JOE HASKELL ALLEN APR 7 '86

REPORT UAG-94

WORLD DATA CENTER A
for
Solar-Terrestrial Physics

THE SOLAR MAGNETIC FIELD -- 1976 THROUGH 1985

January 1986

WORLD DATA CENTER A
National Academy of Sciences
2101 Constitution Avenue, NW
Washington, D.C. 20418 USA

World Data Center A consists of the Coordination Office and the following eight Subcenters:

COORDINATION OFFICE
World Data Center A
National Academy of Sciences
2101 Constitution Avenue, NW
Washington, D.C. 20418 USA
[Telephone: (202) 334-3359]

GLACIOLOGY (Snow and Ice)
World Data Center A: Glaciology (Snow and Ice)
Cooperative Inst. for Research in Environmental Sciences
University of Colorado
Boulder, Colorado 80309 USA
Telephone: (303) 492-5171

MARINE GEOLOGY AND GEOPHYSICS (Gravity, Magnetics, Bathymetry, Seismic Profiles, Marine Sediment, and Rock Analyses):

World Data Center A for Marine Geology and Geophysics
NOAA, E/GC3
325 Broadway
Boulder, Colorado 80303 USA
Telephone: (303) 497-6487

METEOROLOGY (and Nuclear Radiation)
World Data Center A: Meteorology
National Climatic Data Center
NOAA, E/CC
Federal Building
Asheville, North Carolina 28801 USA
Telephone: (704) 259-0682

OCEANOGRAPHY
World Data Center A: Oceanography
National Oceanographic Data Center
NOAA, E/OC
2001 Wisconsin Avenue, NW
Page Bldg. 1, Rm. 414
Washington, D.C. 20235 USA
Telephone: (202) 634-7510

ROCKETS AND SATELLITES
World Data Center A: Rockets and Satellites
Goddard Space Flight Center
Code 601
Greenbelt, Maryland 20771 USA
Telephone: (301) 344-6695

ROTATION OF THE EARTH
World Data Center A: Rotation of the Earth
U.S. Naval Observatory
Washington, D.C. 20390 USA
Telephone: (202) 653-1507

SOLAR-TERRESTRIAL PHYSICS (Solar and Interplanetary Phenomena, Ionospheric Phenomena, Flare-Associated Events, Geomagnetic Variations, Aurora, Cosmic Rays, Airglow):

World Data Center A for Solar-Terrestrial Physics
NOAA, E/GC2
325 Broadway
Boulder, Colorado 80303 USA
Telephone: (303) 497-6323

SOLID-EARTH GEOPHYSICS (Seismology, Tsunamis, Gravimetry, Earth Tides, Recent Movements of the Earth's Crust, Magnetic Measurements, Paleomagnetism and Archeomagnetism, Volcanology, Geothermics):

World Data Center A for Solid-Earth Geophysics
NOAA, E/GC1
325 Broadway
Boulder, Colorado 80303 USA
Telephone: (303) 497-6521

World Data Centers conduct international exchange of geophysical observations in accordance with the principles set forth by the International Council of Scientific Unions. WDC-A is established in the United States under the auspices of the National Academy of Sciences. Communications regarding data interchange matters in general and World Data Center A as a whole should be addressed to World Data Center A, Coordination Office (see address above). Inquiries and communications concerning data in specific disciplines should be addressed to the appropriate subcenter listed above.

WORLD DATA CENTER A
for
Solar-Terrestrial Physics

REPORT UAG-94

THE SOLAR MAGNETIC FIELD -- 1976 THROUGH 1985

An Atlas of Photospheric Magnetic Field Observations and Computed Coronal Magnetic Fields from the John M. Wilcox Solar Observatory at Stanford 1976-1985

J. Todd Hoeksema
and
Philip H. Scherrer

Center for Space Science and Astrophysics
Stanford University, Electronics Research Laboratory
Stanford, CA 94305 USA

January 1986

Major funding for printing provided by Stanford University

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
National Geophysical Data Center
Boulder, CO 80303 USA

TO OBTAIN UAG REPORTS, SEE LISTING AT BACK OF BOOK.

DESCRIPTION OF WORLD DATA CENTERS

World Data Centers conduct international exchange of geophysical observations in accordance with the principles set forth by the International Council of Scientific Unions (ICSU). They were established in 1957 by the International Geophysical Year Committee (CSAGI) as part of the fundamental international planning for the IGY program to collect data from the numerous and widespread IGY observational programs and to make such data readily accessible to interested scientists and scholars for an indefinite period of time. WDC-A was established in the U.S.A.; WDC-B, in the U.S.S.R.; and WDC-C, in Western Europe, Australia, and Japan. This new system for exchanging geophysical data was found to be very effective, and the operations of the World Data Centers were extended by ICSU on a continuing basis to other international programs; the WDC's were under the supervision of the Comite International de Geophysique (CIG) for the period 1960 to 1967 and are now supervised by the ICSU Panel on World Data Centres.

The current plans for continued international exchange of geophysical data through the World Data Centers are set forth in the *Fourth Consolidated Guide to International Data Exchange through the World Data Centres,* issued by the ICSU Panel on World Data Centres. These plans are broadly similar to those adopted under ICSU auspices for the IGY and subsequent international programs.

Functions and Responsibilities of WDC's

The World Data Centers collect data and publications for the following disciplines: Glaciology; Meteorology; Oceanography; Rockets and Satellites; Solar-Terrestrial Physics disciplines (Solar and Interplanetary Phenomena, Ionospheric Phenomena, Flare Associated Events, Geomagnetic Phenomena, Aurora, Cosmic Rays, Airglow); Solid-Earth Geophysics disciplines (Seismology, Tsunamis, Marine Geology and Geophysics, Gravimetry, Earth Tides, Recent Movements of the Earth's Crust, Rotation of the Earth, Magnetic Measurements, Paleomagnetism and Archeomagnetism, Volcanology, Geothermics). In planning for the various scientific programs, decisions on data exchange were made by the scientific community through the international scientific unions and committees. In each discipline the specialists themselves determined the nature and form of data exchange, based on their needs as research workers. Thus the type and amount of data in the WDC's differ from discipline to discipline.

The objects of establishing several World Data Centers for collecting observational data were: (1) to insure against loss of data by the catastrophic destruction of a single center, (2) to meet the geographical convenience of, and provide easy communication for, workers in different parts of the world. Each WDC is responsible for: (1) endeavoring to collect a complete set of data in the field or discipline for which it is responsible, (2) safekeeping of the incoming data, (3) correct copying and reproduction of data, maintaining adequate standards of clarity and durability, (4) supplying copies to other WDC's of data not received directly, (5) preparation of catalogs of all data in its charge, and (6) making data in the WDC's available to the scientific community. The WDC's conduct their operation at no expense to ICSU or to the ICSU family of unions and committees.

World Data Center A

World Data Center A, for which the National Academy of Sciences through the Geophysics Research Board and its Committee on Data Interchange and Data Centers has over-all responsibility, consists of the WDC-A Coordination Office and seven subcenters at scientific institutions in various parts of the United States. The GRB periodically reviews the activities of WDC-A and has conducted several studies on the effectiveness of the WDC system. As a result of these reviews and studies some of the subcenters of WDC-A have been relocated so that they could more effectively serve the scientific community. The addresses of the WDC-A subcenters and Coordination Office are given inside the front cover.

The data received by WDC-A have been made available to the scientific community in various ways: (1) reports containing data and results of experiments have been compiled, published, and widely distributed; (2) synoptic type data on cards, microfilm, or tables are available for use at the subcenters and for loan to scientists; (3) copies of data and reports are provided upon request.

Abstract

Daily magnetogram observations of the large-scale photospheric magnetic field have been made at the John M. Wilcox Solar Observatory at Stanford since May of 1976. These measurements provide a homogeneous record of the changing solar field through most of Solar Cycle 21.

Using the photospheric data, the configuration of the coronal and heliospheric fields can be calculated using a Potential Field -- Source Surface model. This provides a 3-dimensional picture of the heliospheric field evolution during the solar cycle.

In this report we present the complete set of synoptic charts of the measured photospheric magnetic field, the computed field at the source surface, and the coefficients of the multipole expansion of the coronal field. The general underlying structure of the solar and heliospheric fields, which determine the environment for solar - terrestrial relations and provide the context within which solar activity related events occur, can be approximated from these data.

Table of Contents

Page

Abstract i
Introduction 1
Method of Observation -- Photospheric Field 2
Synoptic Chart Format 2
Data Coverage 3
Method of Computation -- Source Surface Field 3
Source Surface Field Format 6
Overview of the Heliospheric Field 9
Multipole Expansion 11
Conclusions 16
Acknowledgements 18
References 19
Photospheric Synoptic Charts & Source Surface Fields 20
Harmonic Coefficients 272

1. Introduction

The large-scale magnetic field of the sun evolves slowly but dramatically during the 11 years of a sunspot cycle. Because the changes occur relatively slowly, much can be learned about the ambient environment within which activity related events occur by studying the large scale field configuration over longer periods of time.

Full disk measurements of the mean solar magnetic field began at Stanford in 1975. Observations of the photospheric field with a resolution of three arc minutes began in May 1976 and have continued through the present time. Synoptic charts of the photospheric field have been published monthly in the Prompt Reports of *Solar Geophysical Data* beginning with the data from January, 1979.

Since the data now spans most of a sunspot cycle, beginning with solar minimum in 1976, continuing through maximum in 1979, and covering most of the declining phase through mid 1985, this seems an appropriate time to publish all the data in one report for easy reference.

One important use of this data is in determining the configuration of the interplanetary magnetic field (IMF) by means of a Potential Field -- Source Surface model. With this model, described below, the three-dimensional polarity structure of the interplanetary medium can be calculated. Comparisons with IMF measurements and coronameter data suggest a good level of agreement with the actual coronal and interplanetary field configurations (e.g. Wilcox & Hundhausen, 1983, Hoeksema, 1984 or Bruno *et al.*, 1984). Synoptic charts of the heliospheric field configuration are also presented in this report on the pages opposite the corresponding photospheric field maps.

Finally, one intermediate result of the potential field calculation is a description of the coronal field in terms of its multipole components: dipole, quadrupole, etc. From these components the three-dimensional field near the sun can be calculated. The relative contributions of the multipoles to the total field vary with height above the photosphere and with time during the solar cycle. Because the field is constantly changing, the values of the components are presented for each 180° of Carrington Longitude.

Short descriptions of the observing instrument, the method of observation, data reduction, and model computation are provided below. More detailed descriptions may be found in the referenced reports.

2. Method of Observation -- Photospheric Field

Daily magnetograms with three arc-minute resolution are taken at the John M. Wilcox Solar Observatory at Stanford every day that the weather is good. A Babcock solar magnetograph measures the line-of-sight component of the photospheric magnetic field using the Zeeman splitting of the 5250.2 Å Fe I spectral line. This method accurately measures large-scale, weak field regions, but only crudely shows regions of strong or complex fields. The noise level of each measurement is less than 10 μT and the zero level error is less than 5 μT. [1 Gauss is 100 μT.] Because of the saturation of the magnetic signal in the magnetograph, the measured values reported here are smaller than the actual field strengths by about a factor of two. A detailed description of the instrument can be found in Scherrer et al. (1977), Duvall (1977), or Hoeksema (1984).

The magnetograms are obtained by scanning boustrophedonically along east-west lines. The aperture moves 90 arc seconds between points in the east-west direction and 180 arc seconds north or south between scan lines. The entire procedure, including calibrations and an auxilliary scan using the 5247 Å Fe I line, takes approximately 2 hours; the integration time for each of the 195 points on the solar disk is 15 seconds. The daily magnetograms are interpolated onto a finer grid based on the Carrington coordinate system by fitting a parabolic surface to the nearest observed points. The synoptic chart is constructed by combining all the values for each Carrington coordinate. Data from all magnetograms for which the Carrington longitude of interest is within 55° of central meridian contribute. The individual values are weighted for central meridian distance and the quality of the measurement to provide the best determination of the solar field. Because of the large aperture size the regions from 70° to the poles lie entirely within the last aperture and are not resolved. In the final plotted grid there are 29 points equally spaced in latitude from 70° north to 70° south at 5° intervals. The resolution in longitude is also 5°.

3. Synoptic Chart Format -- Photospheric Field

Beginning on page 21, the synoptic charts on the right hand pages are contour maps of the photospheric magnetic field over the entire surface of the sun. The first map is for Carrington Rotation 1641. The contour levels have the magnitudes indicated and are the same for every photospheric field chart. The thinner solid lines identify positive field regions, where the field is directed out of the sun; the broad solid contour is the neutral line; and dashed contours show regions of negative magnetic field polarity. With

the large aperture size the field strength rarely exceeds 2000 μT. The synoptic charts are shaded gray to aid the eye in recognizing patterns of strong and weak field regions. The gray scale is white at zero field values and saturates at the highest field value for each particular map. The shading is the same for positive and negative fields of equal magnitude. Gray shaded contour maps of the solar field are presented for Carrington Rotations 1641 through 1766.

The Carrington coordinate system specifies the central meridian longitude, thus time goes from right to left on the Carrington grid simulating the rotation of the sun. The dates of central meridian passage are labeled. The scale is the standard 8mm/day. The inverted carets indicate the times of magnetograms contibuting to the field data. An extra 30° are shown at each end of the rotation for continuity. Note that the opposite ends of a rotation differ because of field evolution and differential rotation.

The top panel of the chart shows the mean magnetic field of the sun as measured in integrated sunlight for each day. This is the result of a separate observation taken at the solar observatory. Dotted lines are linear interpolations over missing days.

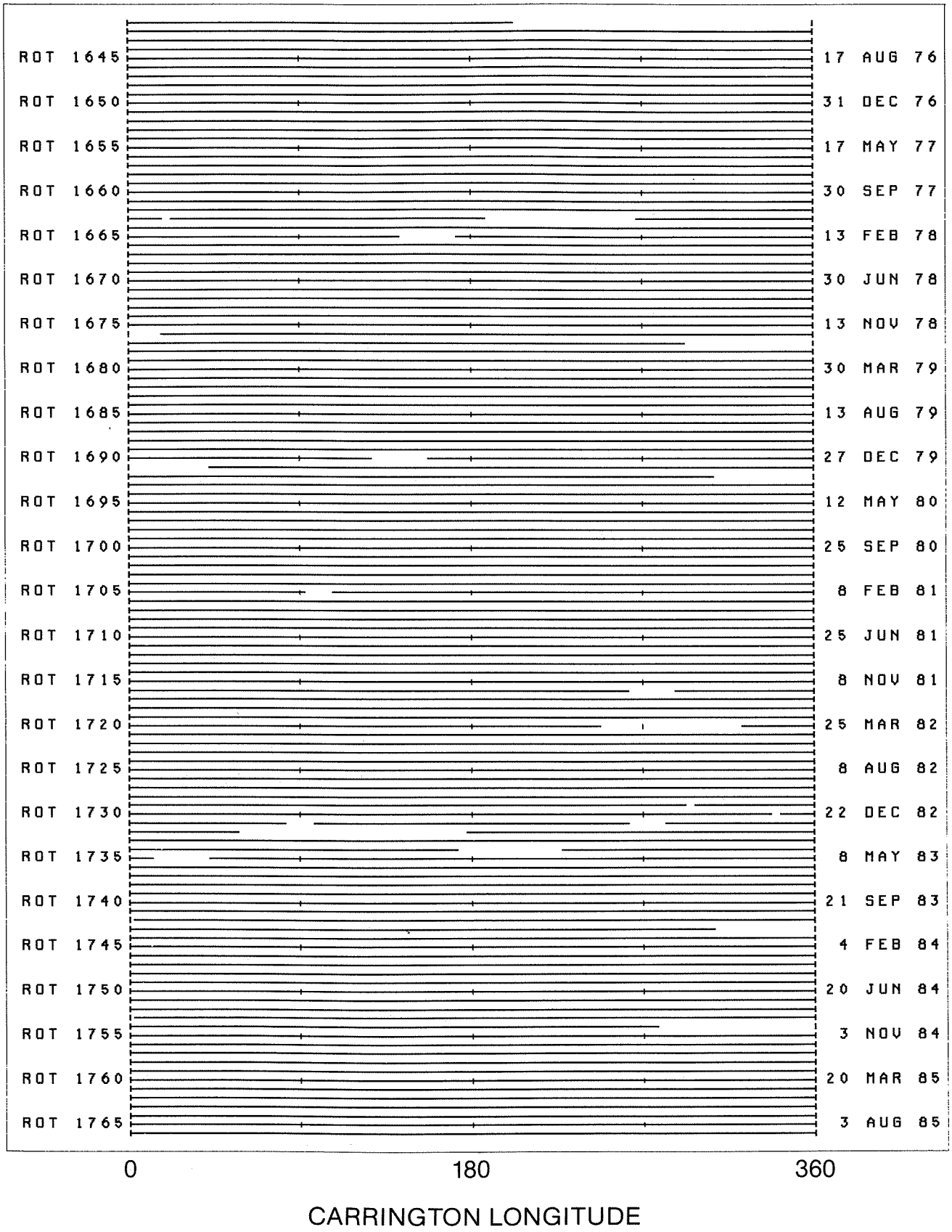
4. Data Coverage

Because of weather and equipment problems, magnetograms are not available every day. Sometimes gaps of 8 or more days occur which produce gaps in the magnetic field record. Figure 1 shows the data coverage through CR 1766. The data is generally of uniform quality, though near gaps data as much as 55° from central meridian was used. Magnetograms have been taken on 63% of the days since 1976.

5. Method of Computation -- Source Surface Field

Under the assumptions that the coronal field is approximately a potential field and that the field at some height above the photosphere is completely radial (as suggested by eclipse pictures and energy density considerations) the field configuration can be calculated from the photospheric measurements. While some changes in the field configuration undoubtedly occur above the radius where the field lines are assumed to become radial, called the source surface radius, we assume that the polarity structure is essentially locked in at that point and advected radially outward by the solar wind into the heliosphere. These are simplifying assumptions and although none of these assumptions is strictly true, the overall picture which emerges

DATA CONTINUITY



conforms quite well to the available data.

This model was first developed independantly by Schatten et al. (1969) and by Altschuler & Newkirk (1969). Later investigations (e.g. Adams & Pneuman, 1976; Altschuler et al., 1976; Schulz et al., 1978; Levine, 1982; Hoeksema, 1984; and references therein) demonstrated the basic validity of the model for predicting the large scale structure and suggested improvements for looking at the finer scale. The results presented in this report are extensions of the calculations of Hoeksema et al. (1982, 1983) and Hoeksema (1984). The source surface radius has been located at 2.5 solar radii because it gives the best overall agreement with the polarity pattern observed at Earth.

Calculation of the coronal field requires a knowledge of the photospheric field over the entire solar surface. It takes about 27 days to measure the entire solar surface because of solar rotation. During that time there can be substantial field evolution, especially in strong field regions. Furthermore, a magnetic region on the sun would not be observed at the same Carrington coordinates on the following rotations because of differential rotation. To minimize these effects which are most important near the "edges" of the Carrington Rotation, the source surface field has been calculated for 360° data windows stepping just 10° between calculations and only the center 30° are used to construct the final dataset.

Three corrections have been applied to the data: elimination of the zero offset, or monopole component; addition of a strong polar field; and reconstruction of missing data in the synoptic charts.

The zero offset of the instrument is very small; much of the problem comes from the effects near the edges of the data window described above. In addition, with the large aperture the strong sunspot fields are not fully measured because they are relatively dim. Since most of the zero offset comes from small local effects it has been subtracted from the final field values.

Because the magnetograph measures only the line-of-sight projection of the field and because of the large aperture, the polar regions are not accurately measured. From the changes in the measured field strength at

---

Figure 1 (opposite): Each line represents the data coverage for one Carrington Rotation. A solid line is plotted wherever synoptic chart data is available. Gaps occur when there was missing data because of weather or equipment problems.

the polar caps during the year as the Earth moves between ± 7.25° in solar latitude, the magnitude of the polar field can be inferred (Svalgaard *et al.*, 1978). The derived 6.4 $\cos^8\theta$ G radial field has been added to the data near solar minimum; θ is the colatitude. [This 6.4 G field is the same as the 11.7 G field discussed in Hoeksema et al., (1982, 1983) when corrected by the 1.8 saturation factor.] The correction changes as the polar field strength changes during the solar cycle (Hoeksema et al., 1983) and reverses sign at solar maximum late in 1979. While the magnitude of the correction is rather large, it is sharply peaked and significantly affects only the most poleward values. At lower latitudes it has the primary effect of moving the neutral line toward the equator.

Missing data in the synoptic charts would cause large gaps in the computed source surface fields. To minimize the effects of missing data we have filled the gaps by using the average of the photospheric field measurements at the same location from the preceeding and following rotation. Because the large scale field changes relatively slowly this is a reasonable approximation to the field.

6. Source Surface Field Format

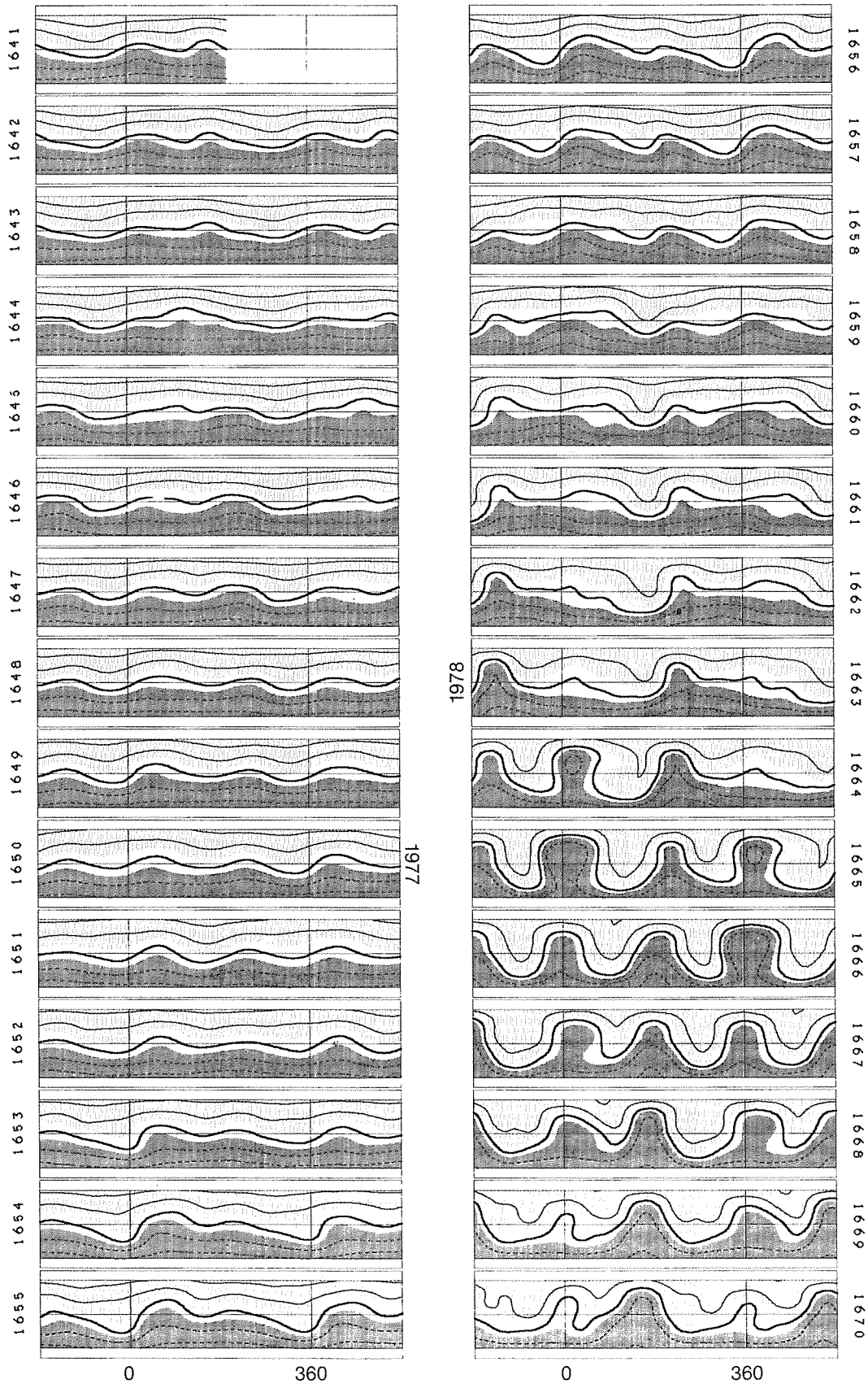
Contour maps of the source surface field are shown on the left hand pages, opposite the corresponding photospheric field. The layout is the same as for the photospheric field charts, with the grid once again showing slightly more than one Carrington rotation. The broad solid neutral line divides the negative polarity regions, shown by dashed contours, from the positive areas, indicated by solid lines. Notice that the field strength is about 1% that found at the photosphere.

Since we assume this field is carried radially outward by the motion of the solar wind, these graphs show the predicted three-dimensional polarity structure of the heliospheric field. It should be pointed out that much beyond 1 AU the interaction of various streams with different velocities will

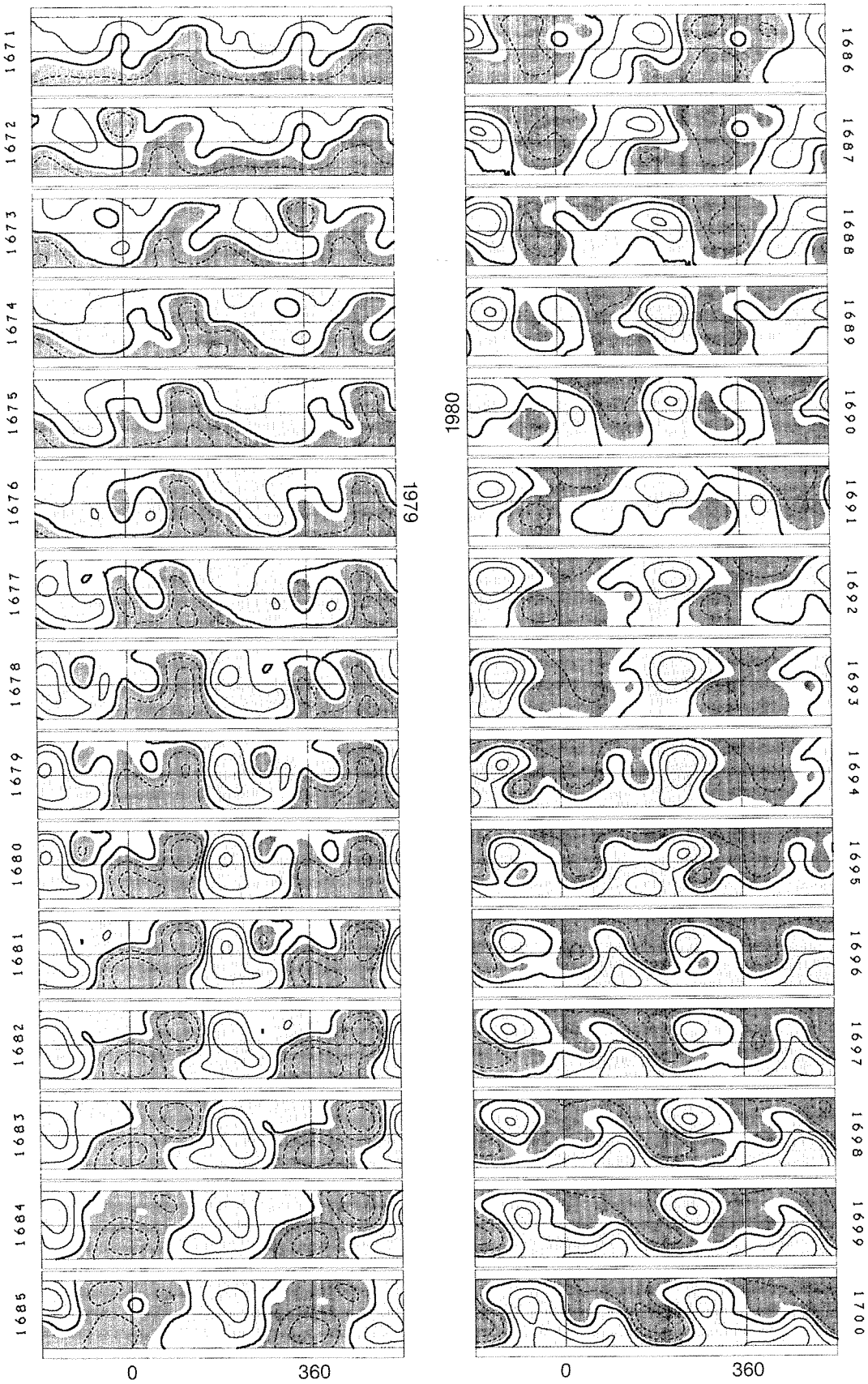
---

Figure 2 (opposite): The heliospheric current sheets for Carrington Rotations 1641 - 1670 are shown. Field magnitudes above 2 μT are shaded. Regions of negative polarity are shaded more darkly. Each box shows the labeled rotation plus an additional half rotation appended to each side; each box is two rotations wide so that structures near the ends of a rotation can be traced more easily. Vertical lines show rotation divisions. Horizontal lines denote ± 70° and the equator. Rotations which include January 1 are labeled in the center with the new year. The latitudinal extent of the current sheet increases greatly from 1976 to 1978, though the underlying 4-sector pattern in the ecliptic plane persists. Most features can be traced for at least 10 rotations and show little distortion by differential rotation.

THE FIELD AT THE SOURCE SURFACE: 1976-1978



THE FIELD AT THE SOURCE SURFACE: 1978-1980



distort this structure (Suess & Hildner, 1985). The solar latitude of the Earth is shown by the small '> ' and '< ' symbols at the edges of each graph. To compare with the IMF polarity observed at Earth, the travel time of the solar wind must be taken into account. Near the neutral line the transit time is about 4.5 to 5 days. Thus to find the field extrapolated to Earth, look 60° to 65° west (i.e. right) of the desired date's central meridian longitude.

One cannot directly infer the *strength* of the field much above the source surface. Observations of IMF strength at 1 AU show a very different pattern from that observed on the source surface. At the source surface the field strength increases in magnitude away from the neutral line, while at 1 AU the field reaches its highest value near the neutral sheet and is roughly constant through the rest of a sector. Suess et al. (1977) modelled the field in a polar coronal hole. From $2R_o$ to $5R_o$ to 1 AU the field strength profile changed from one with a maximum field strength near the center and a minimum near the coronal hole boundaries to a profile having an almost uniform field across the hole to one with an enhanced magnitude near the boundaries.

