	25	25	35	60	60	50	85	80	75	40	20	10	3	-25	6	573	430	1003
31	-40	-40	-5	-10	-40	5	0	5	-5	2	5	0	15	30	40	15	15	20	50	70	25	25	-10	-40	6	322	190	512
M	-34	-31	-13	-9	-7	-3	0	1	2	2	4	5	9	8	8	13	17	17	15	8	-3	-13	-25	-33	-3	132	196	327
MPS	0	0	0	1	2	1	2	2	3	2	5	5	9	9	9	13	18	18	17	11	6	3	0	0				
MNS	34	31	14	10	8	4	2	1	1	0	0	0	0	1	1	0	0	0	2	3	8	16	25	33				

JUNE

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-50	-15	-80	-120	20	30	10	10	0	0	0	0	0	10	0	30	45	30	30	-15	-35	0	0	5	-4	220	315	535
2	0	0	0	0	0	0	0	0	0	0	0	0	10	20	0	0	0	0	20	0	5	-10	-10	-10	1	55	30	85
3	0	-10	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	10	3	0	0	0	0	18	10	28
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	12	3	3	0	1	23	0	23
5	0	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30	-20	5	10	-18	10	15	0	-5	-15	-10	0	5	10	5	5	5	5	0	5	0	0	0	-5	-13	0	80	86	166

JULY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-5	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	20	0	5	-10	-55	0	68	70	138
2	-40	-10	0	0	-5	-10	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	0	68	68
3	-15	-120	-20	-10	-5	-5	0	0	0	0	0	0														0	175	175
4																												
5																												
6																												
7													0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
8	-20	-7	0	-7	-8	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-70	-5	0	117	117
9	-160	-190	-80	-45	-20	-10	0	10	0	0	10	25	15	0	5	0	5	20	30	8	12	13	-5	-5	-15	153	515	668
10	0	0	-5	-10	-10	15	0	0	0	5	10	10	10	0	0	0	5	20	40	5	0	-40	-90	-70	-4	120	225	345
11	-70	-135	-18	0	0	0	0	5	0	0	10	15	10	20	40	35	20	5	0	0	0	0	0	-7	-3	160	230	390
12	-30	0	-15	-20	18	15	5	0	0	5	15	15	5	0	0	-5	-5	0	-5	-5	0	-5	0	0	-1	78	90	168
13	5	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-1	5	20	25
14	-15	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-2	0	35	35
15	0	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	-5	-5	0	20	10	30
16	0	0	0	0	0	0	0	0	0	0	10	10	10	5	5	0	0	5	10	10	5	-5	5	0	3	75	5	80
17	10	-15	-10	-3	0	0	-5	0	0	0	5	0	0	25	25	10	0	0	0	0	-20	-30	-30	-35	-3	75	148	223
18	-35	-70	-25	5	0	10	10	0	0	5	5	10	5	0	5	0	5	0	0	-15	-25	0	0	0	-5	60	170	230
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	-20	-45	-30	-4	0	100	100
20	-50	0	0	-5	0	0	0	-7	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	0	72	72
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	5	-15	-10	-3	0	0	5	10	0	0	0	0	0	0	5	-5	-5	0	0	0	0	0	0	-1	25	38	63
23	0	-20	-8	-10	-5	-5	-5	0	0	0	0	0	0	0	0	40	40	5	0	-20	-20	-20	-210	-200	-18	85	523	608
24	-270	-150	-180	-190	-20	-25	-35	-50	-20	-20	-5	10	-10	-5	25	0	0	0	0	0	8	0	-15	0	40	43	995	1038
25	-20	-10	0	0	0	0	0	0	0	0	0	10	10	15	5	0	0	15	20	15	0	-15	-25	-20	0	90	90	180
26	0	0	0	0	0	0	-5	0	0	0	0	0	0	0	0	15	15	15	0	-8	0	0	-40	-130	-6	45	183	228
27	-120	-40	-5	0	15	5	0	0	0	7	15	25	25	30	20	0	-15	-5	5	-5	-30	-60	-115	-60	-13	147	455	602
28	-5	0	0	0	0	-10	-5	-10	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	-1	10	30	40
29	0	0	0	0	-10	-7	0	0	0	0	0	5	0	0	5	5	5	5	0	0	0	0	0	0	0	25	17	42
30	-8	0	0	0	0	0	0	0	0	0	0	0	5	10	0	0	0	10	10	15	15	-10	-30	-10	0	65	58	123
31	5	0	0	0	0	0	0	0	5	0	0	0	0	0	7	0	0	10	5	0	0	0	0	0	2	32	0	32
M	-31	-29	-14	-11	-2	-1	-2	-2	-1	0	3	5	4	4	5	4	3	4	5	1	-2	-7	-23	-27	-5	49	159	208
MPS	1	0	0	0	1	2	1	1	1	1	3	5	4	4	5	4	4	4	5	3	2	1	0	0				
MNS	32	29	14	11	3	3	2	2	1	1	0	0	0	0	0	0	1	0	0	2	4	8	23	27				

Bossekop. **Declination. Storminess (+ W). Unit Gamma.** *Gr. M. T.*

HOURLY MEAN VALUES

AUGUST 1933

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	-5	-10	-10	-3	0	0	10	0	0	5	0	0	0	10	10	10	0	-22	-10	0	-1	45	60	105
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-3	0	0	2	3	5
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	5	-10	-30	-1	13	40	53
5	-32	-10	-10	-10	-10	-15	15	5	15	22	30	50	85	145	220	190	180	140	25	-100	-20	15	-5	-35	37	1137	247	1384
6	-20	-50	-160	-80	-5	0	10	5	0	-10	0	0	5	0	0	-5	5	0	0	-25	-10	0	0	8	-14	33	365	398
7	0	-15	-30	-22	0	-5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	-15	-80	-7	5	167	172
8	-35	-70	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-8	0	0	10	10	15	0	-10	-4	35	128	163
9	-22	0	0	0	0	0	0	0	0	0	12	10	10	0	-5	-5	0	5	15	5	5	0	-3	-12	1	62	47	109
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	-10	-5	0	5	15	20
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	25	15	10	0	-30	2	70	30	100
13	-28	-10	0	0	0	0	0	-10	0	10	15	20	25	45	45	60	30	30	65	-50	-70	-40	-130	-170	-7	345	508	853
14	-10	0	-70	0	5	0	0	0	0	0	0	5	0	5	15	20	35	25	20	5	-25	-70	-70	-30	-6	135	275	410
15	0	0	0	0	0	5	0	0	0	0	0	0	0	-10	-10	-10	0	20	-10	-15	0	0	0	0	-1	25	55	80
16	0	-5	0	0	0	0	0	0	0	0	0	0	0									0	0	0		0	5	5
17	5	0	0	0	25	17	0	-20	20	12	0	0	15	25	5	0	0	20	20	-40	-25	-5	-10	0	3	164	100	264
18	-12	0	0	0	0	0	25	20	10	0	0	0	0	0	15	75	85	85	70	-110	-50	-140	-110	-90	-5	385	512	897
19	-110	-230	-100	0	15	30	20	45	35	25	10	10	5	0	0	0	0	0	0	0	-35	-60	-15	-10	-15	195	560	755
20	-35	0	-15	-15	0	0	0	0	0	0	0	0	5	5	0	0	5	20	45	30	-50	-70	-135	-90	-13	110	410	520
21	-50	-30	-20	0	0	5	0	10	0	-8	-20	5	0	0	50	80	10	40	20	-30	-70	-15	-35	-25	-3	220	303	523
22	-15	5	0	0	0	0	-5	0	10	15	10	10	0	0	0	0	0	0	0	0	0	0	0	0	1	50	20	70
M	-17	-19	-18	-6	1	1	3	2	4	3	3	5	7	10	16	19	16	19	14	-13	-15	-17	-26	-28	-2	138	175	313
MPS	0	0	0	0	2	3	3	4	4	4	4	5	7	11	17	20	17	19	15	4	2	2	0	0				
MNS	17	19	18	6	1	1	1	2	0	1	1	0	0	0	1	1	0	0	0	18	17	19	26	28				

Vertical Intensity. Storminess (+ Down). Unit Gamma.

HOURLY MEAN VALUES

OCTOBER 1932

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	-15	-10	-5	0	0	0	0	0	0	0	-5	-10	-10	0	15	15	15	5	5	0	-5	-5	-35	-20	-3	55	120	175
2	-5	0	0	0	0	0	0	0	0	0	5	20	35	40	30	50	40	10	-15	-35	-35	-20	-10	5	5	235	120	355
3	0	-50	-35	-30	-25	-20	-10	0	0	0	10	15	25	50	20	20	30	10	0	0	0	0	-5	-25	-1	180	200	380
4	-50	-70	-75	-60	-40	-25	-15	-5	0	0	5	15	10	0	10	25	40	20	-10	5	25	30	60	-40	-6	245	390	635
5	-30	-25	-25	-20	-10	0	0	0	0	0	0	0	5	-25	-25	-5	-10	10	-25	-20	0	-15	-80	-85	-16	15	400	415
6	-100	-75	-45	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-50	-55	-85	-75	-30	-22	0	525	525
7	-30	-50	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	5	15	10	5	-5	-10	-10	-10	-4	35	130	165
8	-25	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-30	60	-10	-30	-20	-15	-4	60	145	335
9	-25	-50	-10	0	0	0	0	0	0	0	0	0	0	0	-5	-5	40	30	10	-5	-10	30	20	-75	-2	130	185	315
10	-110	-80	-50	-60	-40	-15	-10	0	0	0	0	0	0	0	10	50	-10	20	20	-10	-50	-70	-40	-20	-19	100	565	665
11	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-30	-40	-50	-50	-50	-10	0	250	250
12	-75	-75	-40	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	-5	-30	-20	-10	-11	20	275	295
13	-5	0	0	0	0	0	0	0	0	0	0	0														0	5	5
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-50	-3	0	60	60
15	-30	-30	-40	-25	-20	-25	-20	-10	5	50	30	-5	-50	-150	-170	-220	-275	-80	-50	0	-25	70	-30	-75	-49	155	1330	1485
16	-125	-100	-50	-50	-10	-50	-15	0	-10	-10	0	15	10	20	20	0	10	5	20	10	0	0	0	0	-13	110	420	530
17	-40	-80	-60	-40	-20	-10	0	0	10	35	10	10	15	30	60	40	15	-45	0	40	100	-60	-40	-20	-2	365	415	780
18	50	-90	-30	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-10	0	-20	-30	-55	-80	-11	50	325	375
19	-40	-10	-5	0	0	0	0	0	0	0	0	5	20	30	40	50	70	60	45	20	10	0	-10	-15	11	350	80	430
20	-15	-10	0	0	0	0	0	0	0	0	5	20	25	60	60	5	-80	-90	-20	70	180	170	210	0	25	605	215	1020
21	200	-70	-100	-150	-90	-40	0	30	20	25	25	35	35	40	50	50	30	45	10	-20	0	-25	-5	0	4	595	500	1095
22	0	0	0	0	0	0	0	0	0	0	0	0	10	20	25	10	-75	-70	-30	25	180	0	40	20	6	330	175	505
23	25	20	5	0	-15	-10	-5	0	5	30	60	60	60	65	-25	0	-40	-80	10	-10	-75	5	30	-30	4	375	290	665
24	-15	0	0	0	-20	-10	-10	0	0	30	40	25	30	30	5	15	20	15	-20	-5	-50	-90	-90	-50	-6	210	360	570
25	-25	-20	-20	-10	0	0	0	0	5	10	20	30	40	20	15	0	5	0	0	-5	-25	-25	-20	-10	-1	145	160	305
26	-10	0	0	0	0	0	-10	-10	0	0	0	0	10	10	10	0	10	20	20	5	-30	-20	-10	-5	0	85	95	180
27	0	0	0	0	0	0	0	0	10	5	5	40	40	10	-25	-10	30	15	15	-10	-30	-30	-20	0	2	170	125	295
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	80	-80	1	100	80	180
30	-60	-30	-40	-25	-25	-20	-10	0	0	0	5	20	10	10	20	10	20	20	10	-15	-35	-40	-35	-40	-10	125	375	500
31	-35	-20	-20	-10	0	0	0	0	0	0	0	10	20	30	40	40	10	0	0	0	0	0	0	0	3	150	85	235
M	-20	-31	-21	-17	-10	-7	-3	0	1	6	7	10	11	10	6	5	-3	-2	-1	1	0	-10	-8	-27	-4	168	271	439
MPS	9	1	0	0	0	0	0	1	2	6	7	10	13	15	14	13	13	10	6	8	16	11	15	1				
MNS	29	31	21	17	10	7	3	1	0	0	0	0	2	6	6	8	16	12	7	7	17	21	22	28				

NOVEMBER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	0	-5	-25	-40	-40	-40	-10	-10	10	0	0	10	0	5	25	30	20	0	-5	-5	-25	-15	20	40	-3	160	220	380
2	45	-15	-35	-20	0	5	10	15	5	0	10	35	30	20	10	10	10	10	10	5	0	0	0	0	7	230	70	300
3	0	0	0	0	0	0	-5	0	0	10	5	0	0	0	30	20	5	5	5	10	15	10	0	-10	4	115	15	130
4	-20	-15	-5	-10	-15	-30	-10	0	0	0	0	0	0	0	0	0	5	-25	-55	-100	-10	30	50	-35	-10	85	330	415
5	-25	-5	-25	-50	-25	-10	5	10	5	0	0	10	10	10												50	140	190
6																												
7																												
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-5	0	0	-35	-45	-45	-30	-7	0	170	170
9	-30	-25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15	0	-10	-20	-15	-10	-4	25	110	135
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-20	-25	-20	-4	0	85	85
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	25	35	25	25	5	0	10	-35	-50	-40	-25	-10	-1	125	160	185
13	0	0	-5	-15	-20	-20	-10	-5	0	0	0	5	20	15	35	35	15	10	-5	-20	-10	-75	-70	-20	-6	135	280	415
14	0	0	0	0	0	0	0	10	25	40	15	0	70	30	50	25	0	-10	0	-10	0	40	-30	-140	5	305	190	495
15	-60	-5	0	0	0	10	0	0	0	0	0	0	0	10	0	0	0	0	-60	-30	-15	0	-20	-20	-8	20	210	230
16	-50	-40	-50	-70	-140	-80	-100	-80	-70	-20	0	15	25	25	-25	-55	-90	-120	-150	-55	-55	20	120	40	-42	245	1250	1495
17	-10	0	0	0	0	0	5	5	0	10	15	20	20	10	-30	15	20	10	-15	0	-10	-100	-80	-50	-7	130	295	425
18	-35	0	0	0	0	0	5	10	10	0	0	5	20	10	15	25	10	20	-15	-10	-25	-80	-35	-5	-3	130	205	335
19	0	0	0	0	0	0	0	0	0	0	0	0	5	30	35	25	15	0	-25	-15	-25	-25	-10	-35	-1	110	135	245
20	-60	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	30	10	20	25	20	10	0	-10	-40	-1	115	130	245
21	-35	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15	15	0	0	0	-30	-45	-20	-5	40	150	190
22	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	5	0	0	0	0	0	0	1	35	10	45
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-50	15	0	0	0	0	-10	-25	-3	15	95	110
26	-55	-25	0	0	0	0	0	0	0	0	0	0	0	5	15	5	0	0	0	0	0	0	0	0	-2	25	80	105
27	0	0	0	0	0	-10	0	0	0	0	0	0	0	0	0	0	5	10	0	-20	-25	-25	-10	-5	-3	15	95	110
28	-10	0	0	0	0	0	0	0	0	0	0	0	20	30	40	20	10	0	10	10	5	0	0	0	6	145	10	155
29	0	0	-35	-20	-15	-5	-5	0	0	0	0	0	0	0	0	20	-5	0	0	-25	-10	-20	-30	-20	-7	20	190	210
30	-20	-15	-5	0	0	0	0	0	0	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	0	55	55
M	-13	-7	-7	-8	-9	-6	-4	-2	-1	1	1	4	9	8	9	9	0	-1	-9	-10	-11	-15	-10	-15	-4	81	167	248
MPS	2	0	0	0	0	1	1	2	2	2	2	4	9	8	11	11	6	5	3	2	1	4	7	3				
MNS	15	7	7	8	9	7	5	3	2	1	0	0	0	0	2	2	6	6	12	12	12	18	17	18				

Bossekop. Vertical Intensity. Storminess (+ Down). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

DECEMBER 1932

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	15	-5	-30	-50	-40	-25	-10	-10	-6	20	170	190
2	-20	-10	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	-10	-120	-50	-10	0	-8	25	220	245
3	0	0	0	-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	-30	-50	-50	-35	-7	10	185	195
4	-65	-55	-55	-45	-15	0	0	0	0	0	0	0	10	15	10	10	15	0	0	10	0	0	0	0	-7	70	235	305
5	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-15	-55	-50	-6	0	135	135
6	-30	-15	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-110	-7	0	170	170
7	-70	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4	0	90	90
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17	-40	-45	-50	-40	-30	-15	0	0	10	15	15	25	35	20	25	-40	-100	-30	-25	-100	-40	0	-20	0	-18	145	575	720
18	-25	-20	-40	-30	-25	-25	-10	0	5	15	15	15	20	20	20	0	0	0	0	-20	-50	-35	-15	-10	-8	110	305	415
19	0	0	0	0	0	0	0	0	0	0	0	0	0	30	35	20	-45	-5	0	0	-90	-50	-45	-15	-7	85	250	335
20	0	0	-20	0	-5	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	35	35
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	25	15	0	-35	-10	0	0	1	70	45	115
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	20	10	5	0	0	0	2	40	0	0
24	-20	-20	-5	0	0	0	0	0	0	0	0	0	0	5	5	10	10	10	5	0	0	0	0	0	0	45	45	90
25	0	0	0	0	0	0	-10	-10	-10	0	10	15	5	10	10	15	15	10	-25	-50	-40	-75	-40	5	-7	95	260	355
26	-10	-50	-30	-25	-10	-10	0	0	0	0	0	0	0	0	20	15	5	-10	0	-25	-100	0	0	10	-9	50	270	320
27	15	-20	-110	-70	0	0	0	0	0	0	0	0	20	0	10	0	10	10	0	-50	0	0	0	-10	-8	65	260	325
28	-10	0	0	0	0	0	-10	-10	0	0	0	0	10	25	20	10	-10	0	0	-15	0	-40	-35	-25	-4	65	155	220
29	-25	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-25	-15	-5	-3	10	75	85
30	0	0	0	0	-10	-5	0	0	0	0	0	0	0	0	0	20	5	0	-10	-75	-35	10	-15	-30	-6	35	180	215
31	-60	-25	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	-10	-50	-60	-50	-25	-90	-15	15	370	385
M	-17	-12	-14	-10	-5	-3	-1	-1	0	1	2	3	5	6	7	4	-3	1	-2	-19	-29	-19	-16	-17	-6	43	183	227
MPS	1	0	0	0	0	0	0	0	1	1	2	3	5	6	7	6	4	2	2	1	0	0	0	1				
MNS	18	13	14	10	5	3	1	1	0	0	0	0	0	0	0	2	7	3	5	20	29	19	16	18				

JANUARY 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-90	-80	-35	-20	-25	0	0	0	0	0	0	0	0	10	50	40	20	-40	-40	-120	-30	-30	-25	0	-17	120	535	655
2	10	50	-50	-40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-45	-20	-4	60	155	215
3	-10	-20	-30	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-10	-5	0	110	110
4	0	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	-5	-20	-25	-30	-25	-40	-40	0	20	25	40	40	40	-20	-50	10	20	20	20	-40	-70	-25	0	0	-6	235	390	625
7	-80	-50	-25	-20	-15	0	0	0	0	0	0	0	0	0	0	0	-15	-70	-80	-20	-10	0	0	0	-16	0	385	385
8	-15	-10	-10	0	0	0	0	0	0	0	0	0	10	10	10	0	0	5	5	0	-5	-15	-25	-40	-3	40	120	160
9.	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	10	0	0	-10	-15	-35	-25	-3	30	95	125
10	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	10	0	0	-10	-10	0	25	25	50
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-20	-20	-15	-3	0	65	65
12	-15	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-25	-2	0	50	50
13	-35	-25	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	10	0	0	0	-2	20	70	90
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-50	-40	-15	-10	-6	0	135	135
15	-25	-10	-10	0	-30	-35	-60	10	40	10	0	5	0	0	15	15	15	10	5	-20	-20	30	-50	-30	-6	155	290	445
16	-10	-15	-25	-15	0	0	10	10	15	15	0	0	10	10	0	15	10	0	0	-10	0	0	0	0	1	95	75	170
17	0	0	0	-10	0	0	0	0	0	15	10	0	0	0	0	0	0	10	10	0	0	0	0	-20	1	45	30	75
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	-10	-40	-20	-20	-20	-4	10	110	120
19	-10	0	0	0	-15	-5	10	0	0	0	0	0	0	10	-60	-160	-130	-10	0	-10	-10	0	50	-45	-16	70	455	525
20	-35	-40	-15	-20	-50	-75	-20	-10	0	0	15	5	0	0	0	10	10	0	0	0	0	0	0	-20	-10	40	285	325
21	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-20	-10	0	-3	0	60	60
22	0	0	0	0	-10	-10	-15	-20	-10	5	0	0	0	0	0	-60	-40	-125	-70	-10	-40	25	-20	-40	-18	30	470	500
23	30	-50	-50	-10	0	-10	-10	-10	10	0	0	0	0	10	60	10	20	0	-40	-50	-30	-30	30	75	-2	245	290	535
24	50	30	-35	-10	0	0	0	0	0	0	0	0	20	0	0	0	0	10	15	0	-15	-10	-10	-10	1	125	90	215
25	-10	40	-10	-10	0	0	0	0	0	0	0	0	0	0	40	40	40	40	20	20	0	10	25	-20	9	275	50	325
26	-60	-25	-70	-110	-50	-40	-10	0	0	10	0	0	0	0	25	20	0	-40	-20	0	-75	-85	20	-35	-23	75	620	695
27	-160	-90	-60	-30	-25	-15	-10	0	0	0	0	0	5	15	0	40	-10	-20	-110	-30	25	110	-40	-30	-18	195	630	825
28	-50	-70	-50	-90	-50	-20	0	0	0	-10	10	15	0	35	0	20	-15	-50	-80	-70	50	-20	25	-10	-18	155	585	740
29	-25	-50	-40	-15	-15	0	-5	0	0	0	0	0	10	30	25	0	-50	-10	-20	-40	-70	-60	-40	-10	-16	65	450	515
30	-15	-20	-50	-40	-10	-10	-5	0	0	0	0	0	0	0	10	25	10	0	0	0	-20	-25	-35	-50	-10	45	280	325
31	0	0	-20	-10	0	0	0	0	0	0	0	0	0	10	15	0	15	10	0	0	0	-70	-60	-40	-6	50	200	250
M	-19	-15	-20	-16	-11	-8	-5	-1	2	2	2	2	3	4	5	1	-3	-8	-11	-13	-14	-10	-10	-15	-7	71	230	301
MPS	3	4	0	0	0	0	1	1	3	3	2	2	3	5	8	8	6	4	3	1	3	6	5	2				
MNS	22	19	20	16	11	8	6	1	0	0	0	0	0	1	4	7	8	12	15	15	17	16	15	17				

FEBRUARY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-15	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-60	-60	-6	0	140	140
2	-50	-30	-20	-25	-30	-45	-30	-25	-15	-10	10	10	10	25	5	15	0	0	0	-20	-15	10	-25	-10	-11	85	350	435
3	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	0	0	0	0	0	0	-20	-70	-3	30	90	120
4	-75	-20	0	0	0	0	0	0	0	0	0	0	0	0	15	20	25	35	-10	-30	0	-10	-20	0	-3	95	165	260
5	-20	-20	-50	-60	-50	-25	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-13	0	235	235
6	0	-10	-15	-20	-15	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-15	-10	0	-5	0	110	110
7	0	0	0	0	5	0	-10	-10	-10	-5	0	0	0	0	0	0	10	15	5	0	0	0	0	0	0	35	35	70
8	0	0	0	0	0	0	0	0	0	0	0	0	15	25	10	0	0	0	0	0	-50	-85	-75	-75	-13	50	285	335
9	-45	-30	-30	-35	-40	-40	-35	-20	-10	0	0	0	0	0	0	15	30	15	10	0	0	-20	0	0	-13	70	305	375
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-20	0	-2	0	40	40
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	15	15	-10	-10	-10	-10	0	35	40	75
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	-10	-5	0	0	0	0	-5	-10	-10	-5	0	0	10	0	0	0	0	-15	70	-20	-50	-25	-15	-4	80	170	250
15	-20	-10	-25	-10	-10	-10	-10	-10	0	0	0	0	20	15	0	30	30	20	30	20	-10	-40	-50	-30	-3	165	235	400
16	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-15	-15	-10	-2	0	55	55
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	50	10	-10	15	2	75	20	95
19	-15	-25	-70	-70	-15	-10	-15	-10	0	0	0	10	15	0	-130	-40	0	-25	-40	-150	-60	-25	50	130	-21	205	700	905
20	30	-70	-50	-60	-20	0	0	0	0	20	25	15	40	20	10	15	25	15	-25	-50	0	-10	25	-60	-4	240	335	575
21	-110	-75	10	-160	-170	-130	-60	-30	-20	0	10	30	20	0	-160	-170	-140	-20	-80	-150	-50	20	60	-90	-61	150	1615	1765
22	80	-130	-120	-130	-70	-60	-60	-35	-15	0	0	20	15	25	25	50	20	10	-160	-100	-40	-25	70	160	-19	475	935	1410
23	-40	-40	-25	-30	-35	-35	-25	-5	0	0	0	15	10	20	20	-80	-130	-120	0	-120	-50	70	50	-100	-27	185	835	1020
24	-50	-60	-75	-60	-20	0	-20	0	0	0	15	30	10	0	-10	-25	-40	-50	-130	-130	0	-20	-130	-110	-36	55	930	985
25	-25	-25	-25	-20	-20	-25	-15	-10	10	30	40	40	50	10	10	30	25	20	-25	-75	-10	120	180	80	15	645	275	920
26	20	70	40	-100	-80	-50	-10	0	0	0	10	30	30	20	30	30	40	25	10	-15	-60	-170	-170	-120	-18	355	775	1130
27	-60	-40	-40	-20	-20	-10	0	10	10	15	25	40	10	0	0	10	20	20	10	20	0	-10	-75	-75	-7	190	350	540
28	-90	-50	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-50	-10	0	240	240
M	-17	-21	-19	-29	-21	-16	-11	-5	-2	1	5	9	9	6	-6	-3	-3	-1	-14	-26	-12	-11	-11	-17	-8	115	331	446
MPS	5	2	2	0	0	0	0	0	1	2	5	9	9	6	5	8	8	6	3	4	2	8	16	14				
MNS	22	23	20	29	21	16	11	6	3	1	0	0	0	0	11	11	11	8	17	30	14	19	26	31				