7. Overview of the Heliospheric Field

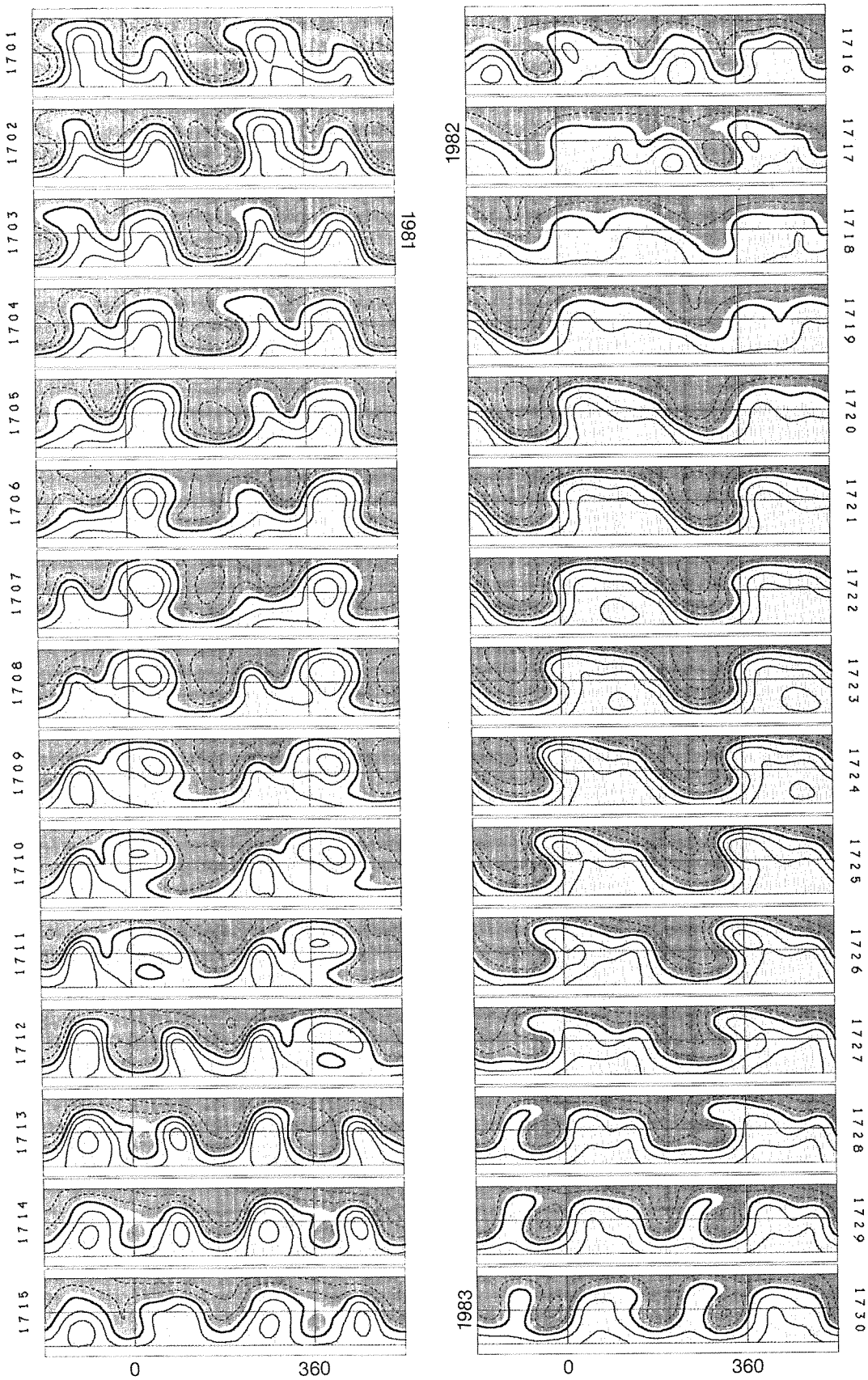
The slow evolution of the heliospheric field configuration may not be apparent from observing the individual rotations. Figures 2 - 5 show the polarity structure for each rotation. Near solar minimum the neutral line stays near the equator, though the excursion in latitude is enough to produce 4 sectors in the IMF at Earth. The structure gradually evolves through 1977 and 1978 to higher latitudes, but the same structures can be traced throughout this period.

During the approach to maximum, shown in Figure 3, the field configuration becomes quite complex, though the structures can still be followed for many rotations. Notice the gradual changes that bring about the reversal of the polar fields. Also interesting are the formation of separate

---

Figure 3 (opposite): The evolution of the current sheet near sunspot maximum is shown for rotations 1671 - 1700 in the same format as the previous figure. The polar fields reverse near Carrington Rotation 1690. The structure is complex throughout this interval, extending to the poles through most of the period and often having multiple current sheets. Many features can be traced for long periods of time. Most structures show less distortion than would be expected from differential rotation. In spite of the complexity, Earth experiences slowly varying two and four sector structures.

THE FIELD AT THE SOURCE SURFACE: 1980-1982



current sheets as seen, for example, in CR 1679 and CR 1698.

The beginning of the declining phase (Figure 4) shows a return to the stability seen before maximum. As in all the intervals, the effects of differential rotation are smaller than observed in the photospheric fields, though some indications of differential rotation can be seen in CR 1709 - 1713. A very stable two sector structure forms in 1982.

Figure 5 indicates the structure later in the declining phase. An extremely stable 4-sector structure lasts through all of 1983 and into 1984. The 2-sector structure which develops in early 1984 persists through 1985 at gradually decreasing latitudes.

One of the few tests of the model is to compare the prediction of the IMF polarity with the polarity actually observed. Figure 6 shows the observed IMF polarity for the present cycle from 1976 to 1982. Much of the data are from the measurements of the ISEE-3 spacecraft, courtesy of Ed Smith. The remainder are from other satellites or inferred from geomagnetic data. It is easy to see both the 27 day, 4-sector structure and the 28.5 day, 2-sector structure which have been commonly observed in each of the last 6 sunspot cycles (Svalgaard & Wilcox, 1975.)

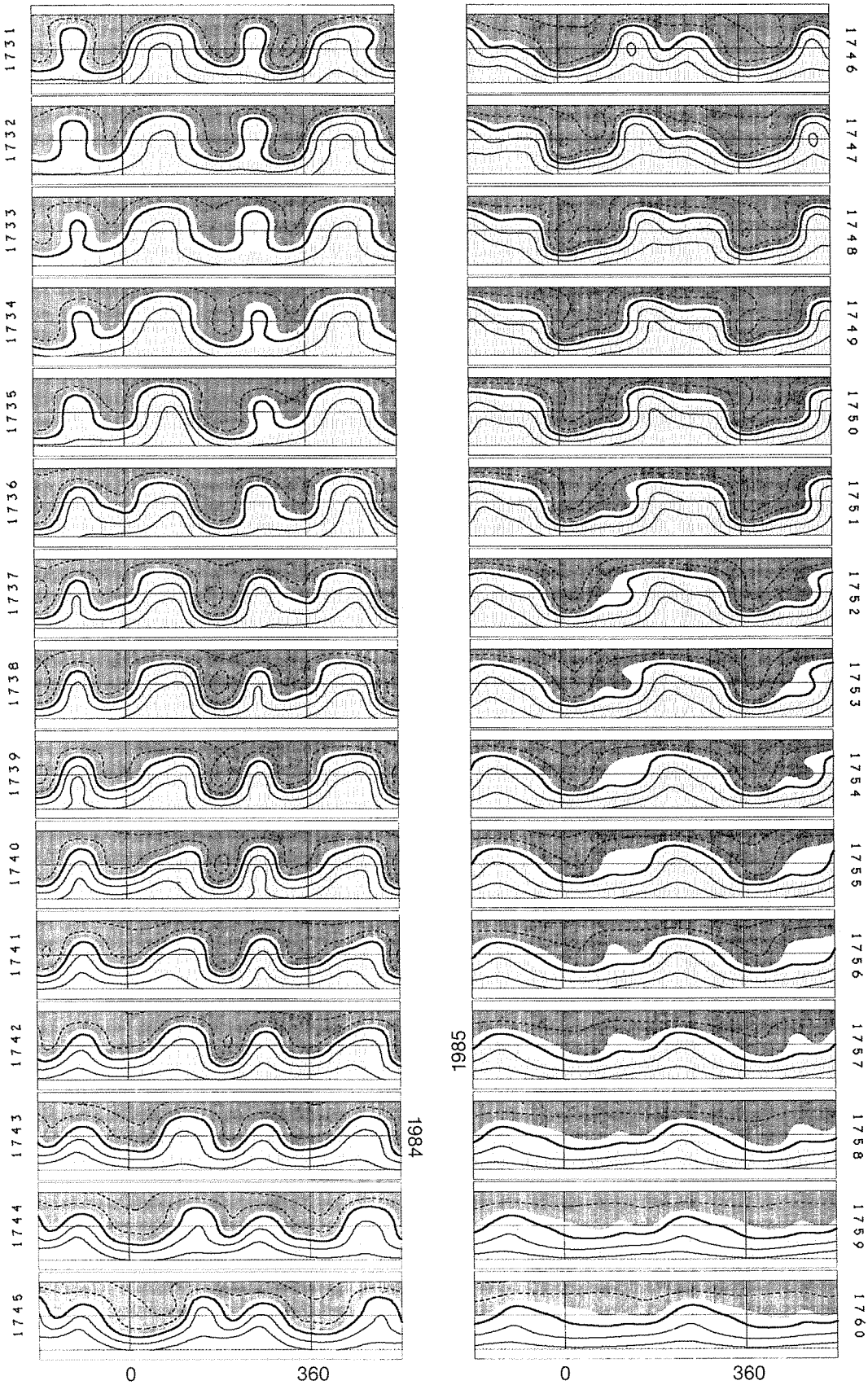
Figure 7 shows the predicted structure plotted in the same way. A five day lag has been used to account for the solar wind propagation time near sector boundaries from the sun to the Earth. Analysis shows that the correct polarity is predicted on about 80% of the days throughout this interval.

8. Multipole Expansion

To summarize the mathematical solution: using the observed line-of-sight photospheric field as one boundary condition and the requirement of a purely radial field at the source surface as the other, a solution is found to LaPlace's equation (the potential field assumption) in terms of the Legendre polynomials:

Figure 4 (opposite): This shows the evolution of the current sheet after sunspot maximum during Carrington Rotations 1701 - 1730. The current sheet becomes much simpler and the extent in latitude decreases a little. Earth experiences both two and four sector structures during this period. Changes in structure occur slowly and many features again persist for more than a year. Some features experience differential rotation, while others do not. The structure is simple and almost stationary through most of 1982.

THE FIELD AT THE SOURCE SURFACE: 1983-1985



$$P_l^m(\theta) = \left\{ q_m \frac{(l-m)!}{(l+m)!} \right\}^{1/2} \times$$

$$\frac{(2l)!}{2^l l!(l-m)!} \sin^m\theta \left\{ \cos^{l-m}\theta - \frac{(l-m)(l-m-1)}{2(2l-1)} \cos^{l-m-2}\theta \right.$$

$$\left. + \frac{(l-m)(l-m-1)(l-m-2)(l-m-3)}{2\cdot 4\cdot(2l-1)(2l-3)} \cos^{l-m-4}\theta - \cdots \right\}$$

where $q_m = 2$ for $m > 0$ and 1 for $m = 0$.

In this normalization the polynomials have the same order of magnitude for the various degrees, m, and can be compared directly (see the discussion in Chapman and Bartels, 1940). The mean square value of these functions over the sphere is given by:

$$\frac{1}{4\pi} \int_0^{\pi} \int_0^{2\pi} \left[P_l^m(\theta) \begin{Bmatrix} \cos \\ \sin \end{Bmatrix} m\phi \right]^2 \sin\theta \, d\theta \, d\phi = \frac{1}{(2l+1)} .$$

Using this form for the Legendre polynomials the solution for the three components of the field between the photosphere and the source surface can be written:

$$B_r = -\frac{\partial\Psi}{\partial r} = \sum_{lm} P_l^m(\cos\theta)\,(g_{lm}\cos m\phi + h_{lm}\sin m\phi) \left\{ (l+1)\left[\frac{R_o}{r}\right]^{l+2} - l\left[\frac{r}{R_s}\right]^{l-1} c_l \right\}$$

and

$$B_\theta = -\frac{1}{r}\frac{\partial\Psi}{\partial\theta} = \sum_{lm} \left\{ \left[\frac{R_o}{r}\right]^{l+2} + c_l \left[\frac{r}{R_s}\right]^{l+1} \right\} (g_{lm}\cos m\phi + h_{lm}\sin m\phi) \frac{\partial P_l^m(\cos\theta)}{\partial\theta}$$

and

Figure 5 (opposite): During 1983 and 1984 the field structure evolved slowly. The current sheet produced four sectors in the ecliptic in 1983. The latitudinal extent of the sheet began to decrease, but reached more than 50° throughout the year. The large structures continue from the previous interval through at least the end of 1983. 1984 shows a change to a simple 2-sector structure of decreasing latitudinal extent.

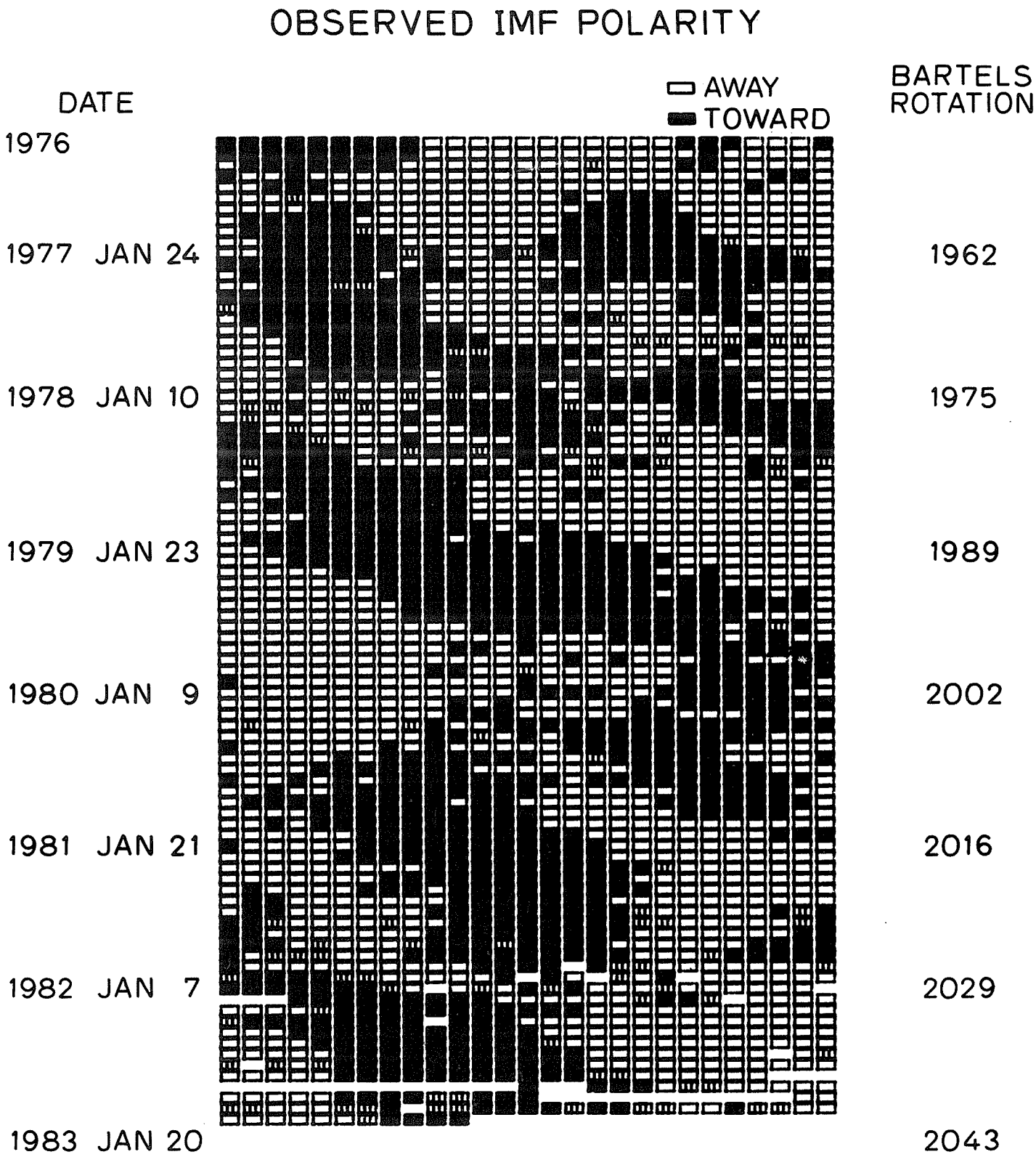


Figure 6: The observed IMf polarity from 1976 to 1982. In this figure a 27 day calendar is used and the plot is only one rotation wide. The structures in the current cycle are similar to those observed in previous cycles.

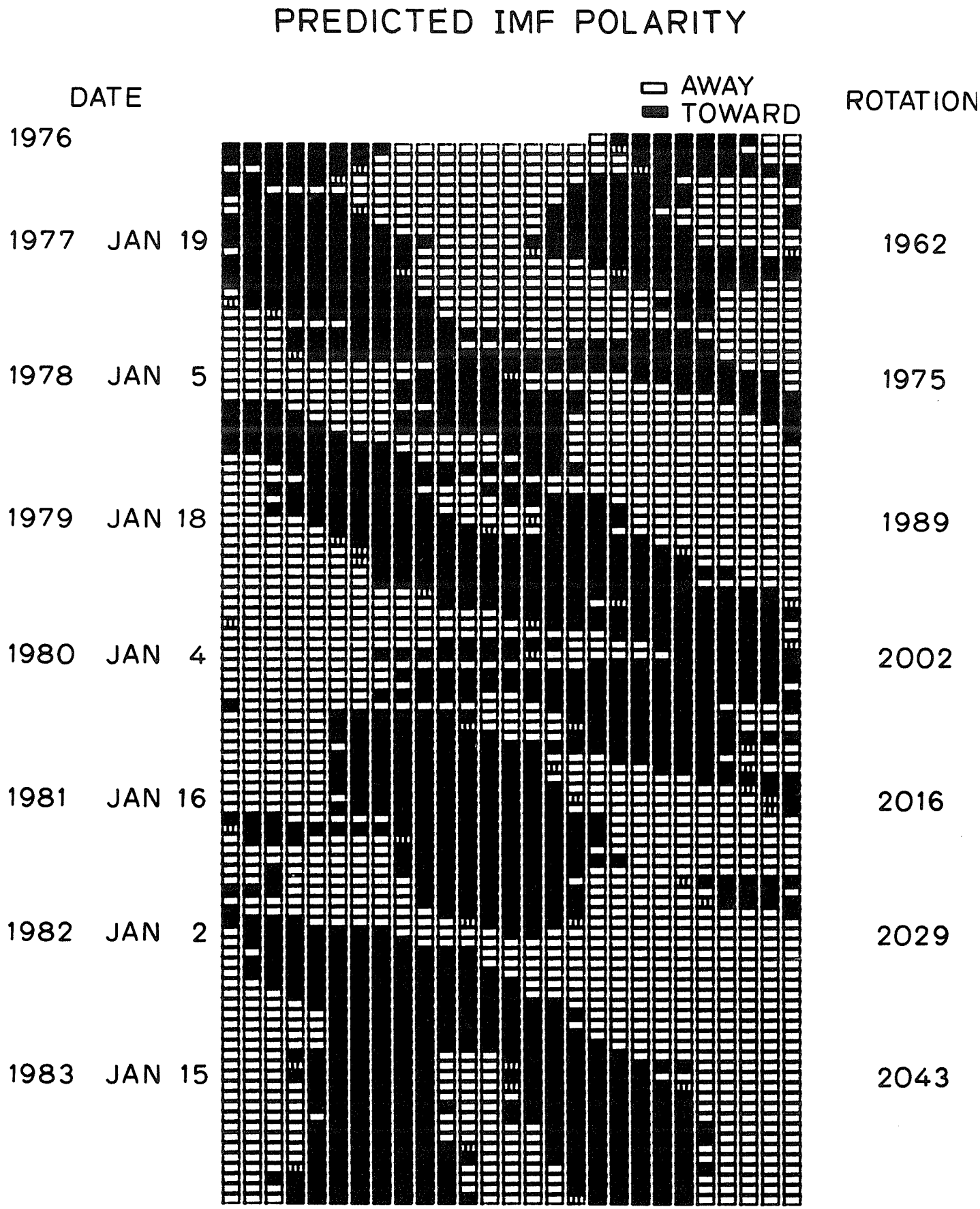


Figure 7: The IMF polarity predicted by the potential field model for 1976 - 1983 plotted to the same scale as Figure 6. Note the striking similarity of the general structure. Most discrepancies occur near sector boundaries and on isolated days.

$$B_\phi = -\frac{1}{r\sin\theta}\frac{\partial\Psi}{\partial\phi} = \sum_{lm}\left\{\left[\frac{R_o}{r}\right]^{l+2} + c_l\left[\frac{r}{R_S}\right]^{l-1}\right\}\cdot m\cdot P_l^m(\cos\theta)\cdot(g_{lm}\sin m\phi - h_{lm}\cos m\phi),$$

where $c_l = -\left[\frac{R_o}{R_s}\right]^{l+2}$, R_o is the solar radius and R_s is the source surface radius. The g_{lm} and h_{lm} are tabulated in the final section of this report each 180° in Carrington longitude.

Often the heliospheric field is characterized in terms of its lowest order components, particularly the dipole term. Figure 8 shows the RMS field strength at the source surface due to each of the first three multipole components. [Note that the monopole ($l = 0$) term has been treated as an error term and removed from the plotted field at the source surface.] Near minimum the polar dipole is the dominant term, but during much of the solar cycle the quadrupole and octupole components contribute a comparable fraction of the field strength. This suggests that during much of the cycle the simple notion of a dipole or tilted dipole field is incorrect (Hoeksema & Scherrer, 1984.) Certainly at the latitude of the Earth where a 4-sector structure is common even near minimum, the importance of the higher order terms must be acknowledged.

9. Conclusions

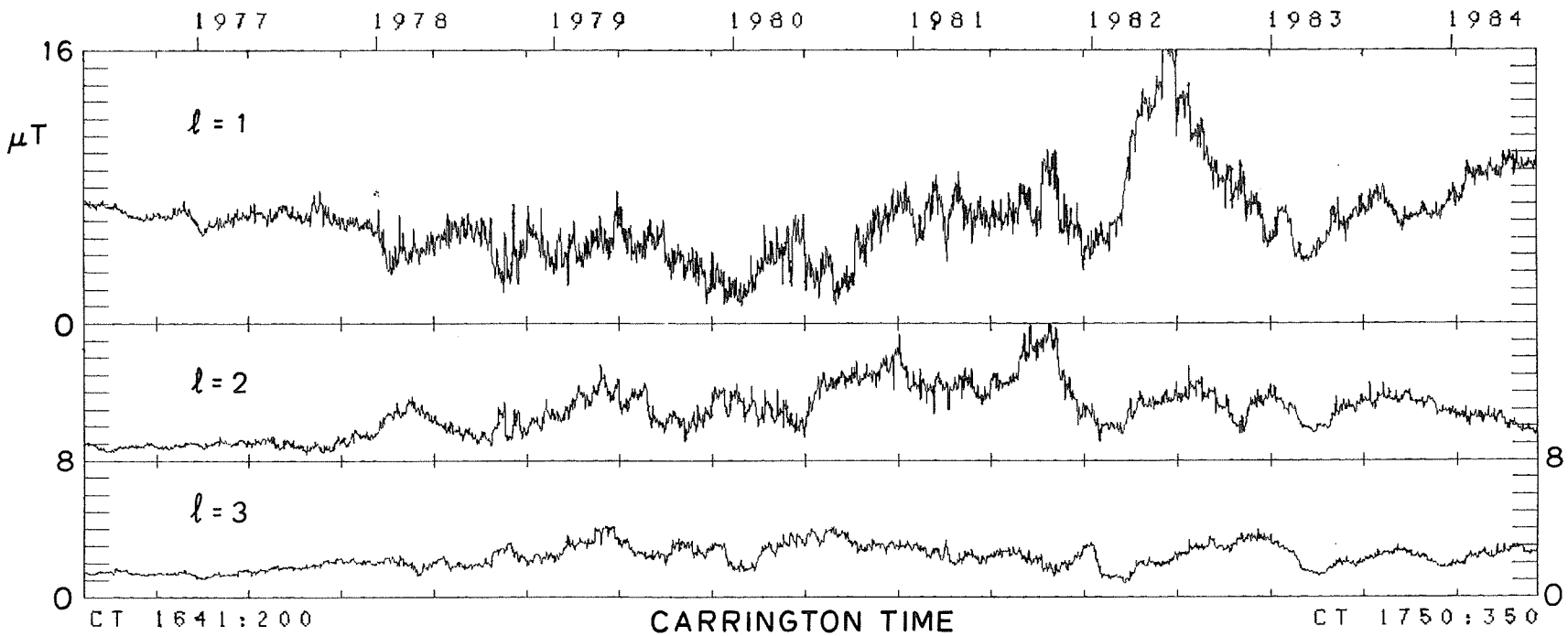
It is our hope that the provision of a homogeneous dataset of the solar magnetic field over nearly an entire sunspot cycle in a convenient, inclusive package will stimulate the studies of the large-scale structures of the solar and heliospheric magnetic field, encourage others to consider the relationship of the large scale, ambient field structures to activity on short time scales and smaller spatial scales, and enable the inclusion of the heliospheric field in analyses of solar-terrestrial relations.

It is our intention to promote the use of these synoptic observations as primary data and for use in correlative studies in solar physics and solar-terrestrial physics research. We ask only that the source of the data be

---

Figure 8 (opposite): This shows the relative RMS contributions of the dipole ($l = 1$), quadrupole ($l = 2$), and octupole ($l = 3$) components to the source surface magnetic field strength. Near minimum the dipole field dominates, but during much of the solar cycle the quadrupole component has a comparable magnitude. Even the octupole term is not negligible.

SPHERICAL HARMONICS $\ell = 1, 2, 3$



acknowledged and that we receive a copy of resulting research reports and papers. Inquiries concerning extended analyses should be directed to J. Todd Hoeksema or Phil H. Scherrer, Center for Space Science and Astrophysics, ERL 328, Stanford, CA 94305.

10. Acknowledgements

The existence of this data and the John M. Wilcox Solar Observatory would not have been possible without the foresight and persistence of John M. Wilcox.

Without long term funding such records can not be compiled. Over the years this work has been faithfully supported by the Office of Naval Research under Contract N00014-76-C-0207, by the National Aeronautics and Space Administration under Grant NGR5-020-559 and Contract NAS5-24420, by the Atmospheric Sciences Section of the National Science Foundation under Grant ATM77-20580 and by the Max C. Fleischman Foundation.

We would also like to thank the observers who have worked hard to provide the data presented in this report with as few gaps as possible: Eric Gustavson, Steve Bryan, Todd Hoeksema, Phil Duffy, John Foster III, and Harald Henning. We also want to thank Janice Alderman without whom this never would have been finished.

11. References

Adams, J., and G.W. Pneuman, A New Technique for the Determination of Coronal Magnetic Fields: A Fixed Mesh Solution to Laplace's Equation Using Line-of-sight Boundary Crossings, *Solar Phys., 46,* 185, 1976.

Altschuler, M.D., R.H. Levine, M. Stix, and J.W. Harvey, High Resolution Mapping of the Magnetic Field of the Solar Corona, *Solar Phys, 51,* 345, 1976.

Altschuler, M.D. and G. Newkirk, Jr., Magnetic fields and the Structure of the Solar Corona, *Solar Phys., 9,* 131, 1969.

Bruno, R., L.F. Burlaga, and A.J. Hundhausen, K-Coronameter Observations and Potential Field Model Comparison in 1976 - 1977, *J. Geophys. Res., 89,* 5381, 1984.

Chapman, S. and J. Bartels, *Geomagnetism, Vol. II.,* Oxford University Press, London, 1940.

Duvall, T.L., Jr., A Study of Large-Scale Solar Magnetic and Velocity Fields, *Ph. D. Thesis,* SUIPR Report 724, 1977.

Hoeksema, J. T., Structure and Evolution of the Large Scale Solar and Heliospheric Magnetic Fields, *Ph. D. Thesis,* CSSA Rept. 7, 1984.

Hoeksema, J.T. and P.H. Scherrer, Harmonic Analysis of the Solar Magnetic Field, in *The Hydromagnetics of the Sun,* Proceedings of the Fourth European Meeting on Solar Physics, ESA SP-220, 1984.

Hoeksema, J.T., J.M. Wilcox, and P.H. Scherrer, Structure of the Heliospheric Current Sheet in the Early Portion of Sunspot Cycle 21, *J. Geophys. Res., 87,* 10331,1982.

Hoeksema, J.T., J.M. Wilcox, and P.H. Scherrer, The Structure of the Heliospheric Current Sheet: 1978-1982, *J. Geophys. Res., 88,* 9910, 1983.

Levine, R.H., Open Magnetic Fields and the Solar Cycle, I, *Solar Phys, 79,* 203, 1982.

Schatten, K.H., J.M. Wilcox and N.F. Ness, A Model of Interplanetary and Coronal Magnetic Fields, *Solar Phys., 6,* 442, 1969.

Scherrer, P. H., John M. Wilcox, L. Svalgaard, T.L. Duvall, Jr., P.H. Dittmer and E.K. Gustafson, The Mean Magnetic Field of the Sun: Observations at Stanford, *Solar Phys., 54,* 353, 1977.

Schulz, M., E.N. Frazier, and D.J. Boucher, Jr., Coronal Magnetic Field Model with Nonspherical Source Surface, *Solar Phys., 60,* 83, 1978.

Solar Geophysica Data, pub. U.S. Dept. of Commerce, Boulder, Colorado, U.S.A. 80302.

Suess, S.T., and E. Hildner, Deformation of the Heliospheric Current Sheet, *J. Geophys. Res., 90,* 9461, 1985.

Suess, S.T., A.K. Richter, C.R. Winge, and S.F. Nerney, Solar Polar Coronal Hole -- A Mathematical Simulation, *Ap. J. 217,* 296, 1977.

Svalgaard, L. and J.M. Wilcox, Long Term Evolution of Solar Sector Structure, *Solar Phys, 41,* 461, 1975.

Svalgaard, L., T.L. Duvall, Jr., and P.H. Scherrer, The Strength of the Sun's Polar Fields, *Solar Phys., 58,* 225, 1978.

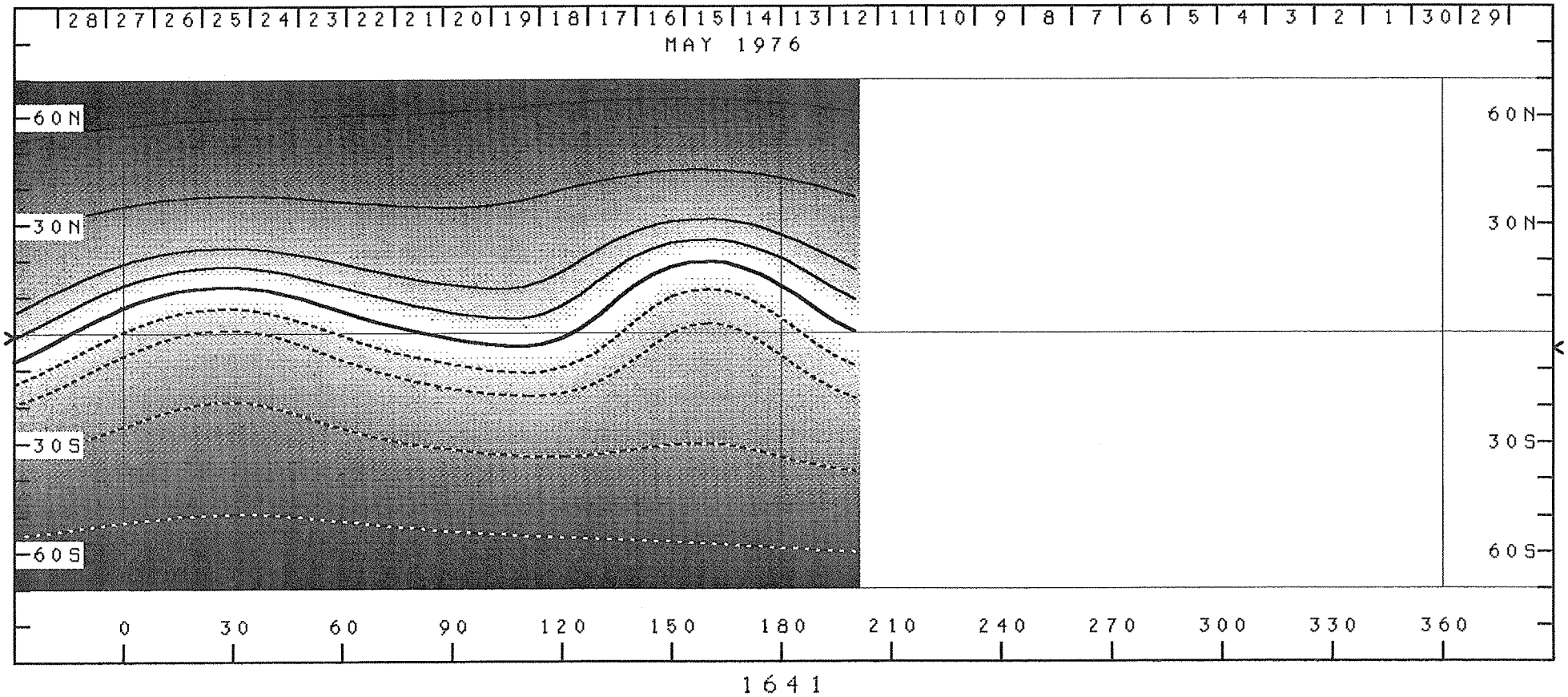
Wilcox, J.M. and A.J. Hundhausen, Comparison of Heliospheric Current Sheet Structure Obtained from Potential Magnetic Field Computations and from Observed Maximum Coronal Brightness, *J. Geophys. Res. 88,* 8095, 1983.

PHOTOSPHERIC SYNOPTIC CHARTS AND SOURCE SURFACE FIELDS

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

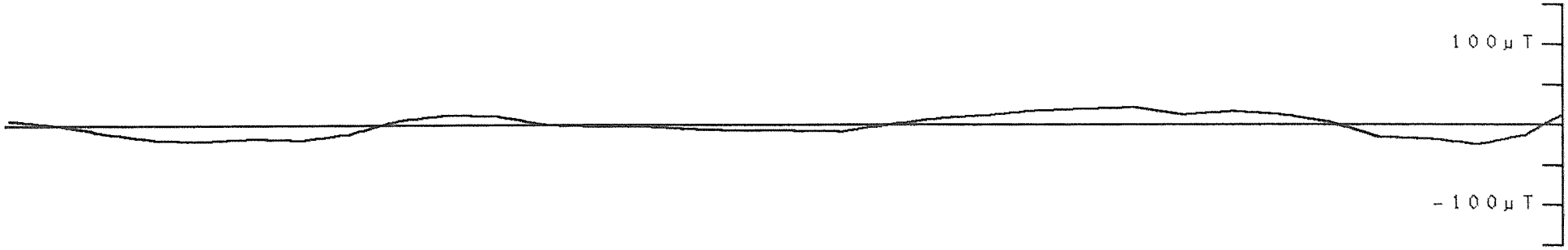
0, ±1, 2, 5, 10, 20 MICROTESLA



1641

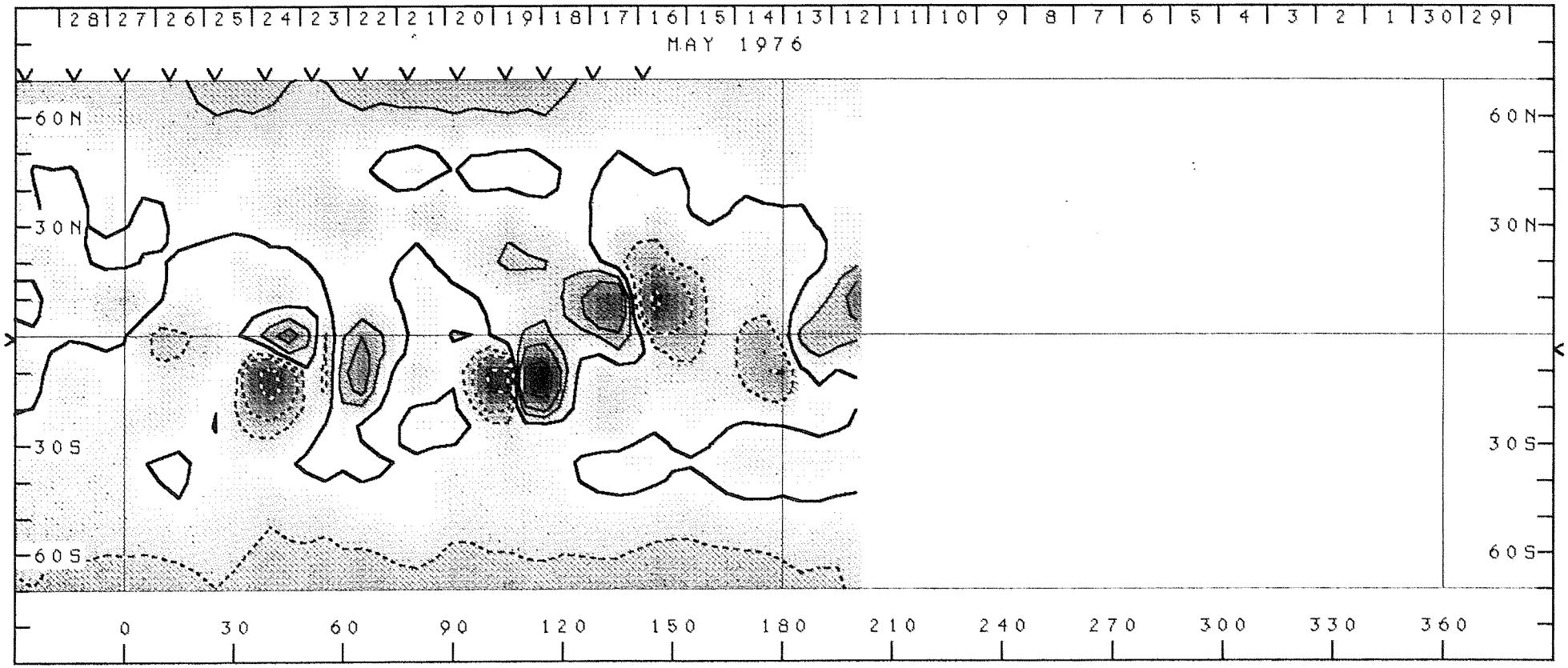
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

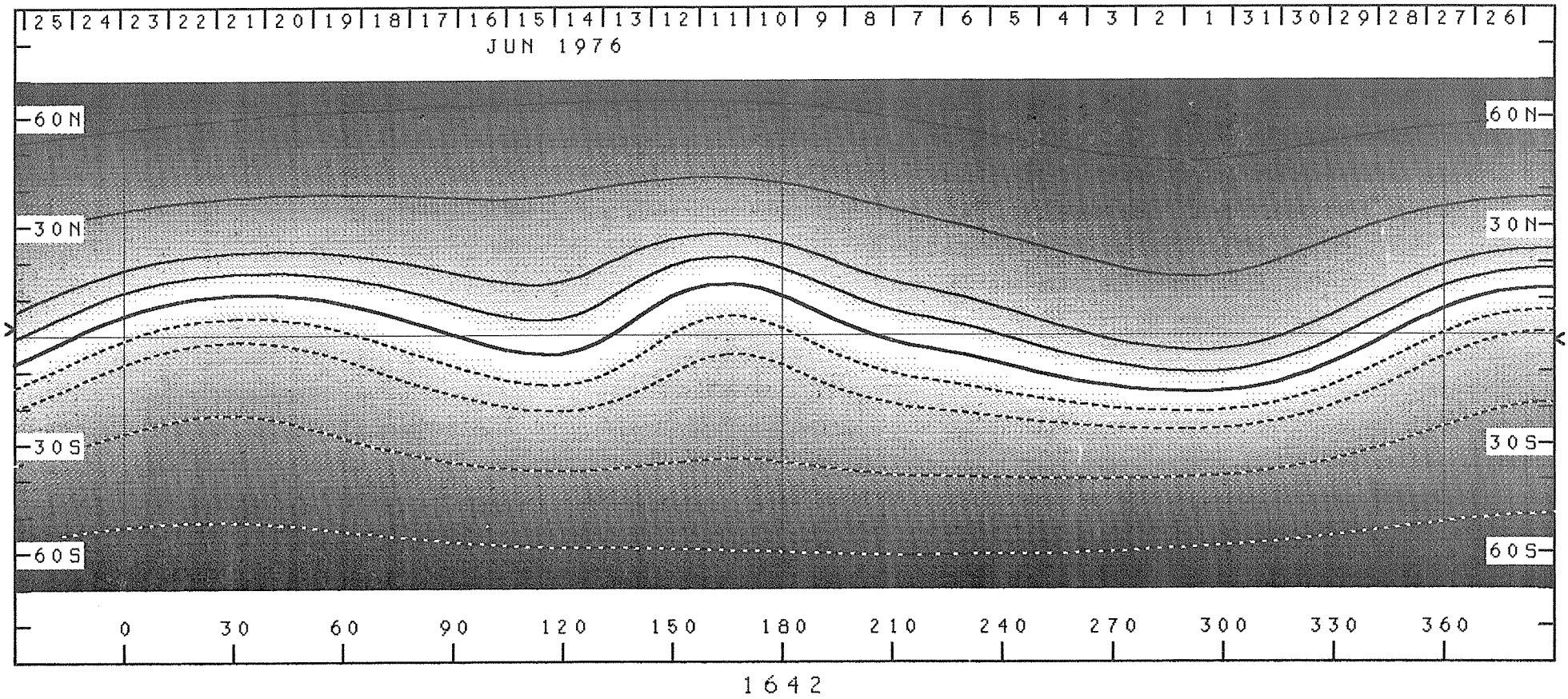
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

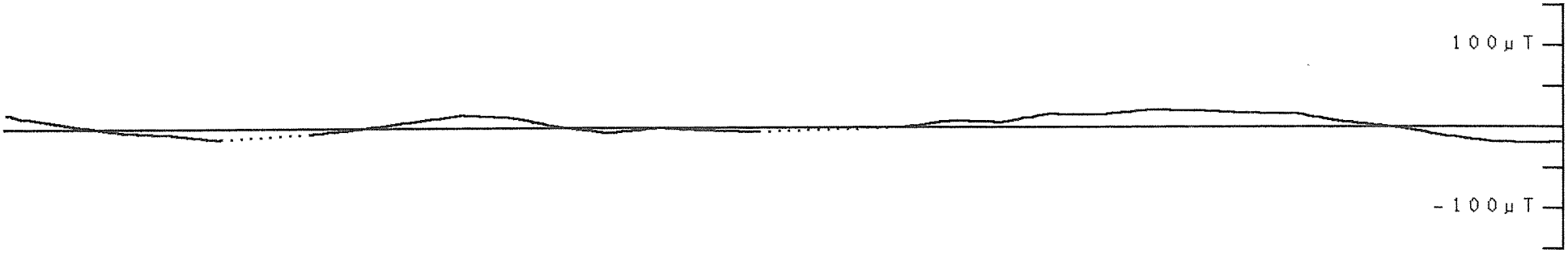
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



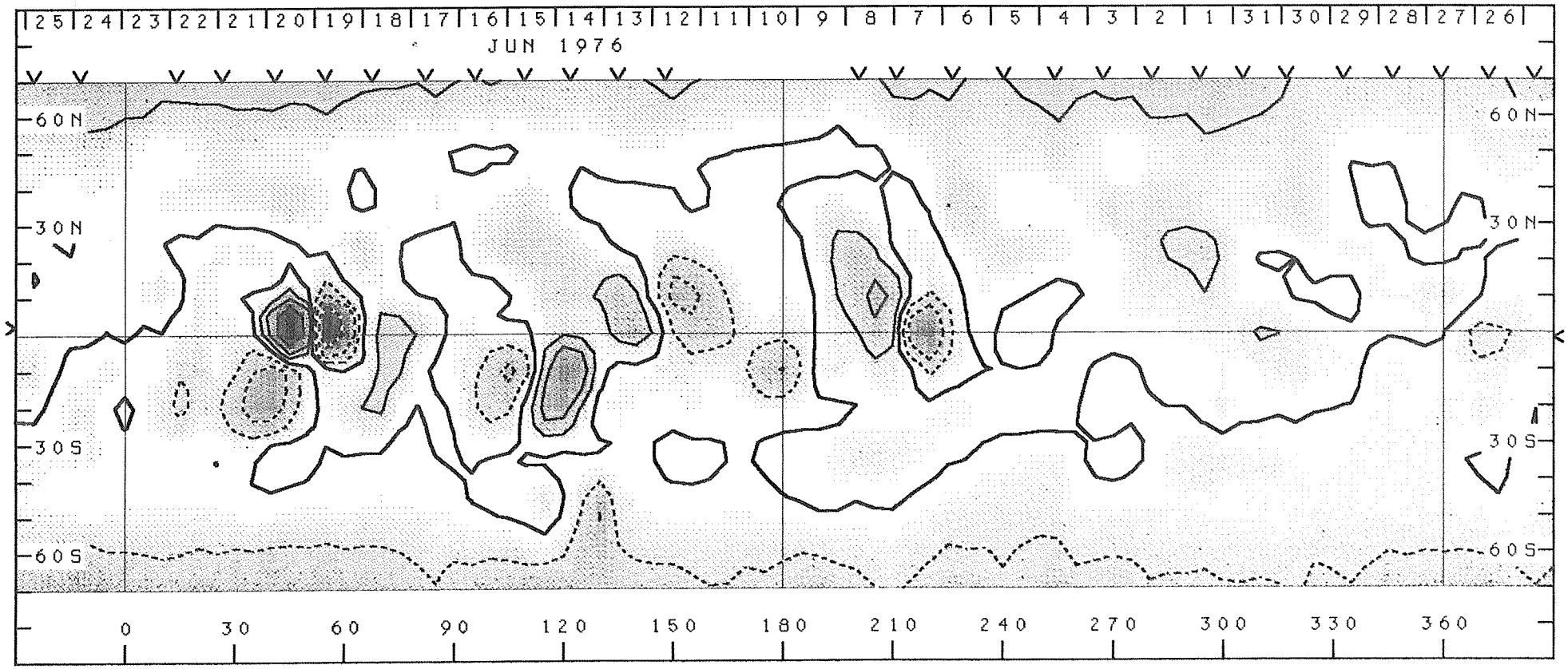
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

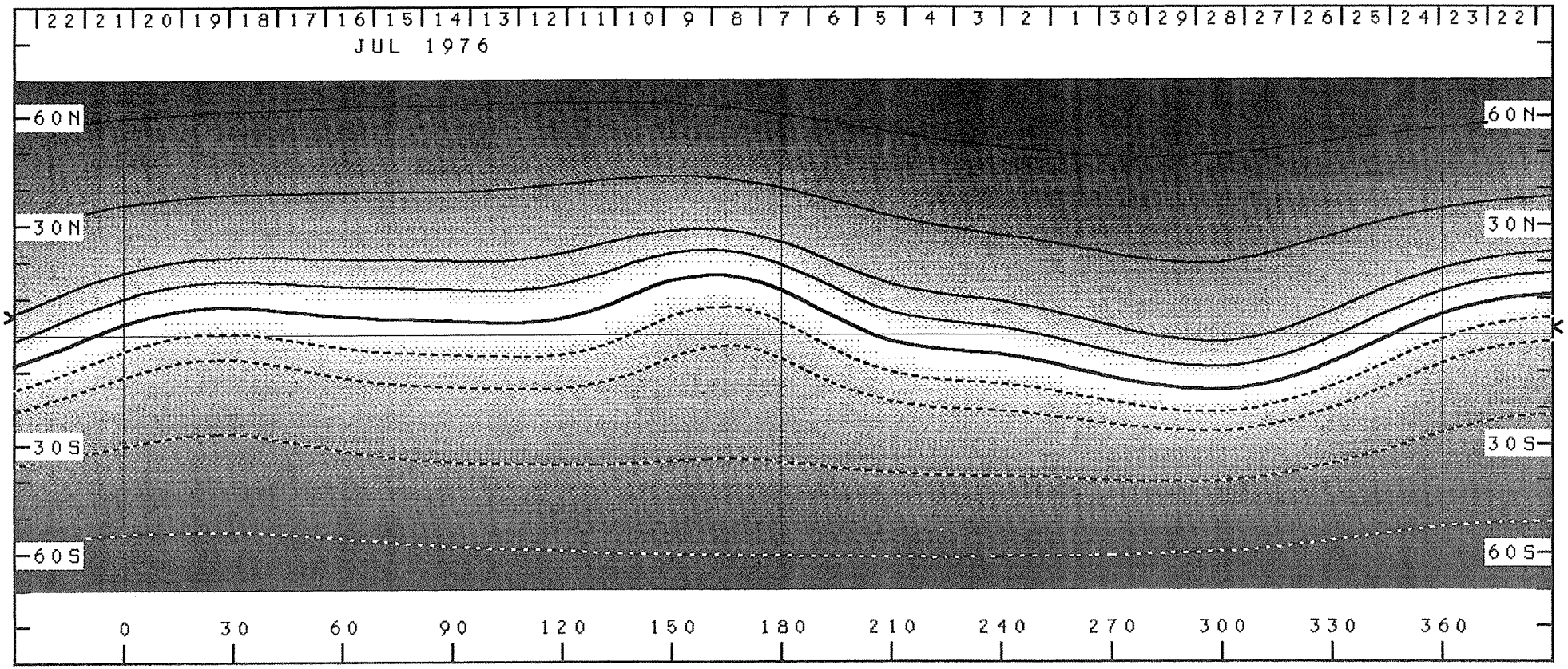
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

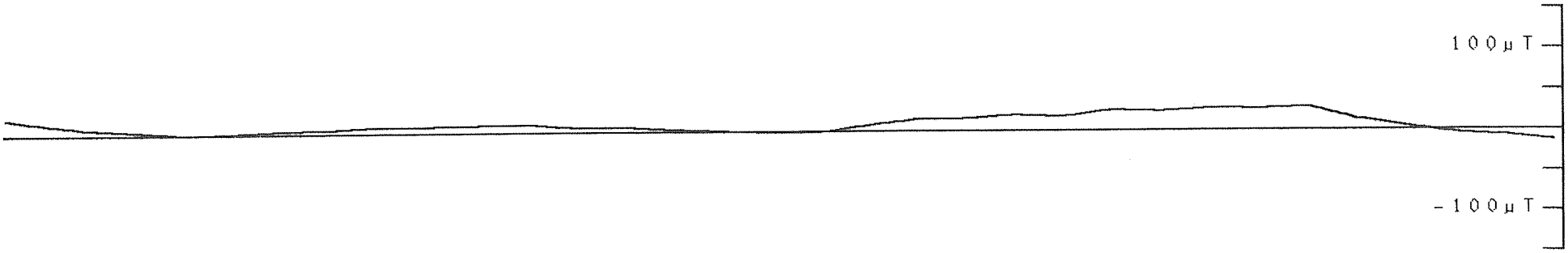
0, ±1, 2, 5, 10, 20 MICROTESLA



1643

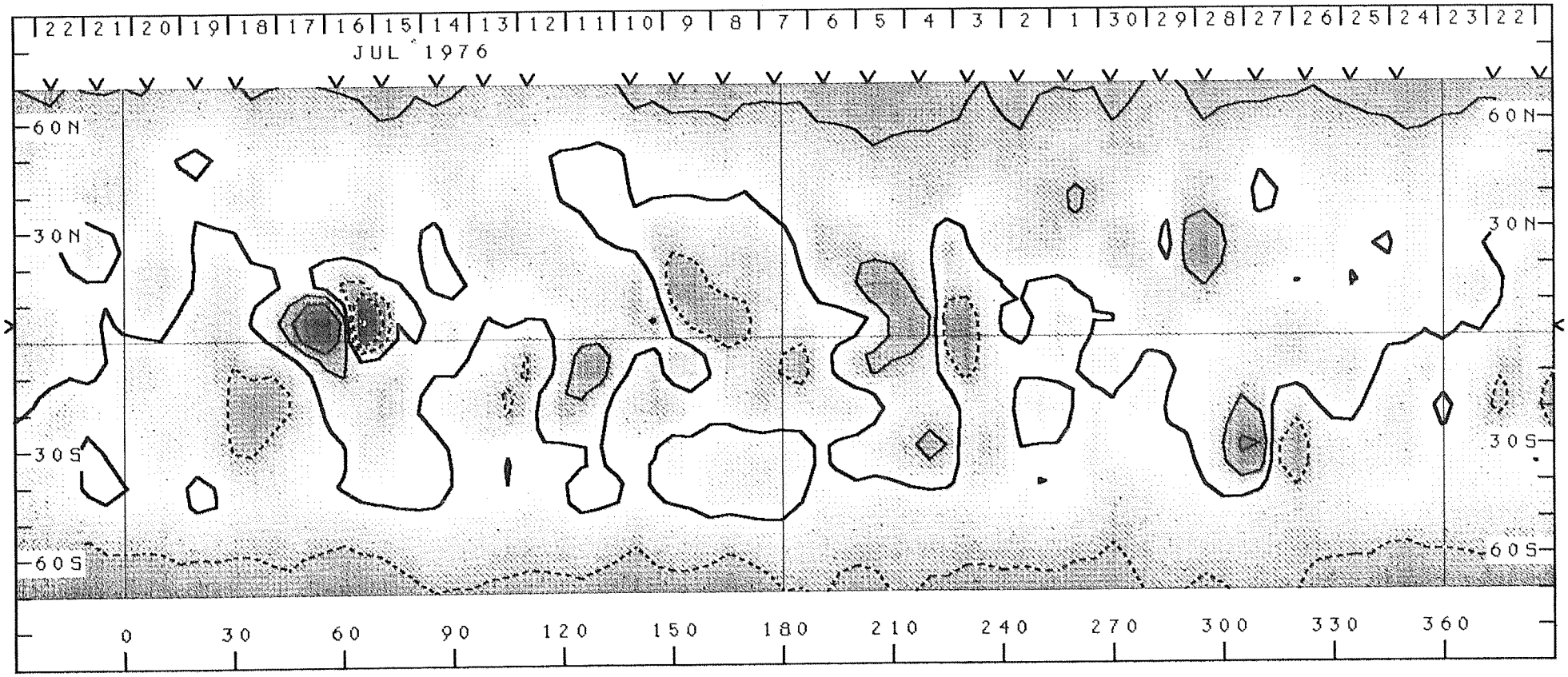
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

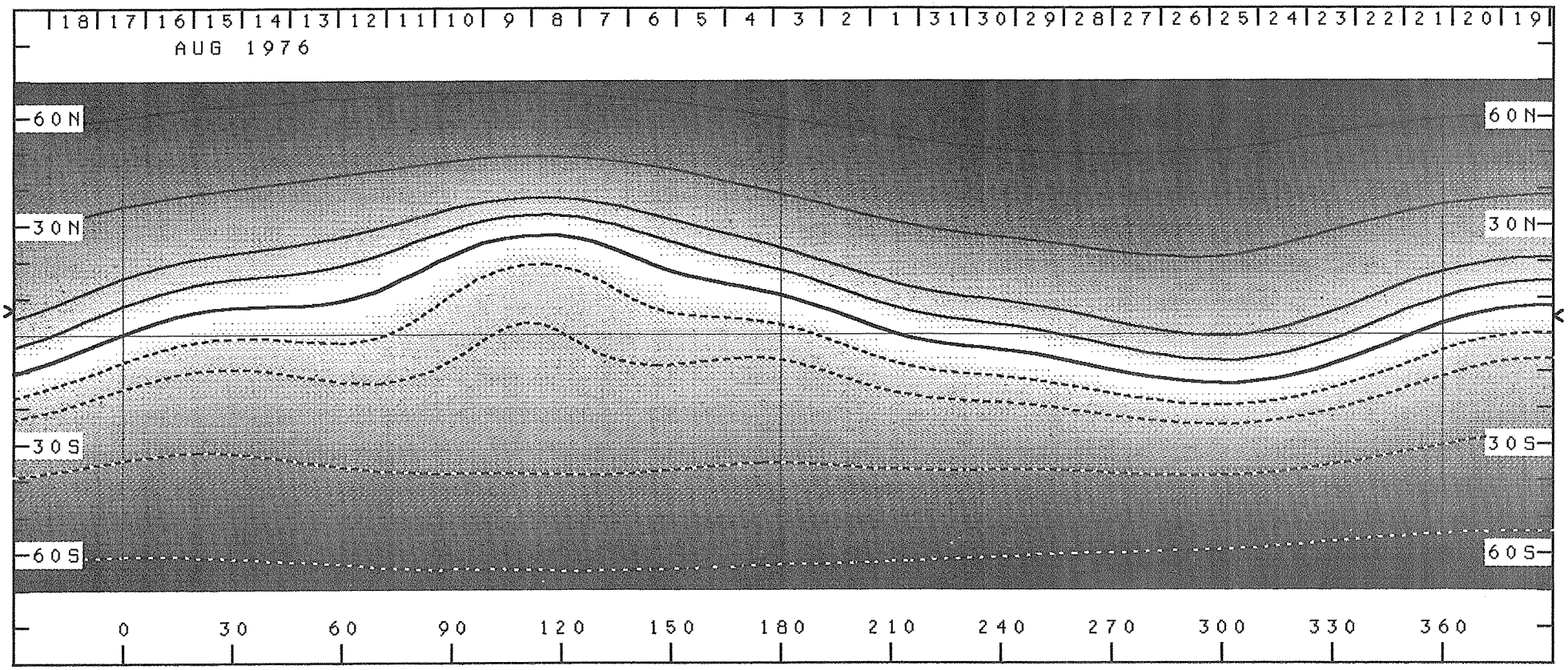
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

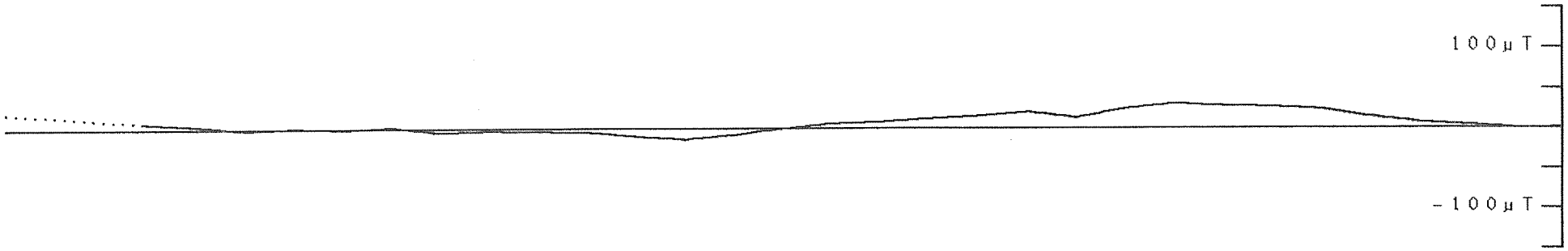
0, ±1, 2, 5, 10, 20 MICROTESLA



1644

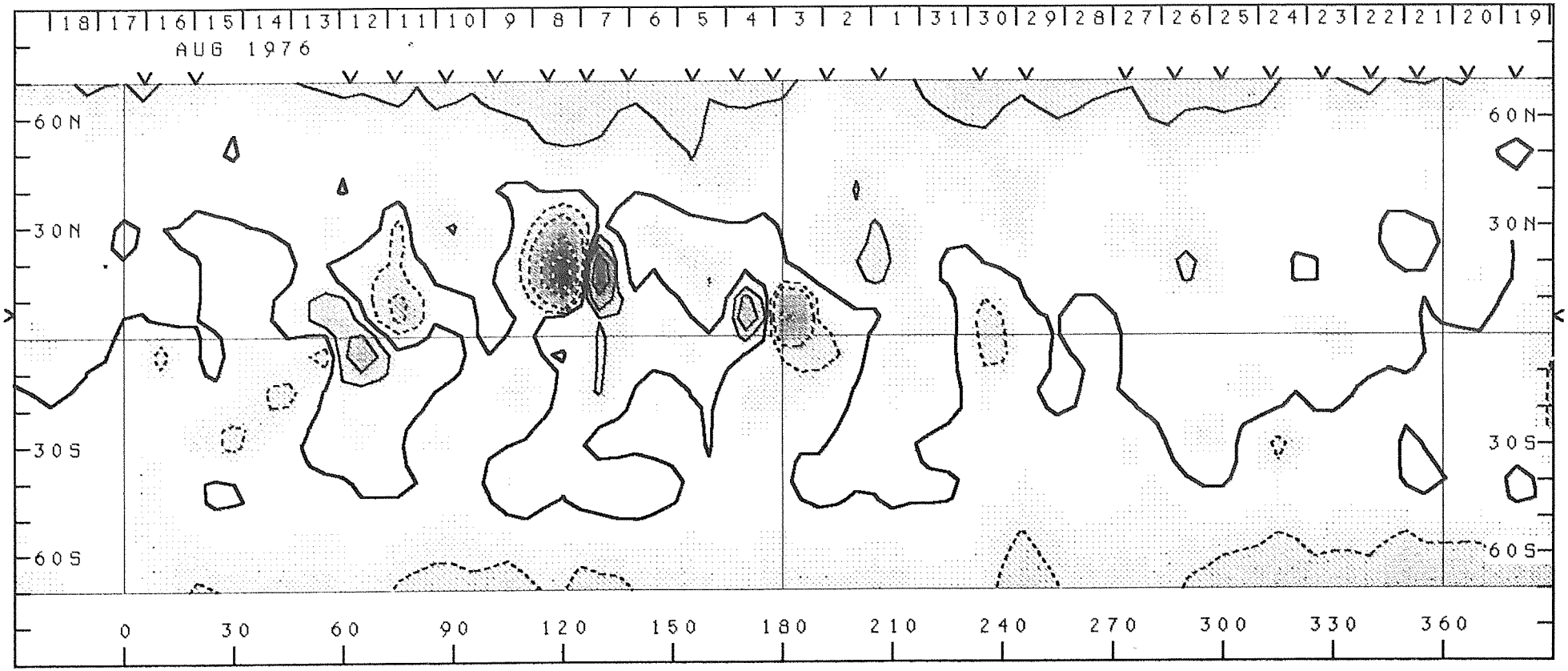
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