Bossekop. Vertical Intensity. Storminess (+ Down). Unit Gamma. *Gr. M. T.*

MARCH 1933 HOURLY MEAN VALUES

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-30	-30	-40	-25	-5	0	0	0	0	0	0	0	0	0	10	20	20	15	-10	-25	-80	-50	-35	-10	-11	65	340	405
2	-60	-25	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-40	-30	-10	-8	0	195	195
3	-35	-10	0	0	0	0	0	0	0	0	0	0	0	0	10	20	10	0	-25	-30	-25	-30	-20	-10	-6	40	185	225
4	-15	-5	-10	-20	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	-10	-20	-10	-4	10	105	115
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	0	0	0	10	10
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	0	0	0	0	-25	-30	-20	-10	-2	30	85	115
7	0	0	0	0	0	0	0	0	0	0	0	0	-10	-10	0	0	0	10	10	0	0	0	-30	-30	-3	20	80	100
8	-20	-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	15	15	15	10	0	0	0	-10	-15	-1	45	65	110
9	-20	-10	-10	-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-3	0	70	70
10	-20	-25	-25	-15	-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-30	-80	-80	-30	-14	0	325	325
11	60	-50	-120	-80	-25	-10	-10	0	0	0	0	0	20	20	10	15	20	20	10	0	-30	-25	-15	0	-8	175	365	540
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	15	20	10	0	10	-10	-10	0	2	70	20	90
13	-10	0	0	-10	-10	-10	-5	0	0	0	0	0	0	10	10	20	-20	15	10	-10	10	0	0	-10	0	75	85	160
14	0	0	0	-10	-30	-50	-20	-10	-10	0	0	0	15	0	0	15	45	20	20	10	0	0	0	0	0	125	130	255
15	0	0	0	0	0	0	0	0	0	0	0	0	10	20	10	0	0	0	0	0	0	-10	-20	-10	0	40	40	80
16	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	-15	0	0	15	25	40
17	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	10	5	15	20	15	-20	-60	-40	-35	-3	95	155	250
18	-10	-10	-30	-130	-140	-130	-120	-50	-30	-10	0	20	10	0	0	-10	30	30	-10	10	0	-10	-20	20	-25	120	710	830
19	60	0	-20	-15	0	-10	0	0	0	0	0	10	20	0	30	20	-10	0	15	0	80	70	-80	-10	7	305	145	450
20	10	180	10	-120	-60	-20	-10	-10	0	0	25	15	0	0	20	10	5	-15	-30	60	0	-10	180	10	10	525	275	800
21	15	20	-130	-130	-60	-50	-25	0	10	25	25	35	20	0	40	40	40	25	25	15	-30	-50	-80	-30	-10	335	585	920
22	10	-180	-100	-75	-100	-80	-60	-30	0	20	15	30	20	0	30	40	0	20	-70	10	70	25	-50	-10	-19	290	755	1045
23	30	20	-20	-25	-60	-60	-70	60	-40	-20	0	15	30	30	20	-30	-75	-50	30	-30	50	-50	-80	-30	-15	285	640	925
24	-20	30	-30	-50	-25	-50	-20	-10	0	0	15	20	30	10	15	-30	-50	-100	-60	20	40	10	25	-80	-13	215	525	740
25	120	-25	0	0	20	-10	0	15	15	15	10	10	10	15	20	10	0	20	20	-25	-20	0	-30	-40	6	300	150	450
26	-15	-10	0	0	0	0	0	0	5	25	0	0	0	0	0	0	30	20	10	10	0	0	0	0	3	100	25	125
27	0	0	0	0	0	0	0	0	0	10	0	0	20	10	40	50	20	-25	-60	-40	-25	-10	10	20	1	180	160	340
28	10	0	-10	-40	-15	-10	0	10	10	0	0	0	10	10	25	25	15	-30	-10	-20	-40	-70	10	-100	-9	125	345	470
29	-50	0	0	0	0	0	0	0	0	0	20	20	10	10	0	10	-20	40	15	-10	0	-25	50	-120	-2	175	225	400
30	-20	0	-10	-10	0	0	0	0	0	0	0	0	10	15	25	40	25	10	10	10	0	-20	-20	0	3	145	80	225
31	-30	-60	-75	-50	-15	0	0	0	0	0	10	20	20	0	0	30	40	20	-20	0	20	0	0	-25	-5	160	275	435
M	-2	-6	-21	-26	-18	-16	-11	-1	-1	2	4	6	8	5	11	11	5	3	-2	-1	-2	-16	-14	-19	-4	131	231	363
MPS	10	8	0	0	1	0	0	3	1	3	4	6	8	5	11	13	11	10	7	5	9	3	9	1				
MNS	12	15	21	26	19	16	11	4	3	1	0	0	0	0	0	2	6	7	10	6	11	19	23	20				

APRIL

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-30	-25	-20	-20	-60	-75	-50	-20	-15	0	0	10	10	0	0	10	10	10	0	-10	10	-10	-15	-40	-14	60	390	450
2	-60	-10	0	0	0	0	0	0	0	0	0	0	10	10	10	10	0	10	10	-20	-40	-40	-10	15	-4	75	180	255
3	-40	-25	-25	-25	-20	-10	-10	0	0	10	20	0	10	10	10	20	25	30	15	-20	-10	0	25	0	0	175	185	360
4	0	30	-50	-100	-40	0	0	0	0	0	0	0	0	0	0	0	5	0	-15	5	0	0	0	0	-7	40	205	245
5	-15	-40	-40	-30	-20	-5	0	0	0	0	0	0	0	0	30	50	40	15	15	0	15	10	20	0	2	195	150	345
6	70	30	-40	-20	0	0	0	0	0	0	0	10	15	20	10	10	25	20	10	10	30	-30	-40	-5	5	260	135	395
7	0	0	0	0	0	0	0	0	0	0	0	0	-40	0	10	-10	0	30	20	15	60	20	0	0	4	155	50	205
8	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	-40	-50	-10	0	-20	0	-25	-4	40	145	185
9	-20	-40	-10	0	0	0	0	0	0	20	10	10	20	20	20	20	10	10	0	0	0	0	0	-20	2	140	90	230
10	-15	0	0	0	0	0	0	0	0	0	0	10	15	10	25	0	0	0	-30	-50	-15	0	0	0	-2	60	110	170
11	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	10	0	0	0	0	0	-10	-30	-20	-1	40	60	100
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15	0	10	-10	-30	-20	0	10	20	-25	-1	65	85	150
15	-25	-25	-25	-25	-25	-20	-20	0	0	0	0	0														0	165	165
16																												
17																												
18																												
19															0	0	20	20	-15	-25	0	40	180	-30		260	70	330
20	-60	-25	-10	0	0	0	-15	0	0	15	10	20	10	0	10	-10	-30	20	0	-40	160	0	10	40	4	295	190	485
21	0	-25	-10	0	0	0	0	0	0	10	10	10	20	10	10	25	15	0	-20	-50	-25	50	100	-20	5	260	150	410
22	-130	-90	-40	-10	-10	15	0	0	25	25	15	10	20	0	25	25	15	-40	0	10	100	-60	-50	0	-6	285	430	715
23	-30	-30	-20	0	-20	-10	10	0	0	0	0	0	10	10	10	25	20	0	15	0	-90	10	100	0	0	210	200	410
24	0	-70	-50	-25	0	0	10	10	0	0	0	0	0	0	25	25	20	25	10	0	10	20	160	-100	3	315	245	560
25	-25	-40	0	0	0	0	0	0	0	0	10	0	10	20	0	25	20	0	25	10	10	10	25	25	5	190	65	255
26	10	-60	-60	-20	0	0	0	0	0	0	0	0	20	40	30	0	10	15	20	-40	-70	-35	-30	-10	-8	145	325	470
27	0	0	0	-5	-10	0	0	0	0	0	0	0	0	0	20	20	15	15	10	-20	-10	-40	-100	0	-4	80	185	265
28	20	-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	0	0	50	-10	3	100	30	130
29	-70	-30	0	0	0	0	0	0	0	0	0	0	0	20	10	0	0	0	10	0	0	-5	-10	-10	-4	40	125	165
30	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	-20	70	1	70	50	120
M	-17	-19	-16	-11	-8	-4	-3	0	0	3	3	3	5	8	12	10	9	5	1	-9	5	-3	15	-6	-1	131	149	279
MPS	4	2	0	0	0	1	1	0	1	3	3	3	7	8	12	11	10	8	7	2	15	7	26	6				
MNS	21	21	16	11	8	5	3	1	1	0	0	0	2	0	0	1	1	3	6	12	10	10	12	12				

MAY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	0	10	0	0	0	0	-10	-10	0	-10	10	0	-40	-100	-220	-170	-60	-20	70	130	230	250	220	150	18	1070	640	1710
2	200	40	-90	-50	-10	0	0	10	10	15	10	10	0	0	0	0	20	20	0	0	0	0	-50	-70	3	335	270	605
3	50	-10	-75	-40	-20	-10	0	0	0	0	-10	25	30	25	25	30	20	0	-25	-40	-10	0	30	20	1	255	240	495
4	-40	-25	-10	-15	-15	-20	-15	0	0	0	0	0	0	0	0	20	-40	10	50	-100	-20	0	0	0	-9	80	300	380
5	0	-10	-10	0	0	0	0	0	0	0	0	0	10	20	20	0	0	0	0	20	10	30	70	70	10	250	20	270
6	0	70	100	-120	-50	-20	-10	0	0	0	0	20	0	20	10	20	20	10	0	0	-25	0	30	200	11	500	225	725
7	120	-50	-30	-10	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	3	160	90	250
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15	15	15	0	0	0	0	0	0	2	55	0	55
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	-10	-10	0	0	0	0	0	0	0	-10	-10	0	0	0	0	0	0	0	0	0	0	0	-2	0	40	40
11	0	-10	-20	-10	-10	-5	0	0	0	0	0	0	0	0	10	25	25	20	10	10	0	0	0	0	2	100	55	155
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-25	-1	0	35	35
13	-25	-10	-10	0	0	0	-10	-20	0	0	0	10	40	0	0	0	0	0	0	0	-25	-50	-10	20	-4	70	160	230
14	40	-50	-15	0	0	0	0	0	0	0	0	0	20	30	20	25	-30	-20	25	50	150	170	75	70	23	675	115	790
15	0	-10	-10	-40	-100	-110	-40	-20	0	0	20	30	15	10	0	0	0	0	0	-15	0	60	40	-80	10	175	425	600
16	-90	-40	-10	0	0	0	0	0	0	0	0	15	20	20	0	0	0	0	0	-60	-25	30	25	40	-3	150	225	375
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25													10	20	20	20	20	0	0	0	0	0	0	0		90	0	90
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	-20	0	0	25	60	50	5	145	20	165
28	100	70	-140	-100	-40	-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	170	300	470
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	-50	-80					30	10	60	0	120	130	250
30	100	150	130	0	-80	-50	-30	0	0	10	30	30	30	25	25	25	-40	-100	-50	0	0	0	20	50	11	625	350	975
31	10	-30	-45	-50	-40	-50	0	0	0	10	10	25	30	0	-75	20	25	0	0	-30	0	40	90	60	0	320	320	640
M	21	4	-11	-20	-17	-13	-6	-2	0	1	3	7	7	4	-5	-1	-4	-3	3	-2	13	25	26	27	2	232	172	405
MPS	28	15	10	0	0	0	0	0	0	2	4	8	9	8	8	9	7	3	7	10	18	28	29	34				
MNS	7	11	22	20	17	13	6	2	0	0	0	0	2	4	13	10	11	6	4	11	5	2	3	8				

Bossekop. Vertical Intensity. Storminess (+ Down). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

JUNE 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-10	-10	25	25	-180	-80	-30	-10	0	0	0				10	-10	-30	10	10	-10	-25	-15	-10	0	-13	80	360	440
2	0	0	10	0	0	0	0	0	0	0	0	15	10	0	0	0	10	15	-20	0	-10	-10	-15	0	0	60	55	115
3	0	-25	-20	-20	0	0	0	10	15	20	10	0	10	10	10	10	5	15	10	0	-5	-10	0	0	2	125	80	205
4	0	0	0	0	0	0	0	0	0	0	10	10	5	0	0	0	0	10	20	10	0	0	0	0	3	65	0	65
5	-10	-20	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	35	35
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	15	20	15	0	0	0	0	0	0	-15	-25	0	50	40	90
8	-50	-60	-50	-15	-15	-10	0	0	0	0	0	40	20	0	0	20	25	25	0	-40	30	150	150	200	18	660	240	900
9	200	150	-25	-25	-30	0	0	0	0	0	0	10	25	0	20	20	25	30	10	20	20	15	0	0	19	545	80	625
10	10	-20	0	10	0	0	0	0	0	0	0	0	0	0	0	0	15	15	5	-10	-25	-15	-10	0	-1	55	80	135
11																												
12																												
13																												
14																												
15																												
16																												
17																			0	0	0	0	-15	-15		0	30	30
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-30	-70	-4	0	100	100
19	-100	-50	0	0	0	-10	-10	0	0	0	0	0	10	25	25	20	0	-40	-50	-20	10	0	-10	-20	-9	90	310	400
20	70	70	-150	-180	-160	-90																				140	580	720
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30	-15	0	0	-10	-10	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	-10	-10	-1	20	55	75

JULY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	15	20	20	25	80	8	200	15	215
2	-60	-60	-20	0	0	0	0	0	0	0	0	0	0	10	10	10	0	0	0	0	0	0	0	0	-5	30	140	170
3	0	-75	-40	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-20	-10	0	-8	0	185	185
4	0	0	0	-10	-10	0	0	0	0	0	0	0														0	20	20
5	0	0	-25	-20	-10	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	-1	20	55	75
6	-5	-20	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-15	-10	0	0	-4	0	85	85
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	10	0	0	0	0	-20	1	40	20	60
8	-40	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0	0	20	50	1	90	60	150
9	10	-60	-70	-15	-10	0	0	0	0																	10	155	165
10																												
11																			0	0	0	0	0	0		0	0	0
12	-40	-25	-10	-20	0	0	0	0	0	0	0	0	0	0	0	10	20	10	0	0	0	0	0	0	-2	40	95	135
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	0	5	5
14	-30	-40	-25	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	0	0	-20	-6	0	155	155
15	-15	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-20	-2	0	50	50
16	-5	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	0	0	0	0	0	0	0	0	1	30	5	35
17	-5	-40	-30	-15	-5	0	0	0	-10	-10	0	0	50	70	40	20	5	0	0	0	0	30	75	40	9	330	115	445
18	110	70	-60	-70	-50	-30	-15	0	10	10	0	0	30	40	0	5	-10	0	-25	-30	-30	-20	-10	0	-3	275	350	625
19	0	0	0	0	-10	0	0	0	0	0	0	5	0	0	20	40	20	5	0	0	-10	-30	-70	-50	-3	90	170	260
20	-50	-20	-10	0	-20	-25	-25	-10	0	10	0	0	0	10	20	30	25	20	0	0	0	-10	-20	-10	-4	115	200	315
21	-10	-10	-20	-25	-20	-10	0	0	0	0	0	0	0	0	0	0	10	15	25	10	0	0	0	-10	-2	60	105	165
22	-10	-10	-50	-50	-25	-15	0	0	0	0	0	0	10	30	60	30	15	0	0	0	0	0	0	0	-1	145	160	305
23	0	-40	-50	-20	0	0	0	0	0	0	0	0	0	30	-40	0	-10	-60	0	50	120	100	80	60	9	440	220	660
24	40	-100	-60	120	-90	-50	-30	0	25	0	10	70	60	40	20	-20	-10	20	15	10	0	-10	-40	-80	-3	430	490	920
25	-70	-40	-15	0	0	0	0	0	0	0	-5	-15	0	10	0	10	15	0	0	0	0	0	-20	-50	-8	35	215	250
26	-20	0	0	0	0	0	0	0	0	0	0	0	0	10	15	20	20	0	25	20	0	0	-30	-80	-1	110	130	240
27	-85	-80	-15	-10	-25	-25	-10	0	0	0	0	-15	20	15	0	0	0	-10	0	-10	-20	10	180	50	-1	275	305	580
28	-50	-5	0	0	0	0	0	0	0	0	10	10	0	0	0	10	10	0	-20	-20	0	0	5	-15	-3	45	110	155
29	-10	0	0	0	0	0	0	0	0	0	0	0	10	30	20	25	15	10	0	0	0	0	0	0	4	110	10	120
30	0	0	0	0	0	0	0	0	0	0	0	10	10	15	5	0	0	0	0	0	0	-5	-10	-15	0	40	30	70
31	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	20	10	-15	-35	0	0	0	0	0	50	50	100
M	-12	-20	-18	-6	-10	-5	-3	0	1	0	1	3	7	12	7	9	7	2	1	-1	2	2	6	-3	-1	100	123	224
MPS	6	2	0	4	0	0	0	0	1	0	1	4	7	12	8	10	8	4	3	4	5	6	13	10				
MNS	18	23	18	10	10	5	3	0	0	0	0	1	0	0	1	1	1	3	2	4	3	4	8	13				

AUGUST

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	15	15	10	0	-10	-60	-40	0	-2	60	110	170
3	0	0	0	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-15	-10	-2	0	45	45
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-10	-10	-1	0	30	30
5	-40	-20	0	0	0	0	-15	0	0	0	-10	0	30	-100	-220	-240	-130	-50	50	40	-10	-30	30	50	-28	200	865	1065
6	10	20	70	-80	-40	-25	-10	0	0	0	0	10	15	0	20	40	25	20	-50	-20	-10	0	0	-10	-1	230	245	475
7	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	20	0	0	0	0	0	-40	-80	-3	40	120	160
8	-30	-25	-20	-20	-15	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	-50	-110	-9	15	270	285
9	-75	-50	-20	0	0	0	0	0	0	0	0	0	0	0	15	15	10	10	10	5	0	0	-10	-25	-5	65	180	245
10	-20	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	25	25
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-40	-30	-3	0	70	70
12	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-1	0	15	15
13	-40	-40	-20	0	0	0	0	-10	-10	-10	0	40	40	25	25	10	25	0	-35	-40	-40	80	220	50	11	515	245	760
14	-70	-25	-60	-30	-10	0	10	10	5	0	0	10	40	40	10	20	20	0	15	15	0	25	-25	-40	-2	220	260	480
15	-10	0	-10	0	-10	-5	0	-10	10	15	0	10	20	40	20	15	15	25	-50	-50	-15	0	0	0	0	170	160	330
16																						-10	-60	-40		0	110	110
17	-10	0	0	-10	-20	-15	0	5	20	15	0	0	0	25	50	40	20	-10	-10	0	0	0	15	0	5	190	75	265
18	-25	-30	0	0	0	0	-20	-30	-20	0	0	0	0	20	10	15	-20	-20	70	200	50	0	50	150	17	565	165	730
19	80	-20	-50	-25	-20	-30	0	10	0	0	0	50	60	30	30	0	10	20	20	0	-10	-50	-25	-10	3	310	240	550
20	-10	-20	0	-10	0	0	0	0	0	0	0	10	20	30	20	25	15	5	-50	-40	-10	140	-110	-50	-1	265	300	565
21	-20	-25	0	-20	-20	0	10	5	0	10	20	40	40	30	40	10	-80	0	40	0	-80	-25	0	0	-1	245	270	515
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	-13	-11	-5	-10	-6	-4	-1	-1	0	1	0	8	14	7	1	-1	-2	1	1	5	-6	2	-5	-8	-1	140	173	313
MPS	4	1	3	0	0	0	1	1	2	2	1	8	14	11	11	10	9	5	10	12	2	11	14	11				
MNS	17	12	9	10	6	4	2	2	1	0	0	0	0	5	10	11	11	4	9	7	9	9	15	19				

Resuming Tables.

Monthly Means. Storminess.

Horizontal Intensity. Unit Gamma.

Bossekop.

1932 - 1933		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
OCTOBER	MPS	0	0	0	0	3	4	4	3	7	11	15	20	30	42	46	44	27	20	11	6	2	0	0	0
NOVEMBER	MPS	1	0	0	2	5	4	2	4	2	5	9	9	18	25	29	40	41	28	19	11	5	0	0	0
DECEMBER	MPS	1	1	0	1	3	2	2	3	3	5	5	10	14	19	22	19	24	18	18	7	3	3	2	2
JANUARY	MPS	1	1	3	4	2	3	3	2	2	4	5	6	9	15	25	25	33	28	15	12	4	1	1	0
FEBRUARY	MPS	0	0	0	1	3	4	5	3	4	6	10	14	15	26	31	27	17	18	12	10	4	2	0	0
MARCH	MPS	0	1	1	1	1	3	3	4	9	12	19	24	28	31	40	41	36	23	17	7	2	1	0	0
APRIL	MPS	0	1	2	5	4	2	3	5	2	9	13	20	25	37	39	49	42	40	22	6	1	0	0	0
MAY	MPS	0	1	4	5	3	1	3	5	8	13	23	23	32	44	43	39	41	40	22	4	1	0	0	0
JUNE	MPS	0	2	2	3	1	4	3	5	10	12	17	30	25	29	40	36	37	37	18	3	1	1	0	0
JULY	MPS	1	1	2	2	2	3	2	3	6	8	12	22	37	45	47	42	32	22	18	8	3	2	1	0
AUGUST	MPS	0	0	0	1	2	3	5	7	6	12	14	25	46	59	59	57	38	38	20	2	1	3	0	0
MEAN		0	1	1	2	3	3	3	4	5	9	13	19	25	34	38	38	33	28	18	7	2	1	0	0
OCTOBER	MNS	90	64	28	14	2	3	1	2	2	1	1	1	1	0	1	1	2	7	10	38	84	81	106	96
NOVEMBER	MNS	24	10	12	14	9	6	8	3	4	1	0	0	0	0	0	0	0	7	6	5	35	75	67	43
DECEMBER	MNS	68	68	37	25	11	4	2	1	1	0	1	0	0	0	0	0	3	11	2	38	55	78	53	73
JANUARY	MNS	56	55	39	13	10	7	2	1	1	1	1	0	0	1	0	0	0	1	10	33	58	75	82	67
FEBRUARY	MNS	92	63	56	37	16	3	2	1	3	1	0	1	0	0	0	0	2	4	15	51	38	101	122	116
MARCH	MNS	96	84	59	34	20	17	6	2	2	1	1	0	1	1	1	0	0	9	22	47	61	89	113	114
APRIL	MNS	105	67	25	11	9	8	7	4	6	2	2	3	1	1	1	1	0	0	6	37	119	121	142	148
MAY	MNS	92	71	46	21	26	13	5	1	1	1	1	0	0	0	1	4	3	3	9	25	44	73	90	91
JUNE	MNS	80	97	63	72	28	11	4	3	1	1	2	1	1	1	1	1	0	0	3	19	46	61	84	101
JULY	MNS	66	50	25	18	7	3	0	2	0	0	1	1	1	0	0	0	0	0	1	12	27	39	69	74
AUGUST	MNS	46	37	35	19	6	4	5	4	1	0	1	1	0	0	1	1	1	0	17	75	73	64	82	76
MEAN		74	61	39	25	13	7	4	2	2	1	1	1	0	0	1	1	1	4	9	35	58	78	92	91
OCTOBER	MPS - MNS	-90	-64	-28	-14	1	0	3	1	5	10	15	19	29	41	45	44	25	14	2	-33	-82	-81	-106	-96
NOVEMBER	MPS - MNS	-23	-9	-11	-12	-3	-3	-6	1	-2	3	8	9	18	25	29	40	41	21	13	6	-31	-75	-67	-43
DECEMBER	MPS - MNS	-67	-68	-36	-24	-7	-2	0	2	2	4	4	10	14	19	22	19	21	6	16	-31	-53	-76	-51	-71
JANUARY	MPS - MNS	-55	-55	-36	-9	-8	-4	1	1	1	3	5	6	8	15	25	25	33	27	5	-21	-54	-74	-81	-67
FEBRUARY	MPS - MNS	-92	-63	-56	-36	-13	0	4	2	1	5	9	13	15	25	31	27	15	15	-3	-41	-34	-99	-122	-116
MARCH	MPS - MNS	-95	-83	-59	-33	-18	-14	-3	3	7	11	18	24	27	30	39	41	36	14	-6	-39	-59	-88	-113	-114
APRIL	MPS - MNS	-104	-65	-23	-5	-6	-6	-3	0	-4	7	11	18	24	36	38	48	42	40	15	-32	-118	-120	-142	-148
MAY	MPS - MNS	-92	-69	-42	-16	-23	-12	-2	4	6	11	22	23	32	43	42	35	38	37	13	-21	-43	-72	-90	-91
JUNE	MPS - MNS	-80	-95	-62	-70	-28	-7	-1	2	9	10	15	30	24	29	39	35	37	37	15	-16	-45	-60	-84	-101
JULY	MPS - MNS	-65	-49	-23	-15	-4	2	1	1	6	8	12	21	37	45	47	41	32	22	17	-4	-24	-37	-68	-74
AUGUST	MPS - MNS	-46	-37	-35	-18	-4	-2	-1	3	5	11	14	23	46	59	59	56	37	38	3	-72	-72	-62	-82	-76
MEAN		-74	-60	-37	-23	-10	-4	-1	2	3	8	12	18	25	33	38	37	32	25	8	-28	-56	-77	-91	-91

Declination. Unit Gamma. + West.

1932 - 1933		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
OCTOBER	MPS	0	0	0	1	3	6	6	5	3	3	5	9	11	15	14	8	13	9	6	1	0	0	0	0
NOVEMBER	MPS	1	1	0	1	3	4	5	4	2	3	3	3	4	3	4	3	6	3	2	2	1	0	0	0
DECEMBER	MPS	1	1	1	1	1	3	4	2	2	3	2	3	2	3	6	8	8	11	9	6	2	1	1	3
JANUARY	MPS	0	1	2	1	1	5	5	3	1	3	4	4	4	5	6	6	8	6	6	6	2	2	3	0
FEBRUARY	MPS	0	1	0	1	1	5	5	5	5	3	4	6	7	9	8	5	7	8	3	8	7	2	0	0
MARCH	MPS	0	0	0	0	1	2	3	2	0	1	2	7	6	8	8	7	7	4	6	4	1	1	0	0
APRIL	MPS	0	0	0	0	1	1	2	2	2	1	4	7	7	12	10	11	7	10	11	8	1	2	1	0
MAY	MPS	0	0	0	1	2	1	2	2	3	2	5	5	9	9	9	13	18	18	17	11	6	3	0	0
JUNE	MPS																								
JULY	MPS	1	0	0	0	1	2	1	1	1	1	3	5	4	4	5	4	4	4	5	3	2	1	0	0
AUGUST	MPS	0	0	0	0	2	3	3	4	4	4	4	5	7	11	17	20	17	19	15	4	2	2	0	0
MEANS		0	0	0	1	2	3	4	3	2	2	4	5	6	8	9	9	10	9	8	5	2	1	1	0
OCTOBER	MNS	36	28	16	10	2	0	1	1	1	1	0	0	0	1	1	4	4	4	2	9	24	31	36	31
NOVEMBER	MNS	7	4	6	5	3	2	2	0	1	1	0	1	1	1	2	6	3	7	8	8	9	21	22	12
DECEMBER	MNS	33	23	11	6	3	2	0	0	0	0	0	0	1	0	1	2	4	3	4	11	16	21	19	28
JANUARY	MNS	25	22	13	7	4	1	0	0	1	1	1	0	0	3	1	2	1	5	4	7	12	17	24	27
FEBRUARY	MNS	28	26	30	9	4	0	0	0	0	0	0	1	1	2	1	3	3	1	9	10	8	15	30	30
MARCH	MNS	41	39	32	16	7	1	0	1	2	3	2	1	0	1	2	2	3	8	3	5	12	32	23	35

APRIL	MNS	43	31	11	6	3	2	1	1	1	1	0	0	0	0	0	2	1	1	4	9	18	31	28	41
MAY	MNS	34	31	14	10	8	4	2	1	1	0	0	0	0	1	1	0	0	0	2	3	8	16	25	33
JUNE	MNS																								
JULY	MNS	32	29	14	11	3	3	2	2	1	1	0	0	0	0	0	0	1	0	0	2	4	8	23	27
AUGUST	MNS	17	19	18	6	1	1	1	2	0	1	1	0	0	0	1	1	0	0	0	18	17	19	26	28
MEAN		30	25	17	9	4	2	1	1	1	1	0	0	0	1	1	2	2	3	4	8	13	21	26	29
OCTOBER	MPS - MNS	-35	-28	-15	-9	2	6	6	4	3	2	5	9	11	14	13	5	9	5	4	-8	-24	-31	-36	-30
NOVEMBER	MPS - MNS	-6	-3	-6	-5	0	2	3	4	1	2	3	3	3	2	3	-3	3	-4	-6	-6	-8	-21	-22	-12
DECEMBER	MPS - MNS	-32	-22	-10	-6	-1	2	3	2	1	2	2	3	1	3	5	6	4	8	5	-4	-14	-21	-18	-25
JANUARY	MPS - MNS	-24	-21	-11	-6	-3	4	5	3	1	2	3	3	3	3	5	4	6	2	2	-1	-11	-15	-21	-27
FEBRUARY	MPS - MNS	-28	-26	-29	-9	-2	5	5	5	5	3	4	5	6	6	7	1	4	7	-6	-2	0	-13	-30	-30
MARCH	MPS - MNS	-41	-39	-32	-16	-5	1	2	1	-2	-2	0	6	6	8	6	5	4	-4	2	-1	-11	-32	-23	-36
APRIL	MPS - MNS	-43	-31	-11	-6	-2	-1	1	1	1	0	4	7	7	11	10	9	6	9	6	-1	-18	-29	-27	-41
MAY	MPS - MNS	-34	-31	-13	-9	-7	-3	0	1	2	2	4	5	9	8	8	13	17	17	15	8	-3	-13	-25	-33
JUNE	MPS - MNS																								
JULY	MPS - MNS	-31	-29	-14	-11	-2	-1	-2	-2	-1	0	3	5	4	4	5	4	3	4	5	1	-2	-7	-23	-27
AUGUST	MPS - MNS	-17	-19	-18	-6	1	1	3	2	4	3	3	5	7	10	16	19	16	19	14	-13	-15	-17	-26	-28
MEAN		-29	-25	-16	-8	-2	2	3	2	2	1	3	5	6	7	8	6	7	6	4	-3	-11	-20	-25	-29

Vertical Intensity. Unit Gamma.