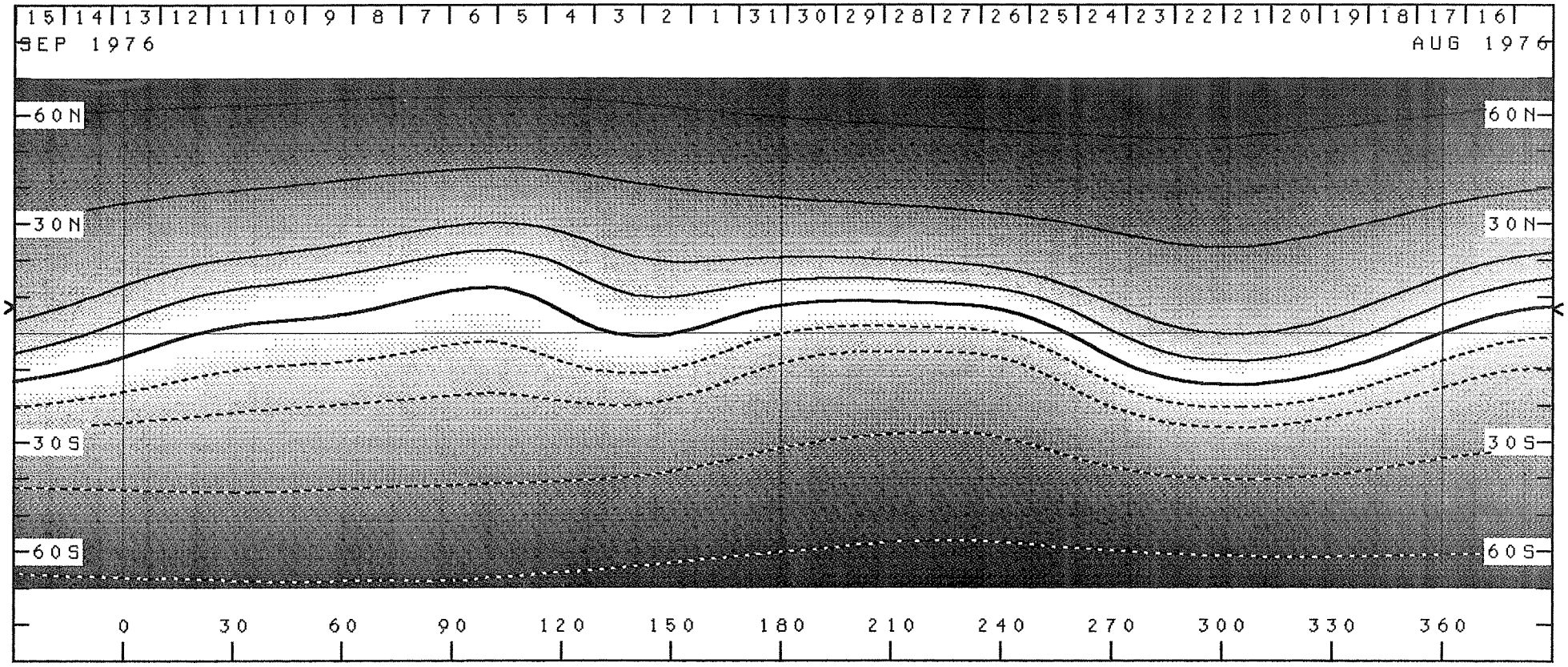


1644

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

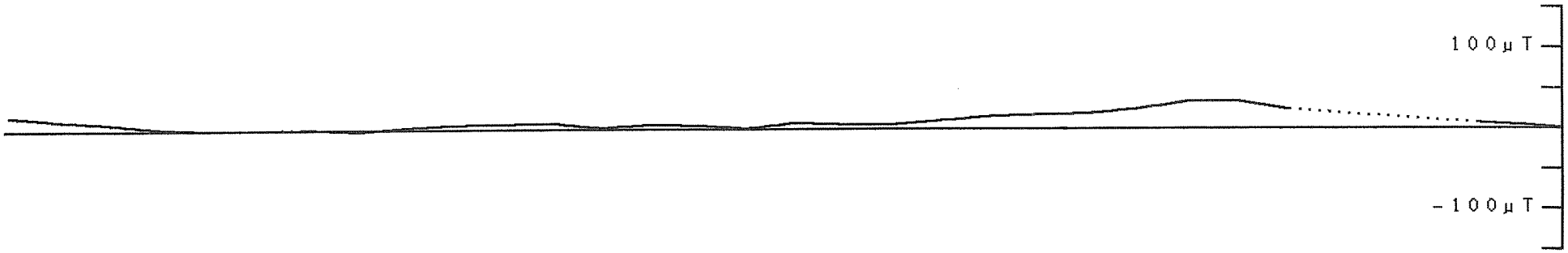
0, ±1, 2, 5, 10, 20 MICROTESLA



1645

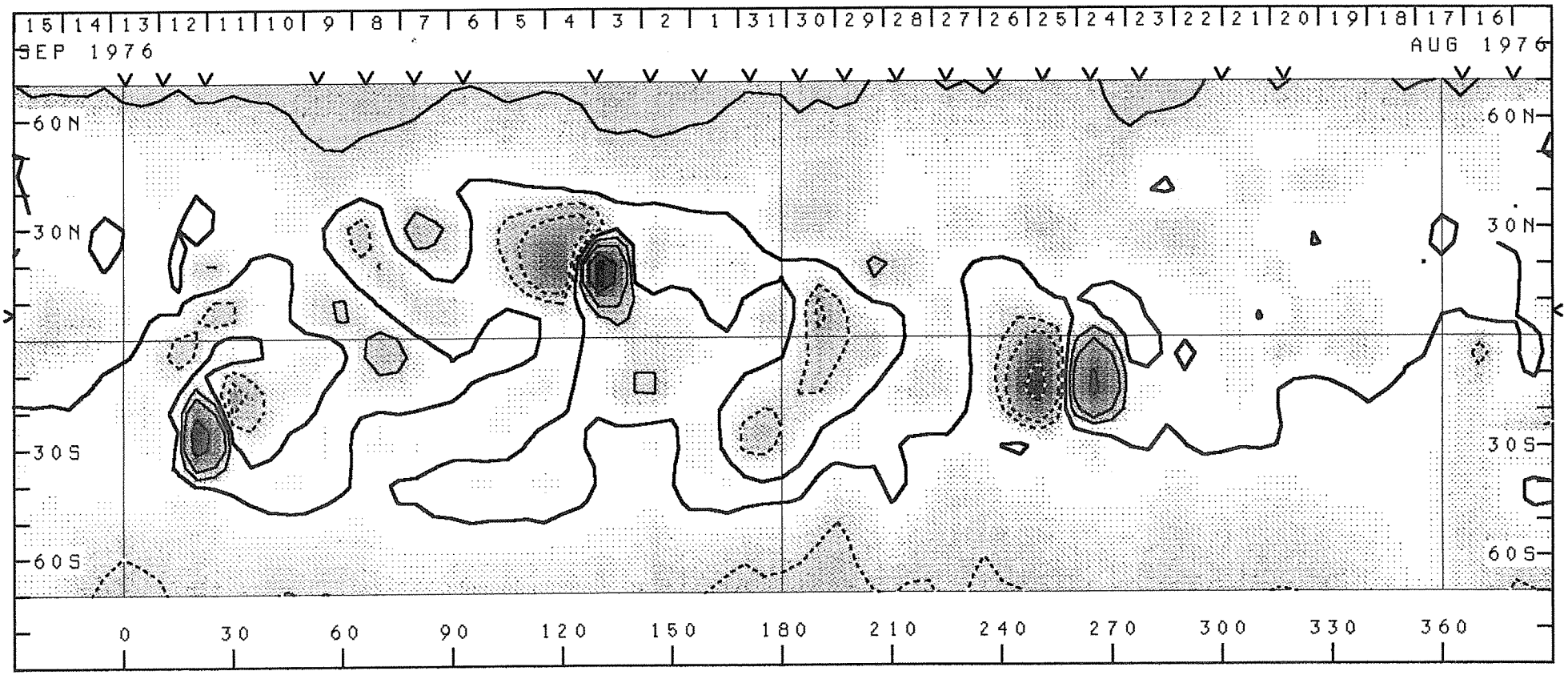
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

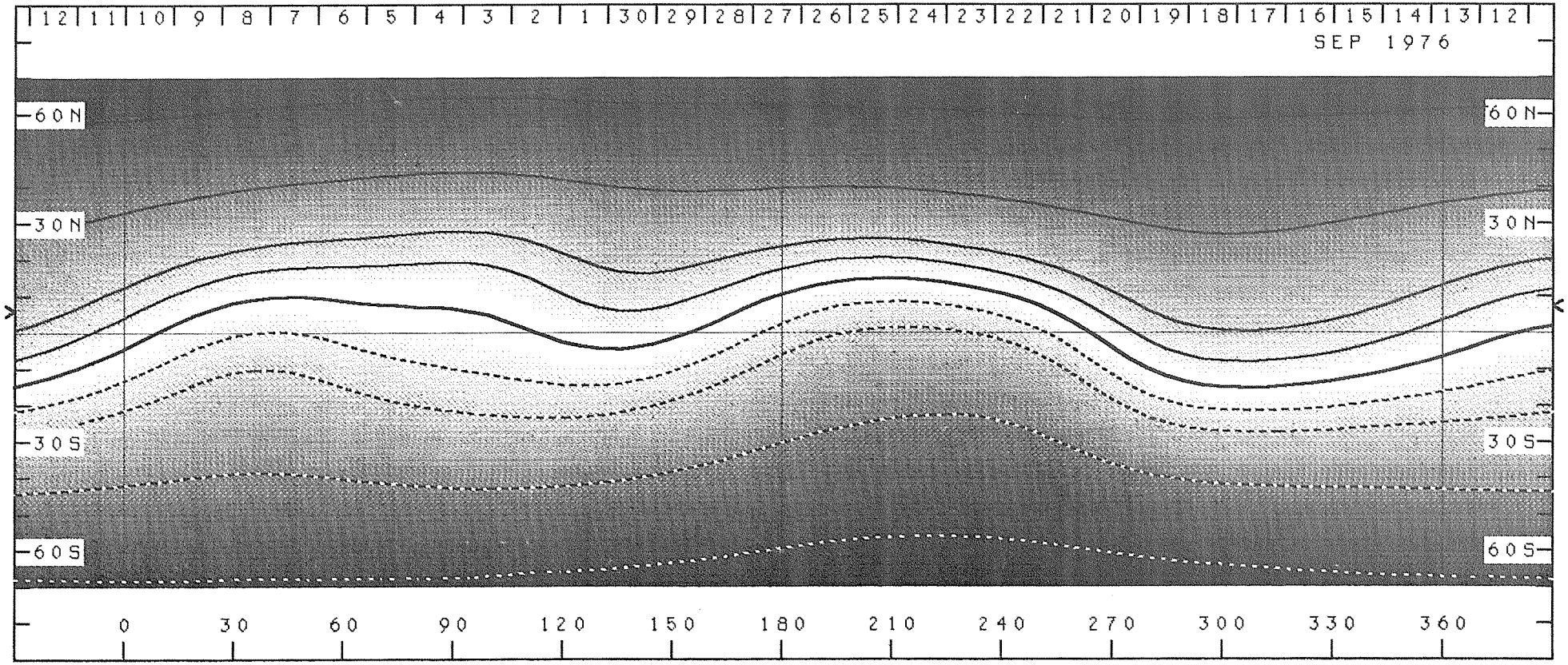
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

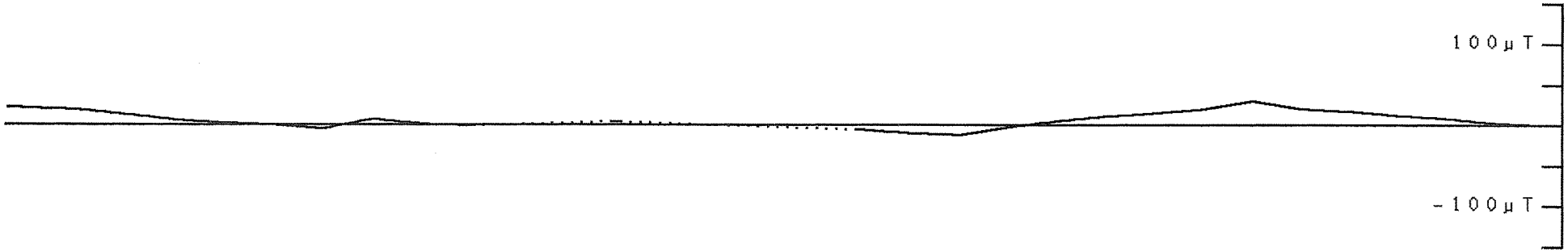
0, ±1, 2, 5, 10, 20 MICROTESLA



1646

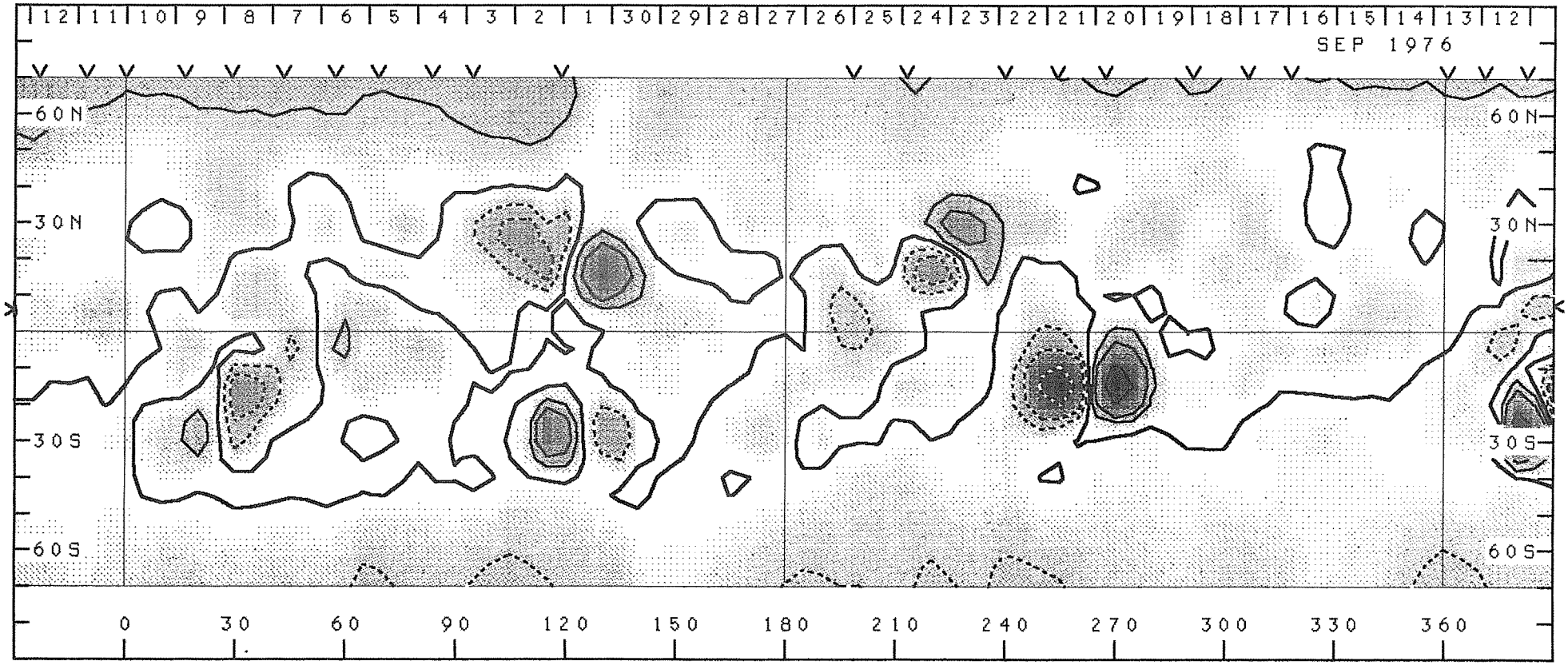
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

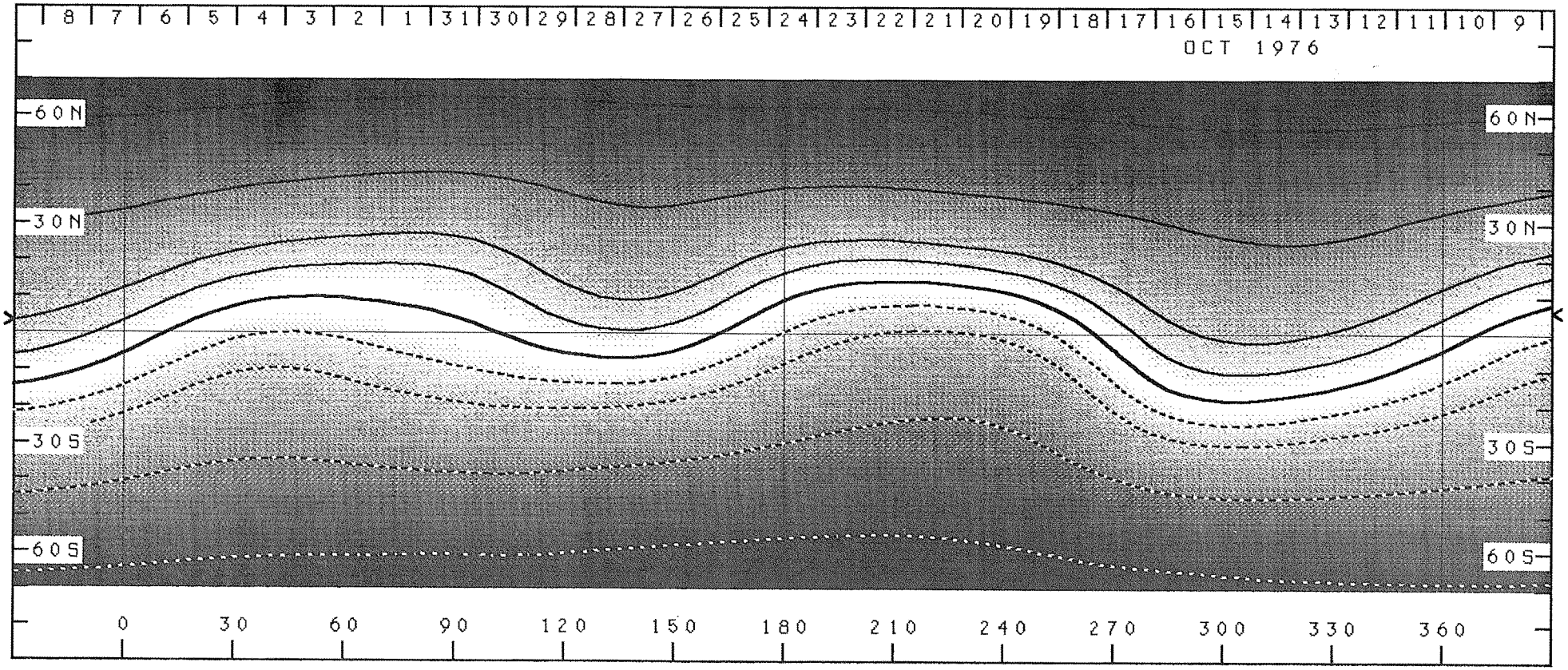
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

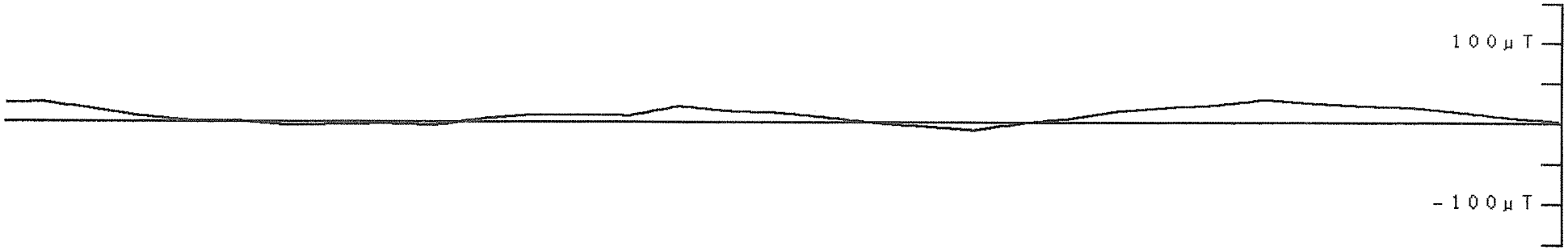
0, ±1, 2, 5, 10, 20 MICROTESLA



1647

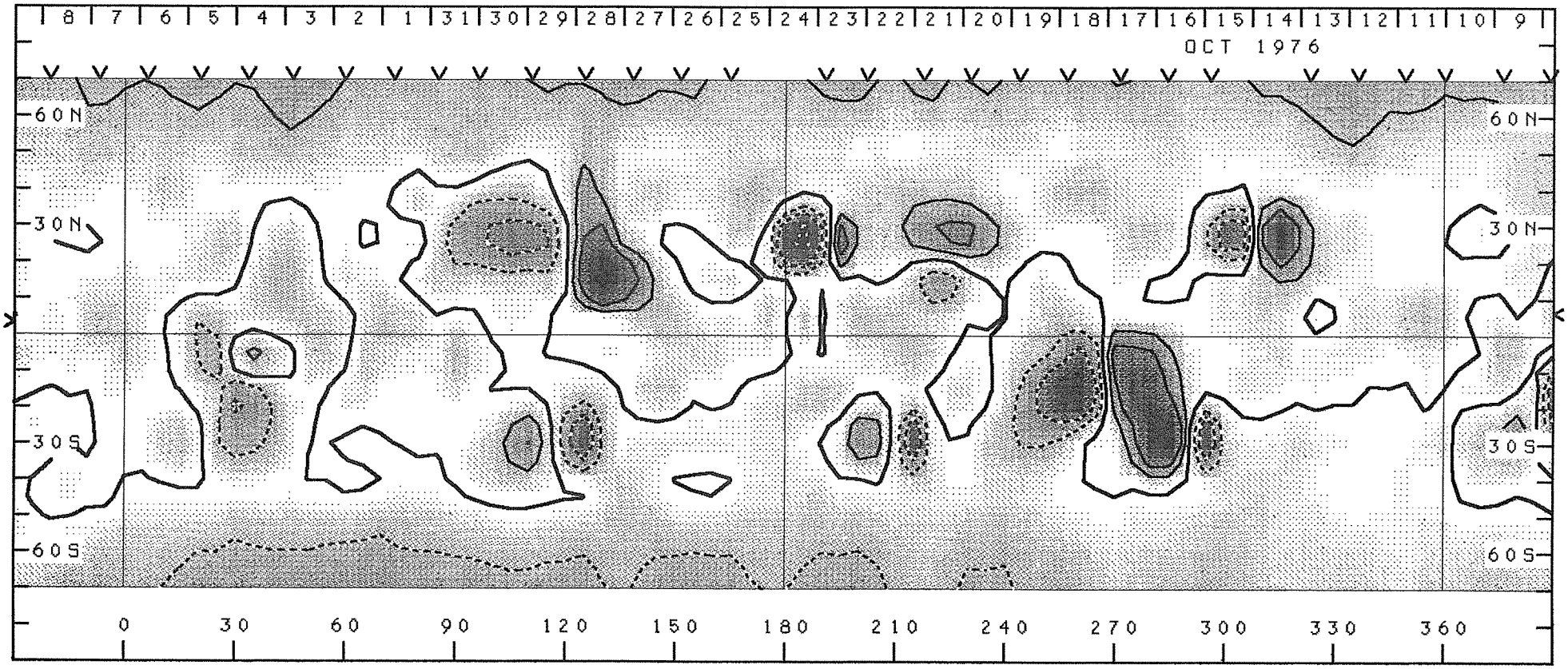
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

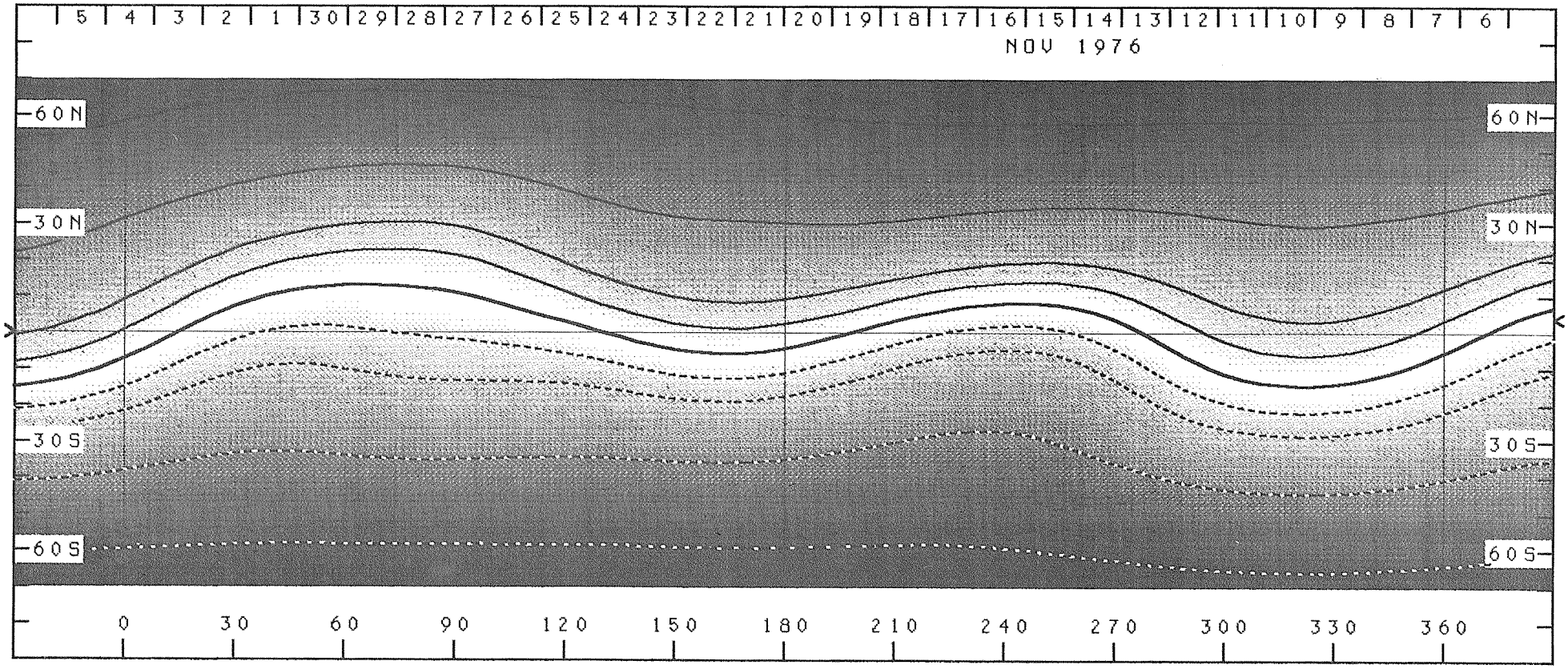
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

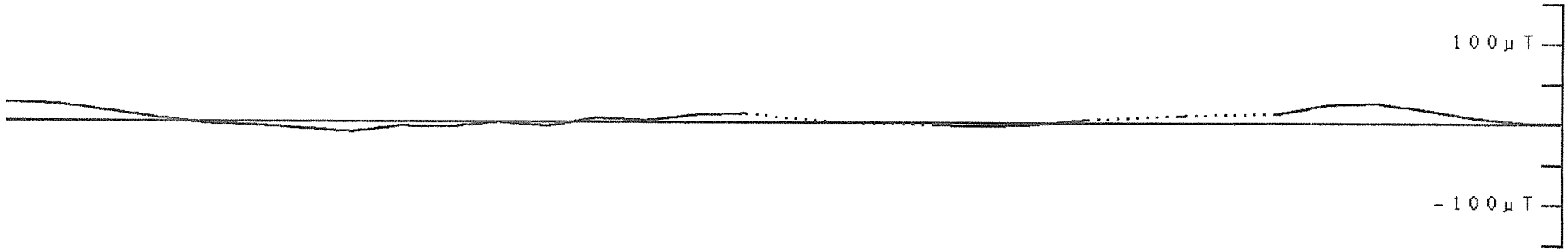
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



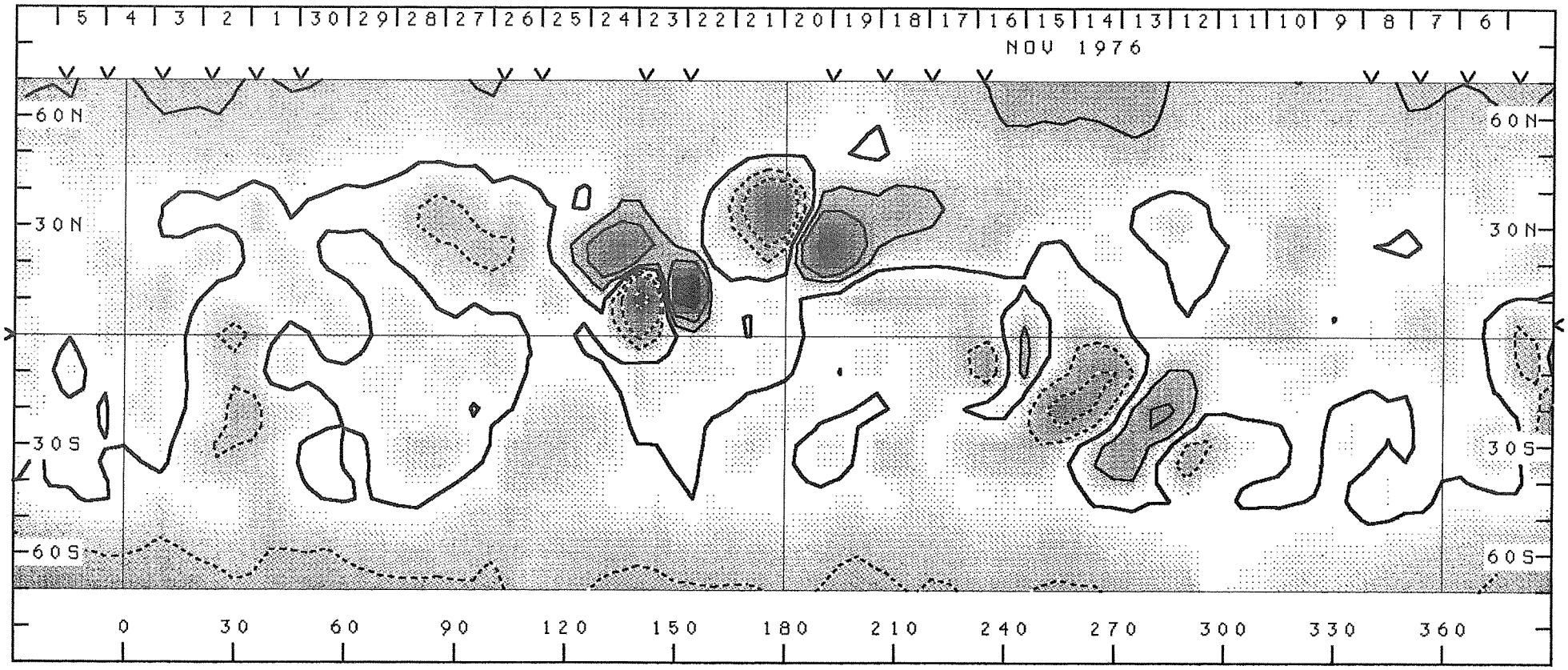
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