1932 - 1933		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
OCTOBER	MPS	9	1	0	0	0	0	0	1	2	6	7	10	13	15	14	13	13	10	6	8	16	11	15	1
NOVEMBER	MPS	2	0	0	0	0	1	1	2	2	2	2	4	9	8	11	11	6	5	3	2	1	4	7	3
DECEMBER	MPS	1	0	0	0	0	0	0	0	1	1	2	3	5	6	7	6	4	2	2	1	0	0	0	1
JANUARY	MPS	3	4	0	0	0	0	1	1	3	3	2	2	3	5	8	8	6	4	3	1	3	6	5	2
FEBRUARY	MPS	5	2	2	0	0	0	0	0	1	2	5	9	9	6	5	8	8	6	3	4	2	8	16	14
MARCH	MPS	10	8	0	0	1	0	0	3	1	3	4	6	8	5	11	13	11	10	7	5	9	3	9	1
APRIL	MPS	4	2	0	0	0	1	1	0	1	3	3	3	7	8	12	11	10	8	7	2	15	7	26	6
MAY	MPS	28	15	10	0	0	0	0	0	0	2	4	8	9	8	8	9	7	3	7	10	18	28	29	34
JUNE	MPS																								
JULY	MPS	6	2	0	4	0	0	0	0	1	0	1	4	7	12	8	10	8	4	3	4	5	6	13	10
AUGUST	MPS	4	1	3	0	0	0	1	1	2	2	1	8	14	11	11	10	9	5	10	12	2	11	14	11
MEAN		7	4	2	0	0	0	0	1	1	2	3	6	8	8	10	10	8	6	5	5	7	8	13	8
OCTOBER	MNS	29	31	21	17	10	7	3	1	0	0	0	0	2	6	8	8	16	12	7	7	17	21	22	28
NOVEMBER	MNS	15	7	7	8	9	7	5	3	2	1	0	0	0	0	2	2	6	6	12	12	12	18	17	18
DECEMBER	MNS	18	13	14	10	5	3	1	1	0	0	0	0	0	0	0	2	7	3	5	20	29	19	16	18
JANUARY	MNS	22	19	20	16	11	8	6	1	0	0	0	0	0	1	4	7	8	12	15	15	17	16	15	17
FEBRUARY	MNS	22	23	20	29	21	16	11	6	3	1	0	0	0	0	11	11	11	8	17	30	14	19	26	31
MARCH	MNS	12	15	21	26	19	16	11	4	3	1	0	0	0	0	0	2	6	7	10	6	11	19	23	20
APRIL	MNS	21	21	16	11	8	5	3	1	1	0	0	0	2	0	0	1	1	3	6	12	10	10	12	12
MAY	MNS	7	11	22	20	17	13	6	2	0	0	0	0	2	4	13	10	11	6	4	11	5	2	3	8
JUNE	MNS																								
JULY	MNS	18	23	18	10	10	5	3	0	0	0	0	1	0	0	1	1	1	3	2	4	3	4	8	13
AUGUST	MNS	17	12	9	10	6	4	2	2	1	0	0	0	0	5	10	11	11	4	9	7	9	9	19	19
MEAN		18	18	17	16	12	8	5	2	1	0	0	0	1	2	5	6	8	6	9	12	13	14	16	18
OCTOBER	MPS - MNS	-20	-31	-21	-17	-10	-7	-3	0	1	6	7	10	11	10	6	5	-3	-2	-1	1	0	-10	-8	-27
NOVEMBER	MPS - MNS	-13	-7	-7	-8	-9	-6	-4	-2	-1	1	1	4	9	8	9	9	0	-1	-9	-10	-11	-15	-10	-15
DECEMBER	MPS - MNS	-17	-12	-14	-10	-5	-3	-1	-1	0	1	2	3	5	6	7	4	-3	1	-2	-19	-29	-19	-16	-17
JANUARY	MPS - MNS	-19	-15	-20	-16	-11	-8	-5	-1	2	2	2	2	3	4	5	1	-3	-8	-11	-13	-14	-10	-10	-15
FEBRUARY	MPS - MNS	-17	-21	-19	-29	-21	-16	-11	-5	-2	1	5	9	9	6	-6	-3	-3	-1	-14	-26	-12	-11	-11	-17
MARCH	MPS - MNS	-2	-6	-21	-26	-18	-16	-11	-1	-1	2	4	6	8	5	11	11	5	3	-2	-1	-2	-16	-14	-19
APRIL	MPS - MNS	-17	-19	-16	-11	-8	-4	-3	0	0	3	3	3	5	8	12	10	9	5	1	-9	5	-3	15	-6
MAY	MPS - MNS	21	4	-11	-20	-17	-13	-6	-2	0	1	3	7	7	4	-5	-1	-4	-3	3	-2	13	25	26	27
JUNE	MPS - MNS																								
JULY	MPS - MNS	-12	-20	-18	-6	-10	-5	-3	0	1	0	1	3	7	12	7	9	7	2	1	-1	2	2	6	-3
AUGUST	MPS - MNS	-13	-11	-5	-10	-6	-4	-1	-1	0	1	0	8	14	7	1	-1	-2	1	1	5	-6	2	-5	-8
MEAN		-11	-14	-15	-15	-12	-8	-5	-1	0	2	3	6	8	7	5	4	0	0	-3	-8	-5	-6	-3	-10

Bodö. Declination. Storminess (+ W). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

SEPTEMBER 1932

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1														0	0	-3	8	-18	-2	0	0	0	0	-10		(8	33	41)
2	-22	-45	-28	-30	-7	-12	3	0	0	0	9	12	14	15	10	6	2	0	0	0	0	-15	-10	-5	-4	71	174	245
3	-8	0	0	0	0	0	0	0	0	0	0	0	3	0	0	-3	-2	-2	0	2	0	-12	1	5	-1	11	27	38
4	-4	0	0	0	0	0	0	0	0	0	0	0	0	2	-3	-3	0	-7	1	8	-13	-45	-22	-10	-4	11	107	118
5	0	0	0	0	0	0	0	0	0	0	2	5	4	0	7	-10	-35	0	0	0	0	4	-4	-24	-2	22	73	95
6	-11	-10	-6	-11	-13	-13	-13					15	6	-32	30	60	62	20	18	-15	-32	-125	-40	0	-5	211	320	531
7	2	-2	0	0	0	0	0	0	3	2	-3	0	3	0	0	0	0	2	-12	-15	2	-40	20	-18	-2	34	90	124
8	-10	-7	-47	-120	-110	-22	0	5	-3	-5	-3	0	3	0	0	2	6	6	-40	2	-56	-20	-18	-40	-20	24	501	525
9	-28	-57	-100	-60	-18	-12	-6	0										-11	0	-12	-30	-22	-12	0	-18	0	368	368
10	-2	-2	0	0	0	-2	0	0	0	0	0	0	0	0	0	-3	-3	-3	-3	3	0	0	0	2	-1	5	18	23
11	-10	-32	-6	-4	-5	0	0	0	0	0	-1	3	0	-3	-3	0	0	0	0	0	0	-20	-2	0	-3	3	86	89
12	2	4	0	0	-2	0	0	0	0	0	0	1	0	4	0	0	0	-2	-2	0	0	-10	-22	-4	-1	11	42	53
13	0	-3	0	0	4	0	0	0	0	0	0	0	0	-4	0	-9	-6	0	4	0	0	-8	-2	0	-1	8	32	40
14	-2	0	0	0	-5	-5										0	0	0	3	3	-6	-20	-3	5	-1	11	41	52
15	0	0	0	0	0	0	0	0	0	0	6	2	8	3	3	4	-7	-1	0	0	0	0	-16	-16	-1	26	40	66
16	-2	0	0	0	0	0	0																		0	0	2	2
17							0	0	0	0	0	3	4	2	4	-4	-4	0	0	-11	-2	0	0	16	0	29	21	50)
18	10	0	0	0	2	0	0							13	3	4	0	-7	0	3	-3	-15	-55	-170	-9	35	250	285
19	-70	-35	-22	-14	-6	-3	0	0	0	-2	0	25	11	4	15	32	-5	10	8	3	0	-5	-42	-28	-5	105	232	337
20	-20	-32	-25	-5	12	-4	0			0	0	-2	-5	0	4	-10	0	0	0	-4	-10	-22	-3	-23	-6	16	159	175
21	13	-18	-16	-3	-5	5	10	0	0	0	-6	0	0	3	4	0	0	-8	-3	-20	-12	0	3	-1	-2	38	92	130
22	5	0	-8	-12	25	22	-6	0	0	5		12	3	12	5	0	-18	-35	-3	-16	-30	-120	-50	-32	-10	89	330	419
23	-12	-40	-25	-5	-8	11	15																			(25	90	115)
24									0	0	3	-3	22	40	50	10	-5	5	-10	-165	0	-22	-105	-70		(130	380	510)
25	-42	-115	-32	-90	-63	-12	-6					0	20	40	65	75	10	20	26	45	-65	-90	-130	-75	-17	301	720	1021
26	-45	-14	0	-5	-3	7	10	10								0	0	0	0	-45	-25	-35	-28	-20	-12	27	230	257
27	-70	-30	-38	-12	0	-3	0						-2	-1	11	-10	-10	-15	-8	-47	-26	-6	0	8	-14	19	278	297
28	3	-12	-10	-12	0	0	7	2	0	0	0	0	0	0	2	0	3	0	-2	-5	0	-8	-8	0	-2	17	57	74
29	-30	0	-27	-8	-2	0	0	0	0	8	4	6	0	0	0	0	0	3	13	-16	-30	-33	-10	-65	-8	34	223	257
30	-43	-16	-26	-12	-8	-3	0	-2	-3	2	0	0	3	1	4	4	0	0	0	3	4	-30	-55	-6	-8	21	204	225
M	-15	-17	-15	-15	-8	-2	0	1	0	0	0	4	4	4	9	5	0	-2	0	-11	-12	-26	-18	-21	-5	44	175	219
MPS	1	0	0	0	2	2	1	1	0	1	1	4	4	6	9	7	3	2	2	2	0	0	1	1				
MNS	16	17	15	15	10	3	1	0	0	0	1	0	0	2	0	2	3	4	3	13	12	26	19	22				

OCTOBER

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-2	15	-2	2	1	0	0	0	0	0	0					1	-7	-10	0	0	-2	-5	18	2	1	39	28	67
2	1	0	0	2	0	0	0	0	0	0	0						2	0	-9	-15	-7	-2	0	8	-2	11	35	46
3	-13	-17	-10	-3	0	0	3											0	0	0	0	-2	0	3	-2	6	45	51
4	0	-3	0	0	0	0	0							0	2	-2	-3	-9	4	0	0				-1	6	17	23
5								-1	-1	3	0	0	4	3	-3	-11	-1	-3	-20	-1	0	4	-2	11	-1	25	42	67
6	10	0	-2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	10	0	10	3	2	10	2	51	2	53
7	23	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	10	2	44	0	44
8	5	-1	0	0	2	2	2	0	0	0	0	0	0	-3	2	2	5	11	35	-8	-22	-18	3	0	1	69	52	121
9	11	-10	3	0	0	0	0	0	0	-2	4	3	0	0	20	18	0	8	0	2	0				3	69	12	81
10	-45	-18	-22	-38	0	0	0	-2	2	1	0	5	4	0	-10	-60	-30	0	-5	-10	15	0	-2	2	-9	29	255	284
11	4	4	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	2	-4	-13	-15	-2	3	-12	-1	17	46	63
12	-2	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	-23	-13	-6	2	-6	7	88	95
13	0	0	0	0	0	0	0	0	0	0	0	3	0	2	-8	-10	-1	-4	-1	2	0	0	6	5	0	18	24	42
14	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	-7	0	3	8	11
15	-7	-18	-10	-31	12	16	3	0	5	23	16	20	45	70	50	-8	120	40	30	35	-16	-38	-10	-15	14	485	153	638
16	-70	-60	-26	13	20	35	27	56	20	0	0	-13	0	2	0	-22	-21	-28	2	0	-1	-4	2	-2	-3	177	247	424
17	16	12	-11	-2	0	0	0	0	-2	0	-3	0	3	5	-10	0	-30	-32	-3	-18	-43	-18	-33	-53	-9	36	258	294
18	-8	-19	3	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	-13	6	4	0	0	-1	8	-1	21	44	65
19	6	0	0	0	-1	-2	2	8	0	-2	4	3	2	-8	0	11	12	-3	0	0	0	0	3	-4	1	51	21	72
20	-1	0	0	0	0	-2	0	0	0	1	0	8	12	10	10	38	70	70	15	-30	-50	-255	-220	-125	-27	234	683	917
21	-160	-360	-250	-150	-13	18	20	12	2	-8	12	8	10	-13	-1	-11	-3	7	0	-13	0	-2	3	1	-37	95	984	1079
22	1	-1	0	0	0	0	0	0	0	-3	0	4	0	-3	5	15	30	40	25	25	-10	-55	-42	-12	1	145	126	271
23	-3	-40	-10	-5	-15	0	0	0	0	5	0	7	10	8	20	-18	-5	-3	3	5	-11	-15	-40	-12	-5	58	177	235
24	4	0	2	-3	-5	0	0	4	-2	3	0	4	10	-10	0	-2	0	-15	15	-20	-45	-30	-52	-11	-6	42	195	237
25	0	5	6	-2	-3	-10	0	3	2	-4	0	0	0	3	0	-25	3	0	-1	-14	-26	-16	-9	0	-3	22	110	132
26	2	9	0	-5	-3	0	0	0	-2	-1	0	0	-2	0	-2	-6	-2	-1	0	-3	-9	-4	-2	2	-2	13	42	55
27	0	0	3	0	0	0	-2	0	4	8	6	20	12	22	35	12	0	0	0	-11	-22				4	122	35	157
28								-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	20	20
29	0	0	0	0	0	0	0	0	5	2	2	0	0	0	0	0	0	0	0	-7	-2	-6	-56	-56	-5	9	127	136
30	-32	-30	-24	-5	-10	-6	-3	0	0	5	16	25	14	3	-5	-5	-2	0	0	-13	10	0	-2	0	-3	73	137	210
31	2	-4	0	3	0	3	6	0	0	6	0	3	8	10	22	10	-2	0	0	0	-2	-4	0	8	3	61	12	93
M	-9	-19	-12	-8	-1	2	2	2	1	1	2	4	5	4	5	-2	4	2	3	-3	-9	-16	-15	-8	-3	66	129	195
MPS	3	2	1	1	1	3	0	3	1	2	2	4	5	5	6	4	8	6	5	2	1	0	1	2				
MNS	12	21	13	9	2	2	2	0	1	1	0	0	0	1	1	6	4	4	1	6	10	16	16	10				

NOVEMBER

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	2	4	-22	-10	11	0	-12	17	6	15	20	22	25	10	3	0	2	0	0	2	-18	6	-5	-6	3	145	73	218
2	-30	-10	-16	-15	-8	7	0	3	-8	-3	0	0	0	0	-3	0	-2	2	-22	-10	0	0	0	0	-5	10	127	137
3	-3	0	0	0	2	2	4	3	0	-6	-2	0	0	0	0	0	0	0	0	-3	-3				0	11	17	28
4								0	3	-3	0	0	0	0	-2	-3	0	-26	0	8	6	-55	-45	0	-5	17	134	151
5	0	-22	0	-8	0	0	0	0	2	0	0	0	2	0	3	0	-15	-16							-2	7	61	68
6															0	0	0	0	-2	-2	-19	-11	-6	0		(0	40	40)
7	17	6	0	-6	-2	0	0	0	0	0	0	0	0	0	0	0	-45	-52	-16	-10	-10	-8	-2	0	-5	23	151	174
8	0	0	0	0	-2	0	0	0	0	0	0	0	0	0	0	0	0	-2	-3	-6	-15	-8	-12	-5	-2	0	53	53
9	0	0	0	0	3	2	0	0	0	-2	0	-2	-6	-7	-4	-2	0	0	-2	0	-8	-12	-2	5	-2	10	47	57
10	0	3	3	0	0	2	0	0	0	4	3	0	0	0	0	0	-2	-2	-6	-7	-8	-10	-2	-8	-1	15	45	60
11	5	8	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						1	18	0	18
12								0	0	0	0	2	0	-13	3	-13	20	-8	-6	-42	-36	-17	-8	0	-5	25	143	168
13	0	-5	0	8	8	-4	0	0	0	0	0	2	8	0	12	0	11	-10	-16	-10	-13	-26	-19	-3	-2	49	106	155
14	0	0	-5	0	-3	0	18	5	0																	(23	8	31)
15												0	0	-6	-3	0	0	-25	-45	-11	0	-6	-30	-14		(0	140	140)
16	-8	-22	-30	-20	25	23	35	25	15	10	0	0	0	0	-13	-45	0	-45	-80	0	-50	-88	-130	-45	-18	133	576	709
17	0	-5	-5	-7	0	8	7	5	-8	-6	-6	0	0	0	-30	0	-10	-10	-5	0	10	-10	-15	-25	-5	30	142	172
18	-16	0	-10	-6	0	2	0	0	0	0	9	7	3	0	7	-28	-22	-4	-16	-8	-4	-18	-16	0	-5	28	144	172
19	-3	0	8	-3	0	0	0	0	-3	-3	-3	0	4	5	5	0	-3	0	-8	-15	-8	-13	-16	-16	-3	22	94	116
20	3	0	-10	0	0	0	8	0	0	-2	-4	-4	-5	0	0	-26										(11	51	62)
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												
M	-2	-2	-5	-4	2	3	4	3	0	0	1	2	2	-1	-1	-6	-3	-11	-13	-7	-11	-18	-19	-7	-4	34	120	154
MPS	1	1	1	1	3	3	5	0	1	1	2	2	2	1	1	0	2	0	0	1	1	0	0	0				
MNS	3	3	6	5	1	0	1	3	1	1	1	0	1	1	2	6	5	11	13	8	12	19	19	7				

Bodö. Declination. Storminess (+ W). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

DECEMBER 1932

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1																												
2																	0	-2	0	-23	-31	-13	-2	0		(0	71	71)
3	0	-2	-2	12	2	0	0	0	-1	4	7	3	3	0	0	0	0	0	2	2	-8	-16	-6	-12	-1	35	47	82
4	-18	-32	-18	-15	0	0	0	0	-1	0	0	-2	6	6	0	0	-3	0	0	2	0	0	-10	-5	-4	14	101	115
5	8	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	-2	-8	0	-9	-20	-27	-2	14	66	80
6	-10	10	0	0	0	0	0	0	0	2	4	9	0	0	0	0	0	0	0	-3	0	-3	-2	-30	-1	25	48	73
7	-17	0	0	-3	-2	0	0	1	0	0																(1	22	23)
8								0	0	0	2	12	12	10	10	5	6	7	11	2	0	-14	-35	-55		(77	104	181)
9	-58	-45	-30	-22	-9	13	10	-5	-5	3	3	0	-8	0	0	-23	-6	0	0	0	-45	-45	0	0	-12	19	301	320
10	18	0	12	0	0	0	-3	-2	-4	3	0	4	8	0	10	0	0	-18	-20	-34	-26	-21	-28	-10	-5	55	166	221
11	2	4	0	0	0	0	0	0	0	0	0	0	-5	-3	0	0	-3	-8	0	-5	-15	-33	-20	0	-4	6	92	98
12	11	0	0	3	10	4	0	0	0	-3	2	-2	0	0	0	0	0	0	0	0	0	0	0	0	1	30	5	35
13	0	0	0	3	3	0	2	0	0	0	0	0	10	13	22	18	40	-6	0	-20	-16	-55	-45	-30	-3	111	172	283
14	-25	0	-5	-5	-3	3	4	0	0	0	4	3	0	10	7	18	35	140	65	-5	-30	-180	-145	-230	-14	289	628	917
15	-120	-85	-12	22	5	2	0	0	-5	5	0	0	2	3	-18	13	12	4	32	25	-35	-55	-92	-170	-20	125	595	720
16	-120	-110	-58	-52	-50	-18	2						6	2	-3	12	-5	-53	45	20	16	-50	-21	-6		(103	546	649)
17	-15	20	-6	0	-4	9	8	0	0	0	0	-2	0	-11	18	9	-32	8	9	-72	0	0	-9	8	-3	89	161	250
18	0	4	-5	-8	8	-13	0	-15	0	0	-3	0	0	-12	-10	0	-2	3	-9	-9	-8	0	-8	0	-4	15	102	117
19	0	0	0	0	0	0	0	0	-5	-2	-5	0	3	3	-7	-8	-28	5	0	-25	-53	-33	-15	-10	-7	11	181	192
20	0	20	6	0	3	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-2	0	-3	0	2	31	7	38
21	0	7	2	0	0	0	0	0	0	0	0	0	0	-7	-4	0	0	0	0	0	0	-5	-2	0	0	9	18	27
22	0	0	0	5	0	0	0	0	0	0	0	0	0	3	2	2	2	-8	-10	-14	-27	-7	-1	0	-2	14	67	81
23	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	2	3	3	3	4	0	-2	-2	0	1	19	4	23
24	15	0	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-8	-12	-10	0	0	0	-1	15	35	50
25	0	0	0	0	0	0	0	2	2	0	0	2	0	5	10	0	0	2	0	18	-45	-35	-16	-15	-3	41	111	152
26	-55	-55	-26	0	-7	-3	0	0	-2	-2	0	0	3	2	10	11	0	3	-30	-10	22	12	8	8	-5	79	190	269
27	8	-30	-45	-25	0	0	0	0	-2	16	0	2	0	2	0	0	0	3	-6	16	-12	-5	-3	-3	-3	47	131	178
28	0	-5	-7	0	-3	0	4	0	-4	-5	-4	-3	11	15	11	0	0	20	-10	-13	12	-12	-38	-20	-2	73	124	197
29	-10	0	0	-6	0	0	0	0	0	2	-2	3	4	9	7	15	3	0	0	0	-12	-5	-10	-2	0	43	47	90
30	0	-3	-2	0	-10	-7	5	1	5	0	0	0	8	4	13	12	0	8	0	0	10	6	-16	-14	1	72	52	124
31	-40	-10	-16	-10	0	-8	6	-1	7	3	6	6	-2	8	10	-5	16	20	-6	30	-26	-8	25	58	3	195	132	327
M	-15	-11	-8	-3	-2	-1	1	-1	-1	1	1	1	2	2	3	3	1	5	2	-4	-12	-20	-18	-19	-4	58	153	211
MPS	2	2	1	2	1	1	1	0	0	1	1	2	3	3	5	4	4	8	6	4	2	1	1	3				
MNS	17	13	9	5	3	2	0	1	1	0	0	0	1	1	1	1	3	3	4	8	14	20	19	22				

JANUARY 1933

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	-22	-10	-10	-2	2	-2	2	0	0	0	2	0	0	2	0	3	-18	-14	-13	-30	-35	-45	11	0	-7	22	201	223
2	1	-32	-20	-5	1	0	0	0	0	-1	7	0	2	-3	0	0	0	5	-15	-45	-8	-15	-15	-12	-6	16	171	186
3	-8	10	6	0	0	2	0	2	0	0	-1	-1	10	2	0	0	1	1	1	-8	-10	-4	-10	3	0	38	42	80
4	-4	-7	-1	-2	0	0	0	0	-2	0	0	0	-1	0	-2	-2	0	-6	0	0	0	-3	-4	-1	-2	0	35	35
5	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
6	1	4	3	-3	-7	6	12	3	4	-6	-2	10	5	3	-5	10	1	1	-2	-11	-9	-6	-20	-48	-2	63	119	182
7	-56	-18	0	5	8	0	-1	0	-1	-4	0	2	0	0	-3	1	0	4	18	20	2	0	-2	-3	-1	60	88	148
8	-2	3	0	0	0	-1	1	0	2	0	-3	0	2	-1	0	-2	-2	2	0	0	0	-8	5	3	0	18	19	37
9	2	0	2	0	-3	0	0	0	0	0	0	0	-1	-6	-6	7	5	0	0	-4	-20	-13	-8	-5	-2	16	66	82
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	0	0	-8	-11	-8	-1	0	29	29
11	1	1	-2	0	0	0	0	0	0	0	0	-4	-3	2	0	0	0	0	0	-1	-1	-1	-2	0	0	4	14	18
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	-3	1	-8	0	1	12	13
13	-5	-4	2	2	0	0	0	0	0	1	6	2	2	0	0	0	0	3	9	3	7	-1	-6	2	1	39	16	55
14	-1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	-20	-37	-60	-26	-5	23	144	167
15	-25	15	10	2	-10	14	53	22	0	15	15	10	2	6	12	-2	-1	7	-2	-16	-3	-43	-26	-1	2	183	129	312
16	-8	3	8	-10	-3	7	-1	-3	-2	-2	-4	8	4	0	1	-7	-3	0	0	-5	0	0	0	0	-1	31	48	79
17	-1	0	0	-6	0	-2	-2	0	0	0	-3	-12	-7	2	0	0	0	0	2	6	2	0	0	0	-1	12	35	47
18	0	0	0	0	0	0	0	0	0	-5	-5	0	0	0	0	0	0	1	-5	-18	-10	-9	1	5	-2	7	52	59
19	6	-1	0	1	4	0	0	0	0	2	0	-1	8	0	18	-12	6	0	-4	-40	-18	-10	-38	-72	-6	45	196	241
20	-40	-12	1	-5	-4	61	35	30																		(127)	(61	(188)
21									0	0	2	8	3	0	0	0	2	1	0	0	-4	-18	-8	-2		(16	32	48)
22	0	-2	0	6	2	-4	3	2	0	0	0	9	10	0	6	32	46	18	25	-50	-35	-5	-95	-50	-4	150	241	391
23	-50	-26	-8	0	-7	2	4	2	0	-5	0	-10	3	6	0	6	10	-5	-5	-18	-25	0	-5	-105	-10	33	269	302
24	-70	-98	-35	7	-8	-5	0	0	-2	0	0	2	-3	0	-6	-2	13	7	2	-3	-5	0	-20	-23	-10	31	280	311
25	-50	-38	-16	-5	0	0	0	3	2	-20	-2	0	0	0	-5	3	5	-2	-13	-8	-10	-12	-50	-90	-13	13	319	332
26	-35	-17	-15	-25	-15	-2	3	0	-12	-3	-2	8	6	5	-12	0	0	-5	-5	-13	-55	-30	-35	-60	-13	22	331	353
27	-60	3	-13	-11	-12	20	5	6	0	0	0	3	8	0	10	-6	26					-56	-45	-56	-9	78	259	337
28	-30	-58	-30	8	-10	0	3	0	0	-2	0	-2	3	-45	0	-37	-35	0	-50	-20	-27	-55	-75	5	-19	19	474	493
29	-40	-35	-6	2	0	0	-1	-1	0	-2	-6	0	0	0	16	0	-11	-2	11	-9	-20	-5	-6	0	-5	29	144	173
30	0	-12	-20	-18	-10	0	2	2	-3	-7	-5	3	0	0	-5	-12	0	0	0	0	6	22	-23	-21	-4	35	136	171
31	-21	-22	-10	-12	0	0	0	0	-3	2	-3	-2	0	0	-10	3	0	-25	-10	-5	0	5	-19	-10	-6	10	152	162
M	-17	-12	-5	-2	-2	3	3	2	-1	-1	0	1	2	-1	0	-1	2	0	-2	-9	-10	-12	-19	-19	-4	39	142	181
MPS	0	1	1	1	1	4	4	2	0	1	1	2	2	1	2	2	4	2	2	2	1	1	1	1				
MNS	18	13	6	3	3	1	0	0	1	2	1	1	0	2	2	3	2	2	4	10	11	13	19	20				