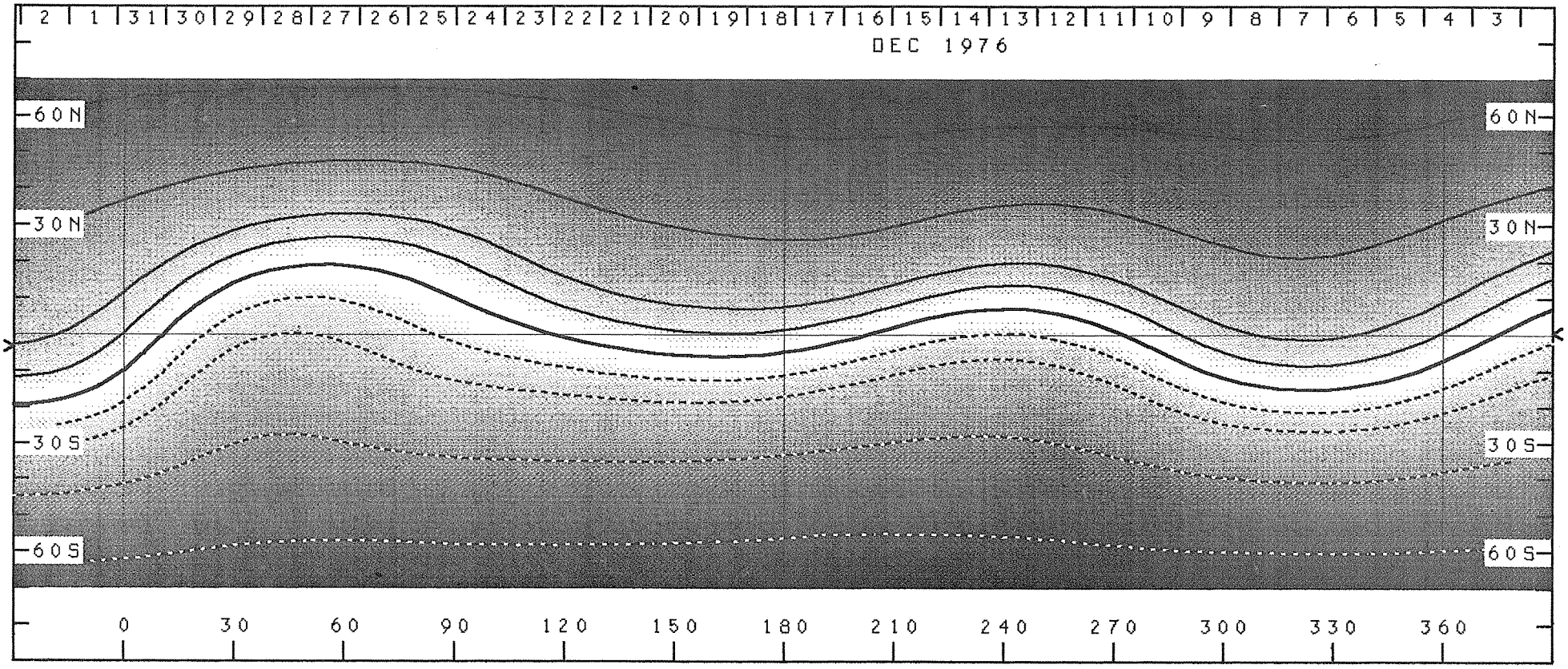
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

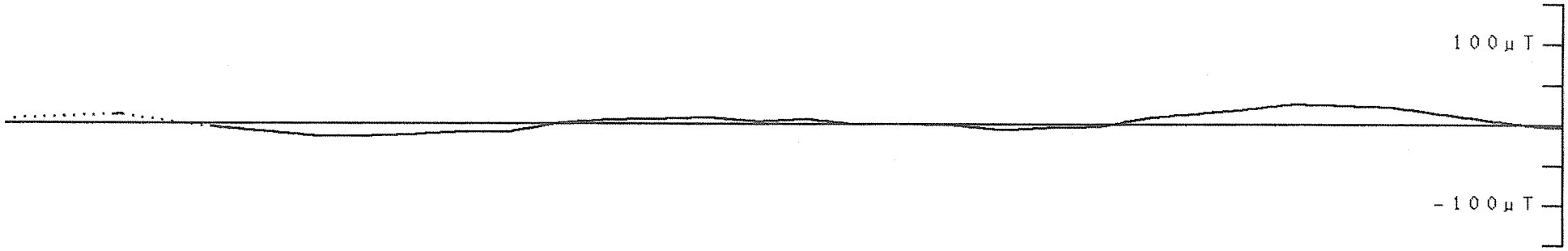
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



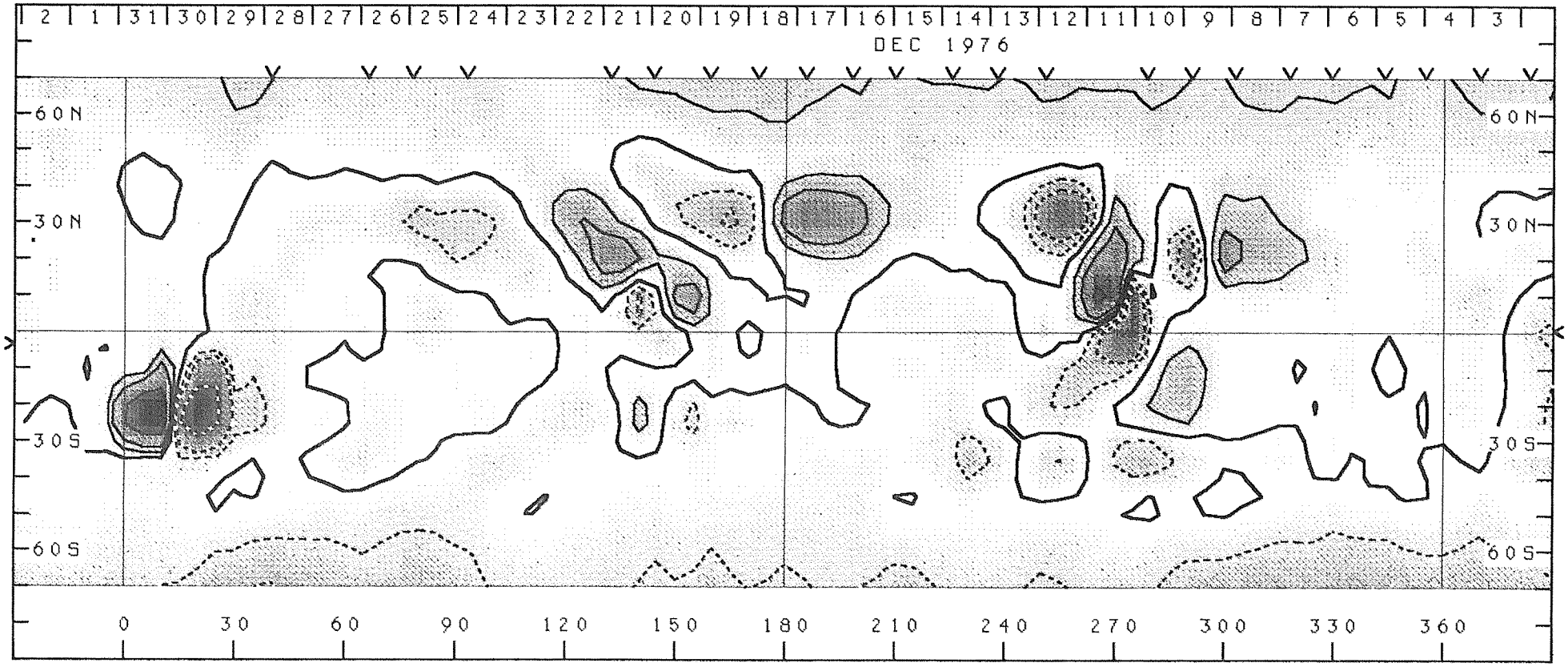
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

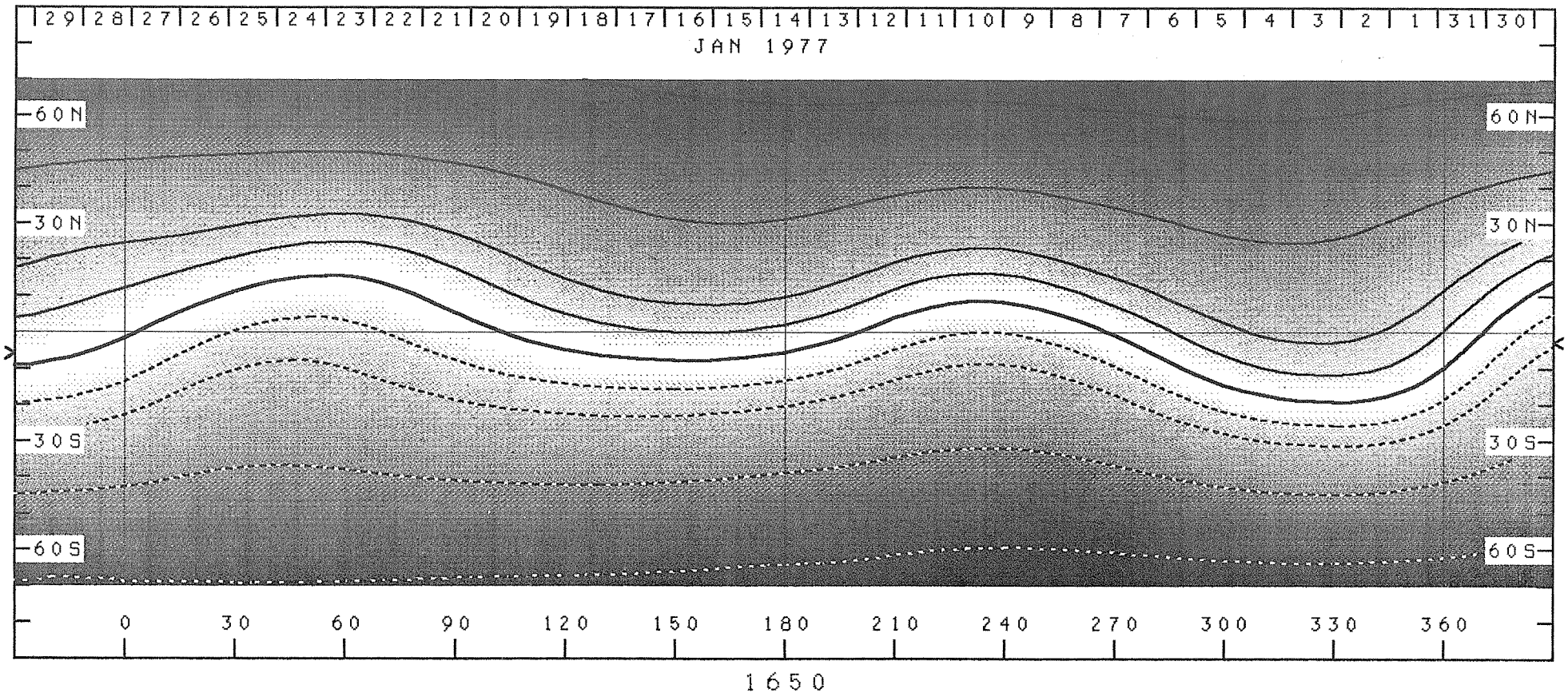
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

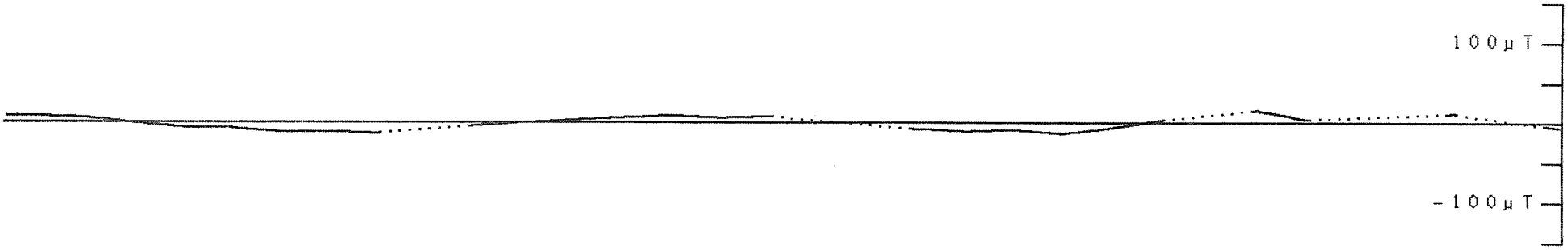
0, ±1, 2, 5, 10, 20 MICROTESLA



1650

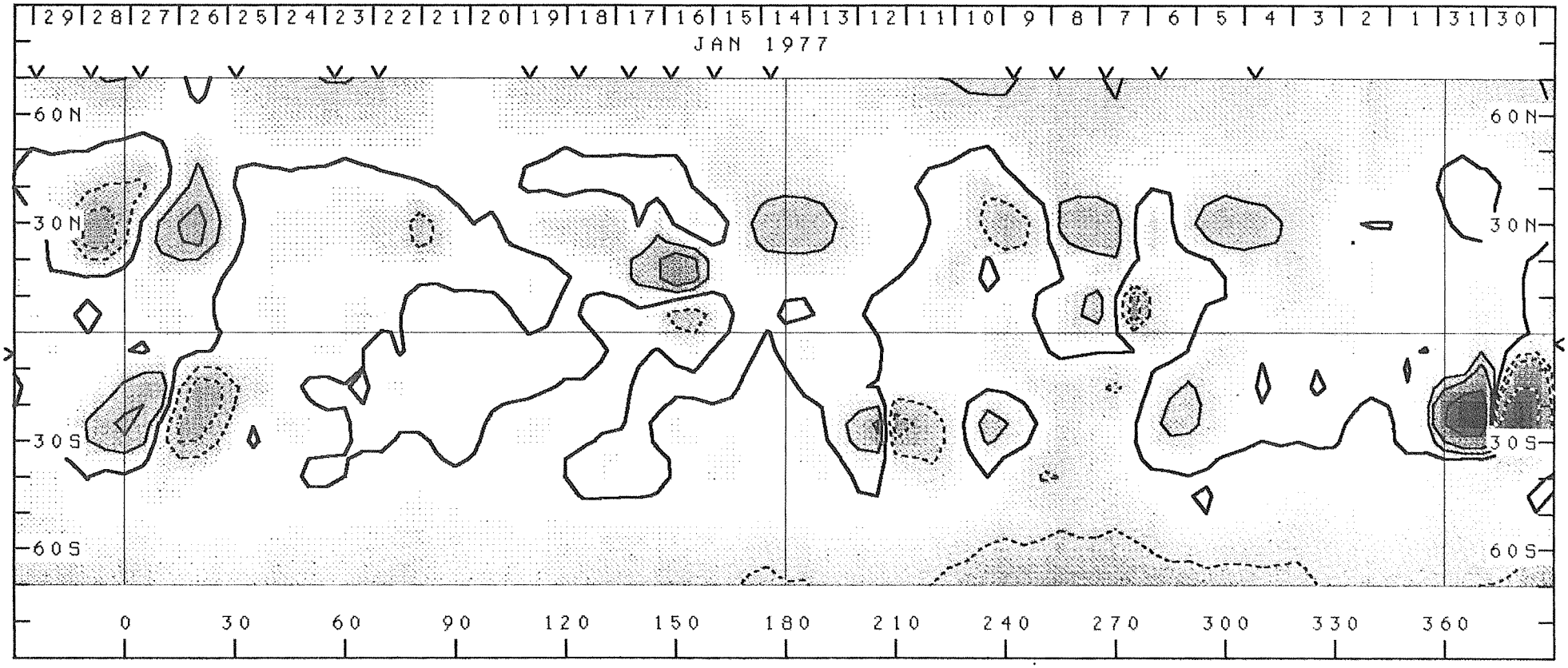
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

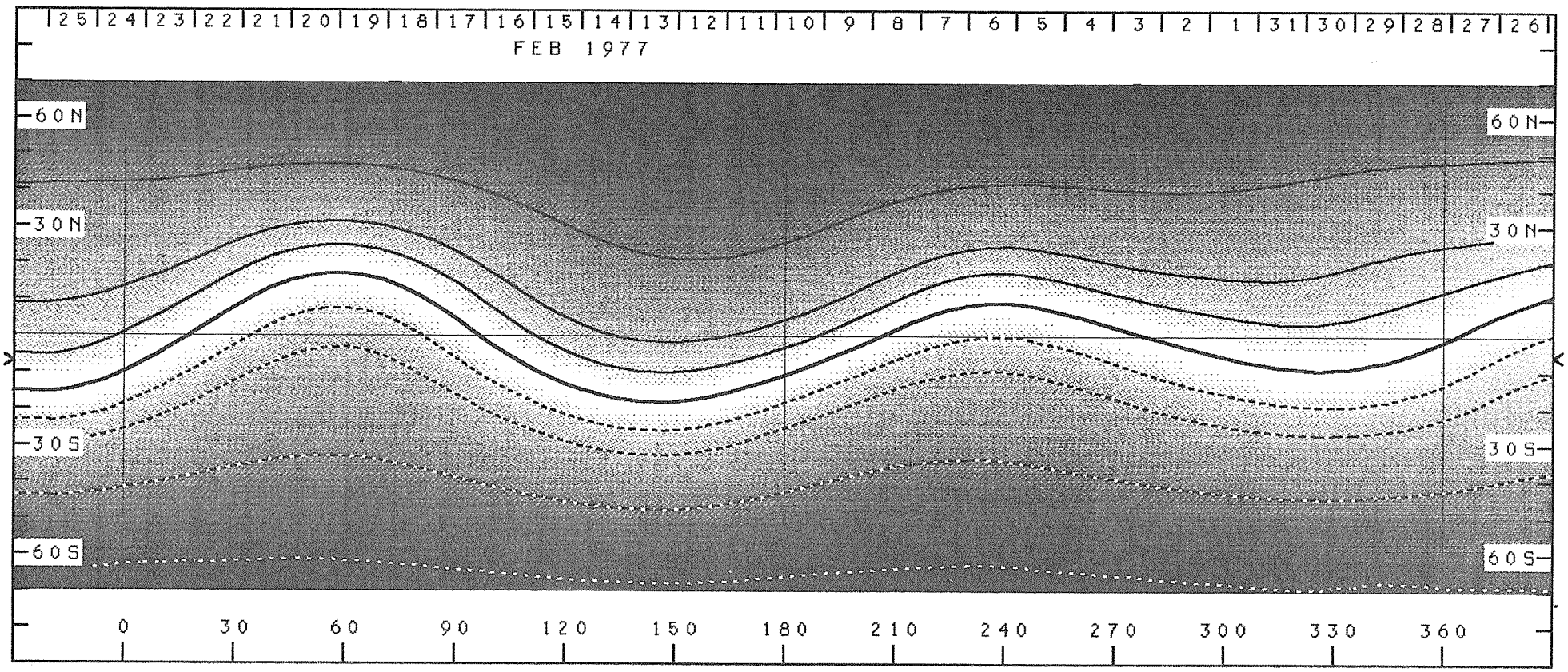


1650

WILCOX SOLAR OBSERVATORY

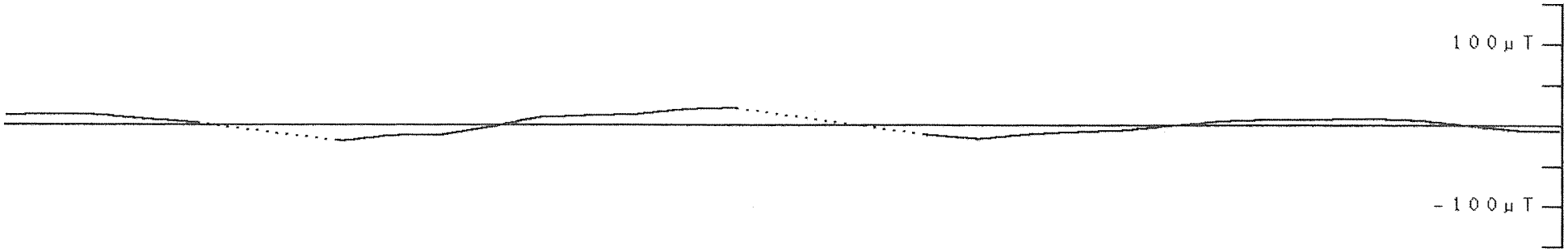
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



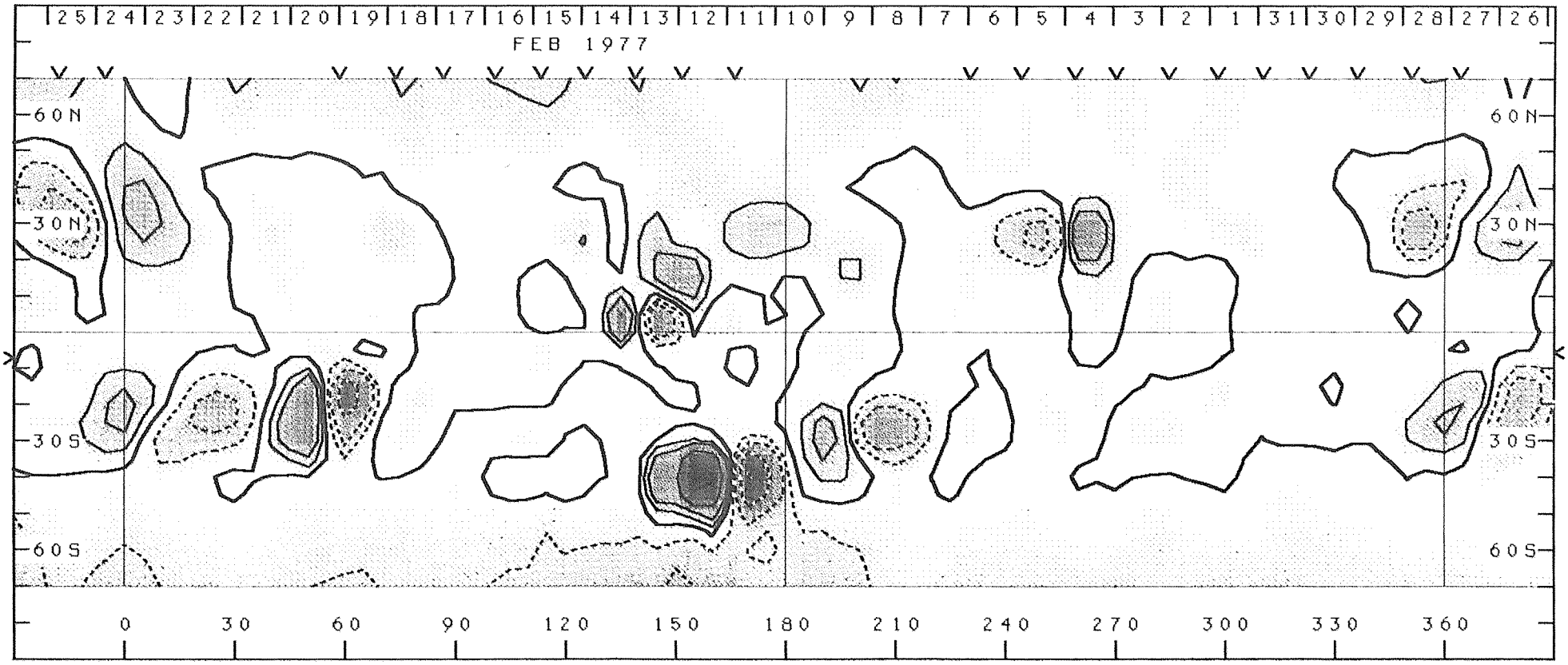
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

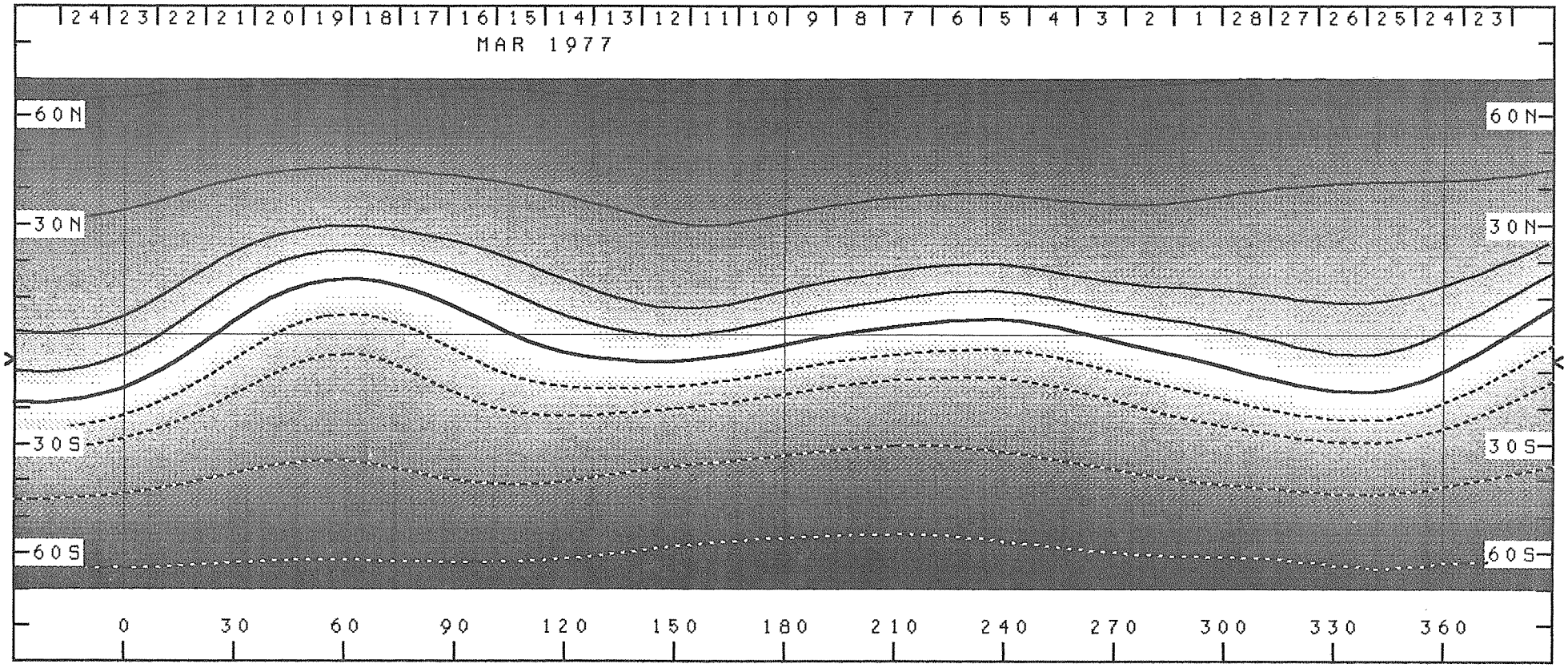
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

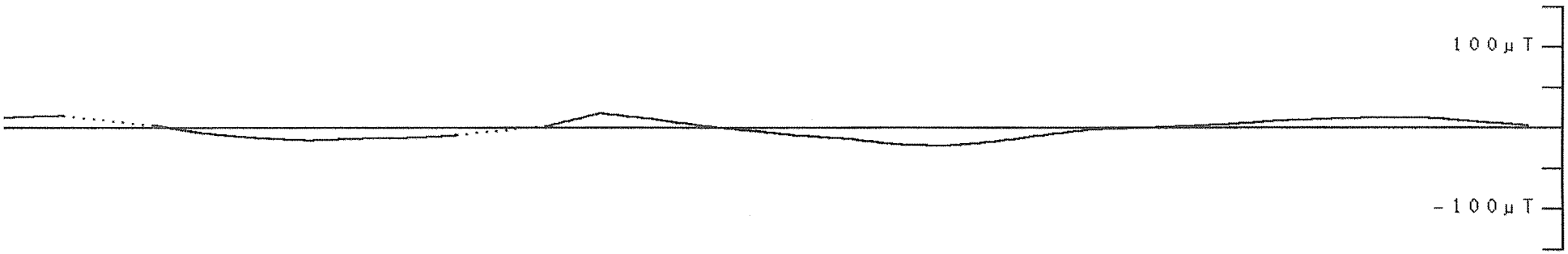
0, ±1, 2, 5, 10, 20 MICROTESLA



1652

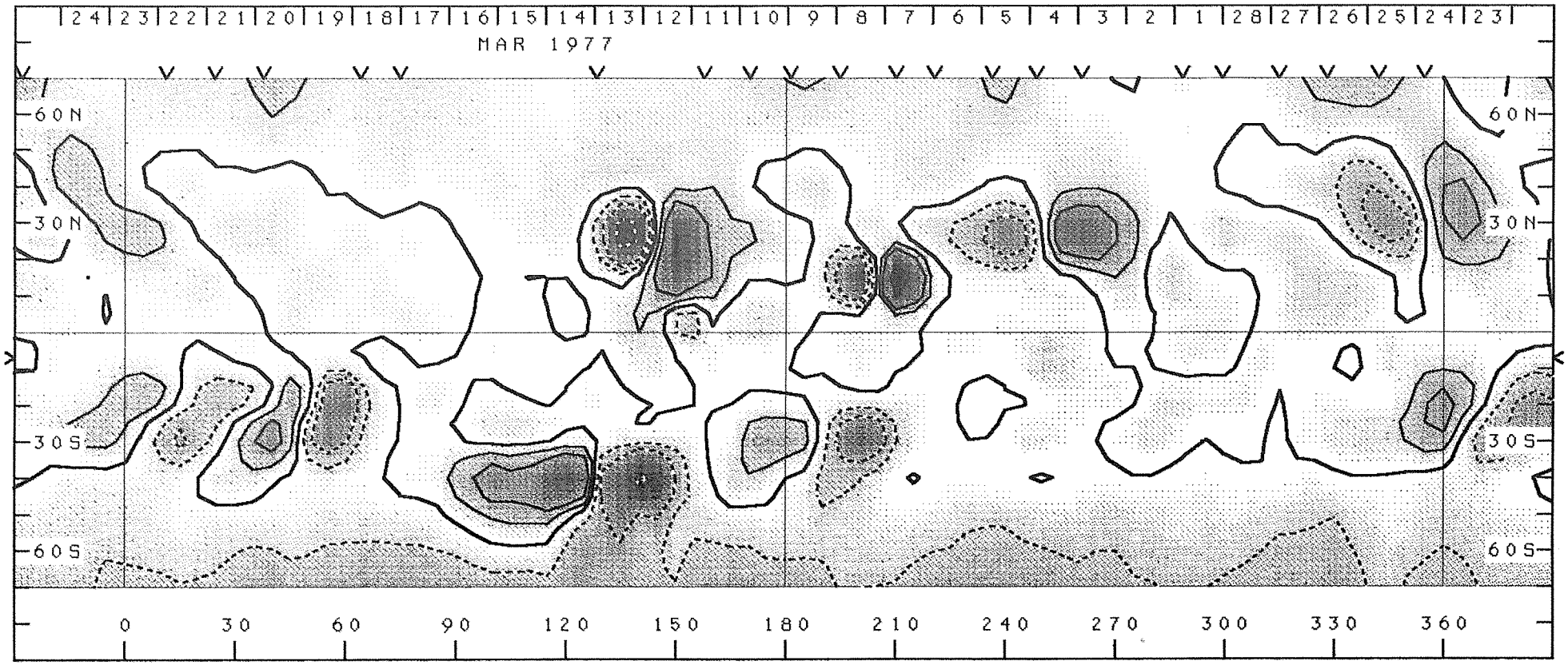
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

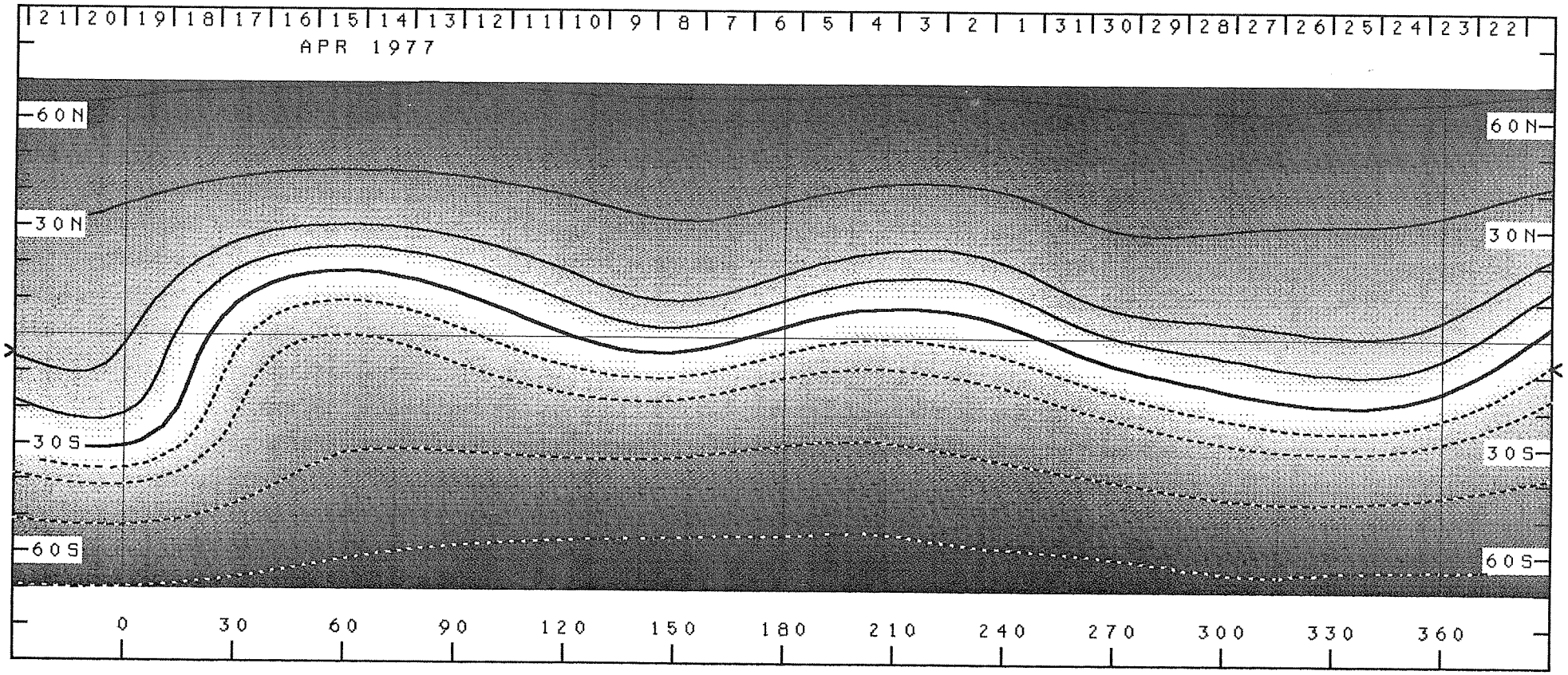
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

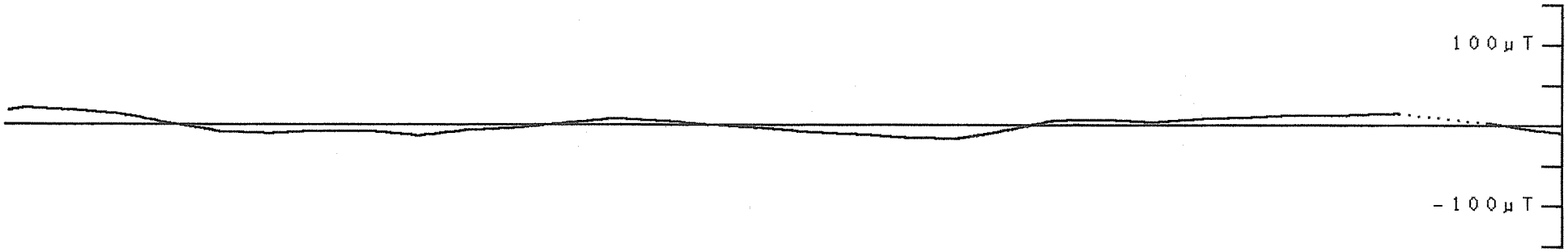
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



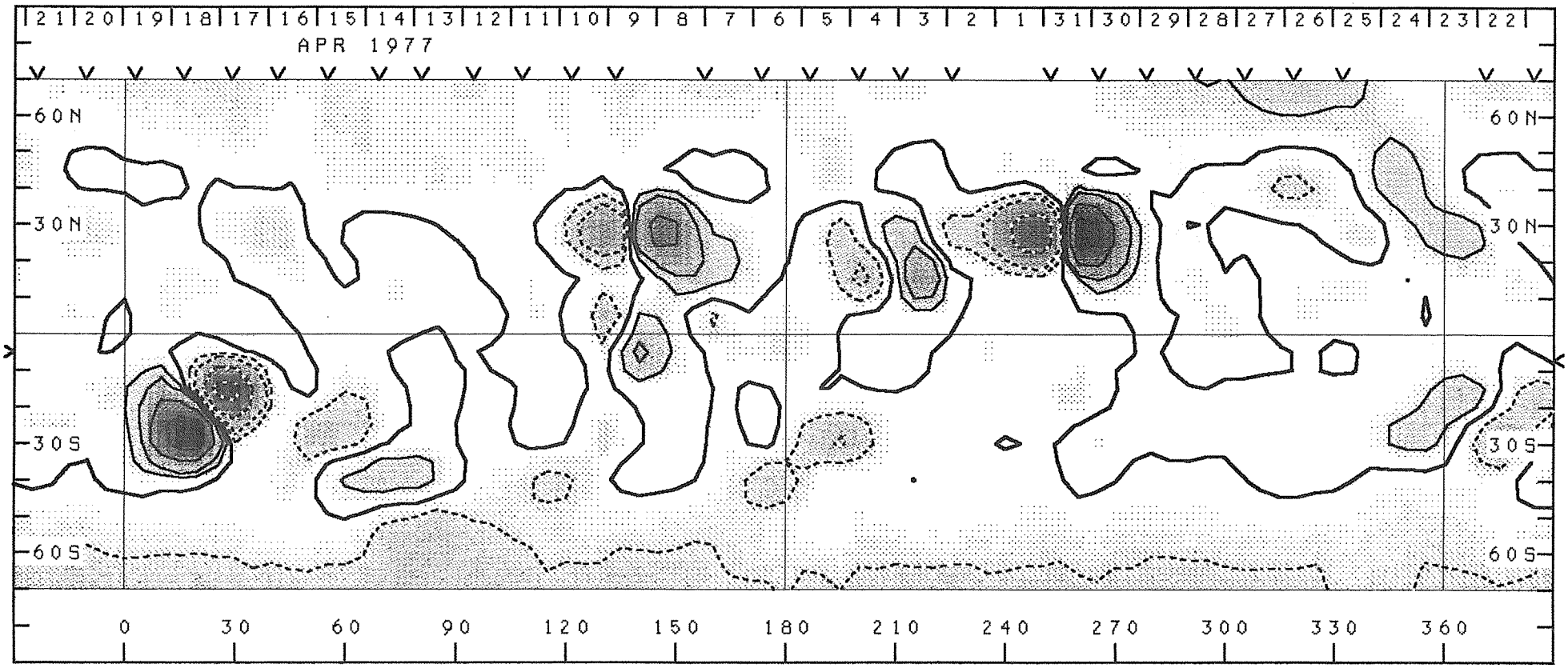
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

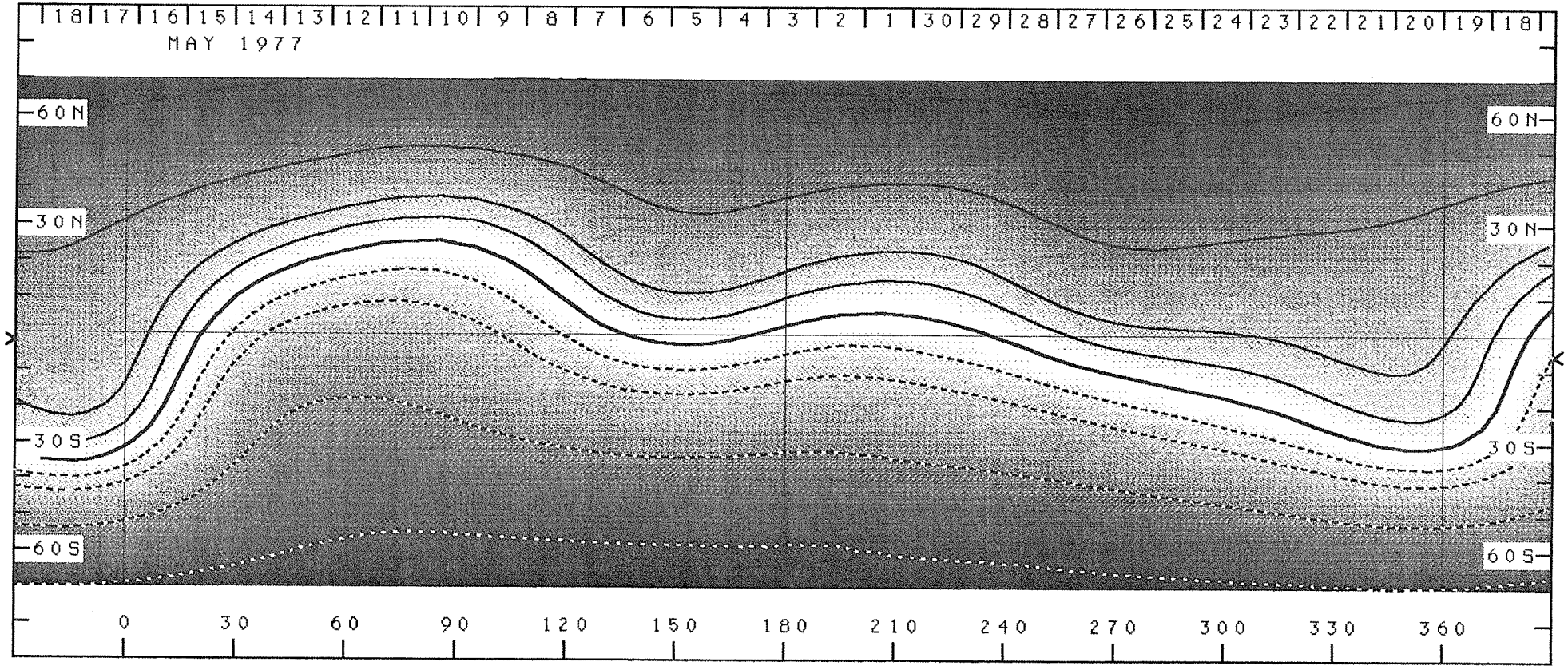
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

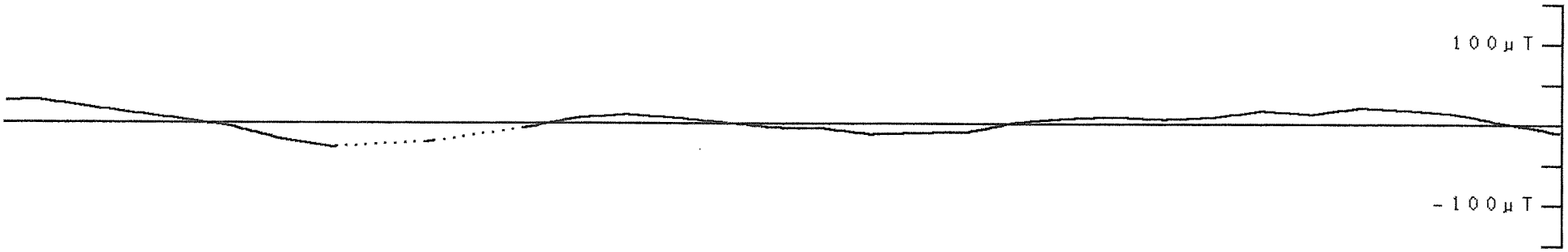
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



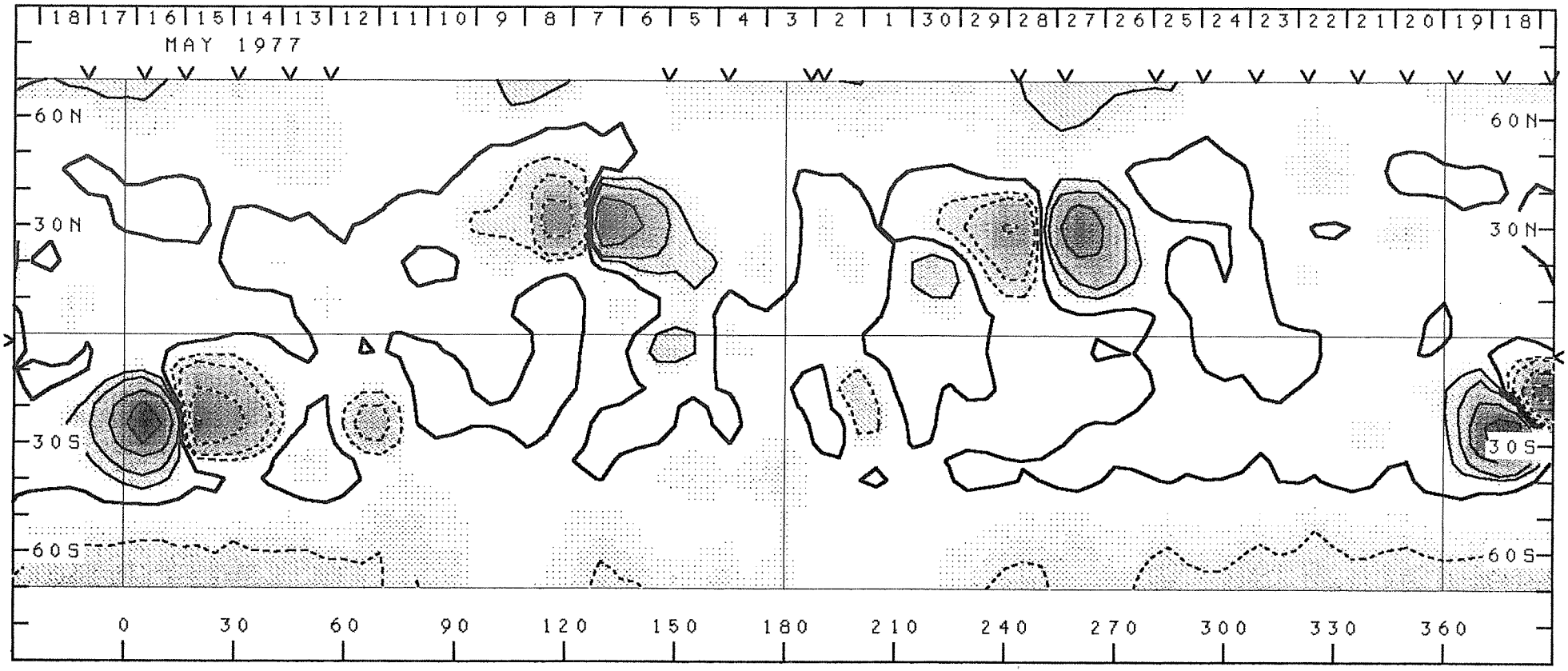
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

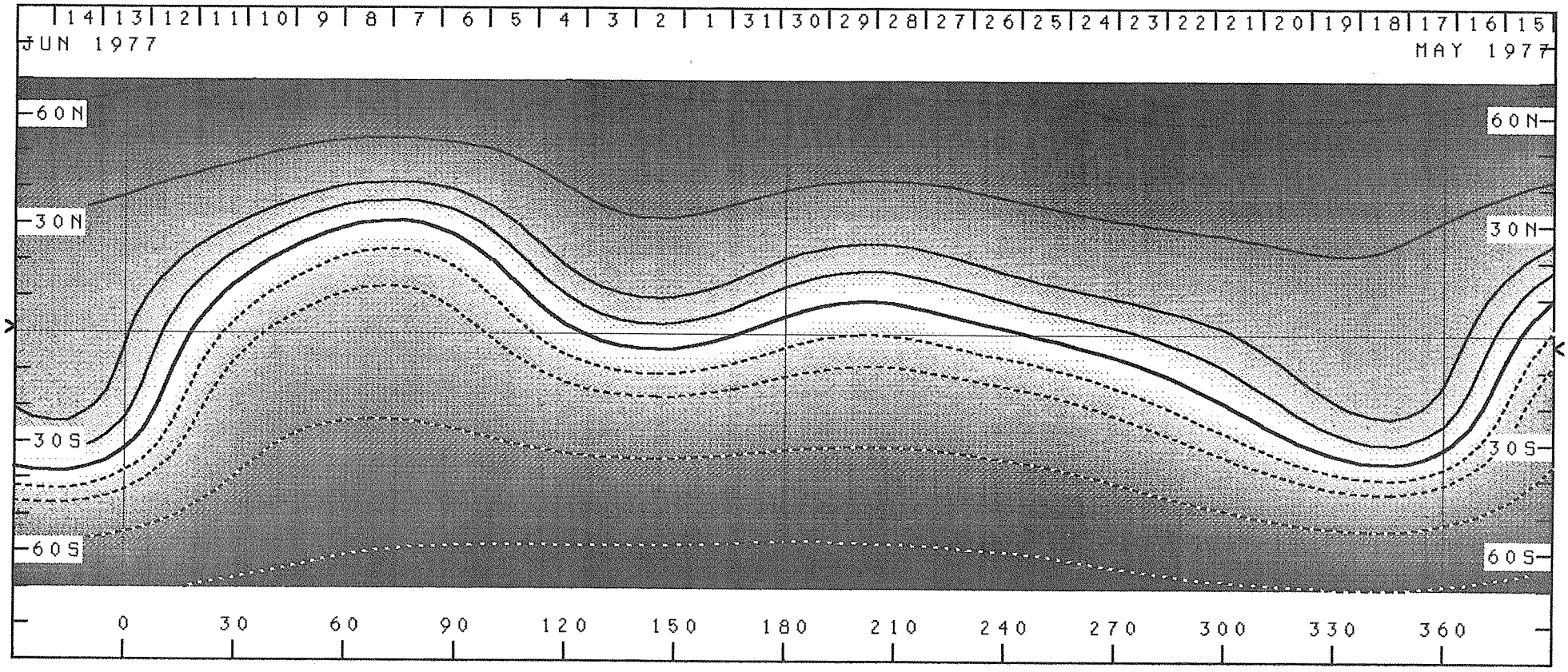
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

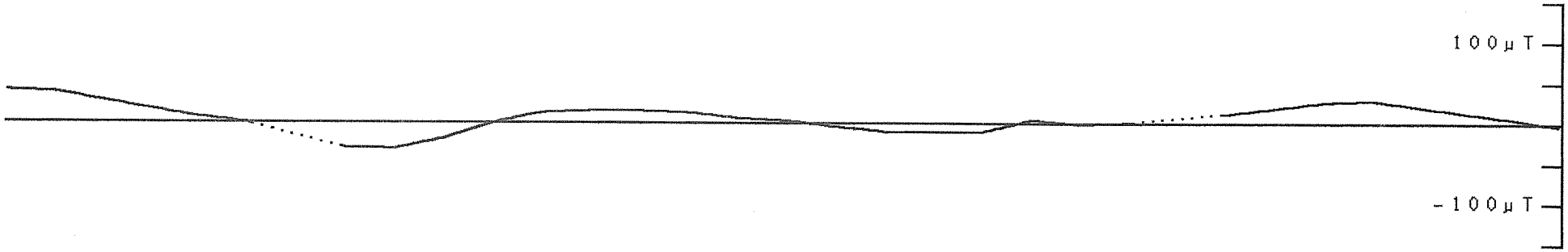
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



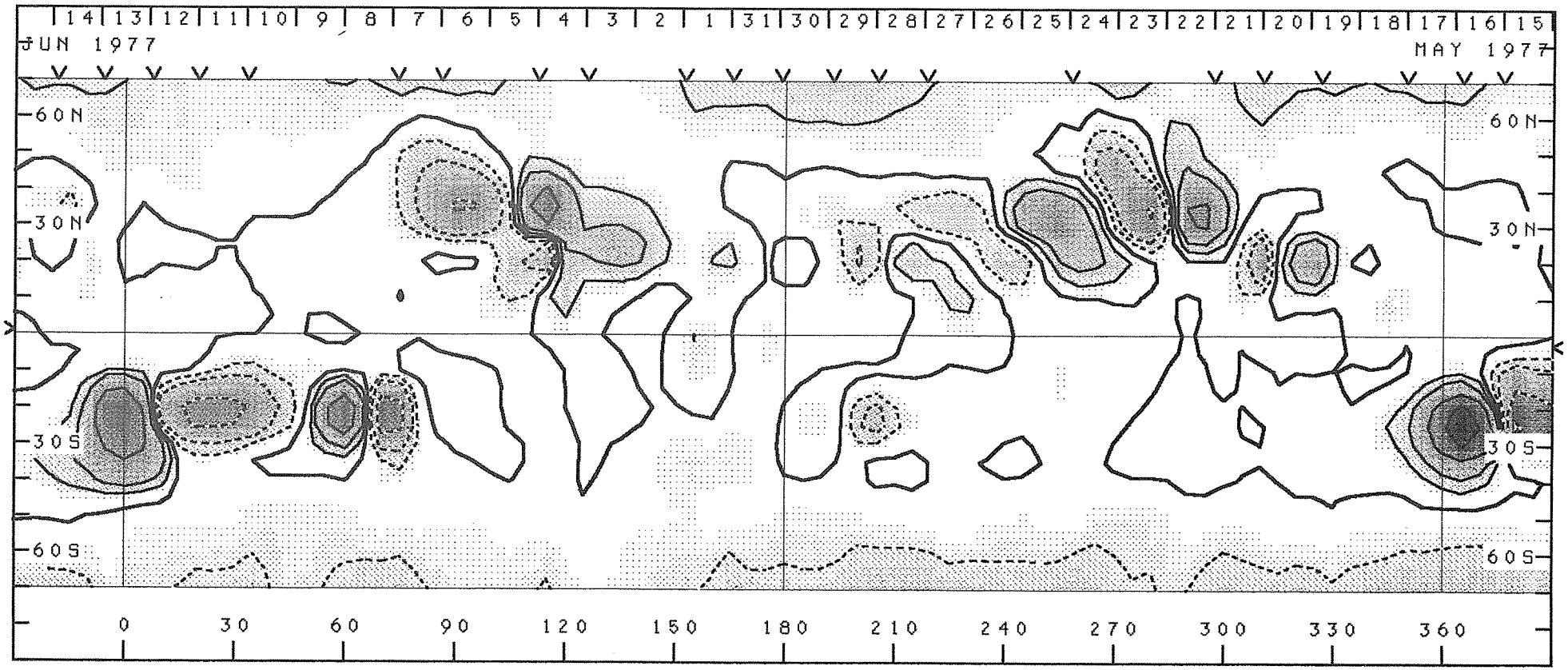
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

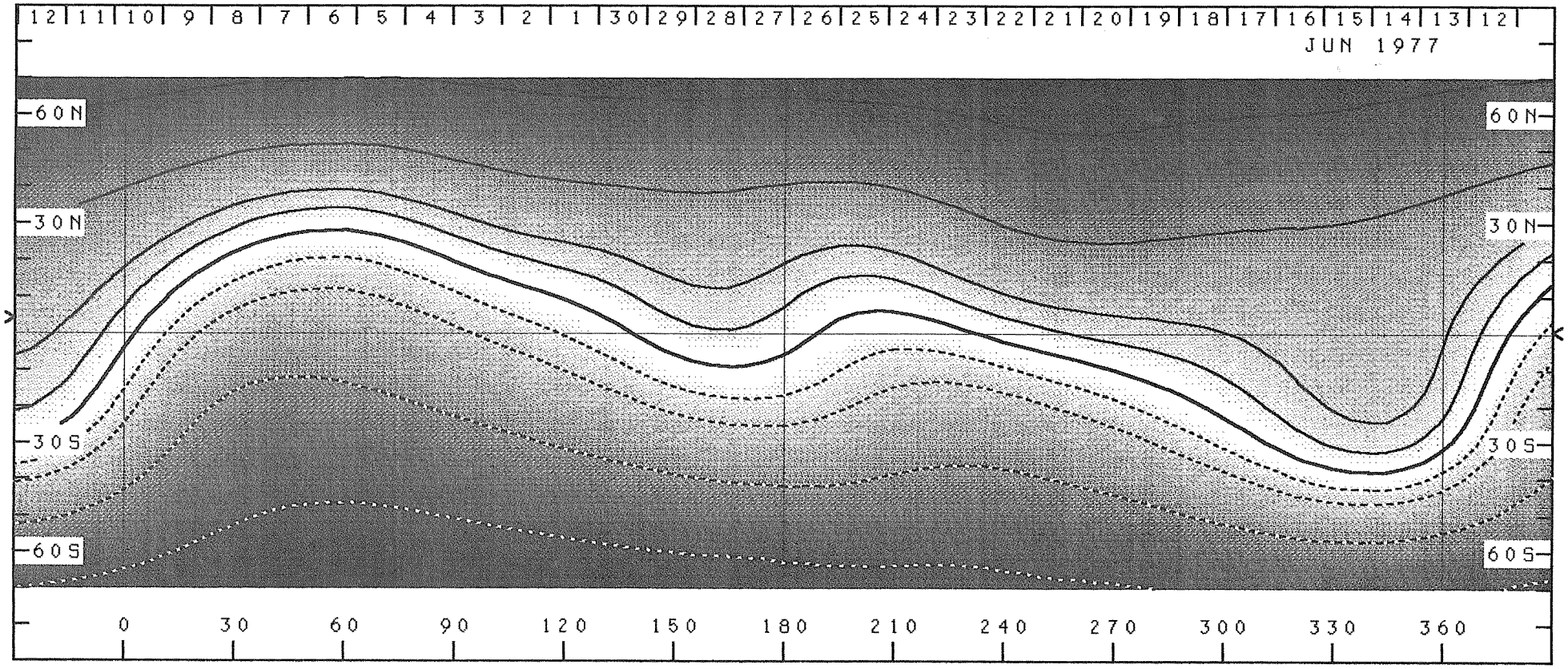
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

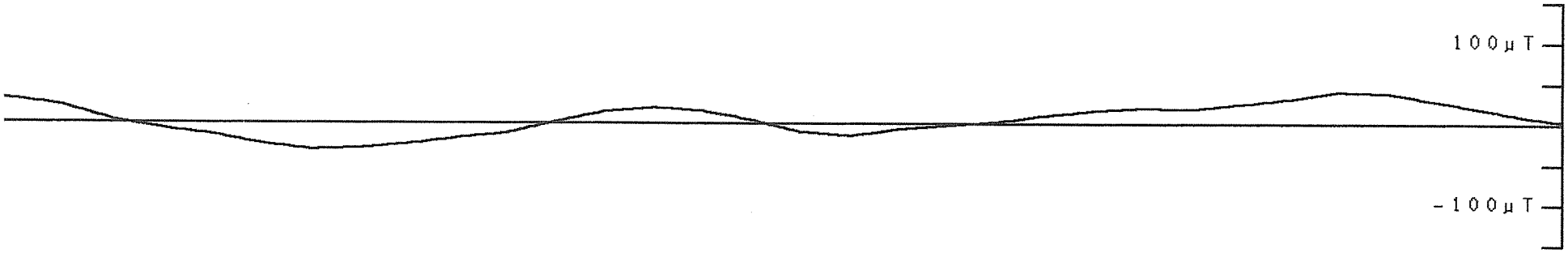
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



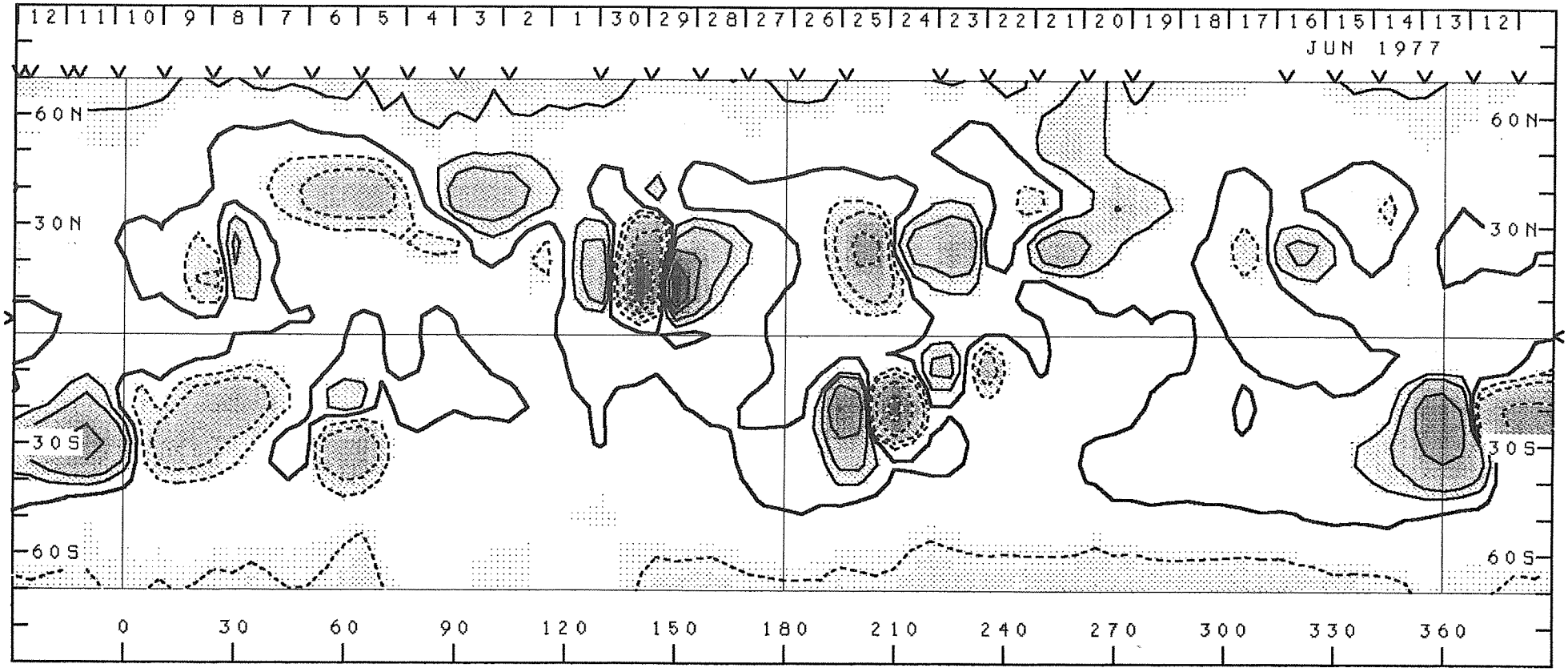
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