FEBRUARY

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4	0	0	-6	-10	-9	-1	0	32	32
2	-1	0	-8	-12	-3	0	-5	0	0	0	8	0	3	-6	2	0	-3	18	-3	-8	0	-10	-8	-2	-2	31	72	104
3	0	3	0	-3	0	0	0	0	0	0	0	0	0	-2	9	-3	0	0	0	0	0	-2	-16	-31	-2	12	57	69
4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	9	3	-15	-3	-2	-18	-2	-1	23	40	63
5	-10	0	-3	-10	-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	32	32
6	1	3	9	1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-9	-7	0	0	0	14	18	32
7	0	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0	5	0	-3	-4	-4	0	0	0	0	25	11	36
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	-28	-30	-15	-16	-4	0	92	92
9	-7	-15	-13	-8	-3	7	2	0	0	0	0	0	8	6	16	26	15	5	8	13	13	-5	-8	-9	2	119	65	184
10	-6	-6	-12	-8	-5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-12	-3	-1	-2	0	54	54
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-3	0	0	-1	0	13	13
12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
13	0	0	0	0	0	0	0	0																		(0	0	0)
14									3	7	2	7	8	6	3	0	0	0	-6	-45	-68	-25	-6	-3		(36	163	199)
15	-3	6	2	-5	0	8	3	3	2	2	1	18	13	12	4	-15	-37	-5	-6	0	-3	10	-10	-3	0	84	87	171
16	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	-6	-4	0	0	0	3	10	13
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	15	-5	0	2	-3	1	24	8	32
19	-6	-26	-25	-25	-3	-6	0	0	-2	-4	10	11	20	33	20	2	10	-10	-70	-140	-5	-20	-45	-70	-15	106	457	563
20	-200	-270	-90	-15	-3	0	2	0	0	0	18	13	19	0	1	-12	-5	-10	-22	-5	-15	-13	-22	-65	-25	53	747	800
21	-15	-26	-68	-50	10	0	0																			(10	159	169)
22																												
23																												
24																				10	5	-35	-60	-16		(15	111	126)
25	-15	5	-48	-46	-25	-13	7	6	0	0	-2	6	0	0	-9	-22	-10	-42	-75	6	-6	35	-26	-75	-16	65	444	509
26	-70	-130	-30	-25	-10	0	15	2	0	0	12	10	0	8	-11	-27	-15	-19	-20	-3	-20	-70	-70	-18	-20	47	538	585
27	-3	-5	-12	0	1	-3	2	-1	0	11	14	0	12	-6	2	0	0	0	0	-2	-2	5	-30	-22	-2	42	86	128
28	-26	-36	-22	-17	-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	109	109
M	-16	-21	-13	-9	-2	0	1	0	0	1	3	3	4	2	1	-2	-2	-2	-8	-8	-6	-8	-14	-14	-5	32	155	187
MPS	0	1	0	0	0	1	1	0	0	1	3	3	4	3	2	1	1	2	1	2	1	2	0	0				
MNS	17	21	14	9	3	1	0	0	0	0	0	0	0	1	1	3	3	4	9	10	7	10	14	14				

Bodö. Declination. Storminess (+ W). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

MARCH 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-18	-35	-12	-22	-7	0	0	0	-2	9	10	10	8	8	10	2	8	3	0	-20	-25	-6	-2	10	-3	78	149	227
2	-1	-5	5	0	0	0	0	0	2	2	0	2	5	0	0	0	0	0	0	-26	-17	-26	-22	-35	-5	16	132	148
3	-11	-9	-5	-7	-4	2	0	0	0	0	5	5	6	8	0	3	6	2	3	-12	-25	-15	-5	-4	-2	40	97	137
4	-1	-2	-8	-10	2	0	0	0	0	-2	-2	5	0	0	0	0	0	2	8	-10	-17	-15	-12	-4	-3	17	83	100
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-10	2	-5	0	0	0	4	15	19
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-6	0	0	0	0	0	0	0	0	0	2	6	8
7	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3	0	0	9	0	9
8	7	7	-3	0	0	0	0	0	0	0	0	3	13	0	1	0	-4	1	-2	0	-5	-14	-15	-15	-1	32	58	90
9	-10	-2	-8	-3	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	-3	-1	4	26	30
10	-5	12	-4	-3	0	0	-3	-5					0	0	0	0	0	0	0	0	-18	-30	-17	2	-3	14	85	99
11	-45	-50	-38	-20	-8	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	-13	-4	2	0	-7	12	178	190
12	0	0	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	5	2	0	0	-6	0	15	8	23
13	-6	-4	0	3	5	-3	0	3	0	0	0	10	8	2	5	8	-3	0	0	0	0	8	0	0	2	52	16	68
14	0	-5	-3	0	0	4	12	0	-3	0	0	6	-2	3	2	0	-12	0	-8	0	2	0	0	0	0	29	33	62
15	0	0	0	0	0	0	0	0	0	0	0	8	10	8	-2	0	0	0	0	0	0	-5	-6	0	1	26	13	39
16	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-11	0	0	0	0	2	0	13	11	24
17	0	0	0	0	0	0	0	0																		(0	0	0)
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												
31																												
M	-5	-6	-5	-4	-1	0	1	0	0	1	1	3	4	2	1	0	0	1	0	-5	-7	-7	-5	-3	-1	22	57	79
MPS	1	1	0	0	0	0	1	0	0	1	1	3	4	2	1	1	1	1	1	0	0	1	0	1				
MNS	6	7	5	4	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5	8	7	5	4				

APRIL

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1																												
2																												
3																												
4																												
5																												
6																												
7															0	0	0	-18	-28	-20	0	-12	0	-6		(0	84	84)
8																					0	0	0	3	-4	14	89	113
9	-25	-35	-15	-3	0	0	-6	6	3	-5	2																	
10	1	0	0	0	0	0	0	0	0	0	-2	2	5	5	0	-25	0	0	-22	-5	0	-1	0	0	-2	13	55	68
11	0	0	0	0	0	0	0	0	0	2	1	0	10	5	0	0	0	0	0	0	-5	-2	-4	0	0	18	11	29
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
14	0	0	0	0	0	0	0	0	0	3	10	15	13	13	8	14	18	22	32	30	-11	0	-25	-15	6	178	40	218
15	0	-3	-7	-10	-10	-5	10	13	5	0	12	17	15	5	19	12	10	26	35	62	20	10	-60	-85	4	271	180	451
16	-30	-20	-15	-9	-9	15	0	0	0	2	3	7	9	18	-20	-20	-2	-4	-30	-105	-55	0	-12	-25	-14	54	356	410
17	-22	-55	-85	-18	-3	15	0	8	5	5	2	2	40	53	35	33	-25	-4	-12	-12	-8	-53	-43	-25	-7	198	365	563
18	-125	-53	-20	-25	-15	3	12	10	0	0	2	10	18	15	12	0	-18	-18	-35	-25	-5	-80	-270	-135	-31	82	824	906
19	-25	-130	-85	-20	0	-10	0	0	0	0	0	9	0	18	28	15	31	21	15	5	-35	-32	-58	-55	-13	142	450	592
20	-15	-8	0	-4	-13	-6	6	15	0	-3	10	11	13	20	-23	5	8	-3	0	-28	-25	-32	-25	-12	-5	88	197	285
21	-45	-20	-22	-3	0	0	0	0	0	0	-5	5	0	0	0	-2	0	15	-6	-43	-45	-12	-65	-8	-11	20	276	296
22	-75	-10	0	4	-6	0	6	0	0	-10	5	0	9	4	0	4	2	-35	3	-8	-38	-48	-38	-60	-12	37	328	365
23	-40	-4	-8	-3	-3	3	-10	5	0	0	0	5	10	12	0	0	-8	-15	0	-30	-12	-35	-40	-85	-11	35	293	328
24	-5	-10	0	0	3	1	-1	0	-4	-4	4	3	0	9	8	-20	-1	7	3	-7	5	-5	-50	-55	-5	43	162	205
25	-42	-6	1	-7	0	0	0	0	0	-3	0	0	3	-7	7	0	-22	0	4	3	-5	0	-13	-18	-6	18	133	151
26	30	-8	-12	1	0	-3	0	0	3	0	0	10	20	16	0	3	15	15	0	-42	-52	-25	-18	0	-2	113	170	283
27	0	0	-3	-6	-3	6	0	0	0	0	0	0	0	2	0	0	0	0	-15	-16	0	-70	-36	-55	-8	8	204	212
28	-105	-48	-25	-4	0	0	3	0	0	0	0	0	0	0	2	-5	-7	2	5	3	2	-10	-15	-10	-9	17	229	246
29	18	10	0	0	0	0	0	0	0	0	2	3	2	0	0	0	0	0	-3	-12	0	0	0	-2	1	35	17	52
30	0	0	0	0	0	0	0	0	0	0	-3	0	5	0	0	5	15	-16	28	46	-35	-115	-10	-80	-7	99	264	363
M	-23	-18	-13	-5	-3	1	1	2	1	0	2	5	8	9	2	1	1	0	-1	-10	-14	-24	-36	-33	-6	68	211	279
MPS	2	0	0	0	0	2	2	3	1	1	3	5	8	10	4	4	5	5	6	7	1	0	0	0				
MNS	25	19	13	5	3	1	1	0	0	1	0	0	0	0	2	3	4	5	7	17	15	24	36	33				

MAY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-25	0	6	-1	-2	-5	-8			10	20	35	75	50	45	180	200	140	100	70	55	-60	-65	-60	32	986	226	1212
2	-60	-45	-40	-12	0	0	2	12	7	0	-7	0	0	0	0	0	0	-7	0	0	0	-25	-50	-45	-11	21	291	312
3	-55	-45	-12	-7	0	0	0	0	0	0	0	3	0	3	0	0	0	-5	-37	-15	0	0	-7	-40	-9	11	218	229
4	-13	-13	-12	0	10	0	-5	0	0	0	0	-2	7	0	10	18	40	20	35	-50	-10	-5	-5	-5	1	140	120	260
5	0	0	-5	-5	-2	0	18	3	0	0	0	0	0	0	0	0	0	0	0	10	-42	-40	-30	-12	-4	31	136	167
6	-12	-65	-5	-5	0	-12	0	3																		(3	99	102)
7																												
8																												
9																												
10																				0	0	0	0	-3		(0	3	3)
11	0	5	10	0	8	0	3	-3	0	0	5	10	12	10	0	0	-2	-3	-15	-4	0	0	0	0	2	63	24	87
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-12	-8	-1	0	20	20
13	-5	-3	-5	-7	-4	11	12	0	0	0	0	0	0	0	0	0	4	8	4	4	0	-33	-18	-10	-2	43	85	129
14	-25	-30	0	0	0	-2	0	0	0	0	0	10	15	20	25	32	42	65	55	35	5	-80	-50	-65	2	304	252	556
15	-35	-8	-3	-22	-10	-15	-5	0	0	0	0	3	0	0	-3	-5	0	10	-5	-3	-4	-15	-40	-55	-9	13	228	241
16	-52	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-27	-10	-42	-45	-60	-11	0	266	266
17	-35	-20	-5	0	0	0	0	5	0	0	-2	6	0	0	3	10	8	22	20	15	20	5	-32	-15	0	114	107	221
18	-50	-60	-45	-22	-40	-20	0	5	8	0	0	10	25	7	8	4	0	3	0	-20	-3	-12	-10	-3	-9	70	285	355
19	-3	-1	-4	-4	-1	0	0	0	-2	0	2	0	2	3	-4	3	3	10	20	30	-22	-25	0	0	0	73	66	139
20	0	-2	-13	-8	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-11	-10	-18	-2	2	62	64
21	-15	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	11	10	3	0	-4	-4	0	27	31	58
22	-8	-8	-3	-3	-8	-9	0	0	6	5	3	0	0	0	-10	-4	3	10	0	7	-3	0	-8	-15	-2	34	79	113
23	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	-10	-8	10	10	3	18	10	0	1	51	23	74
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2
25	8	20	5	0	-7	-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	33	11	44
26	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	3	0	0	0	-55	-17	-2	23	72	95
28	-35	-55	-45	-15	-8	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7	0	161	161
29	0	0	0	0	0	0	0	0	0	0	2	8	10	10	8	24	43	30	32	40	-60	-40	-10	0	4	207	110	317
30	-50	-55	-50	-60	-20	0	5	15	0	-8	3	0	0	0	3	10	32	22	20	10	0	0	4	-15	-6	124	258	382
31	-10	-22	-16	-20	-35	-13	10	0	0	0	0	10	0	5	0	5	12	20	13	0	4	7	-15	-45	-4	86	176	262
M	-18	-16	-9	-7	-5	-3	1	2	1	0	1	3	5	4	3	11	15	14	9	5	-2	-13	-17	-18	-1	95	127	222
MPS	0	1	1	0	1	0	2	2	1	1	1	3	5	4	4	11	16	15	12	9	3	1	1	0				
MNS	18	17	10	7	5	3	1	0	0	0	0	0	0	0	1	0	0	1	3	5	6	14	17	18				

Bodö. Declination. Storminess (+ W). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

JUNE 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-30	-7	-53	-45	-5	22	-8	0	0	0	0	0	8	5	5	5	15	8	5	-15	-15	-3	-3	0	-5	73	184	257
2	0	0	5	-3	0	0	5	0	0	8	3	0	6	10	0	0	0	-5	15	10	6	-2	0	-8	2	68	18	86
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	-5	-1	5	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	-4	2	3	0	0	0	0	14	10	24
5	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	0	14
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	-10	-1	0	12	0
8	-43	-65	-56	-26	-28	-6	0	0	0	0	8	15	10	4	7	0	0	5	32	53	40	15	-15		-2	189	239	428
9					-25	0	-15	15	10	7	2	0	7	8	3	2	10	8	8	10	10	0	0	0		(85	40	125)
10	3	-15	-4	0	4	5	0	0	0	0	0	0	0	5	0	0	0	0	7	8	3	2	0	-6	1	37	25	62
11	0	0	0	3	5	0	0	10			0	0	-10	-13	0	0	0	0	0	0	5	3	0	0	0	26	23	49
12	2	5	0	-10	-2				0	0	0	0	0	0	0	0	-6	0	3	8	10	-35				(28	51	79)
13									0	0	0	5	10	18	22	25	20	10	-15	-10	4	-28	-170	-170		(114	393	507)
14	-120	-54	-30	0	0	0	0																-18	0		(0	222	222)
15	-45	-110	-40	-10	-15	0	8	0	0	0	0	0	0	0	0	3	0	-10	6	0	0	0	-8	-8	-10	17	246	263
16				5	0	0	3	0	0	0	0	0	0	0	0	0	0	0	-7	10	8	8	0	5	1	39	7	46
17	-5	0	0	0	0	0	0	0																		(0	5	5)
18																												
19																												
20																												
21																												
22																												
23											0	0	0	0	0	0	0	0	0	0	0	4	-33	-23		(4	56	60)
24	-15	-12	-16	-8	0	0	3	10	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	26	51	77
25	0	0	0	0	0	0	0	0	0	0	0															(0	0	0)
26							0	0	5	8	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	0	13	5	18
27	0	0	0	0	0	0	0	0	0	0	0	0	0	10	28	25	15	10	10	0	0	0	0	14	5	112	0	112
28	0	-30	-15	-15	-5	-5	0	0	0	5	5	0	15	15	12	15	30	0	15	10	-30	-15	-8	30	-1	122	153	275
29	-115	-45	-13	-10	-5	-5	0	0	-2	0	0	-5	5	-5	0	-10	2	10	0	10	0	0	0	5	-8	32	215	247
30	-5	-2	4	-12	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0	9	19	28
M	-18	-17	-11	-6	-4	-1	0	2	1	2	1	1	3	3	4	4	4	2	4	4	2	-2	-12	-11	-2	46	67	113
MPS	1	0	1	0	0	1	1	2	1	2	1	1	3	4	0	0	4	2	5	6	4	2	0	1				
MNS	13	17	11	7	4	2	1	0	0	0	0	0	0	1	0	0	0	1	1	1	2	4	12	13				

JULY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1												0	0	0	0	0	-5	0	10	10	20	-3	0	-15	1	40	23	63
2	-8	0	0	0	-4	-7	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	3	2	-5	-1	11	24	35
3	12	-65	-13	-10	-10	-5	-5	0	0	0	5	-5	0	0	0	-4	-5	5	-2	0	-4	3	4	4	-4	33	128	156
4	0	3	3	8	0	0	2	0	0	0	0	0	0	10	12	0	0	0	3	20	-10	0			-2	61	10	71
5												0	0	0	0	0	0	0	0	0	0	0	0	3		(3	0	3)
6	-7	0	-6	-10	-10	-2	0	0	0	5	8	8	6	3	0	0	2	0	-2	9	8	2	0	1	1	52	37	89
7	0	0	0	0	0	0	0	0	0	0	10	6	0	0	0	0	2	3	0	0	2	-2	0	2	1	27	2	29
8	0	0	0	0	0	5	2	0	0																	(7	0	7)
9																												
10											0	0	0	0	0	5	10	-8	14	-15	-25	-28	-10	-35		(29	121	150)
11	-32	-53	-18	0	-8	5	-5	3	0	-3	-8	6	0	17	30	0	0	-7	5	3	0	0	0	5	-2	74	134	208
12	-10	-8	0	13	10	13	15	0	0	0	0	0	0	0	0	-2	-6	-8	0	-5	-6	8	0	0	1	59	45	104
13	6	18	5	0	0	0	0	0	0	0	0	0	0	0	0	6	4	0	0	0	0	0	-2	0	2	43	2	45
14	16	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	0	0	3	1	23	10	33
15	6	0	-4	-4	0	0	0	0	0	0	0	8	10	8	0	0	0	0	0	0	0	0	0	0	1	32	8	40
16	0	0	0	0	-3	-4	-5	0	0	0	5	5	8	6	-3	5	5	0	0	0	2	-8	0	0	1	36	23	59
17	16	17	-5	-5	0	0	0	0	0	0	12	8	8	14	18	0	0	0	0	5	-10	-18	-5	-24	1	98	67	165
18	-25	-25	-20	10	-10	5	5										10	5	0	-5	3	0	0	0	-2	38	85	118
19	0	0	0	0	0	0	0	0	0	0	0	0	0	3	-4	-14	-5	-2	0	0	4	-6	-13	-13	-2	7	57	64
20	-15	8	2	0	8	10	10													0	0	0	0	0	1	38	15	53
21	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
22	2	2	25	3	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	34	5	39
23	10	18	8	2	0	5	0	0	2	6	10	0	25	25	20	55	53	30	20	20	-10	-10	-140	-130	1	309	290	599
24	-140	-90	-130	-110	0	0	-20	0	0	0	-5	-6	0	-20	-10	0	-50	-8	0	0	0	0	6	5	-25	11	589	600
25	5	-10	3	0	0	0	0	0	-5	2	0	10	-15	-12	-2	0	-2	-5	0	3	2	3	-17	-6	-2	25	77	102
26	3	0	0	-3	0	-3	-2	0				0	5	0	0	0	-5	-10	-10	-8	0	3	-10	-22	-3	11	73	84
27	-52	-35	-8	-8	15	8	-2	0	-2	-2	4	0	0	2	4	3	-10	-5	0	-8	-35	-35	-55	50	-7	86	257	343
28	-10	0	5	5	5	5	5	0	0	0	5	0	10	15	10	0	0	0	-8	-6	0	0	0	0	2	65	24	89
29	-5	0	0	8	-5	-8	-8	0	0	0	0	0	3	0	0	8	3	0	3	0	0	0	5	0	0	30	26	56
30	0	0	0	0	0	0	0	0																		(0	0	0)
31										0	0	0	0	0	8	-4	0	3	-13	-8	0	0	0	0		(16	25	41)
M	-9	-8	-6	-3	-1	1	0	0	0	0	1	2	3	3	3	2	0	0	1	1	-2	-3	-9	-6	-1	42	70	112
MPS	3	3	2	2	1	2	2	0	0	0	2	2	3	4	4	3	3	2	2	3	2	1	1	3				
MNS	12	11	8	5	2	1	2	0	0	0	1	0	1	1	1	1	3	2	1	2	4	4	9	9				

AUGUST

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	0	0	0	0	0	3	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	7	3	10
2	-2	0	2	4	1	-3	-3	0	0	0	0	0	0	0	-3	-3	0	0	3	5	8	-15	-10	2	-1	20	39	59
3	4	0	10	-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4	-2	-2	-5	-3	0	14	18	32
4	0	0	0	0	0	0	-5	-2	0	0	0	0	0	0	0	0	0	0	0	5	-10	3	0	3	0	11	17	28
5	-15	-5	0	0	-4	-3	20	15	10			30	10	10	55	70	70	55	55	-85	-45	-3	-7	-20	9	400	187	587
6	-17	-32	-85	-75	-20	-18	-10	-12	-5	-5	0	0	-7	-7	2	-5	0	3	-15	-10	-7	0	0	0	-14	5	330	335
7	0	0	-10	-15	-8	0	0	0	0	0	0	4	0	0	0	0	-5	-10	0	0	0	0	10	-32	-3	14	80	94
8	-5	-20	4	-6	-3	0	0	0	0	0	0	0	0	0	0	0	-10	0	0	0	3	7	-8	-11	-2	14	63	77
9	-2			0	0	0	0	0	0	0	0	0	0	0												(2	0	2)
10									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(0	0	0)
11	0	-1	-5	-5	-6	-5	0	5	0	0	0	0	0	0	0	0	0	0	0	4	4	3	8	-2	0	24	23	47
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	11	10	0	0	-9	0	19	9	28
13	-10	0	0	0	0	0	0	0	0	0	0	10	6	6	3	8	6	0	25	-55	-23	-16	-15	-10	-3	64	129	193
14	-19	-12	-42	-3	0	0	0	0	5	10	6	12	0	0	0	0	0	0	0	0	-3	-20	-15		-4	33	114	147
15									0	0	0	0	0	-2	-10	-3	0	0	-35	-7	0	0	0	0		(0	57	57)
16	5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-12	0	0	-3	9	0	0	14	20	34
17	0	-3	0	0	8	2	0	5	-6	15	0	0	0	0	3	-8	-10	-2	-4	8	-16	-5	-5	-5	-2	33	72	105
18	5	-5	0	0	-4	-8	20	25	5	5	0	0	0	0	0	20	30	45	55	-50	-15	-70	-40	-65	-2	210	257	467
19	-75	-110	-45	-6	12	12	0	15	16	16	12	13	-3	10	8	0	0	0	0	3	-22	-30	-16	-10	-8	117	314	431
20	-9	0	-5	-8	6	6	6	3	0	4	8	0	15	10	11	20	0	18	26	-18	6	-20	-52	-35	0	139	147	286
21	-6	-3	0	3	0	0	0	-5	0	0	-5	0	20	-20	-3	10	5	-10	0							(38	52	90)
22										15	10	0	0	0	0	0	0	0	2	5	0	0	0	0		(32	0	32)
23	0	0	0	0	0	0	0	8	0	5	0	0	5	12	20	-6	20	25	0	5	-3	-20	-5	-10	2	100	34	134
24	-3	0	5	8	-3	-5	0	5	8	0	0	10	10	0	10	0	-5	-10	20	0	-25	-10	-30	-65	-3	76	156	232
25	-18	-10	0	-12	3	"	0	0	5	0	0	0	0	-2	-10	0	0	0	-10	0	0	0	0	5	-2	20	62	82
26	18	-10	-20	-25	-5	-5	0	0	0	0	0	3	0	-10	0	0	5	0	0	-3	-5	-3	0	0	-2	26	86	112
27	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	-2	-2	-2	-10	-8	0	-1	8	26	34
28	0	0	0	0	0	0	0	0	0	0	8	3	0	0	0	0	0	0	0	0	3	-15	-10	0	0	14	25	39
29	9	5	2	0	0	0	-3	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	20	3	23
30	5	8	2	3	2	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8	3	2	40	0	40
31	-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-8	-25	-28	-8	-3	0	75	75
M	-5	-7	-7	-5	-1	-1	1	2	1	2	1	3	2	0	3	3	4	4	4	-6	-5	-9	-7	-9	-1	58	94	151
MPS	2	1	1	1	1	1	2	3	2	2	1	3	2	2	4	4	5	5	6	2	1	1	1	1				
MNS	7	8	8	6	2	2	1	1	0	0	0	0	0	1	1	1	1	1	3	8	6	9	8	10				