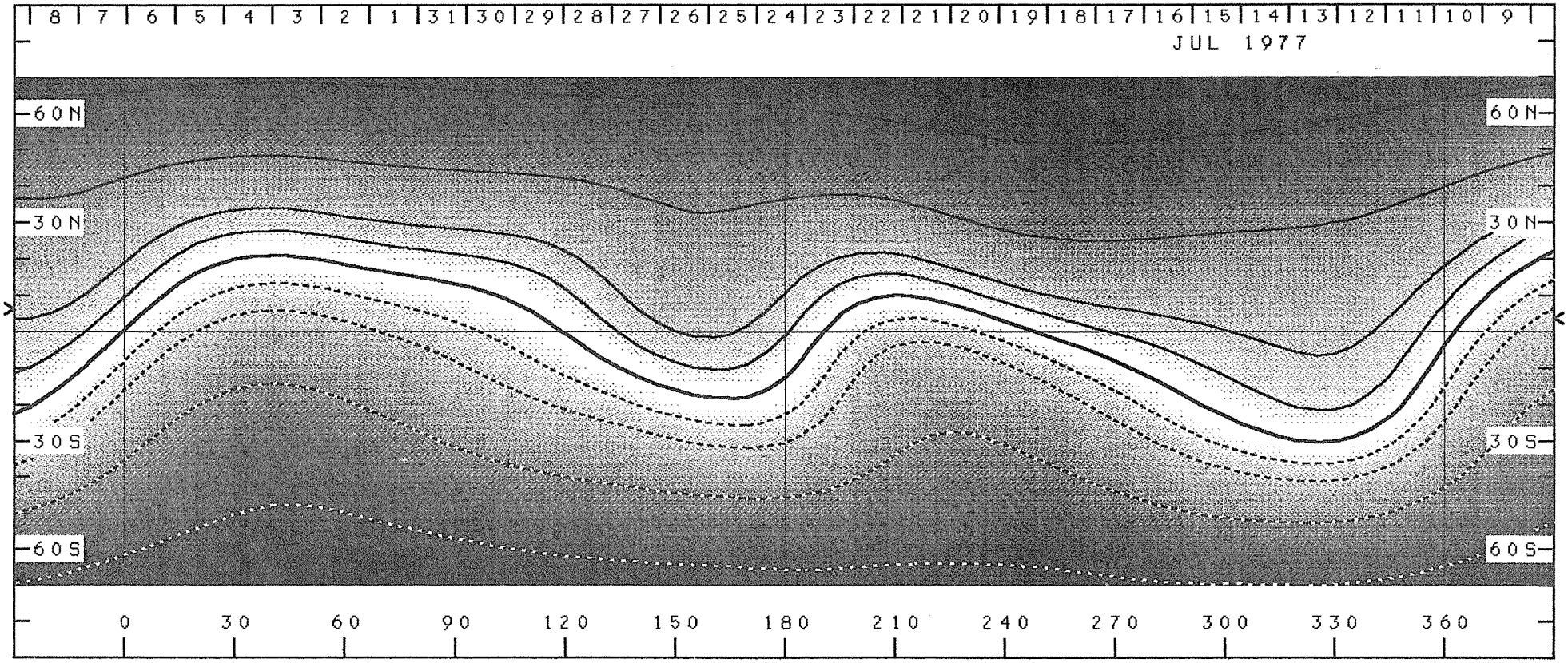
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

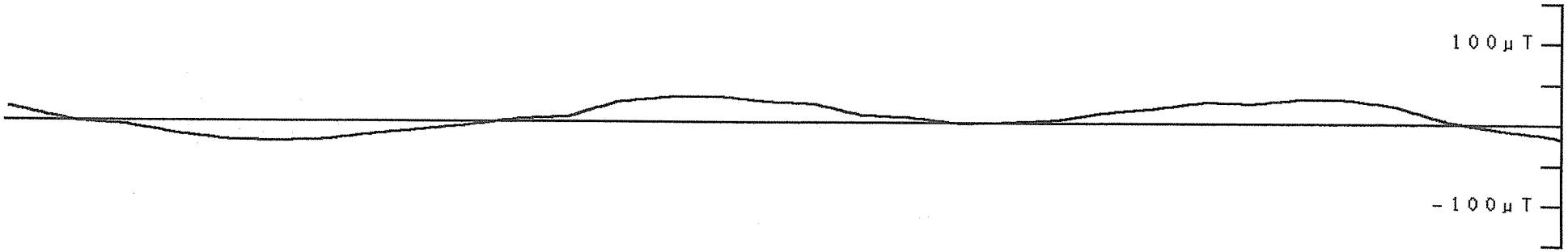
0, ±1, 2, 5, 10, 20 MICROTESLA



1657

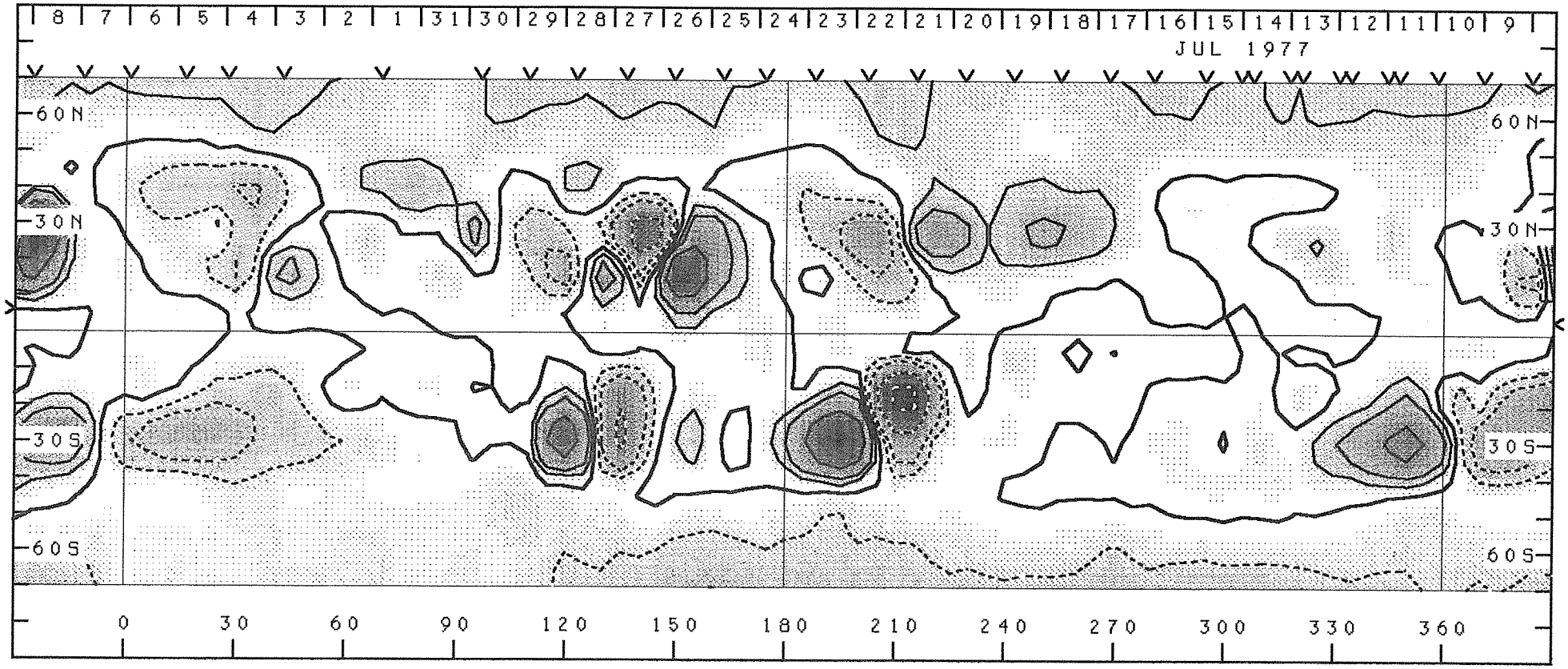
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

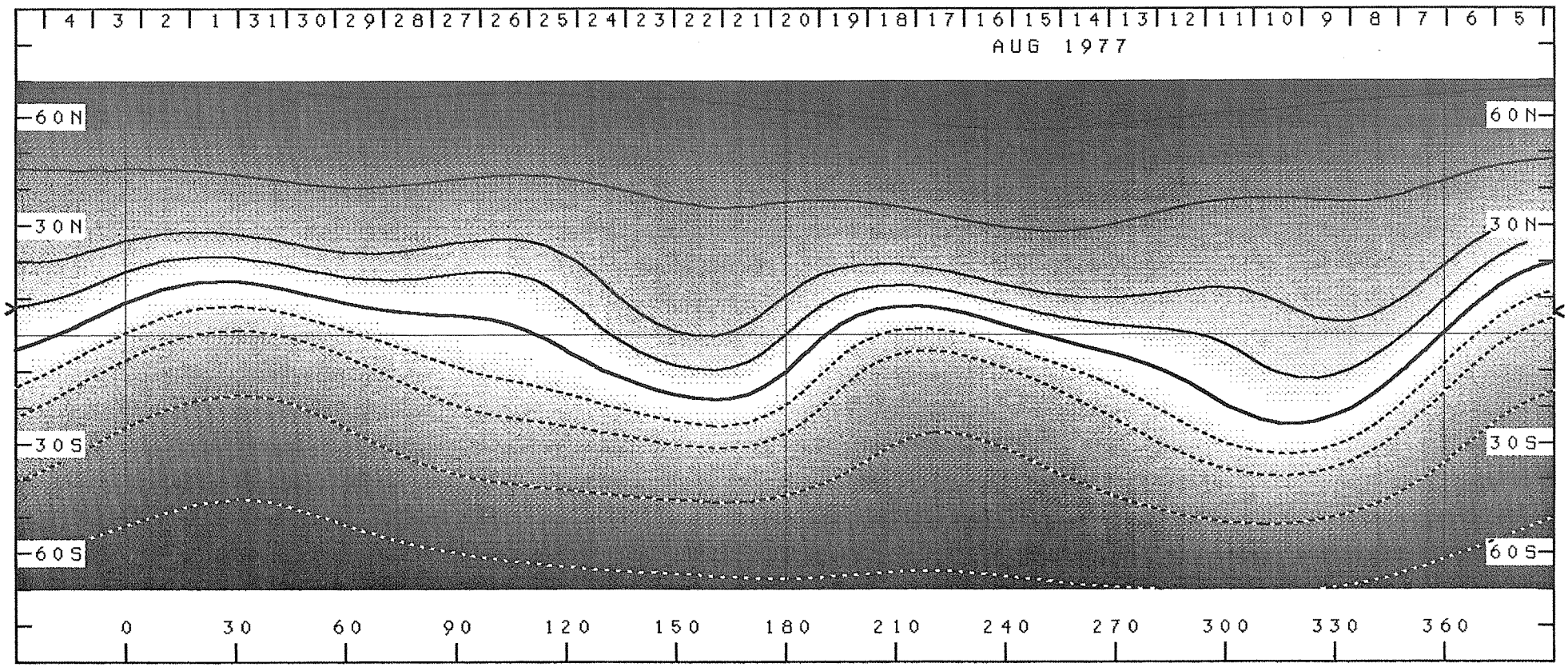
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

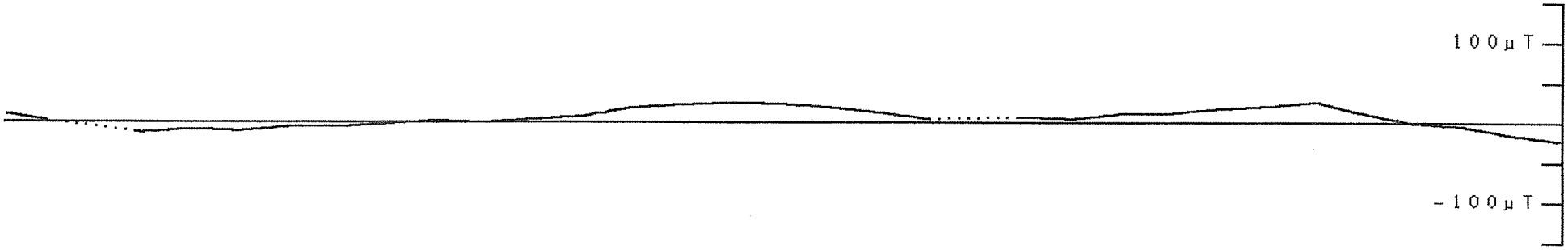
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



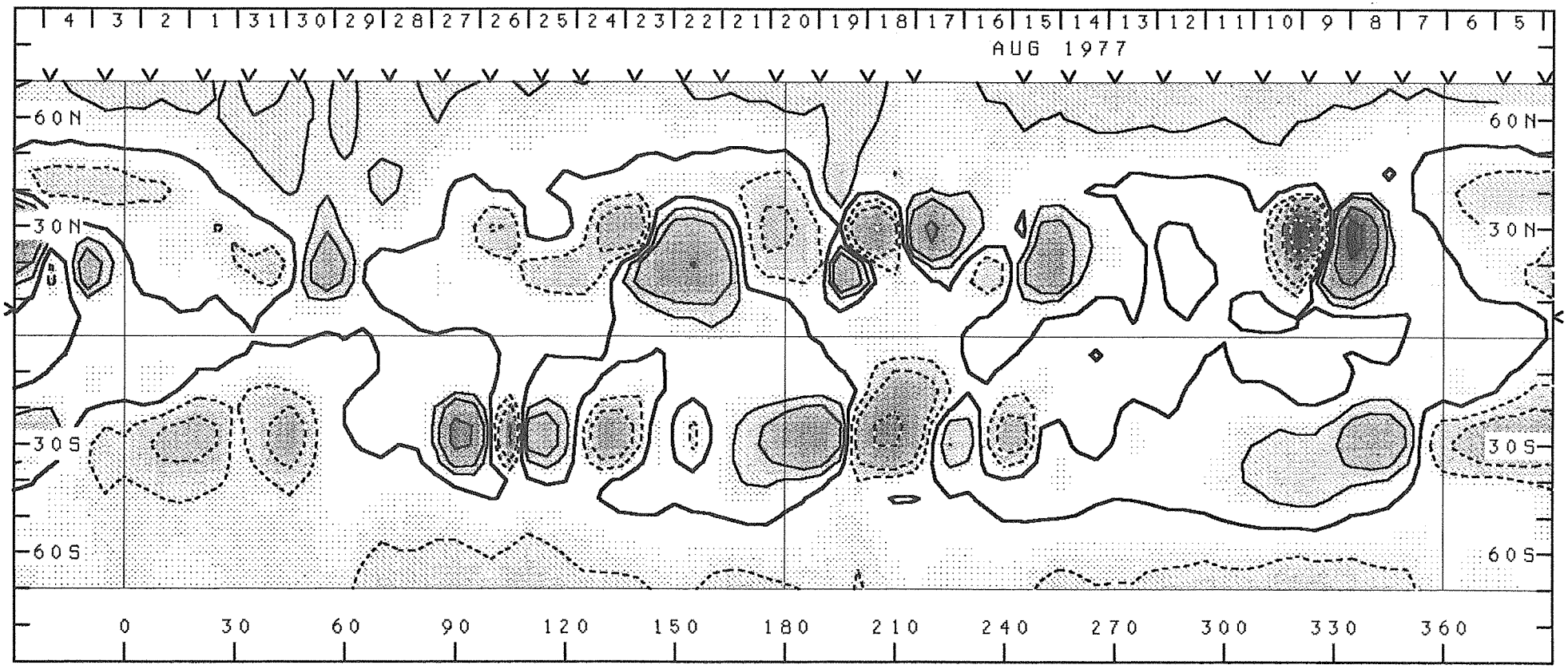
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

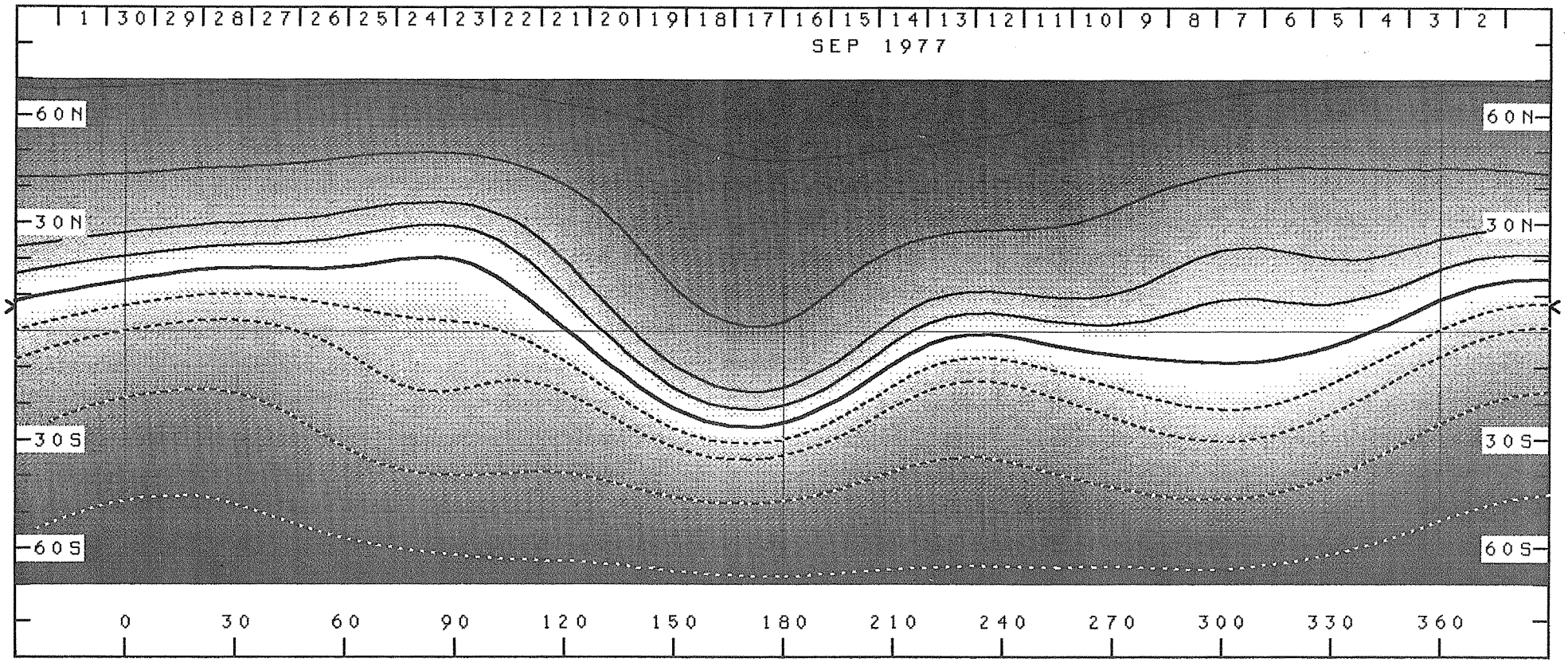
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

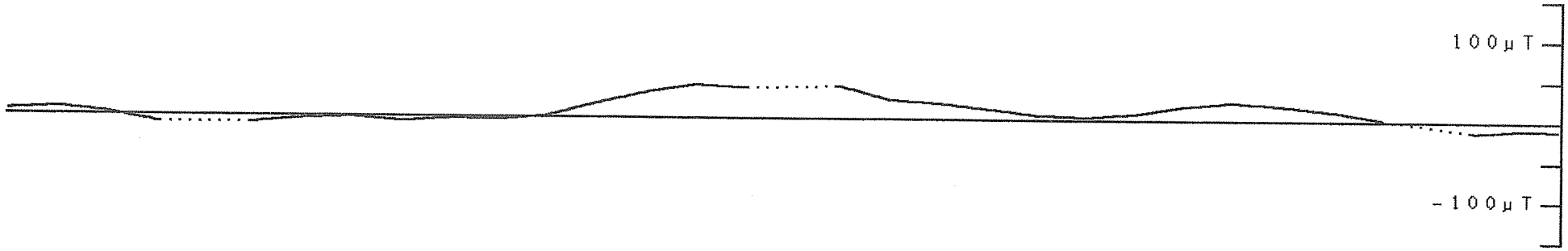
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



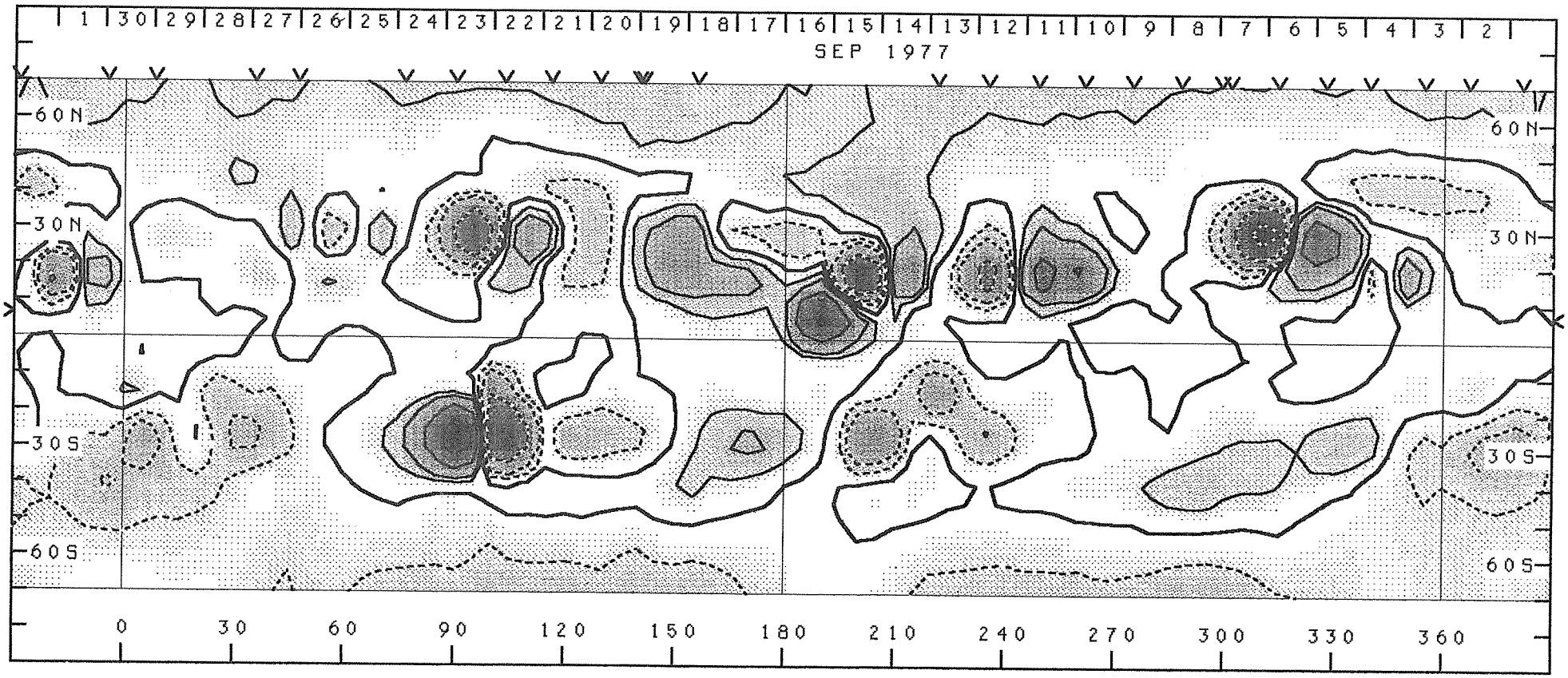
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

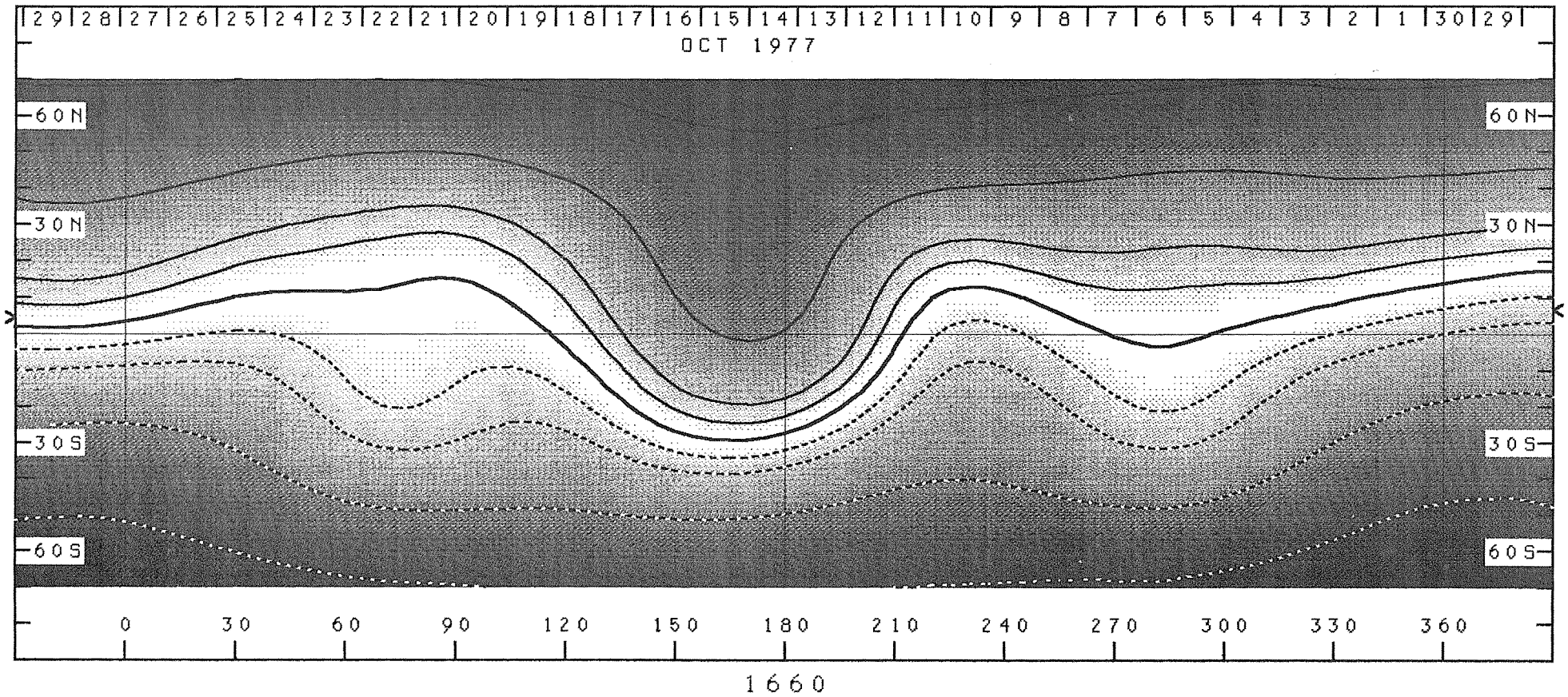
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

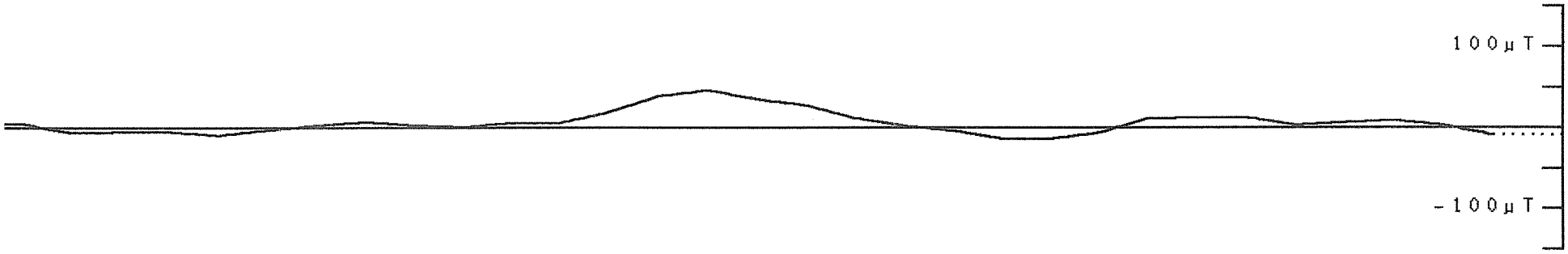
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



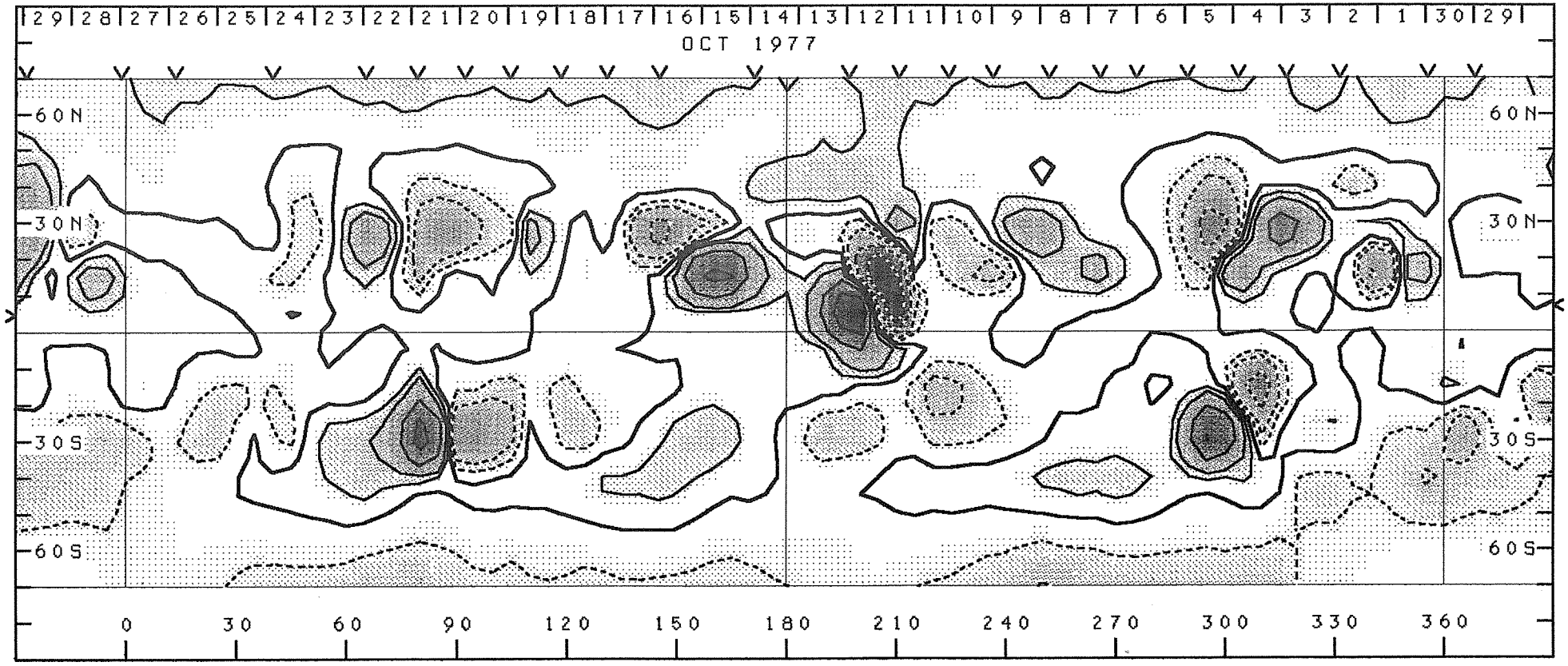
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