Bodö. Horizontal Intensity. Storminess (+ N). Unit Gamma. *Gr. M. T.*

SEPTEMBER 1932 HOURLY MEAN VALUES

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1														40	50	12	25	37	-10	0	0	0	-13	-40		(164	63	227)
2	-175	-85	5	-5	0	5	0	0	0	0	0	0	20	20	35	40	20	10	0	5	-0	-10	-45	-35	-8	155	356	410
3	-15	-4	0	0	0	0	0	0	0	0	0	0	7	10	30	32	48	38	35	30	20	15	-25	-15	-9	265	59	324
4	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	0	-5	-35	-125	-120	-70	-15	0	365	365
5	0	0	0	0	0	0	0	0	0	0	-5	5	0	5	30	125	60	10	5	0	0	0	-30	-20	8	240	55	295
6	-5	0	0	0	0	0	-3	0					125	420	510	380	330	135	75	-90	-290	-310	-90	0	49	1975	788	2763
7	0	0	0	0	0	0	0	0	0	-5	0	-10	5	0	0	0	0	0	0	0	-10	-165	-165	-30	-16	5	385	390
8	-15	0	-100	-390	-180	-30	-28	-25	-15	0	-7	0	0	0	0	0	10	70	60	-30	-20	-15	0	-95	-34	140	950	1090
9	-120	-30	-120	-30	-10	-15	-5	0									0	0	0	10	-20	0	-5	-30	-16	10	385	395
10	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	5	12	0	0	-30	-20	-23	-4	17	103	120
11	-10	-32	0	0	0	0	0	0	0	0	0	5	13	6	0	0	0	0	0	0	0	0	0	0	-1	24	42	66
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-20	0	-1	0	30	30
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	8	0	0	0	-4	0	1	4	0	1	33	4	37
14	0	0	0	0	0	0	0												0	0	-15	-22	-5	0	-2	0	42	42
15	0	0	0	0	0	0	0	0	0	0	0	-4	0	17	22	13	3	0	0	0	0	-3	-30	-15	0	55	58	107
16	0	0	0	0	0	0	0																			(0	0	0)
17								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-40	-2	0	42	42
18	-35	-5	0	0	0	0	0	0							5	20	90	35	5	0	0	-10	-250	-255	-17	155	555	710
19	-160	-240	-110	-15	0	0	0	0	0	5	60	50	0	0	40	145	140	40	62	45	2	-280	-150	0	-15	589	955	1544
20	0	-45	-210	-60	-10	0	-10					0	0	15	65	100	50	10	0	0	-20	-50	-50	-80	-12	240	535	775
21	-78	-50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	-30	-27	-110	-98	-17	5	403	408
22	-8	-2	0	5	-32	-10	0	0	0	0	0	0	15	40	30	30	80	20	10	-58	-215	-280	-238	-120	-33	225	1013	1238
23	-30	-70	-70	-28	0	0	0																			(0	198	198)
24									0	0	20	30	50	80	165	300	70	20	20	-70	-180	-140	-470	-510		(755	1370	2125)
25	-130	-360	-250	-70	0	-10	2							340	300	280	110	-15	-50	-150	-300	-580	-400	-140	-59	1032	2455	3487
26	-140	-140	-105	-20	-36	-50	-40	-38	0	-5	0				10	0	0	0	0	30	-60	-60	-140	-240	-43	40	1069	1109
27	-400	-210	-70	0	0	0	0	0				0	35	70	60	95	30	23	15	25	8	0	-5	-20	-18	368	705	1074
28	-20	-38	10	10	0	17	12	0	0	0	0	0	-5	25	20	10	10	10	0	0	-10	-40	-30	-20	-2	124	163	287
29	-70	-200	-50	0	0	0	0	0	0	22	0	-8	0	0	5	-2	0	-8	-5	-35	-230	-75	-110	-195	-40	27	988	1015
30	-210	-72	-50	-30	-5	0	0	0	0	5	-5	10	10	0	15	20	20	0	0	0	10	-90	-110	-10	-21	90	582	672
M	-61	-59	-41	-23	-10	-3	-3	-2	-1	1	2	4	13	45	54	60	42	16	8	-10	-52	-82	-94	-75	-11	232	507	739
MPS	0	0	1	1	0	1	1	0	0	1	3	5	13	45	54	60	42	17	10	5	1	1	0	0				
MNS	61	59	42	24	10	4	3	2	1	0	1	1	0	0	0	0	0	1	2	16	53	83	94	75				

OCTOBER

DAY		1	2	3	4	5	6		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	FS	NS	AS
1	-15	-40	-5	10	5	0	0	0	0	0	0	15					0	-10	-7	-8	-30	-30	-60	-18	-8	30	223	253
2	0	0	0	-10	0	0	0	0	0	5	15						0	-7	25	10	-25	-14	-10	-35	-2	55	101	156
3	-125	-75	-50	-35	-10	0	0												0	0	1	3	0	-50		(4	345	349)
4	-35	-50	-30	5	0	0	0	0	0	16	0	0	0	0	0	8	30	32	22	30	5	0			1	148	115	263
5								0	0	0	0	0	0	0	00	00	0	0	0	0	0	-35	-45	-70	-6	0	150	150
6	-30	-5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	5	0	10	-22	10	2	-20	-2	39	77	116
7	-90	-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	120	120
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	30	-90	-18	-25	-10	-5	-4	45	148	193
9	-25	-20	0	0	0	0	0	0	0	0	0	0	0	20	45	90	20	0	2	2					6	179	45	224
10	-62	0	0	-10	0	0	0	0	0	0	0	0	0	0	22	40	50	2	0	-10	-80	-40	-20	0	-4	114	222	336
11	-13	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-35	-50	-70	-85	-12	0	283	283
12	-105	-38	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	12	-20	-10	-4	-5	-7	22	192	214
13	0	0	0	0	0	0	0	0	0	0	0	0	0	-13	0	0	0	0	0	0	0	-5	-17	-10	-2	0	45	45
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-25	-5	-2	0	40	40
15	0	-20	-30	-30	-20	0	0	0	0	30	90	120	200	290	280	270	210	50	-40	-50	-110	-210	-260	-320	19	1540	1090	2630
16	-140	-130	-105	-10	-5	-40	0	-10	0	10	30	20	5	5	20	45	35	5	-5	0	0	0	-4	-25	-13	155	474	629
17	-160	-120	-40	0	0	0	0	0	0	0	0	0	0	30	20	0	40	40	0	-55	-190	-90	-45	-95	-28	130	795	925
18	-200	-150	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-15	-30	-30	-17	20	430	450
19	-10	0	0	0	0	-20	-20	0	0	0	0	5	5	30	10	20	5	5	5	0	0	-8	-15	-14	0	85	87	172
20	-20	-5	0	0	0	0	0	0	0	0	5	20	35	0	20	110	190	30	0	-140	-290	-490	-590	-420	-63	450	1955	2405
21	-520	-500	-420	-200	10	0	-40	-30	35	70	70	62	50	50	25	30	25	10	0	10	-30	-2	0	0	-53	447	1722	2169
22	0	0	0	0	0	0	0	0	0	0	0	0	5	20	30	40	130	145	90	-50	-360	-100	-120	-80	-15	460	710	1170
23	-130	-140	-60	-40	-40	-8	0	0	-5	-20	10	10	-5	-10	110	90	110	-15	-5	-70	-125	-140	-240	-60	-33	325	1113	1438
24	-2	0	0	5	0	5	0	0	0	-20	-20	0	50	50	15	10	2	0	10	-60	-195	-42	-55	-28	-11	147	422	569
25	0	-5	-5	0	0	0	-10	0	0	0	-10	-7	20	70	80	90	0	0	0	0	0	-5	-5	-5	9	260	52	312
26	-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	-5	.-5	0	-1	5	30	35
27	0	0	0	0	0	0	0	0	0	0	5	30	20	50	150	55	-8	0	0	0	0				13	310	8	318
28								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-90	-215	-105	-17	0	410	410
30	-28	-10	-5	0	0	0	-20	-25	-15	0	20	-5	0	22	40	60	10	0	-10	0	-10	-40	-45	-50	-5	152	263	415
31	-40	-68	-25	0	0	0	0	0	0	0	0	10	20	30	0	0	0	0	0	0	0	0	-5	-15	-5	60	168	228
M	-61	-49	-26	-10	-2	-2	-3	-2	0	3	7	10	14	24	30	33	30	10	4	-16	-51	-49	-64	-54	-9	173	383	556
MPS	0	0	1	1	1	0	0	0	1	4	8	10	14	25	30	33	30	11	6	2	0	0	0	0				
MNS	61	49	27	11	3	2	3	2	1	1	1	0	0	1	0	0	0	1	2	18	51	49	64	54				

NOVEMBER

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	FS	NS	AS
1	0	-3	-5	-25	-118	-70	-50	0	-40	-25	0	10	43	18	18	-5	0	22	30	30	40	8	-5	-30	-7	219	386	605
2	-145	-70	-38	-2	8	0	5	15	5	0	0	0	-5	5	0	0	0	0	10	-5	0	0	0	0	-9	48	265	313
3	0	0	0	0	0	0	0	5	0	-8	3	0	0	0	0	0	0	0	0	5	0				0	13	8	21
4								0	0	0	0	0	0	0	0	0	5	30	42	105	-22	-160	-260	-105	-15	182	547	729
5	-22	-50	-65	-8	0	0	0	0	0	0	0	0	3	3	10	10	20	3								(49	145	194)
6					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14	8	0	0	1	25	0	25
7	-15	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	10	25	40	20	2	3	0	2	2	3	104	30	134
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	-35	-20	-5	-2	5	60	65
9	-8	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	-5	0	0	0	18	18	36
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-10	0	0	0	-1	0	15	15
11	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
12	0	0	0	0	0	0	0	0	0	0	0	0	0	10	8	48	90	30	0	0	-18	-8	0	0	6	188	26	212
13	0	0	-20	-26	-15	0	0	0	0	0	0	0	0	5	37	40	75	5	5	-3	0	-18	-22	0	3	167	104	271
14	0	0	0	0	0	0	-20	-20	10	15																(25	40	65)
15												0	0	0	0	0	0	20	40	2	0	-40	-50	-50		(62	140	202)
16	-12	-20	-93	-195	-70	-90	-128	-85	0	45	10	45	25	70	150	95	105	20	-25	5	-130	-390	-410	-220	-54	570	1868	2438
17	-18	-5	0	0	0	0	0	0	0	5	20	25	56	90	65	-20	-2	-13	13	-50	-100	-125	-45	-65	-8	260	443	703
18	-30	-15	-5	0	0	0	-15	0	0	0	0	0	0	0	115	30	15	10	25	5	-105	-140	-15	0	-9	100	325	425
19	-3	-20	-30	-5	0	0	0	0	0	0	0	0	0	0	0	20	45	10	10	0	0	-30	-70	-50	-5	85	208	293
20	-40	-3	0	0	0	0	0	0	0	0	0	0	0	5	0	20										(25	43	68)
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												
M	-16	-11	-14	-15	-11	-9	-12	-4	-1	2	2	4	5	11	16	13	21	10	10	5	-17	-58	-56	-33	-7	120	285	405
MPS	0	0	0	0	0	0	0	1	1	4	2	4	5	11	16	14	21	11	11	9	4	1	0	0				
MNS	16	11	14	15	11	9	12	5	2	2	0	0	0	0	0	1	0	1	1	4	21	59	56	33				

Bodö. Horizontal Intensity. Storminess (+ N). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

DECEMBER 1932

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1																												
2																0	0	2	15	38	20	-5	0	0		(75	5	80)
3	0	0	0	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	-2	-7	-40	-2	12	64	76
4	-50	-82	-50	-20	-2	0	0	0	0	0	0	0	0	0	0	6	10	2	0	0	0	0	0	-6	-8	18	210	228
5	-20	-10	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	-23	-2	11	53	64
6	-18	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-55	-53	-5	0	146	146
7	-10	0	-4	0	0	0	0	0	0																	(0	14	14)
8										5	0	0	0	0	5	12	5	5	0	0	2	-40	-95	-210	-13	34	345	379
9	-210	-190	-15	-5	0	3	0	0	5	30	35	22	20	35	25	27	32	20	8	-18	-90	-25	5	0	-12	267	553	820
10	-60	-12	0	18	20	18	5	0	0	0	0	0	0	0	0	0	0	13	10	-10	-18	-35	-20	-28	-4	84	183	267
11	-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	-10	-12	-12	-2	-2	0	44	44
12	-5	0	0	-2	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	45	125	120	100	30	-6	-100	-100	-200	1	432	406	838
14	-25	0	0	12	12	5	0	0	0	-2	-15	10	42	70	-5	60	175	105	100	0	-380	-340	-200	-480	-36	591	1447	2038
15	-530	-205	-190	-210	-130	-35	0	0	5	20	5	0	-10	0	25	15	60	140	80	-150	-265	-220	-230	-225	-85	350	2400	2750
16	-240	-300	-70	-60	-30	0	0	0	0	0	0	0	0	0	12	35	90	150	145	65	-120	-70	0	-20	-17	497	910	1407
17	-40	-80	-10	0	0	0	0	0	0	3	13	40	63	65	98	150	190	90	65	18	-3	-18	-26	-115	21	795	292	1087
18	-6	0	-22	-70	-10	0	0	0	0	0	0	-12	0	6	20	28	8	0	0	5	0	0	0	0	-2	67	120	187
19	0	0	0	-5	0	0	0	0	0	0	0	0	0	0	3	20	35	0	0	0	-5	-18	0	0	1	58	28	86
20	-6	-20	-5	0	0	-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	0	37	37
21	-2	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	-6	0	0	0	0	8	6	14
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-8	0	0	8	8
24	-26	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10	8	0	0	0	0	0	23	34	57
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	4	0	20	46	-10	-40	6	0	-65	-1	83	115	198
26	-110	-115	-40	-5	0	0	0	0	0	0	0	0	0	0	2	6	5	12	15	20	90	35	6	0	-3	191	270	461
27	-8	-170	-195	-30	0	0	0	0	0	0	0	10	30	38	3	3	4	0	12	-10	15	10	3	20	-11	148	413	561
28	3	0	0	0	0	0	0	0	0	0	0	0	0	-7	35	0	0	10	38	3	-20	-115	-50	-38	-5	89	220	309
29	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	-1	0	0	0	0	0	12	2	2	0	0	16	4	20
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	90	45	20	-45	-20	6	200	65	265
31	-10	0	-5	-2	0	0	0	-8	0	0	0	5	-5	0	0	-5	10	30	20	40	12	20	-20	-56	1	137	111	248
M	-48	-42	-21	-10	-5	-1	0	0	0	2	1	3	5	7	8	14	25	24	21	4	-25	-30	-29	-54	-6	151	303	454
MPS	0	0	0	1	1	1	0	0	0	2	2	3	5	7	8	14	25	24	21	11	7	3	1	1				
MNS	48	42	21	11	6	2	0	0	0	0	1	0	1	0	0	0	0	0	0	7	32	33	30	55				

JANUARY 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-10	2	-20	-30	0	0	0	0	0	0	0	7	10	12	12	30	75	85	90	95	±100	-25	35	7	11	460	185	645
2	-5	-195	-90	0	0	0	0	0	0	4	6	0	6	0	0	0	0	0	3	15	-40	-30	6	0	-13	40	360	400
3	-8	-22	-17	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	-2	5	47	52
4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	-3	-10	-15	-10	-10	-2	0	0	0	-5	-10	12	30	155	120	6	0	5	8	12	0	-5	-65	-110	4	348	245	593
7	-80	-27	-18	-22	0	18	0	0	0	0	0	0	0	0	0	5	30	90	100	62	25	0	-7	-18	7	330	172	502
8	-8	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-8	-13	-1	0	32	32
9	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	-14	-4	-1	0	25	25
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-8	-1	0	15	15
13	-12	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	17	15	12	3	0	2	62	15	77
14	0	-6	-14	--3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	10	-40	-65	-30	-5	30	158	186
15	5	10	12	0	-5	-45	-45	-43	-40	-10	10	0	-2	-2	16	2	0	0	0	-10	-30	-225	-165	-5	-18	55	627	682
16	-3	-11	-38	-16	0	0	0	0	0	-10	0	6	-5	0	8	-2	0	2	0	0	0	0	0	0	-3	16.	85	101
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	0	0	5	5
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	-12	-3	0	14	15	29
19	0	0	0	0	-5	3	0	0	0	0	0	2	10	10	115	215	130	50	30	-15	-10	-30	-125	-100	12	565	285	850
20	-110	-55	0	-13	-145	-90	-25	-10																		(0	448	448)
21					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	20	4	-5	1	(39	5	45)
22	0	0	0	0	-10	-5	-10	-5	0	0	0	0	0	0	12	150	150	110	-70	-160	-70	-310	-170	-105	-21	422	915	1337
23	-230	-110	16	0	-5	-18	-3	20	20	0	0	0	0	2	-15	0	0	5	20	-80	-30	-35	-260	-350	-44	83	1136	1219
24	-275	-300	-130	5	17	3	0	0	0	0	0	10	18	0	-15	-5	8	35	18	29	26	22	-8	-30	-24	191	763	954
25	-40	-110	-30	5	13	5	0	0	0	-3	-8	-5	0	8	20	42	30	20	20	13	-20	-18	-30	-110	-8	176	374	550
26	-10	-22	-140	-90	-12	-3	5	0	0	0	3	3	0	10	30	42	42	90	30	-50	-90	-60	-70	-30	-13	255	577	832
27	10	-95	-30	-23	-38	-20	0	0	5	2	0	20	18	28	30	20	110	90	110	-15	-115	-340	-110	-5	-14	451	791	1242
28	-60	-75	-150	-40	10	5	0	0	0	10	20	5	20	20	18	25	10	30	5	20	-190	-85	-145	-210	-32	198	955	1153
29	-112	-50	-20	5	0	5	10	5	0	0	0	0	0	6	32	80	95	45	15	-35	-100	-70	-15	-15	-5	298	417	715
30	-5	-75	-130	-70	-40	0	0	0	0	0	0	-3	0	0	0	-5	15	6	3	0	13	-45	-45	-18	-16	45	436	481
31	-80	-95	-20	0	0	0	0	0	0	0	0	0	3	10	18	22	20	12	5	0	0	-50	-45	-8	-9	90	298	388
M	-35	-42	-28	-10	-7	-5	-2	-1	-1	0	1	2	3	9	14	21	24	23	13	-2	-23	-44	-44	-39	-7	142	308	450
MPS	1	0	1	1	1	1	1	1	1	1	1	2	3	9	15	21	24	23	16	10	3	2	2	0				
MNS	35	42	29	11	9	6	3	2	2	1	1	0	0	0	1	0	0	0	2	12	26	46	46	39				

FEBRUARY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	0	-3	-2	0	0	0	0	0	0	0	0	-4	0	0	0	0	0	0	0	0	0	-5	-12	-22	-2	0	50	50
2	-20	-20	-5	-12	-10	0	0	-8	0	0	0	5	10	18	25	20	46	60	5	20	-20	-57	-8	0	2	219	160	379
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-25	-30	-2	0	55	55
4	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	-8	0	0	0	20	-8	5	0	-5	-20	-2	25	61	86
5	-8	-15	-70	-50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-6	0	143	143
6	0	-2	-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	14	14
7	0	0	0	0	0	0	0	0	0	0	0	8	2	0	0	15	16	15	3	0	0	0	0	0	2	58	0	58
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	-18	-12	0	18	30	48
9	0	0	-18	-25	-10	-10	0	0	0	0	0	0	0	0	5	10	0	5	15	32	42	22	0	-6	3	131	69	200
10	-20	0	-5	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	20	5	0	0	35	35	70
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	10	3	0	1	25	00	25
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-12	-130	-145	-28	-5	-12	-16	0	372	372
15	-13	-10	-20	0	0	-12	0	0	0	-10	-10	0	0	20	26	40	42	70	20	3	6	-30	-5	0	5	227	110	337
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-2	0	0	0	7	7
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	25	-150	-45	-60	-60	-12	35	315	350
19	-30	-46	-25	-3	0	0	0	0	0	10	20	0	25	90	260	120	95	45	-55	-220	-70	-60	-190	-540	-24	665	1239	1904
20	-490	-360	-90	-5	5	5	0	0	0	-10	-10	30	35	18	30	60	18	5	60	20	-26	-40	-130	-270	-47	296	1431	1727
21	-105	-80	-280	-240	-250	-50	10	0																		(10	1005	1015)
22																												
23																												
24																				110	0	-305	-300	-95		(110	700	810)
25	-150	-80	-70	-90	-30	28	25	20	10	0	40	10	35	12	40	38	0	30	45	42	-160	-480	-325	-110	-47	·375	1495	1870
26	-280	-260	-190	-50	10	0	15	5	0	5	15	20	15	43	70	40	25	12	0	0	3	-320	-180	-47	-44	278	1327	1605
27	-40	-30	-90	-95	-30	0	0	5	0	0	0	-5	0	0	8	2	0	4	0	-18	-20	-110	-180	-110	-29	19	728	747
28	-85	-46	-34	-20	-12	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-15	-15	-10	0	232	232
M	-51	-38	-36	-24	-13	-2	2	1	0	0	2	3	5	8	19	14	10	10	5	-6	-20	-57	-58	-54	-12	101	383	484
MPS	0	0	0	0	1	1	2	1	0	1	3	3	5	8	19	14	10	10	7	11	3	2	0	0				
MNS	51	38	36	24	14	3	0	0	0	1	1	0	0	0	0	0	0	0	3	17	24	59	58	54				

Bodö. Horizontal Intensity. Storminess (+ N). Unit Gamma. *Gr..M. T.*

HOURLY MEAN VALUES

MARCH 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-10	-32	-22	-3	0	0	0	0	0	0	0	0	12	9	15	20	12	0	0	20	8	0	-10	-70	-2	96	147	243
2	-60	-6	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	-5	-12	-70	-90	-10	5	246	251
3	-35	-15	0	0	0	0	0	0	0	0	0	5	10	15	22	48	72	60	40	32	-5	-8	-3	-12	9	304	78	382
4	-20	-25	-32	-22	-10	0	3	0	0	-3	-3	0	0	0	0	0	2	12	15	10	0	0	0	0	-3	42	115	157
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	0	0	0	0	3	3
6	0	0	0	0	0	0	0	0	0	0	0	0	0	3	22	23	18	5	0	0	0	0	0	0	2	71	0	71
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-22	-15	-3	0	37	37
8	-12	-10	-5	0	0	0	0	0																		(0	27	27)
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												
31																												
M	-17	-11	-8	-4	-1	0	0	0	0	0	0	1	3	3	1	13	15	11	8	8	0	-3	-15	-28	-1	84	91	175
MPS	0	0	0	0	0	0	0	0	0	0	0	1	3	3	8	13	15	11	8	8	1	0	0	0				
MNS	17	11	8	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	15	28				

APRIL

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8															45	60	60	90	20	-12	-12	-23	-40	-98		(375	185	560)
9	-105	-55	5	15	18	18	18	5	0	25	50										-8	-12	-21	-27		-54	328	482
10	-20	-6	0	0	0	-5	-10	-12	-8	0	-10	0	18	20	15	50	3	3	21	3	0	0	0	0	3	133	71	204
11	0	0	0	0	0	0	0	0	-5	-10	-13	0	0	0	0	0	0	0	0	0	7	0	0	-3	-1	7	31	38
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	11	36	58	12	27	25	40	42	48	-4	-40	-90	-65	4	299	199	498
15	-32	-22	-18	-15	-20	-30	-28	-10	0	3	12	20	15	0	10	20	17	40	103	45	-150	-380	-315	-210	-39	285	1230	1515
16	-90	-95	-58	-22	-30	-20	-10	0	0	-3	-18	10	20	38	70	52	3	12	10	-5	-108	-30	-63	-270	-25	215	822	1037
17	-310	-1 0	-95	-90	-100	-40	-20	-10	5	22	45	75	230	225	45	105	60	40	-30	-85	-160	-160	-220	-225	-36	852	1715	2577
18	-290	-350	-120	-35	-50	-30	-20	-40	-10	0	0	20	5	30	50	25	0	-15	-10	-60	-200	-320	-590	-420	-101	130	2560	2690
19	-450	-430	-250	-110	-5	0	-18	-23	0	10	-8	50	140	120	30	55	18	15	-30	-170	-120	-130	-500	-290	-87	438	2534	2972
20	-25	0	0	8	0	-70	-35	0	-5	0	20	0	0	5	70	75	90	20	5	-50	-295	-140	-95	-90	-22	285	805	1090
21	-150	-90	-50	-20	-10	0	0	0	0	5	20	10	5	5	0	15	20	45	80	-50	-85	-140	-530	-250	-49	205	1375	1580
22	-160	-105	5	0	-15	-10	-10	0	-5	18	-5	20	-10	30	50	50	18	55	0	-6	-315	-210	-95	-190	-40	241	1206	1447
23	-105	-5	-10	-25	-18	-20	-40	0	0	0	2	5	10	70	90	26	5	30	10	-15	-135	-200	-250	-270	-35	248	1093	1341
24	-170	-40	-18	0	0	0	0	0	0	0	0	10	2	15	30	70	50	20	5	-12	-32	-75	-310	-195	-27	197	852	1049
25	-180	-30	5	5	0	0	0	0	0	2	8	4	5	12	22	14	45	30	5	0	-32	-45	-75	-90	-12	157	452	609
26	-175	-115	-15	13	5	0	0	0	-5	0	0	12	36	60	0	-5	12	32	5	-12	-95	-28	-20	-2	-12	175	472	647
27	0	0	-2	-3	2	2	0	0	0																	(4	5	9)
28																												
29																												
30																												
M	-119	-80	-33	-15	-12	-11	-9	-5	-2	4	5	15	30	40	30	36	26	25	13	-21	-92	-105	-185	-142	-25	232	839	1071
MPS	0	0	1	2	1	1	1	0	0	1	8	15	30	40	30	36	26	26	17	5	0	0	0	0				
MNS	119	80	33	17	13	12	10	5	2	5	3	0	0	0	0	0	0	1	4	27	92	105	185	142				

MAY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9													0	0	0	0	0	0	0	0	0	0	0	0		(0	0	0)
10	0	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	15	15
11	0	-15	-15	0	0	0	0	0	0	0	0	0	0	5	5	20	20	20	35	3	0	0	0	0	3	108	30	138
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-25	-10	-2	0	45	45
13	0	0	0	0	-5	-35	-5	5	0	3	10	0	-40	-20	0	7	30	50	30	0	30	-30	-32	-110	-5	165	277	442
14	-230	-30	0	0	0	0	0	0	0	0	15	30	40	5	15	55	170	145	5	-60	-220	-375	-90	-215	-31	480	1220	1700
15	-70	-10	-5	-85	-160	-70	-8	0	20	48	60	20	0	0	0	0	5	12	35	0	-10	-180	-345	-205	-39	200	1140	1340
16	-105	-20	5	5	0	0	0	0	0	0	0	0	15	20	0	0	5	13	12	-20	-37	-170	-105	-150	-22	75	607	682
17	-58	-65	-30	-1	0	0	0	0	0	5	20	18	-2	0	10	20	15	50	45	45	0	-25	-145	-270	-12	228	593	821
18	-350	-100	-40	10	-200	-20	-20	0	10	25	105	55	30	12	25	15	10	0	22	10	-8	-55	-145	-95	-30	319	1033	1352
19	-38	-5	-10	0	0	0	0	0	5	0	10	5	22	38	35	15	0	28	50	-45	-12	-30	0	0	3	208	140	348
20	-5	-12	-12	-10	-10	-10	0	0	0	0	0	0	0	0	0	0	4	8	8	0	0	0	-20	-23	-3	20	102	122
21	0	0	0	0	6	13	2	0	0	-8	-4	0	4	4	0	0	0	3	18	10	0	0	0	0	2	50	12	62
22	-25	-29	-4	0	0	0	0	0	0	0	0	2	0	17	4	13	15	2	0	0	4	-8	-20	-30	-3	57	116	173
23	-8	5	2	2	0	0	0	0	0	0	0	0	0	0	0	12	12	20	20	10	2	-60	-54	-15	-2	85	137	222
24	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	0	8	13	10	0	-5	0	0	1	47	13	60
25	-8	-55	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	0	83	83
26	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	1	12	0	12
27	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	4	-13	27	37	8	0	-37	-160	-130	-11	84	340	424
28	-170	-345	-104	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-26	0	627	627
29	0	0	0	0	0	0	0	0	0	0	0	0	0	17	33	112	96	50	0	0	-100	-257	-112	-140	-25	298	609	907
30	-212	-330	-300	-190	-75	-8	0	0	0	8	25	42	42	60	70	46	133	158	75	37	8	-6	-25	-110	-23	704	1266	1970
31	-125	-54	-13	-50	-105	-42	0	0	0	4	13	13	46	190	250	54	-8	-8	13	17	-4	-90	-187	-166	-10	603	852	1355
M	-64	-54	-25	-15	-25	-8	-1	0	1	4	11	9	7	15	20	17	21	25	18	1	-15	-58	-68	-73	-11	163	402	565
MPS	0	0	0	1	0	1	0	0	1	4	11	9	9	16	20	17	22	25	18	6	2	0	0	0				
MNS	64	54	25	16	25	9	1	0	0	0	0	0	2	1	0	0	1	0	0	5	17	58	68	73				

Bodö.

Horizontal Intensity. Storminess (+ N). Unit Gamma.

Gr. M. T.

HOURLY MEAN VALUES

JUNE 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-46	0	-145	-330	-33	-46	-8	0	4	4	6	13	4	13	54	79	75	27	4	-62	-87	-8	0	0		283	765	1048
2	4	0	4	4	0	0	0	0	0	0	0	0	38	30	13	17	8	13	17	0	-4	-6	-17	-4	5	148	31	179
3	-4	-21	-8	-4	-4	4	0	0	0	13	0	13	8	21	27	8	4	8	4	6	-4	-6	-6	-4	2	112	65	177
4	0	-13	-13	0	0	0	0	0	0	0	4	0	8	10	13	0	0	4	8	4	0	0	-4	-8	1	51	38	89
5	-46	-30	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4	0	84	84
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	8	8	13	4	0	0	0	-8	-19	1	45	27	72
8	-46	-33	-4	0	-2	4	0	0	0	0	8	46	29	29	30	13	0	8	42	75	-25	-104	-125		-3	284	337	621
9						4	4	0	8	4	15	21	21	29	13	19	54	46	37	4	-6	-6	-6	-2		(279	20	299)
10	-29	-25	0	0	0	0	0	0	0	0	0	0	0	0	0	25	46	46	19	4	-27	-8	-13	-8	1	140	110	250
11	0	0	0	8	8	0	0	0	0	0	0	0	8	0	10	4	0	0	0	0	-8	-30	-15	-6	-1	36	59	95
12	-4	-13	-4	-4	-2	0	0	0	0	0	0	6	0	0	0	0	0	0	8	8	0	-54	-175		-11	0	256	256
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												
M	-16	-12	-25	-30	-3	-4	0	0	1	2	3	8	10	11	13	14	16	14	12	3	-13	-19	-31	-5				
MPS	0	0	0	0	1	1	1	0	1	2	3	8	10	11	13	14	16	14	12	8	0	0	0	0				
MNS	16	12	26	30	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5	13	19	31	5				

JULY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10												0	-10	5	0	0	0	5	20	10	-60	-165	-160	-100		40	515	555
11	-95	-215	-65	0	0	5	0	0	0	0				20	65	100	65	28	8	0	0	-5	-12	-35	-1	291	317	608
12	-52	-5	-45	-30	-5	0	0	0																		0	137	137
13									0	0	0	0	0	0	0	10	20	20	3	0	0	0	-6	-16		53	24	77
14	-43	-28	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	-15	-3	11	94	105
15	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8
16	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	8	0	8	10	20	25	20	8	0	0	4	99	10	109
17	-15	-42	-20	0	0	0	0	0	5	10	12	23	40	70	90	40	13	10	5	5	-35	-100	-130	-80	-4	322	422	744
18	-200	-250	-105	-30	-5	0	0	0									12	12	12	-10	-30	-15	-8	0	-25	36	648	684
19	0	0	0	0	0	0	0	0	0	0	5	0	0	26	35	35	30	10	5	0	-6	-18	-45	-42	1	146	111	257
20	-73	-38	-5	-10	-17	-10	0	0	5																	(5	153	158)
21							0	0	0	0	0	0	0	0	5	26	36	32	12	5	0	0	0	0		(116	0	116)
22	0	-5	-60	-30	0	0	5																			(5	95	100)
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												
31																												
M	-49	-58	-31	-10	-3	-1	1	0	1	1	2	2	2	11	22	23	18	13	8	5	-11	-31	-36	-30	-6	112	253	365
MPS	0	0	0	0	0	1	1	0	1	1	2	0	4	11	22	23	16	17	8	6	2	1	0	0				
MNS	49	58	31	10	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0	1	13	32	36	30				

Bodö. Vertical Intensity. Storminess (+ Down). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

SEPTEMBER 1932

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1															0	-30	-25	0	-5	0	0	0	-3	-45		(0	108	108)
2	-160	-155	-45	-45	-22	-3	0	0	0	0	0	0	0	5	30	25	25	5	0	0	-5	-50	-65	-55	-22	85	605	690
3	-30	-5	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	5	30	30	0	-13	-15	-38	27	-30	-4	65	173	238
4	-25	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-15	-45	-90	-125	-85	-17	0	400	400
5	-25	-4	0	0	0	0	0	0	0	0	0	0	5	18	3	40	22	0	0	0	0	-2	-22	-45	0	88	98	186
6	-40	-12	-3	0	0	0	0							-225	-225	-150	-140	-3	-20	65	105	-100	-120	-45	-47	170	1113	1283
7	-8	0	0	0	0	0	0	0	0	0	0	0	0	3	-2	-12	0	5	35	26	0	-70	-150	-48	-9	69	290	359
8	-8	16	38	12	-80	-40	-3	-40	-30	-10	0	0	0	0	0	0	-5	20	40	20	-45	0	10	25	-3	183	258	441
9	-80	-50	-20	-40	-30	15	0	0										15	0	-5	-30	-37	-10	-10	-12	30	312	342
10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-30	-25	0	-3	0	65	65
11	0	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	10	10	20
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-18	-65	-10	-4	0	93	93
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	10
14	0	0	0	0	0	0	0											0	0	-10	-42	-45	-25	0	-5	0	122	122
15	0	0	0	0	0	0	0	0	0	0	0	0	0	-8	0	8	0	0	0	0	0	-20	-52	-30	-4	8	110	118
16	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	20	20
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-38	-2	0	38	38
18	-60	-25	0	0	0	0	0	0	0					-72	-65	-45	10	0	0	0	0	-40	-200	-130	-27	10	637	647
19	-80	-60	-85	-30	-5	0	0	0	0	15	8	10	25	5	0	17	22	15	0	0	5			-65	-10	117	350	467
20	-35	-30	-65	-110	-75	-45	0	0				0	0	0	30	50	30	10	0	0			-55	-100	-20	110	515	625
21	-100	-75	-60	-60	-30	-5	0	0	0	0	0	0	0	0	0	0	0	0	4	10	0	-5	-40	-50	-17	14	425	439
22	-20	0	0	-5	-40	-30	0	0	0	0	0	0	0	0	-12	-25	35	-35	0	-25	-40	-120	-145	-75	-22	35	572	607
23	-20	-5	0	10	5	0	0																			(15	25	40)
24											0	-10			-25	-40	-18	-3	0		-50	-30	0	-110		(0	286	286)
25	-130	-65	-80	-110	-52	-20	-10							-100	-90	-100	-50	-80	-105	50	30	-35	-5	-45	-50	80	1077	1157
26	-18	-15	-35	0	0	0	0	0	0						0	0	0	0	0	-5	-75	-85	-80	-70	-20	0	385	385
27	-20	-80	-60	-5	0	0	0	0				0	0	0	45	50	20	20	30	-20	0	15	20	0	1	210	185	395
28	-8	0	0	0	0	0	0	0	0	0	0	0	0	2	30	17	12	3	2	8	0	-4	0	3	3	77	12	89
29	-12	-100	-50	-5	0	0	0	0	0	8	25	20	5	0	0	0	3	15	30	-20	-65	-20	-40	-75	-12	106	387	493
30	-40	-32	-30	-30	0	0	0	0	0	0	0	0	7	20	20	40	30	0	0	0	-20	-70	-130	-48	-11	127	400	527
M	-34	-27	-19	-16	-13	-5	0	-1	-1	1	1	1	2	-15	-11	-5	0	1	0	2	-11	-33	-50	-40	-11	59	320	379
MPS	0	1	1	1	0	1	0	0	0	1	0	1	2	2	6	10	9	4	5	7	5	1	1	1				
MNS	34	28	20	17	13	6	0	1	1	0	0	0	0	17	17	15	9	5	5	5	16	34	51	41				

OCTOBER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	-35	-40	-15	0	0	0	0										-5	5	5	0	-8	-15	-60	-20	-12	(10	198	208)
2	-5	0	0	0	0	0	0											5	25	15	-10	-5	0	0	1	(45	20	65)
3	-50	-50	-10	0														0	0	0	0	0	5	-40		(5	150	155)
4	-35	-35	-40	-20	-10	0	0	0	0	0				0	-5	-5	35	20	10	7	0				-4	72	150	222
5									0	0	0	0	5	0	5	5	0	20	0	-5	0	-40	-75	-75	(-10	35	195	230)
6	-60	-35	-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-30	-25	-50	-35	-10	-10	0	252	252
7	-50	-50	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-5	0	115	115
8	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8	-15	-30	-5	-20	-10	-5	-4	11	115	126
9	-12	-35	-5	0	0	0	0	0	0	0	0	0	0	5	20	55	22	0	0	0					2	102	52	154
10	-55	-15	5	-15	-10	0	0	0	0	0	0	0	5	0	20	50	40	10	0	-15	-75	-45	-12	-3	-5	130	245	375
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	-10	-30	-40	-40	-35	-6	5	155	160
12	-50	-50	-25	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	15	20	30	0	-20	-5	0	-4	65	160	225
13	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	10	10	00	10	10	10	0	-5	-15	-10	0	50	45	95
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-30	-35	-3	0	65	65
15	-10	-5	-15	-18	5	0	0	0	0	-15	-15	0	10	-20	-45	-135	-160	-90	0	-30	-18	-50	-70	-170	-31	65	821	886
16	-150	-90	-60	-40	-20	-40	-15	0	0	0	5	20	0	0	10	20	20	12	0	5	0	5	-10	-5	-14	97	430	527
17	-60	-80	-50	-20	-5	0	5	0	10	20	0	0	12	40	45	30	45	0	-5	-25	-30	-125	-70	-80	-14	207	550	757
18	-100	-110	-45	-15	-5	0	0	0	0	0	0	0	5	0	0	0	5	12	10	15	10	0	-22	-40	-12	57	337	394
19	-27	-10	-5	0	0	0	0	0	0	0	-5	-8	5	30	0	5	15	20	10	0	0	-5	-15	-15	0	85	90	175
20	-5	-8	-5	0	0	0	0	0	0	0	5	10	-5	30	32	12	-100	-130	-35	0	160	120	5	-180	-4	374	460	834
21	-130	-330	-350	-260	-110	-35	5	0	-5	0	-10	-30	-35	-20	-15	12	25	30	15	5	-15	-12	0	0	-53	92	1357	1449
22	5	0	0	0	0	0	0	0	0	0	0	5	10	10	15	30	15	0	-15	0	-40	-65	-12	-50	-4	90	182	272
23	-55	-60	-30	-12	-12	0	0	0	0	15	45	40	15	10	10	35	0	-28	-5	-75	-100	-72	-130	-65	-20	170	639	809
24	-20	-5	0	0	-10	2	-5	0	5	15	18	5	20	45	0	3	3	5	-25	-45	-120	-75	-77	-50	-13	121	432	553
25	-18	-2	0	0	0	0	0	0	0	5	15	0	17	30	20	15	0	0	0	10	0	-20	-25	-20	1	112	85	197
26	-10	-5	0	0	0	0	0	0	0	0	0	0	0	5	5	0	5	5	0	0	-25	-10	-5	0	-1	20	55	75
27	0	0	0	0	0	0	0	0	0	0	5	25	5	-35	20	35	10	0	0	12	7				4	119	35	154
28							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	15	-10	-100	-4	18	110	128
30	-50	-15	-3	0	0	5	8	0	0	8	5	4	0	0	20	50	48	5	0	0	-25	-40	-42	-38	-2	153	213	366
31	-30	-15	-7	0	0	0	0	0	0	0	0	3	-5	0	5	10	5	0	0	0	0	0	0	-5	-2	23	62	85
M	-37	-38	-24	-14	-7	-2	0	0	0	2	2	3	2	5	6	10	1	-2	1	-6	-12	-17	-27	-38	-8	81	265	346
MPS	0	0	0	0	0	0	1	0	1	2	3	4	4	8	9	15	10	6	4	3	6	7	0	0				
MNS	37	38	24	14	7	2	1	0	0	1	1	1	2	3	3	5	9	8	3	9	18	24	27	38				

NOVEMBER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		M	PS	NS	AS
1	4	4	0	-10	-8	-12	0	0	-5	-10	-15	-20	-42	-35	-20	-6	-10	0	0	3	8	5	0	0	-7	24	193	217
2	-40	-50	-50	-40	-8	-3	3	10	0	0	0	5	0	-10	0	0	0	0	20	0	0	0	0	0	-7	38	201	239
3	0	0	0	0	0	0	0	0	0	10	10	0	0	0	-5	5	0	0	0	12	12				2	49	5	54
4									0	0	0	0	0	0	0	3	18	50	45	20	25	10	-45	-70	2	171	115	286
5	-20	3	-13	-40	-25	-3	-	0	0	0	0	0	0	0	0	18	5	-5							-4	26	106	132
6	-12	-20	-5	0	0	0	0								0	0	0	0	0	10	-6	-6	0	0	-2	10	49	59
7	-15	-22	-5	0	0	0	0	0	0	0	0	0	0	0	-10	-7	12	-12	0	5	5	0	0	0	-2	22	71	93
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	20	15	5	-30	-30	-4	-1	44	64	108
9	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-10	-13	-5	-2	0	0	-2	0	45	45
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-7	-5	0	0	0	2	12	14
11	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						-1	0	15	15
12							0	0	0	0	0	0	-3	28	0	38	50	30	7	-20	-45	-20	-3	0	3	153	91	244
13	0	0	0	-15	-40	-18	-3	0	0	0	0	0	0	12	30	10	40	12	0	-20	-10	-60	-56	-30	-6	104	252	356
14	-5	0	0	0	0	0	0																			(0	5	5)
15													0	20	0	0	0	8	-5	-6	0	-10	-40	-42		(28	103	131)
16	-40	-25	-40	-80	-90	-20	-15	-5					5	28	25	40	-15	-75	-80	-18	-85	-135	-10	20	-30	118	733	851
17	-22	4	0	0	0	0	0	0	0	15	15	10	3	28	20	0	28	4	0	-30	-50	-85	-65	-45	-7	127	297	424
18	-28	-5	0	0	-8	-2	0	0	0	0	0	10	-5	12	18	52	30	25	25	10	-20	-120	-45	-15	-3	182	248	430
19	0	-5	-5	0	0	0	0	0	0	0	0	0	0	10	40	45	25	0	6	10	-12	-20	-40	-55	0	136	137	273
20	-55	-28	-5	0	0	0	0																			(0	88	88)
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												
M	-14	-9	-7	-10	-10	-3	-1	0	0	1	0	0	2	5	6	11	10	2	2	-1	-12	-32	-22	-16	-4	72	166	238
MPS	0	1	0	0	0	0	0	1	0	1	1	1	2	8	1	1	1	7	7	5	33	1	0	1				
MNS	14	9	7	10	10	3	1	0	0	0	1	1	0	3	7	12	11	5	5	7	15	33	22	17				

Bodö. **Vertical Intensity. Storminess (+ Down). Unit Gamma.** *Gr. M. T.*

HOURLY MEAN VALUES

DECEMBER 1932

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1																												
2																	0	0	17	30	-30	-16	0	0		(47	46	93)
3	0	0	0	-10	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-30	-30	-35	-45	-6	2	152	154
4	-50	-45	-40	-15	0	0	0	0	0	0	0	0	0	0	0	5	10	0	0	0	0	0	0	0	-6	15	150	165
5	-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-30	-35	-4	0	87	87
6	-20	-18	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-55	-60	-6	0	136	136
7	-28	0	0	0	0	0	0																			(0	28	28)
8									0	0	0	0	0	20	0	0	0	0	0	0	0	5	40	-65		65	65	130
9	-85	-65	-40	-20	-15	0	0	0	0	0	0	0	0	0	8	30	12	0	0	-60	-75	-20	0	0	-14	50	380	430
10	-55	-45	-5	0	0	0	0																			(0	105	105)
11								0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-50	-40	-38		(0	148	148)
12	-26	-2	0	0	-5	-15	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	0	63	63
13	0	0	0	-5	-5	0	0	0	0	0	0	0	0	4	20	52	30	-15	45	40	5	-12	25	-6	7	221	43	264
14	-20	-8	0	0	0	5	0	0	0	0	0	25	70	55	30	15	-190	-250	-40	-80	60	-65	-70	25	-18	285	723	1008
15	30	-250	-270	-240	-160	-100	-50	-10	0	0	0	0	0	-15	-18	0	15	-15	-60	-120	25	40	40	20	-48	170	1309	1478
16	90	-75	-65	-75	-80	-60	-30	0	0	0	0	0	0	-5	-12	0	20	-40	-50	-40	30	-45	-10	-5	-19	140	592	732
17	-35	-52	-40	-35	-25	-10	0	0	0	0	3	27	30	45	60	20	25	50	3	-62	-18	0	-20	-45	-3	263	342	605
18	-20	-20	-30	-30	-20	-20	-10	0	0	-15	-18	0	5	25	20	-10	-5	2	10	8	0	-10	-5	0	-6	70	213	283
19	0	-3	-12	-15	-15	0	0	0	0	0	0	0	0	20	40	30	20	2	5	3	-75	-32	-15	-15	-3	120	182	302
20	-5	-15	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	35	35
21	0	-5	-20	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	33	33
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	3	8	-10	0	0	0	0	21	10	31
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	-10	-10	0	20	20	40
24	-30	-30	-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	10	10	10	10	0	0	-1	43	62	105
25	0	0	0	0	0	0																				(0	0	0)
26	-40	-35	-30	-20	-6	0																				(0	131	131)
27		-40	-150	-90	-30	0	0	0	0	0	0	0	0	0	0	0	5	5	0	-35	0	0	0	-10	-15	10	355	365
28	-22	-10	0	5	5	0	0	0	0	0	0	0	0	0	40	5	12	0	30	-10	-5				3	97	47	144
29																												
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	-45	-25	-35	-65	-50	-9	15	220	235
31	-55	-35	-20	0	0	0	0	0	0	0	0	0	0													(0	110	110)
M	-15	-29	-29	-21	-14	-8	-5	0	0	-1	-1	2	6	7	9	7	-2	-11	-1	-15	-6	-12	-11	-15	-7	66	231	297
MPS	5	0		0		0	0	0	0	0	0	2	0	1	1	0	7	3	6	5	6	2	16	2				
MNS	20	29	29	21	14	8	5	0	0	1	1	0	6	8	10	7	8	14	7	20	12	14	5	17				

JANUARY 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1					-20	-8	-5	0	0	0	0	0	0	0	3	20	25	20	15	-50	-85	-50	-32	0	-8	83	250	333
2	0	-40	-65	-30	-8	-5	0	0	0	0	0	0	0	0	0	0	0	5	15	20	-12	-32	-28	-5	-8	40	225	265
3	0	-5	-15	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	8	0	0	2	0	15	25	40
4	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	1	21	0	21
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	-8	-12	-25	-25	-30	-30	0	0	0	5	0	11	40	28	15	3	0	-6	-38	-40	-10	-30	-75	-9	102	329	431
7	-80	-35	-15	-15	-12	-3	0	0	0	0	0	0	0	0	0	0	15	5	11	28	7	0	0	-6	-4	66	166	232
8	-12	-8	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	-8	-35	-3	5	66	71
9	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	10	5	0	0	5	-5	-32	-15	-1	28	60	88
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-6	-12	-1	0	28	28
13	-12	-18	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	8	0	0	0	-1	20	40	60
14	0	0	-4	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-50	-48	-42	-20	-7	0	177	177
15	-18	-15	0	0	-25	-32	-55	-20	-25	-32	-40	-30	-5	0	0	0	0	0	7	5	-5	-52	-90	-20	-19	12	464	476
16	0	0	-18	-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	0	36	36
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	0	10	10
18	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	-5	0	-5	-5	0	8	17	25
19	0	0	0	0	-10	-8	0	0	0	0	0	0	3	6	28	-52	10	48	20	-10	-12	-5	-10	-63	-2	115	170	285
20	-60	-32	0	0	-40	-88	-38	-18																		(0	276	276)
21									0	0	0	0	0	ċ	0	0	0	0	0	0	10	0	0	0		(10	0	10)
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	35	-65	-125	18	-5	-40	5	-20	-7	76	255	331
23	-10	-65	-3	15	7	0	-4	0	0	0	0	0	0	0	14	12	15	30	25	-55	-10	-2	-105	-30	-7	118	284	402
24	10	-30	-40	-18	0	0	0	0	0	0	0	0	5	5	5	0	8	35	20	20	20	18	10	0	3	156	88	244
25	-10	10	-10	-8	0	0	0	0	0	0	0	0	0	0	28	45	50	28	35	10	-25	-12	0	-35	4	206	100	306
26	-48	-20	-65	-100	-40	-30	-8	0	0	0	0	0	0	0	20	40	32	30	-12	-35	-80	-55	-20	-20	-17	122	533	655
27	-70	-65	-18	0	0	8	-5	0	0	0	0	0	0	3	5	18							-108	-15		(34	281	315)
28	-35	-50	-60	-78	-30	-5	0	0	0	0	0	5	5	25	8	22	18	5	-5	5	-30	-40	-30	-105	-16	93	468	561
29	-60	-40	-25	-5	0	-3	0	0	0	0	0	0	3	20	25	45	22	40	20	-35	-70	-90	-30	-8	-6	175	366	541
30	0	-15	-58	-55	-35	-12	-6	0	0	0	0	0	0	0	0	15	6	0	0	0	-12	-65	-32	-20	-12	21	310	331
31	-12	-18	-10	-3	0	0	0	0	0	0	0	0	0	0	3	13	3	8	25	10	5	-45	-68	-52	-6	67	208	275
M	-14	-16	-15	-12	-8	-7	-5	-1	-1	-1	-1	-1	1	3	6	7	8	7	2	-3	-13	-18	-22	-19	-5	53	174	227
MPS	1	0	0	1	0	0	0	0	0	0	0	0	1	3	6	9	8	9	7	4	2	1	1	0				
MNS	15	16	15	13	8	7	5	1	1	1	1	1	0	0	0	2	0	2	5	8	15	18	23	19				

FEBRUARY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-25	-40	-3	0	80	80
2	-40	-40	-20	-15	-18	-20	-13	-5	0	0	0	0	0	5	0	15	38	30	20	18	0	-35	-25	-5	-5	126	236	362
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	-13	-60	-3	5	73	78
4	-65	-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	18	25	0	5	5	0	-4	-1	56	87	143
5	-10	-10	-40	-50	-45	-18	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7	0	176	176
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	15	5	0	0	0	0	0	1	25	0	25
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						(0	0	0	0)
9										0	0	0	0	0	0	15	20	13	10	25	25	12	0	-5	(5	120	5	125)
10	-15	-10	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	0	-2	0	40	40
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	0	0	9	0	9
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0														(0	0	0)
14										0	0	0	0	0	0	0	0	0	-3	-30	-90	-48	-16	-10		(0	197	197)
15	-15	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	-5	20	28	45	30	8	-5	-50	-50	-30	-2	131	170	301
16	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-30	-45	-35	-5	5	115	120
19	-18	-12	-12	-13	0	0	0	0	0	0	0	-5	8	32	-5	45	55	45	-45	-105	-26	-5	38	-15	-2	223	261	484
20	-80	-95	-55	-30	-5	0	0	0	0	0	0	0	0	-5	-10	12	35	12	5	-8	5	0	-20	-95	-14	69	403	472
21	-105	-45	-5	-80	-175	-120	-20	0	0																	(0	550	550)
22																												
23																												
24																				-40	5	-140	-230	-115		(5	525	530)
25	-75	-52	-18	-5	0	0	0	0	0	3	15	0	0	0	20	15	0	10	-15	-15	-5	0	-5	-20	-6	63	210	273
26	-40	5	-15	-65	-40	-30	0	0	0	0	0	0	0	0	0	0	0	5	0	0	-50	-215	-170	-75	-29	10	700	710
27	-55	-10	-15	-5	-10	-5	0	0	0	0	0	0	0	0	0	0	0	5	10	10	0	-40	-80	-65	-11	25	285	310
28	-75	-28	-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	-35	-40	-7	10	190	200
M	-27	-14	-9	-12	-13	-8	-2	0	0	0	1	0	0	1	0	5	8	9	2	-6	-6	-23	-30	-27	-6	38	179	217
MPS	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	5	8	9	5	3	2	1	2	0				
MNS	27	14	9	12	13	8	2	0	0	0	0	0	0	0	1	0	0	0	3	9	8	25	31	27				

Bodö. Vertical Intensity. Storminess (+ Down). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

MARCH 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-18	-18	-35	-20	-5	0	0	0	0	0	0	0	0	0	0	10	10	5	6	30	-8	-5	0	-30	-3	61	139	200
2	-60	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	12	18	-6	-20	-50	-45	-7	32	196	228
3	-35	-5	0	0	0	0	0	0	0	0	0	0	0	0	10	12	3	17	5	-20	-35	-22	2	5	-3	54	117	171
4	0	12	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10	20	35	18	10	0	0	0	5	115	0	115
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	13	10	0	0	0	1	31	0	31
6	0	-3	-3	0	0	0	0	0	0	0	0	0	0	0	-3	15	0	0	5	10	10	0	0	0	1	40	9	49
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-35	-25	-3	0	60	60
8	-15	-10	0	0	0	0	0	0	0	0	0	0	5	8	8	6	3	0	0	0	5	6	-10	-22	-1	41	57	98
9	-35	-20	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6	5	5	-2	20	65	85
10	-5	-25	-20	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2	-8	-22	0	18	-5	-3	18	92	110
11	-50	-125	-140	-50	-10	0	0	0	0	0	0	0	0	3	20	8	0	0	0	0	-18	-20	-15	-5	-17	31	433	464
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	8	0	0	0	3	-5	1	19	5	24
13	-8	-3	3	3	0	0	0	0	0	0	0	-5	0	-5	-12	0	50	40	10	8	5	0	0	0	4	119	33	152
14	0	0						0	0	0	0	10	0	0	10	30	3	0	0	0	0	0	0	0		(53	0	53)
15	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0						(0	10	0	10)
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30							0	0	0	0	-5	-15	-12	10	15	5	0	0	15	22	13	-10	-15	-15	(0	80	72	152)
31	-30	-60	-20	-5	0	0	0	0	0	3	8	0	-5	-10	0	5	10	20	-8	0	-3	0	-55	-60	-9	46	256	302
M	-16	-17	-14	-5	-1	0	0	0	0	0	0	-1	-1	1	3	5	5	7	6	6	-2	-4	-10	-13	-2	45	90	136
MPS	0	1	1	0	0	0	0	0	0	0	0	1	0	1	4	5	5	7	6	7	4	1	2	1				
MNS	16	18	15	5	1	0	0	0	0	0	0	1	1	2	1	0	0	0	1	2	6	5	11	13				

APRIL

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-15	5	15	-30	-25	-12	0	0	0	0	5	0	3	0	6	0	18	20	12	-15	-15	-10	-60	-65	-7	84	253	337
2	-15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	22	-5	-20	-40	-20	-50	-5	27	150	177
3	-20	3	3	3	0	0	0	0	0	0	5	0	0	-10	0	0	5	10	10	15	12	0	-12	-20	0	66	62	128
4	-30	-55	-85	-40	0	0	0	0	0																	(0	210	210)
5																												
6																												
7																												
8													0	0	0	12	20	0	-12	10	15	0	-10	-50		(57	72	129)
9	-40	-20	0	0	0	0	0	0	0	0										0	0	0	-10	-20		(0	90	90)
10	-7	0	0	0	0	0	0	0	0	0	0	0	0	5	35	8	0	12	0	-5	0	0	0	0	2	60	12	72
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	-15	-5	-1	0	23	23
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	-5	-10	-15	-25	0	0	15	20	20	45	50	40	0	-15	5	190	70	260
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-6	0	3	12	-8	0	40	75	65	10	8	205	14	219
16	5	-5	-25	-10	-15	0	0	0	0	0	0	0	0	-10	5	3	5	45	50	-15	0	-45	-45	-120	-7	113	290	403
17	-120	-30	-30	25	0	10	40	20	5	0	0	5	-70	-30	-40	-5	-25	15	30	25	0	-50	-70	-55	-15	175	525	700
18	0	-55	-55	0	-10	0	0	0	0	0	0	0	-5	0	10	0	0	0	0	0	20	105	110	35	6	280	125	405
19	30	-20	-15	-5	-5	0	0	0	0	0	0	0	-20	-40	-20	-5	0	0	-45	-80	-65	-5	-80	-130	-21	30	535	565
20	-60	-10	0	0	0	0	-15	0	-15	0	0	0	-8	-3	8	5	15	15	10	-30	-30	-40	0	0	-7	53	211	264
21	0	-8	5	5	15	5	0	0	0	0	10	10	0	0	0	0	0	-30	-20	8	12	70	-55	-70	-2	140	183	323
22	-100	-80	-20	-5	-10	0	0	0	0	0	0	0	-10	0	25	15	35	0	5	-20	-100	-130	-75	-95	-24	80	645	725
23	-50	-12	5	3	0	10	10	0	0	0	0	-5	5	30	35	30	8	0	0	-40	-75	-65	-40	-65	-9	136	352	488
24	-50	-40	-20	5	5	0	0	0	0	0	0	0	0	0	3	25	25	40	30	5	0	0	-55	-140	-7	138	306	443
25	-80	-35	-5	0	0	0	0	0	0	0	0	0	0													(0	120	120)
26																												
27																												
28																												
29																												
30																												
M	-26	-17	-11	-2	-2	0	2	1	0	0	1	0	-6	-4	3	5	7	9	5	-5	-8	-5	-19	-43	-5	91	212	303
MPS	2	0	1	2	1	1	2	1	0	0	1	1	0	2	7	5	8	10	10	5	7	15	9	2				
MNS	28	18	12	4	3	1	1	0	1	0	0	1	6	6	3	1	1	2	4	11	15	19	27	45				

MAY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																		0	0	0	0	0	0	0		0	0	0
11	0	-5	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	0	0	0	0	0	1	30	13	43
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-15	-5	-1	0	20	20
13	-5	0	0	0	10	5	0	0	0	0	3	25	55	20	2	0	0	0	0	0	-20	-45	-10	10	-2	130	80	210
14	-70	-55	-5	0	0	0	0	0	0	0	-5	-5	-5	0	-5	0	15	-10	25	60	70	160	70	20	11	420	160	580
15	-15	-5	0	-25	-75	-48	-10	0	0	0	10	10	0	0	0	0	0	6	18	0	0	-15	-80	-115	-14	44	388	432
16	-85	-15	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	35	40	-5	0	15	-20	-20	-8	100	145	245
17	-15	0	0	0	0	0	0	0	0	0	0	0	0	-5	-5	20	25	20	5	0	5	20	55	90	9	240	25	265
18	-75	-100	-60	-40	-40	-80	-10	0	0	12	40	30	15	0	0	5	10	5	0	-25	5	0	-20	-30	-15	122	480	602
19	-12	0	0	0	0	0	0	0	0	0	0	0	0	-10	-10	-5	0	15	-40	-70	-80	-80	-18	0	-13	15	325	340
20	0	0	-10	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-50	-35	-4	8	105	113
21	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20	5	0	0	0	0	1	35	3	38
22	-5	-20	-10	0	0	0	0	0	0	0	0	0	0	0	20	10	-10	-5	0	0	0	0	-40	-60	-5	30	150	180
23	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	-60	-70	-25	-7	10	175	185
24	-10	0	0	0	0	0	0	0	0	0	0	0	0	5	0	10	0	0	0	0	0	0	0	0	0	15	10	25
25	0	-25	-30	-5	0	0	0	0	0	0							0	0	0	0	0	0	0	0		0	60	60
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-25	0	30	15	0	10	-5	-5	0	55	45	100
28	15	-25	-95	-50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7	15	175	190
29	0	0	0	0	0	0	0	0	0	0	0	0	5	5	15	30	-5	10	25	30	-20	-5	-5	25	5	145	35	180
30	50	90	95	-20	-20	5	0	0	0	0	0	0	-10	-3	5	5	-40	-20	0	10	5	0	0	-10	6	265	123	388
31	-55	-30	0	-15	-15	-15	-10	0	0	0	0	10	30	45	55	30	-10	-10	10	-5	15	20	15	-35	1	230	200	430
M	-15	-9	-6	-7	-7	-6	-1	0	0	1	2	3	5	3	4	5	-1	3	7	5	-1	0	-9	-9	-1	87	124	210
MPS	3	4	5	0	1	0	0	0	0	1	3	4	6	4	5	6	3	5	8	5	5	10	6	7				
MNS	18	13	10	7	7	7	1	0	0	0	0	0	1	1	1	1	5	2	2	10	5	10	15	15				

Bodö. Vertical Intensity. Storminess (+ Down). Unit Gamma. *Gr. M. T.*

HOURLY MEAN VALUES

JUNE 1933

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	-10	30	15	-75	-80	-20	0	0	0	0	0	5	3	3	5	-3	-15	0	-3	-75	-70	-15	-5	0	-12	61	361	482
2	0	0	0	0	0	0	0	0	0	0	5	35	20	0	0	0	0	12	0	15	10	15	0	0	5	112	0	112
3	-8	-20	0	-5	0	0	0	0	0	0	0	0	0	0	10	-10	-15	10	0	0	-10	-10	0	0	-2	20	76	96
4	0	0	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
5	-15	-25	-10	0	0	0	0	0	0	0	0	0	0	-5	0	0	0	0	0	0	0	0	0	0	-2	0	55	55
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-25	-1	0	35	35
8	-40	-35	-20	0	-5	-7	0	0	0	0	-12	10	-20	-25	-15	0	0	0	0	-15	-10	30			-8	40	214	254
9					-20	0	-10	0	12	0	0	0	0	5	0	-15	-5	35	10	10	0	0	0	0		(72	50	182)
10	-5	-28	-12	0	0	0	0	0	0	0	0	5	10	0	0	0	20	20	5	-15	-40	-5	0	0	-2	60	105	165
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-20	-5	0	-1	0	30	30
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-10	0	0	0	-20	-25		-3	0	65	65
13										-10	-35	-55	-60	-50	-40	-90	-75	-55	-20	50	770	180	365	30		(695	490	1185)
14	0	-110	-75	-8	0	0	0	0	0													0	-30	-50		(0	273	273)
15	-22	-20	-105	-70	-15	0	0	0	0	0	0	0	0	0	0	0	0	-5	-10	0	0	-35	-70	-25	-16	0	377	377
16	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-15	-5	-1	0	25	25
17	0	0	0	0	0	0	0	0	0																	(0	0	0)
18																												
19																												
20																												
21																												
22																												
23								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-35	-28	-3	0	63	63
24	-5	-10	-8	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	28	28
25	0	0	0	0	0	0	0	0																				
26									0	0	0	0	0	0	0	0	0	0	25	5	0	0	0	0	1	30	0	30
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	60	25	5	0	0	0	0	0	-5	6	160	5	165
28	-25	-110	-45	-5	0	0	0	0	0	0			43	-5	14	20	-15	18	18	5	25	-20	0	60	-1	203	225	428
29	55	20	10	-5	0	0	0	0	0	0	5	0	12	0	12	25	-10	-5	0	0	0	0	0	-20	5	149	40	189
30	-25	0	0	-10	0	0	0	0	0	0	0	12	0	5	-10	-35	-5	0	5	0	0				-3	22	85	107
M	-5	-16	-12	-9	-5	-1	0	0	0	0	-2	1	0	-3	2	-2	-5	1	1	-1	-1	4	8	-3	-2	74	119	193
MPS	3	2	1	0	0	0	0	0	0	0	0	3	4	1	5	5	2	5	3	4	5	10	17	4				
MNS	8	18	14	9	5	1	0	0	0	0	2	3	4	4	3	7	7	4	1	5	6	6	9	8				

JULY

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1									0	0	0	0	15	0	-15	-10	0	0	15	20	15	0	-10	-10		(65	45	110)
2	-95	-50	--6	0	0	0	0	0	0	0	0	0	0	0	0	-5	5	0	-8	0	0	0	0	0	-7	5	163	168
3	-22	-78	-35	-5	0	0	0	0	0	0	0	0	0	0	0	3	10	3	5	0	0	-15	-10	-3	-6	21	168	189
4	0	0	0	-12	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-25	-10	0		-2	0	52	52
5											0	0	0	0	0	10	10	0	0	0	0	0	0	0		20	0	20
6	-5	-15	-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	10	0	-3	-7	0	-1	25	42	67
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-15	0	0	0	0	0	-15	-2	0	50	50
8	-30	-15	0	0	0	0	0	0																		(0	45	45)
9																												
10													0	0	0	0	0	0	0	0	-40	-40	-40	-85	-40	(0	245	245)
11	-10	20	-10	8	0	0	0	0							20	55	25	-25	-30	-5	0	0	0	0		(128	80	208)
12	-50	-30	-10	-10	0	0	0	0																		(0	100	100)
13								0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8	0		(11	0	11)
14	-25	-28	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	5	0	-2	13	58	71
15	-18	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-10	-2	0	38	38
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	-5	-5	0	0	0	0	12	10	22
17	-5	-25	-12	0	0	0						0	25	40	55	20	0	0	0	-10	-25	-20	-40	0	0	140	137	277
18	25	-30	-35	-10	0	0											5	15	20	0	-10	0	0	0		(65	85	150)
19	0	0	0	-5	-5	0	0	0	0	0	0	0	0	0	5	18	5	0	0	5	5	-15	-40	-30	-2	38	95	133
20	-40	-15	0	5	0	0	0																			(5	55	60)
21								0	0	0	0	0	0	0	0	0	0	5	20	15	0	0	0	0		(40	0	40)
22	0	0	-25	-30	0	0	0	0	0	0	0	0	0	5	25	25	15	0	0	0	0	0	0	0	1	70	55	125
23	0	-30	-35	-10	0	0	0	0	0	0	0	0	0	8	48	0	-50	-68	0	35	-10	100	-10	-55	-7	191	268	459
24	0	-35	-10	10	-50	-5	0	0	0	0	0	10	45	40	15	30	25	10	0	0	0	-10	-40	-45	0	185	195	380
25	-45	-20	-5	0	0	0	0	0	0	0	0	-10	10	25	5	0	0	0	0	0	0	-5	-10	-30	-4	40	125	165
26	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	10	0	0	0	0	-70	-2	40	80	120
27	-120	-65	-10	0	-20	-15	0	0	0	5	15	0	0	30	0	-5	0	0	0	15	0	0	120	-70	-5	185	300	485
28	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-1	0	30	30
29	-8	0	0	0	0	0	0	0	0	0	0	0	0	5	-5	0	0	0	0	0	0	0	-5	0	-1	5	18	23
30	0	0	0	0	0	0	0	0																		(0	0	0)
31								0	0	0	0	0	0	10	5	5	0	0	20	0	0	0	0	0		(30	0	30)
M	-20	-17	-9	-2	-3	-1	0	0	0	0	1	0	4	7	7	6	2	-2	3	2	-4	-1	-5	-15	-2	55	106	161
MPS	1	1	0	1	0	0	0	0	0	0	1	0	4	7	8	7	5	2	4	4	1	4	5	0				
MNS	21	18	9	3	3	1	0	0	0	0	0	0	0	0	1	1	3	4	1	2	4	5	10	15				

AUGUST

DAY		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	M	PS	NS	AS
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	-5	0	0	0	-5	-40	-35	-5	-4	5	90	95
3	0	0	-5	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-30	-1	0	35	35
5	-35	-17	0	0	0	0	0	0	0	0	0	5	35	55	-35	-15	35	65	50	10	-25	-10	0	15	6	270	137	407
6	0	0	10	-65	-30	-10	0	0	0	0	0	0	0	0	0	8	27	-20	-15	0	0	0	0	0	-4	45	140	185
7	0	0	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	12	0	0	0	0	-25	-80	-4	17	110	127
8	-30	-25	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-10	-80	-6	0	155	155
9	-65	-20	-5	0	0	0	0	0	0	0	0	0																
10							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		(0	0	0)
11	0	-10	-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	-5	-25	-30	-3	5	80	85
12	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-12	-1	0	17	17
13	-30	-25	-10	0	0	0	0	0	0	0	0	0	20	5	5	10	0	0	0	-80	-90	20	150	-12	-2	210	247	457
14	-40	5	-15	0	0	0	0	0	0	0	0	0	5	20	55	50	20	5	0	0	-10	-50	-65		-1	160	180	340
15										18	10	13	20	30	30	10	0	0	10	-40	-8	0	0	0		(141	48	189)
16	0	-8	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	0	0	-40	-35	-3	15	91	106
17	-5	0	0	0	0	0	0	0	0	0	0	0	0	18	50	30	0	0	10	0	-10	-5	-5	-20	3	108	45	153
18	-60	-40	-15	0	0	0	-5	-25	-10	5	5	0	0	5	0	15	35	-30	-10	-50	-200	-155	-75	40	-24	105	675	780
19	-55	-110	-60	0	-15	-10	0	10	0	0	0	0	30	15	8	0	0	0	0	5	-10	-20	-10	-5	-9	68	295	363
20	-15	-15	0	-8	0	0	0	0	0	0	-5	5	20	0	-40	-30	0	10	-10	20	35	65	-120	-100	-8	155	343	498
21	-30	-20	5	-20	-20	0	0	5	0	10	5	20	25	5	0	-50	-120	-25								(75	285	360)
22							0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	(5	0	5)
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	5	-15	0	-20	-105	-35	-35	-60	-20	-10	45	290	335
24	0	0	-10	-20	-5	0	0	0	0	0	0	0	0	0	-10	15	30	35	5	10	20	5	20	-35	2	140	80	220
25	-55	-5	5	-10	-10	-10	0	0	10	0	0	0	0	0	0	0	0	12	35	20	5	0	0	0	0	87	90	177
26	-20	-55	-40	-15	0	0	0	0	0	0	0	0	20	35	20	0	0	12	20	20	0	15	0	0	1	142	130	272
27	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-25	-40	-10	-3	5	80	85
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-15	-20	-25	-2	0	60	60
29	-35	-25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	0	60	60
30	0	-5	-8	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20	-2	0	38	38
31	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	-15	-25	-5	-2	8	50	58
M	-17	-13	-6	-5	-3	-1	0	0	0	1	0	1	6	6	4	1	0	5	3	-7	-11	-9	-17	-16	-3	62	136	199
MPS	0	0	1	0	0	0	0	1	0	1	1	1	6	6	7	5	4	7	5	3	3	4	6	2				
MNS	17	14	7	5	3	1	0	1	0	0	0	0	0	0	3	3	5	2	2	10	14	13	19	18				

Storminess. Monthly Means.

Resuming Tables. Declination. Unit Gamma. + West. *Bodö.*

1932 - 1933		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SEPTEMBER MPS	1	0	0	0	2	2	1	1	0	1	1	4	4	6	9	7	3	2	2	2	0	0	1	1
OCTOBER MPS	3	2	1	1	1	3	0	3	1	2	2	4	5	5	6	4	8	6	5	2	1	0	1	2
NOVEMBER MPS	1	1	1	1	3	3	5	0	1	1	2	2	2	1	1	0	2	0	0	1	1	0	0	0
DECEMBER MPS	2	2	1	2	1	1	1	0	0	1	1	2	3	3	5	4	4	8	6	4	2	1	1	3
JANUARY MPS	0	1	1	1	1	4	4	2	0	1	1	2	2	1	2	2	4	2	2	2	1	1	1	1
FEBRUARY MPS	0	1	0	0	0	1	1	0	0	1	3	3	4	3	2	1	1	2	1	2	1	2	0	0
MARCH MPS																								
APRIL MPS	2	0	0	0	0	2	2	3	1	1	3	5	8	10	4	4	5	5	6	7	1	0	0	0
MAY MPS	0	1	1	0	1	0	2	2	1	1	1	3	5	4	4	11	16	15	12	9	3	1	1	0
JUNE MPS	1	0	1	0	0	1	1	2	1	2	1	1	3	4	0	0	4	2	5	6	4	2	0	1
JULY MPS	3	3	2	2	1	2	2	0	0	0	2	2	3	4	4	3	3	2	2	3	2	1	1	3
AUGUST MPS	2	1	1	1	1	1	2	3	2	2	1	3	2	2	4	4	5	5	6	2	1	1	1	1
MEANS	1	1	1	1	1	2	2	1	1	1	2	3	4	4	4	4	5	4	4	4	2	1	1	1
SEPTEMBER MNS	16	17	15	15	10	3	1	0	0	0	1	0	0	2	0	2	3	4	3	13	12	26	19	22
OCTOBER MNS	12	21	13	9	2	2	2	0	1	1	0	0	0	1	1	6	4	4	1	6	10	16	16	10
NOVEMBER MNS	3	3	6	5	1	0	1	3	1	1	1	0	1	1	2	6	5	11	13	8	12	19	19	7
DECEMBER MNS	17	13	9	5	3	2	0	1	1	0	0	0	1	1	1	1	3	3	4	8	14	20	19	22
JANUARY MNS	18	13	6	3	3	1	0	0	1	2	1	1	0	2	2	3	2	2	4	10	11	13	19	20
FEBRUARY MNS	17	21	14	9	3	1	0	0	0	0	0	0	0	1	1	3	3	4	9	10	7	10	14	14
MARCH MNS																								
APRIL MNS	25	19	13	5	3	1	1	0	0	1	0	0	0	0	2	3	4	5	7	17	15	24	36	33
MAY MNS	18	17	10	7	5	3	1	0	0	0	0	0	0	0	1	0	0	1	3	5	6	14	17	18
JUNE MNS	19	17	11	7	4	2	1	0	0	0	0	0	0	1	0	0	0	1	1	1	2	4	12	13
JULY MNS	12	11	8	5	2	1	2	0	0	0	1	0	1	1	1	1	3	2	1	2	4	4	9	9
AUGUST MNS	7	8	8	6	2	2	1	1	0	0	0	0	0	1	1	1	1	1	3	8	6	9	8	10
MEANS	15	15	10	7	3	2	1	0	0	0	0	0	0	1	1	2	3	3	4	8	9	14	17	16
SEPTEMBER MPS - MNS	-15	-17	-15	-15	-8	-2	0	1	0	0	0	4	4	4	9	5	0	-2	0	-11	-18	-26	-18	-21
OCTOBER MPS - MNS	-9	-19	-12	-8	-1	2	2	2	1	1	2	4	5	4	5	-2	4	2	3	-3	-9	-16	-15	-8
NOVEMBER MPS - MNS	-2	-2	-5	-4	2	3	4	3	0	0	1	2	2	-1	-1	-6	-3	-11	-13	-7	-11	-18	-19	-7
DECEMBER MPS - MNS	-15	-11	-8	-3	-2	-1	1	-1	-1	1	1	1	2	2	3	3	1	5	2	-4	-12	-20	-18	-19
JANUARY MPS - MNS	-17	-12	-5	-2	-2	3	3	2	-1	-1	0	1	2	-1	0	-1	2	0	-2	-9	-10	-12	-19	-19
FEBRUARY MPS - MNS	-16	-21	-13	-9	-2	0	1	0	0	1	3	3	4	2	1	-2	-2	-2	-8	-8	-6	-8	-14	-14
MARCH MPS - MNS																								
APRIL MPS - MNS	-23	-18	-13	-5	-3	1	1	2	1	0	2	5	8	9	2	1	1	0	-1	-10	-14	-24	-36	-33
MAY MPS - MNS	-18	-16	-9	-7	-5	-3	1	2	1	0	1	3	5	4	3	11	15	14	9	5	-2	-13	-17	-18
JUNE MPS - MNS	-18	-17	-11	-6	-4	-1	0	2	1	2	1	1	3	3	4	4	4	2	4	4	2	-2	-12	-11
JULY MPS - MNS	-9	-8	-6	-3	-1	1	0	0	0	0	1	2	3	3	3	2	0	0	1	1	-2	-3	-9	-6
AUGUST MPS - MNS	-5	-7	-7	-5	-1	-1	1	2	1	2	1	3	2	0	3	3	4	4	4	-6	-5	-9	-7	-9
MEANS	-13	-13	-9	-6	-2	0	1	1	0	1	1	3	4	3	3	2	2	1	0	-4	-7	-14	-17	-15

Storminess. Monthly Means.

Resuming Tables. Horizontal Intensity. Unit Gamma. *Bodö.*

1932 - 1933		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SEPTEMBER MPS	0	0	1	1	0	1	1	0	0	1	3	5	13	45	54	60	42	17	10	5	1	1	0	0
OCTOBER MPS	0	0	1	1	1	0	0	0	1	4	8	10	14	25	30	33	30	11	6	2	0	0	0	0
NOVEMBER MPS	0	0	0	0	0	0	0	1	1	4	2	4	5	11	16	14	21	11	11	9	4	1	0	0
DECEMBER MPS	0	0	0	1	1	1	0	0	0	2	2	3	5	7	8	14	25	24	21	11	7	3	1	1
JANUARY MPS	1	0	1	1	1	1	1	1	1	1	1	2	3	9	15	21	24	23	16	10	3	2	2	0
FEBRUARY MPS	0	0	0	0	1	1	2	1	0	1	3	3	5	8	19	14	10	10	7	11	3	2	0	0
MARCH MPS																								
APRIL MPS	0	0	1	2	1	1	1	0	0	1	8	15	30	40	30	36	26	26	17	5	0	0	0	0
MAY MPS	0	0	0	1	0	1	0	0	1	4	11	9	9	16	20	17	22	25	18	6	2	0	0	0
JUNE MPS																								
JULY MPS																								
AUGUST MPS																								
MEANS	0	0	0	1	1	1	1	0	0	2	5	6	10	20	24	25	25	18	13	6	2	1	0	0
SEPTEMBER MNS	61	59	42	24	10	4	3	2	1	0	1	1	0	0	0	0	0	1	2	16	53	83	94	75
OCTOBER MNS	61	49	27	11	3	2	3	2	1	1	1	0	0	1	0	0	0	1	2	18	51	49	64	54
NOVEMBER MNS	16	11	14	15	11	9	12	5	2	2	0	0	0	0	0	1	0	1	1	4	21	59	56	33
DECEMBER MNS	48	42	21	11	6	2	0	0	0	0	1	0	1	0	0	0	0	0	0	7	32	33	30	55
JANUARY MNS	35	42	29	11	9	6	3	2	2	1	1	0	0	0	1	0	0	0	2	12	26	46	46	39
FEBRUARY MNS	51	38	36	24	14	3	0	0	0	1	1	0	0	0	0	0	0	0	3	17	24	59	58	54

MARCH	MNS																								
APRIL	MNS	119	80	33	17	13	12	10	5	2	5	3	0	0	0	0	0	0	1	4	27	92	105	185	142
MAY	MNS	64	54	25	16	25	9	1	0	0	0	0	0	2	1	0	0	1	0	0	5	17	58	68	73
JUNE	MNS																								
JULY	MNS																								
AUGUST	MNS																								
MEANS		58	44	28	16	11	6	4	2	1	1	1	0	0	0	0	0	0	0	1	16	39	62	75	65
SEPTEMBER	MPS - MNS	-61	-59	-41	-23	-10	-3	-3	-2	-1	1	2	4	13	45	54	60	42	16	8	-10	-52	-82	-94	-75
OCTOBER	MPS - MNS	-61	-49	-26	-10	-2	-2	-3	-2	0	3	7	10	14	24	30	33	30	10	4	-16	-51	-49	-64	-54
NOVEMBER	MPS - MNS	-16	-11	-14	-15	-11	-9	-12	-4	-1	2	2	4	5	11	16	13	21	10	10	5	-17	-58	-56	-33
DECEMBER	MPS - MNS	-48	-42	-21	-10	-5	-1	0	0	0	2	1	3	5	7	8	14	25	24	21	4	-25	-30	-29	-54
JANUARY	MPS - MNS	-35	-42	-28	-10	-7	-5	-2	-1	-1	0	1	2	3	9	14	21	24	23	13	-2	-S23	-44	-44	-39
FEBRUARY	MPS - MNS	-51	-38	-36	-24	-13	-2	2	1	0	0	2	3	5	8	19	14	10	10	5	-6	-·20	-57	-58	-54
MARCH	MPS - MNS																								
APRIL	MPS - MNS	-119	-80	-33	-15	-12	-11	-9	-5	-2	4	5	15	30	40	30	36	26	25	13	-21	-·92	-105	-185	-142
MAY	MPS - MNS	-64	-54	-25	-15	-25	-8	-1	0	1	4	11	9	7	15	20	17	21	25	18	1	-15	-58	-68	-73
JUNE	MPS - MNS																								
JULY	MPS - MNS																								
AUGUST	MPS - MNS																								
MEANS		-58	-45	-28	-15	-9	-5	-3	-2	0	2	4	6	10	20	24	25	25	18	12	-6	-37	-60	-75	-65

Storminess. Monthly Means.

Resuming Tables.

Vertical Intensity. Unit Gamma.

Bodö.

1932 - 1933		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
SEPTEMBER	MPS	0	1	1	1	0	1	0	0	0	1	0	1	2	2	6	10	9	4	5	7	5	1	1	1
OCTOBER	MPS	0	0	0	0	0	0	1	0	1	2	3	4	4	8	9	15	10	6	4	3	6	7	0	0
NOVEMBER	MPS	0	1	0	0	0	0	0	1	0	1	1	1	2	8	7	12	11	7	7	5	3	1	0	1
DECEMBER	MPS	5	0	0	0	0	0	0	0	0	0	0	2	6	8	10	7	8	3	6	5	6	2	5	2
JANUARY	MPS	1	0	0	1	0	0	0	0	0	0	0	0	1	3	6	9	8	9	7	4	2	1	1	0
FEBRUARY	MPS	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	5	8	9	5	3	2	1	2	0
MARCH	MPS																								
APRIL	MPS	2	0	1	2	1	1	2	1	0	0	1	1	0	2	7	5	8	10	10	5	7	15	9	2
MAY	MPS	3	4	5	0	1	0	0	0	0	1	3	4	6	4	5	6	3	5	8	5	5	10	6	7
JUNE	MPS	3	2	1	0	0	0	0	0	0	0	0	3	4	1	5	5	2	5	3	4	5	10	17	4
JULY	MPS	1	1	0	1	0	0	0	0	0	0	1	0	4	7	8	7	5	2	4	4	1	4	5	0
AUGUST	MPS	0	0	1	0	0	0	0	1	0	1	1	1	6	6	7	5	4	7	5	3	3	4	6	2
MEANS		1	1	1	0	0	0	0	0	0	1	1	2	3	4	6	7	7	6	6	5	4	5	5	2
SEPTEMBER	MNS	34	28	20	17	13	6	0	1	1	0	0	0	0	17	17	15	9	5	5	5	16	34	51	41
OCTOBER	MNS	37	38	24	14	7	2	1	0	0	1	1	1	2	3	3	5	9	8	3	9	18	24	27	38
NOVEMBER	MNS	14	9	7	10	10	3	1	0	0	0	1	1	0	3	1	1	1	5	5	7	15	33	22	17
DECEMBER	MNS	20	29	29	21	14	8	5	0	0	1	1	0	0	1	1	0	7	14	7	20	12	14	16	17
JANUARY	MNS	15	16	15	13	8	7	5	1	1	1	1	1	0	0	0	2	0	2	5	8	15	18	23	19
FEBRUARY	MNS	27	14	9	12	13	8	2	0	0	0	0	0	0	0	1	0	0	0	3	9	8	25	31	27
MARCH	MNS																								
APRIL	MNS	28	18	12	4	3	1	1	0	1	0	0	1	6	6	3	1	1	2	4	11	15	19	27	45
MAY	MNS	18	13	10	7	7	7	1	0	0	0	0	0	1	1	1	1	5	2	2	10	5	10	15	15
JUNE	MNS	8	18	14	9	5	1	0	0	0	0	2	3	4	4	3	7	7	4	1	5	6	6	9	8
JULY	MNS	21	18	9	3	3	1	0	0	0	0	0	0	0	0	1	1	3	4	1	2	4	5	10	15
AUGUST	MNS	17	14	7	5	3	1	0	1	0	0	0	0	0	0	3	3	5	2	2	10	14	'13	19	18
MEANS		22	19	15	10	8	4	1	0	0	0	1	1	1	3	3	3	4	4	3	9	12	18	23	24
SEPTEMBER	MPS - MNS	-34	-27	-19	-16	-13	-5	0	-1	-1	1	1	1	2	-15	-11	-5	0	1	0	2	-11	-33	-50	-40
OCTOBER	MPS - MNS	-37	-38	-24	-14	-7	-2	0	0	0	2	2	3	2	5	6	10	1	-2	1	-6	-12	-17	-27	-38
NOVEMBER	MPS - MNS	-14	-9	-7	-10	-10	-3	-1	0	0	1	0	0	2	5	6	11	10	2	2	-1	-12	-32	-22	-16
DECEMBER	MPS - MNS	-15	-29	-29	-21	-14	-8	-5	0	0	-1	-1	2	6	7	9	7	-2	-11	-1	-15	-6	-12	-11	-15
JANUARY	MPS - MNS	-14	-16	-15	-12	-8	-7	-5	-1	-1	-1	-1	-1	1	3	6	7	8	7	2	-3	-13	-18	-22	-19
FEBRUARY	MPS - MNS	-27	-14	-9	-12	-13	-8	-2	0	0	0	1	0	0	1	0	5	8	9	2	-6	-6	-23	-30	-27
MARCH	MPS - MNS																								
APRIL	MPS - MNS	-26	-17	-11	-2	-2	0	2	1	0	0	1	0	-6	-4	3	5	7	9	5	-5	-8	-5	-19	-43
MAY	MPS - MNS	-15	-9	-6	-7	-7	-6	-1	0	0	1	2	3	5	3	4	5	-1	3	7	5	-1	0	-9	-9
JUNE	MPS - MNS	-5	-16	-12	-9	-5	-1	0	0	0	0	-2	1	0	-3	2	-2	-5	1	1	-1	-1	4	8	-3
JULY	MPS - MNS	-20	-17	-9	-2	-3	-1	0	0	0	0	1	0	4	7	7	6	2	-2	3	2	-4	-1	-5	-15
AUGUST	MPS - MNS	-17	-13	-6	-5	-3	-1	0	0	0	1	0	1	6	6	4	1	0	5	3	-7	-11	-9	-13	-16
MEANS		-21	-18	-13	-10	-8	-4	-1	0	0	0	0	1	2	1	3	6	3	2	3	-3	-8	-13	-18	-22

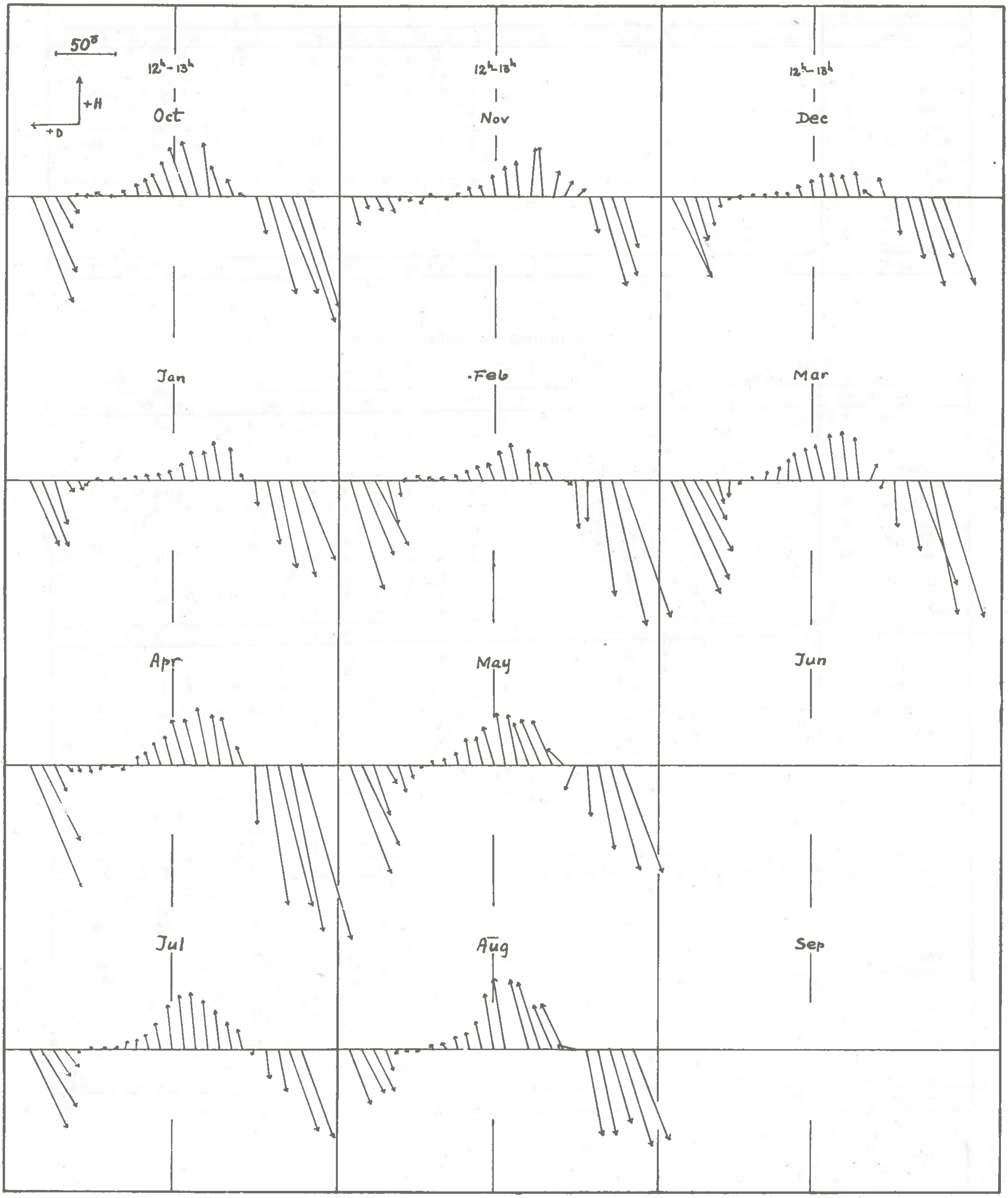


Fig. 1. Vector-Diagrams of the Monthly Means (M) of the Storminess in the Horizontal Plan at Bossekop.

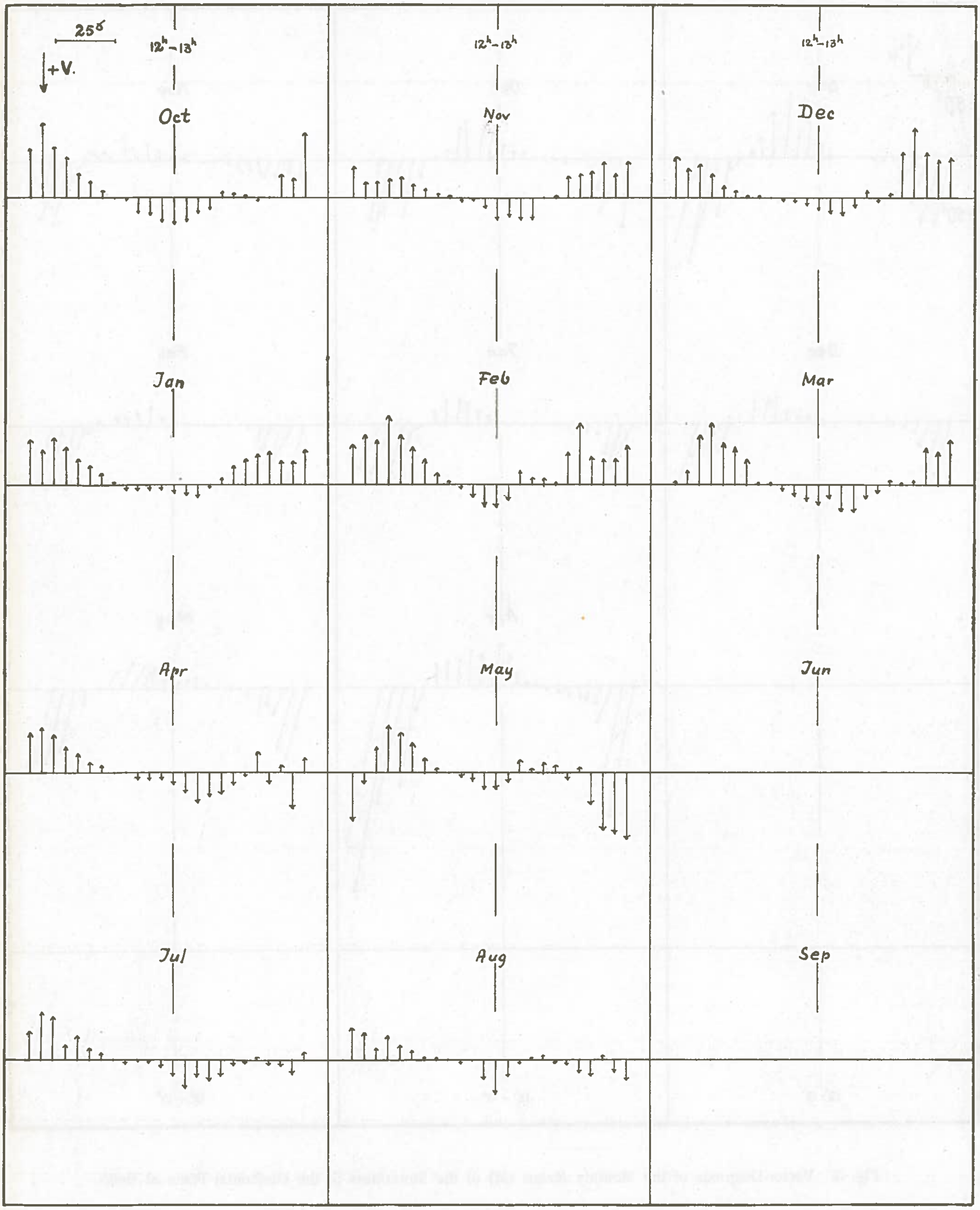


Fig. 2. Vector-Diagrams of the Monthly Means (M) of the Storminess in the Vertical Plane at Bossekop.

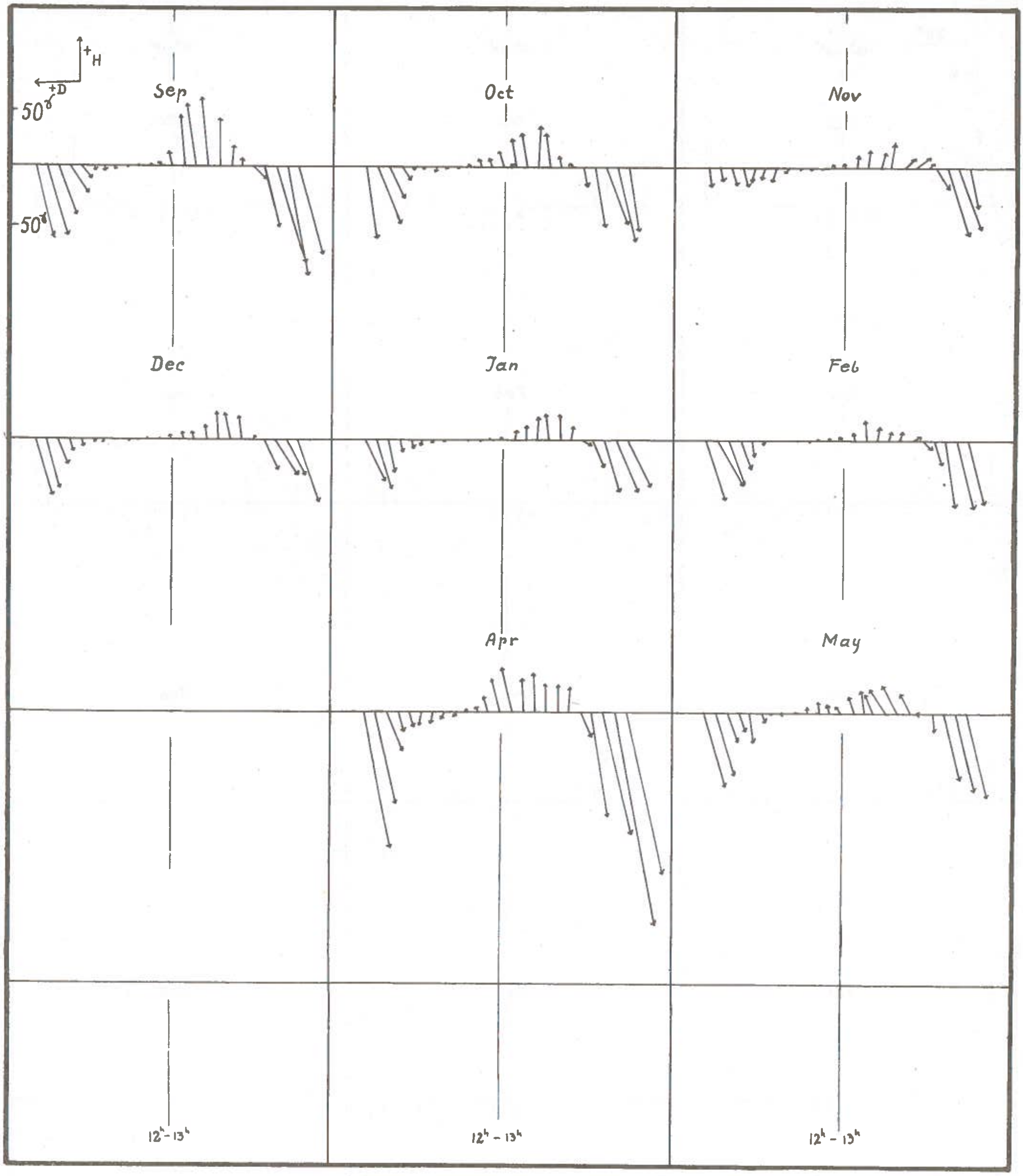


Fig. 3. Vector-Diagrams of the Monthly Means (M) of the Storminess in the Horizontal Plane at Bodö.

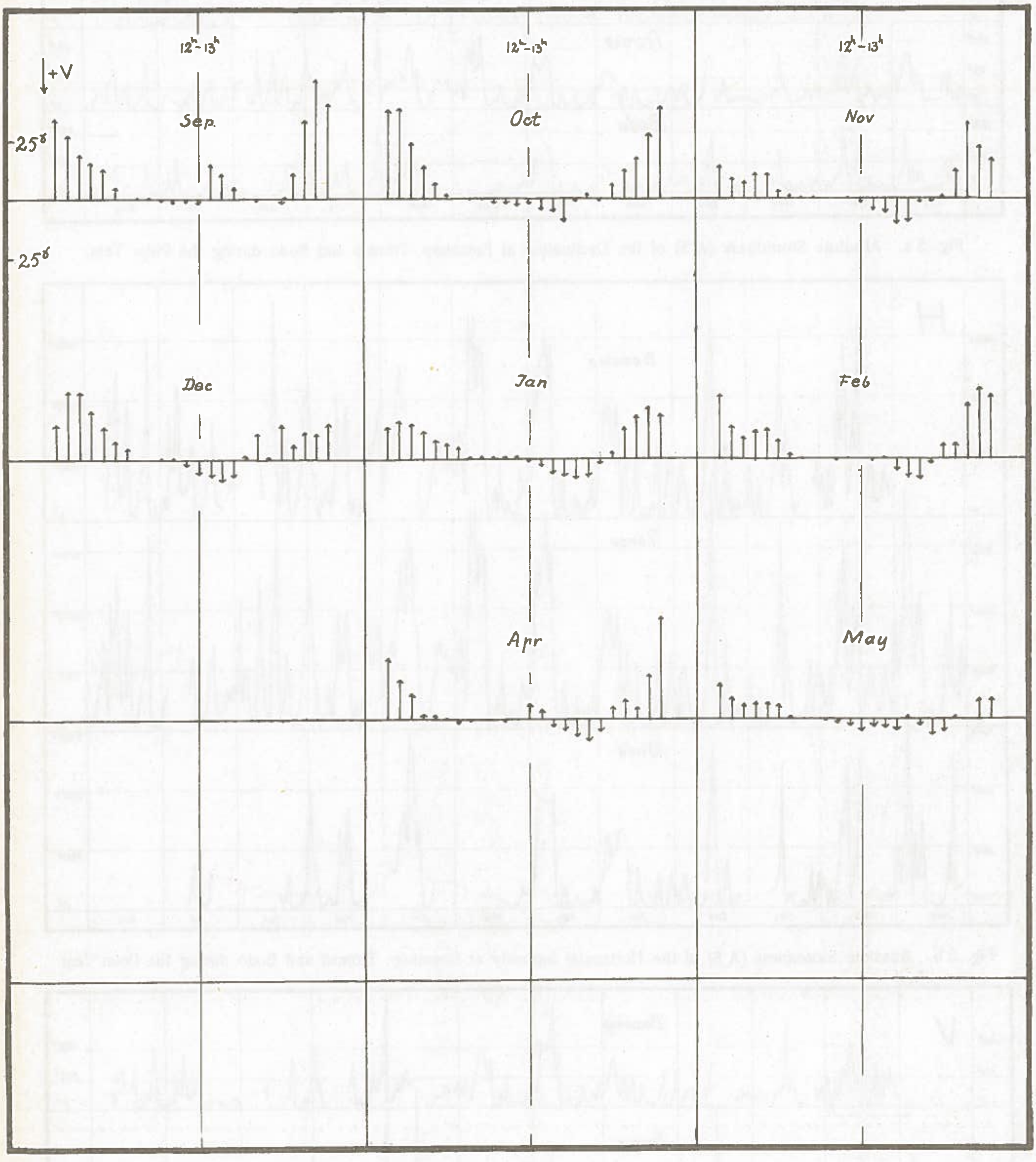


Fig. 4. Vector-Diagrams of the Monthly Means (M) of the Storminess in the Vertical Plane at Bodö.

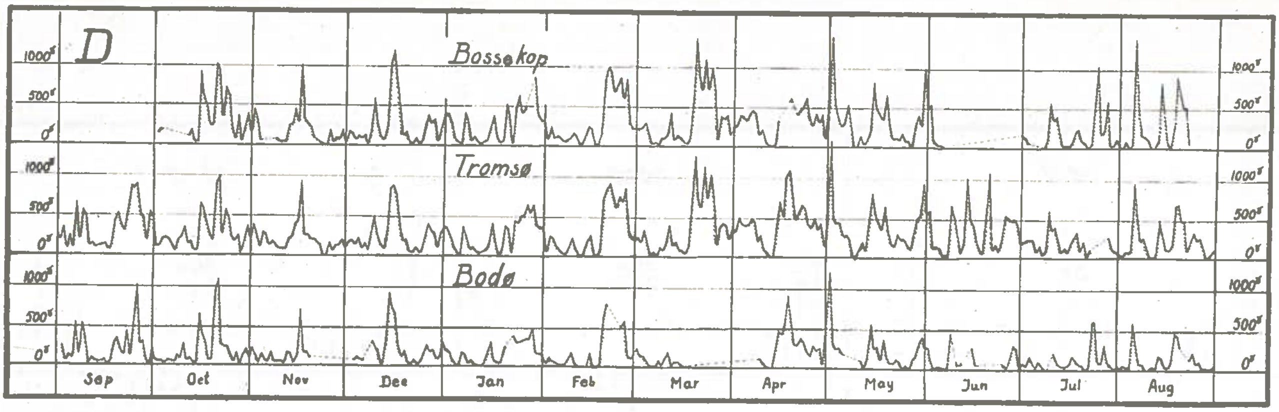


Fig. 5 a. Absolute Storminess (A S) of the Declination at Bossekop, Tromsö and Bodö during the Polar Year.

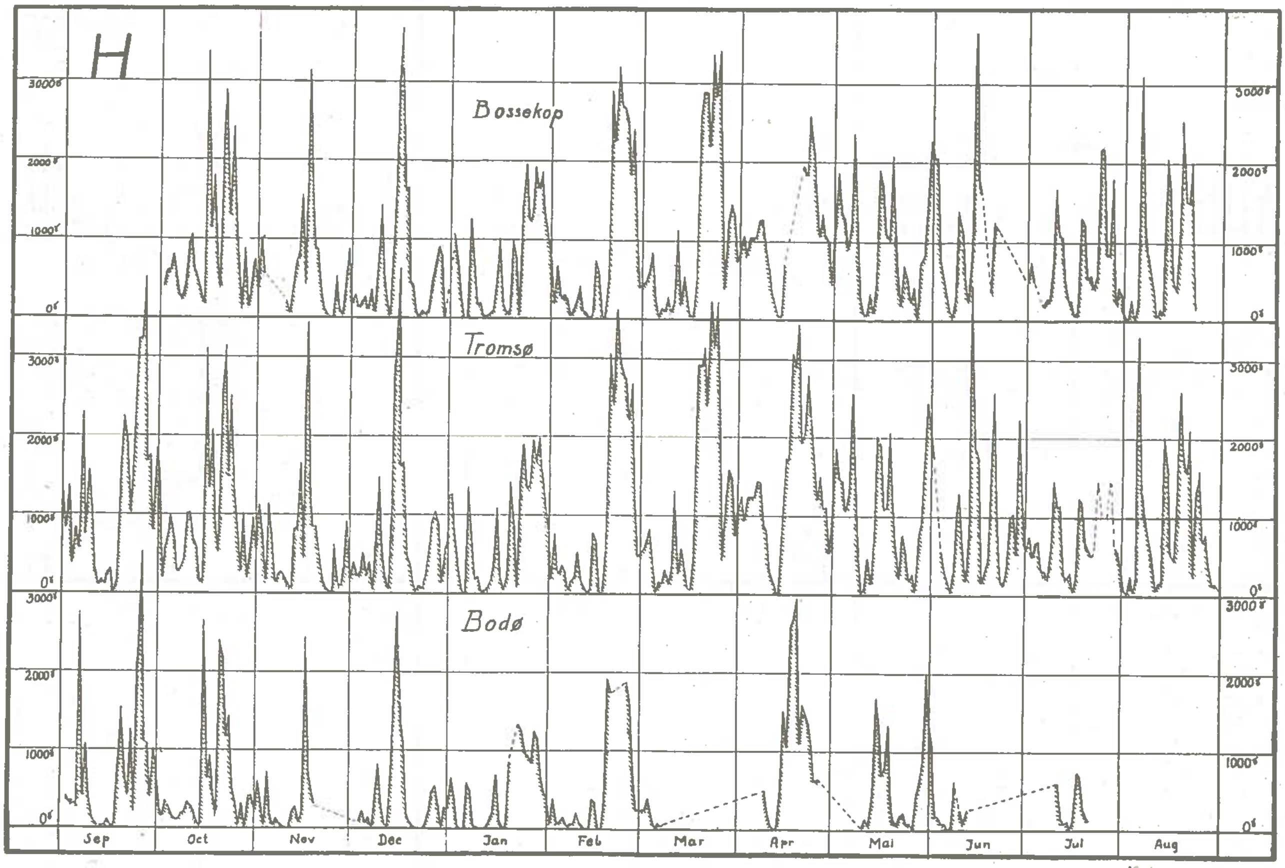


Fig. 5 b. Absolute Storminess (A S) of the Horizontal Intensity at Bossekop, Tromsö and Bodö during the Polar Year.

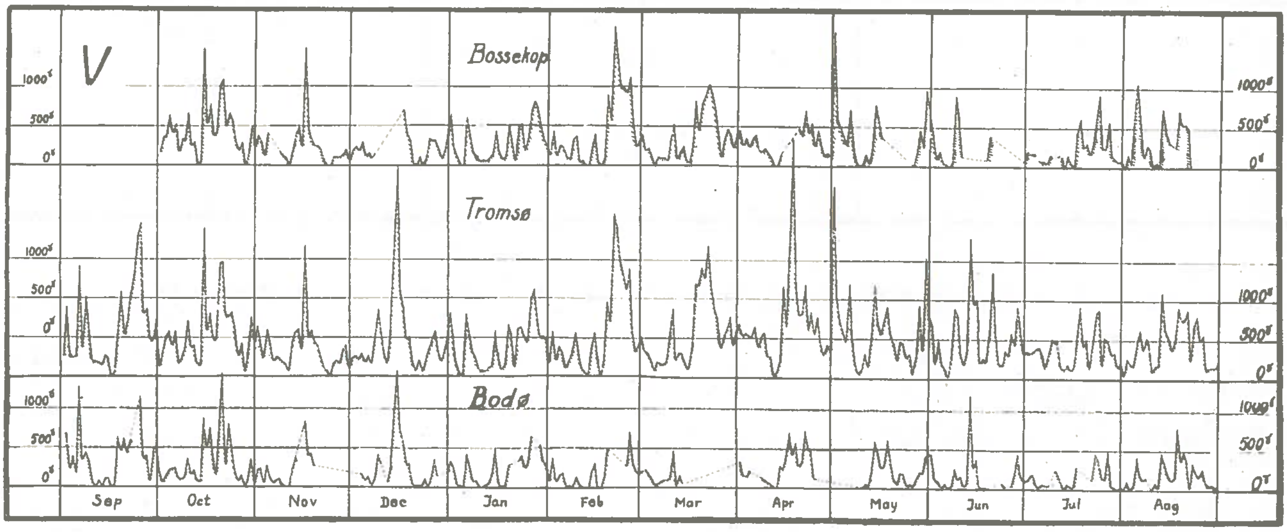


Fig. 5 c. Absolute Storminess (A S) of the Vertical Intensity at Bossekop, Tromsö and Bodö during the Polar Year.