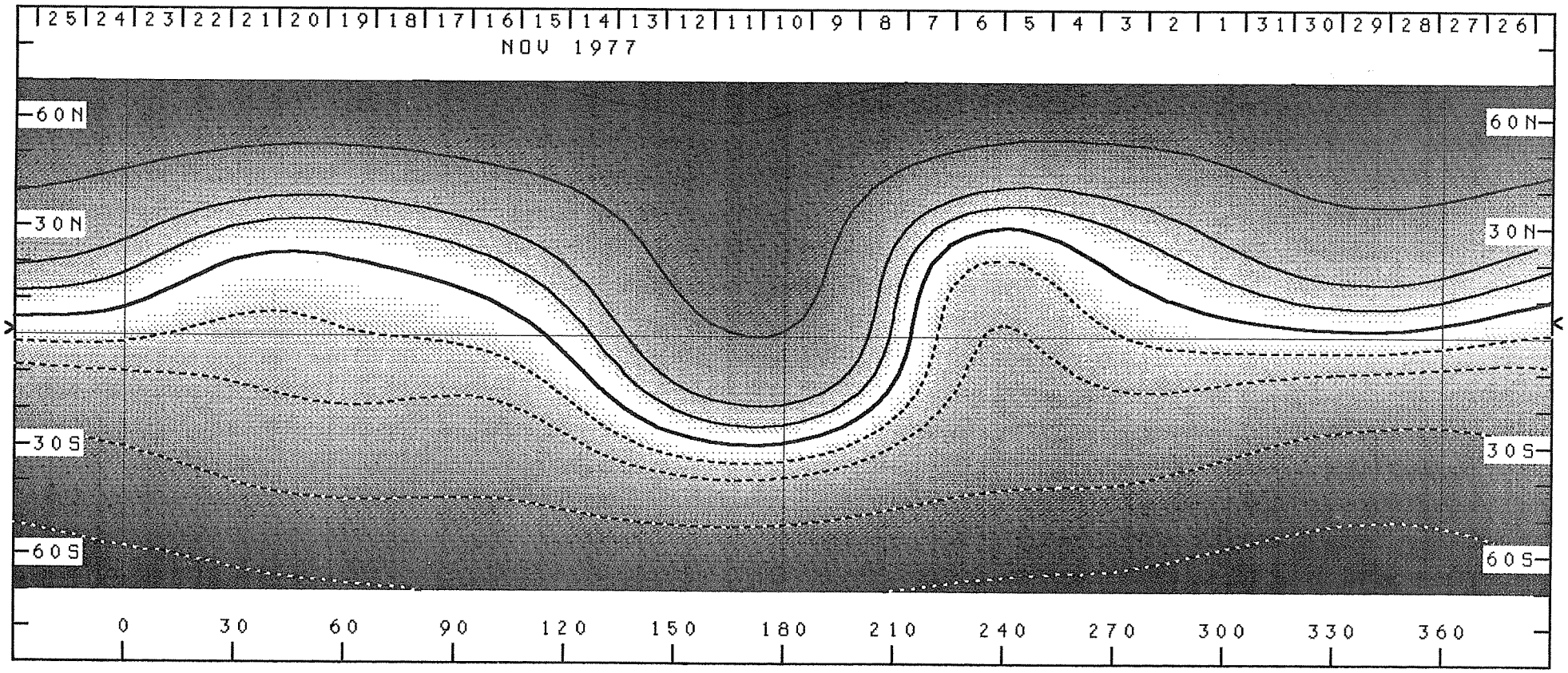
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

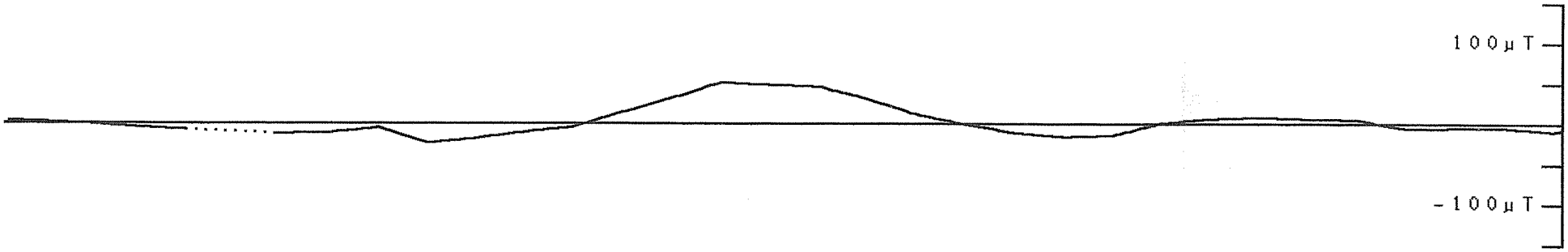
0, ±1, 2, 5, 10, 20 MICROTESLA



1661

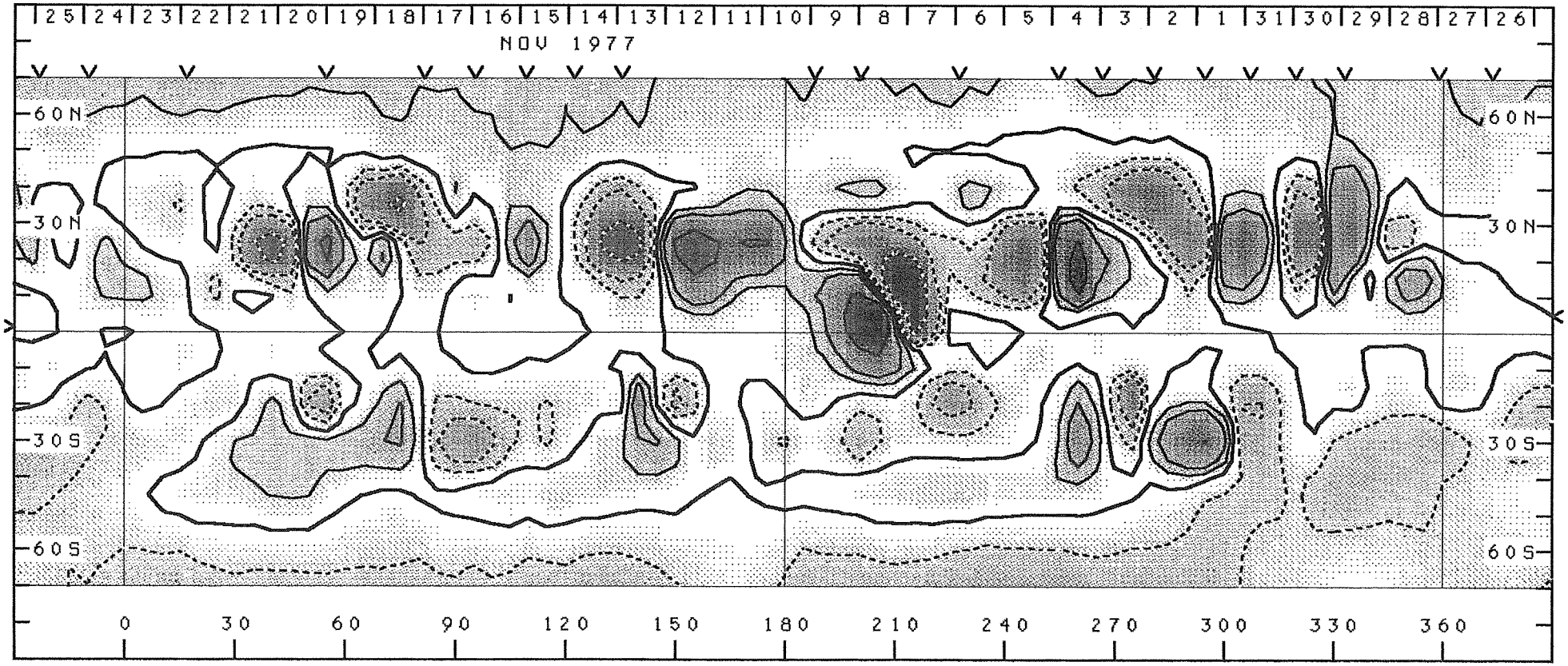
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

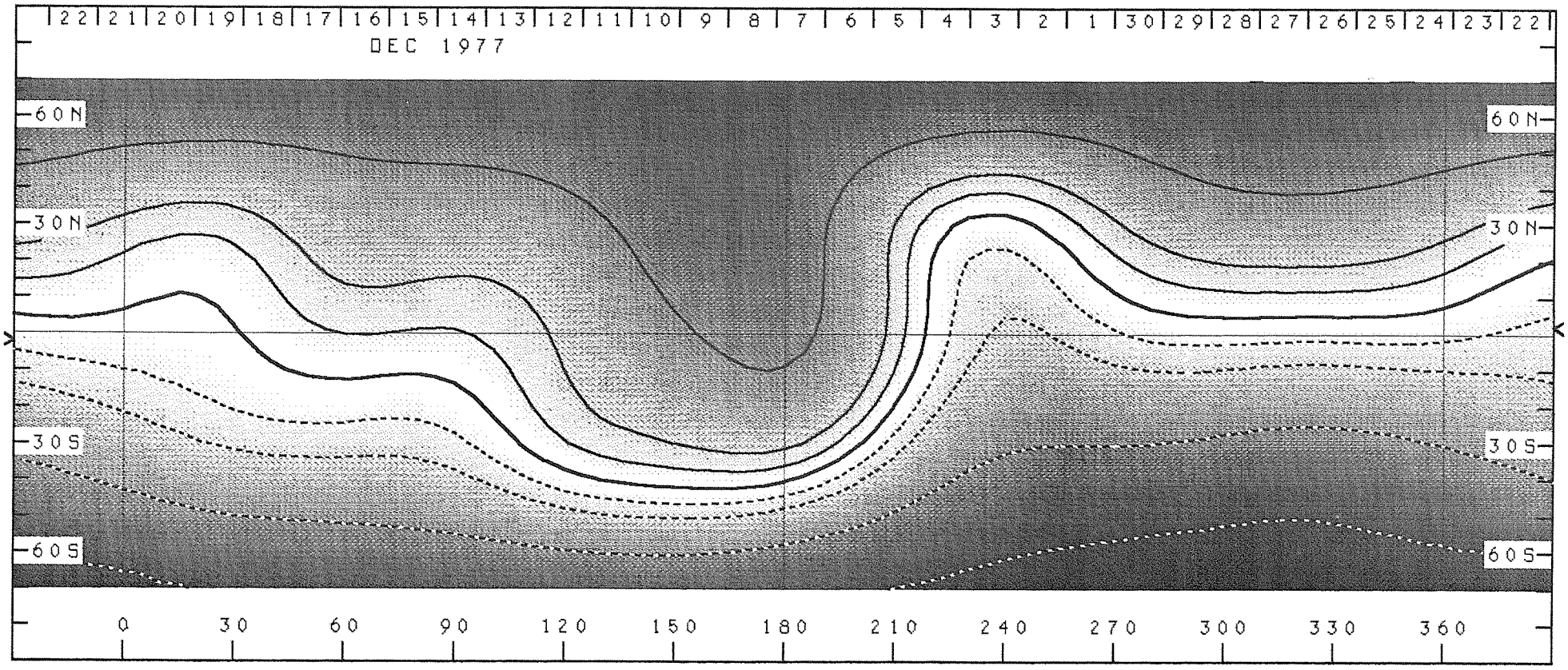
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

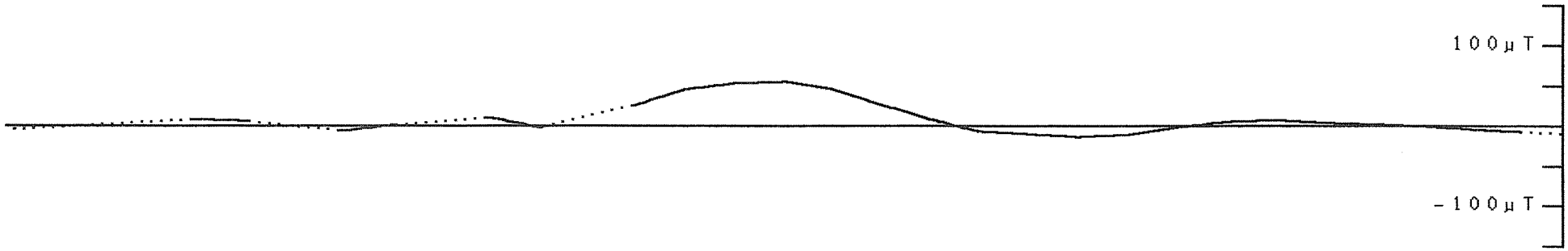
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



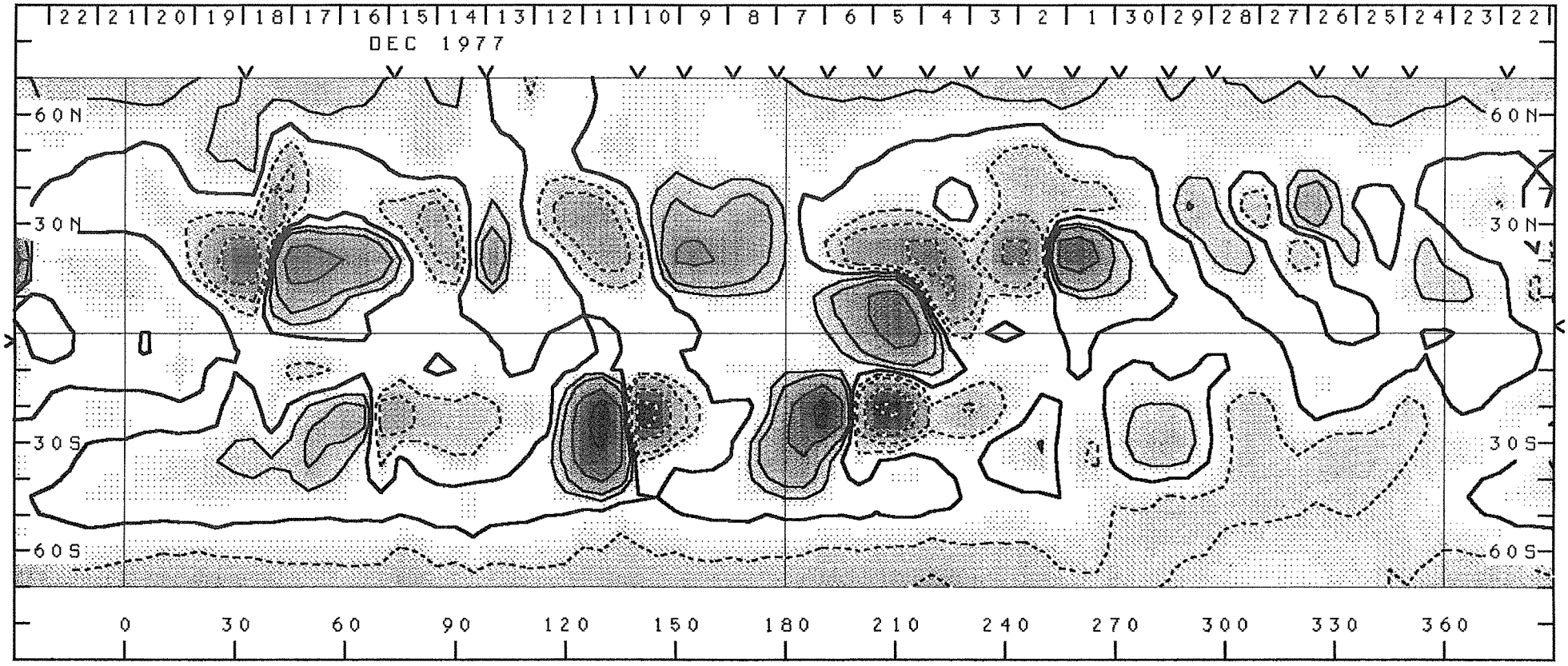
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

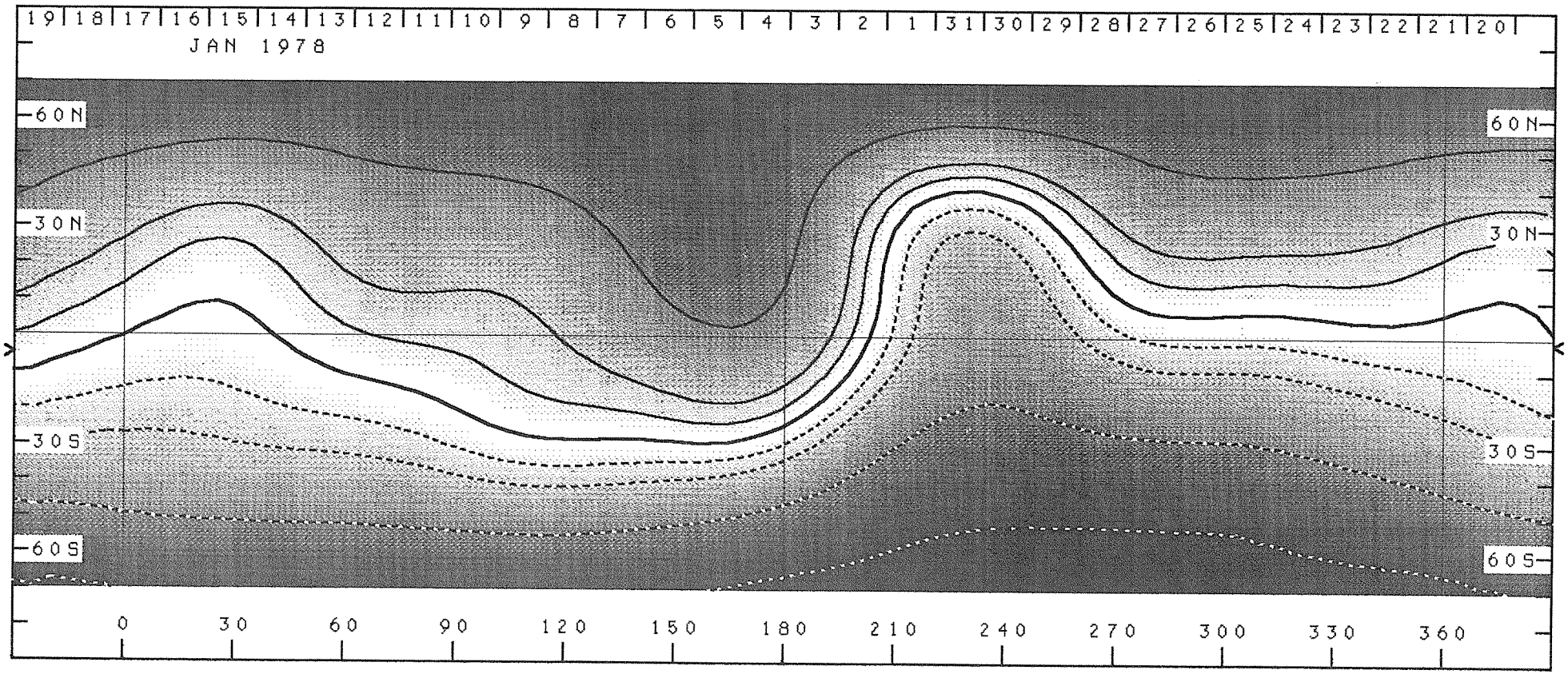
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

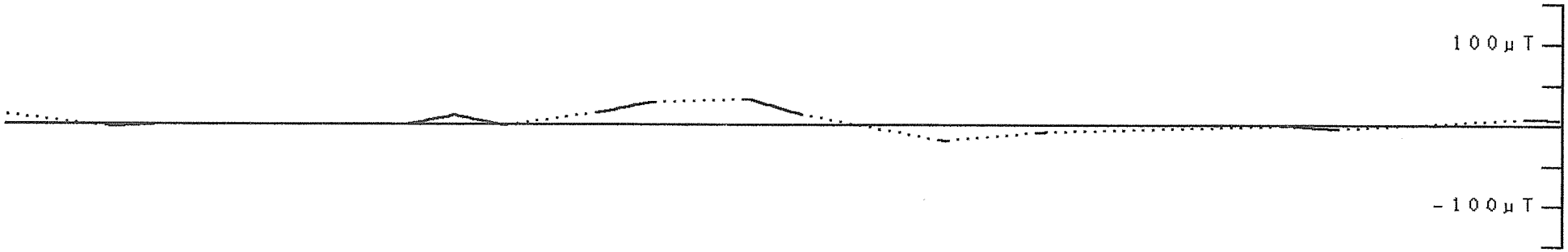
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



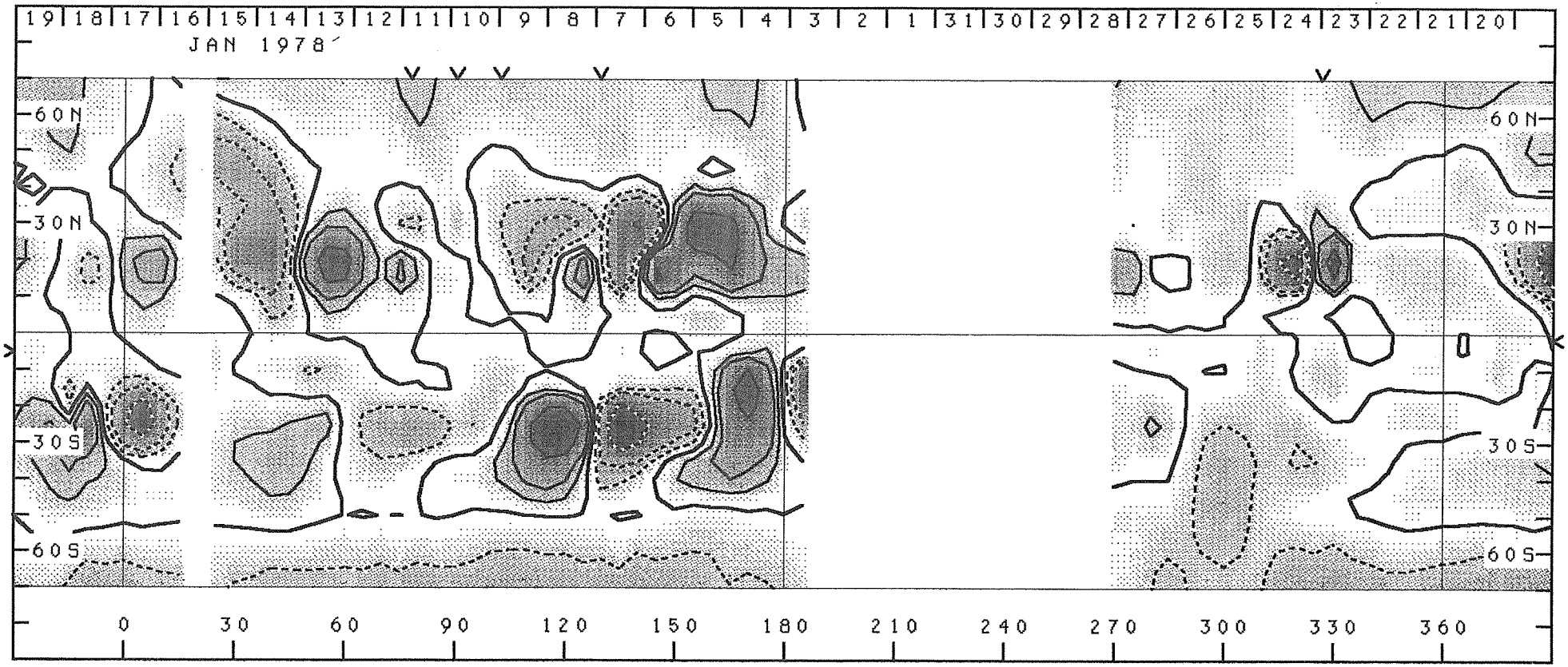
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

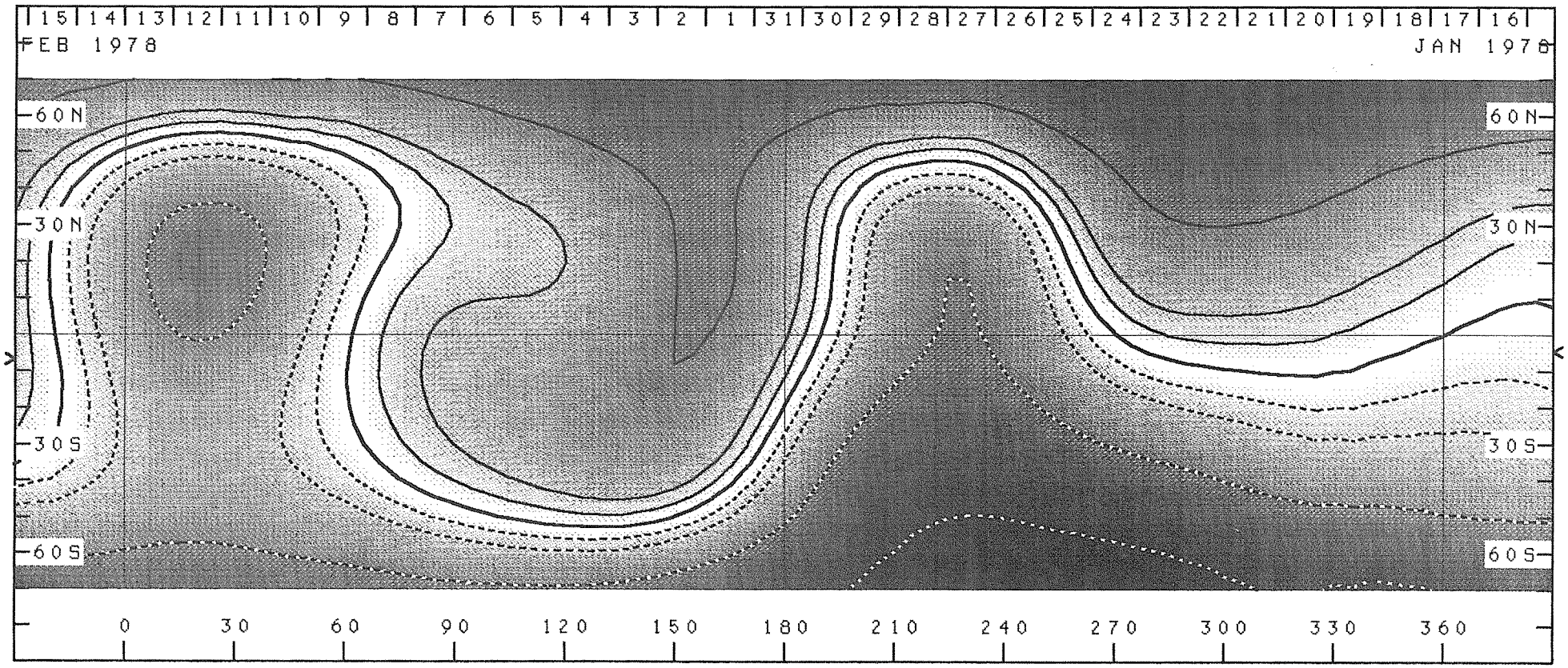
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

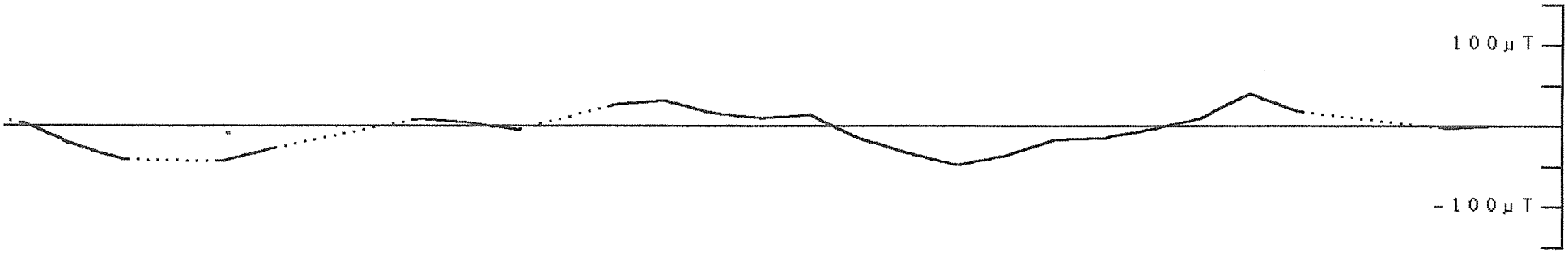
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



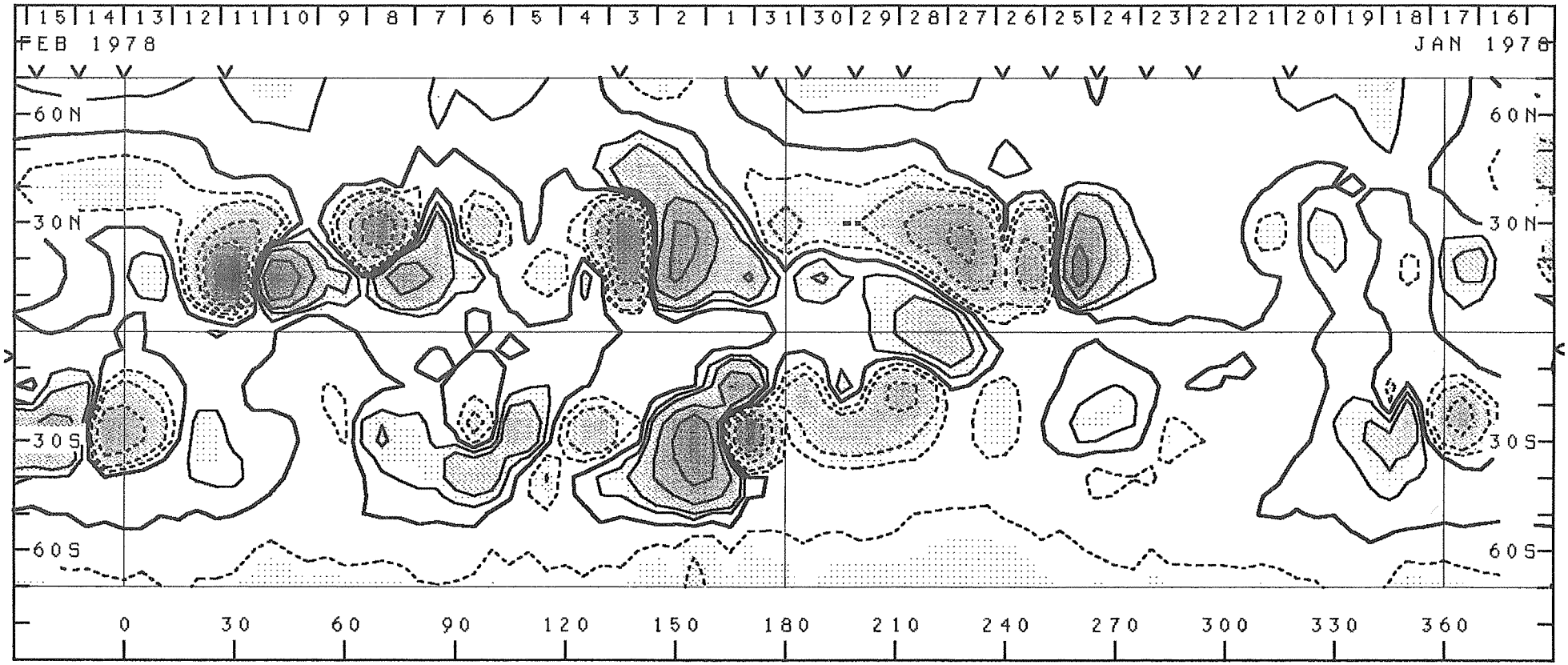
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

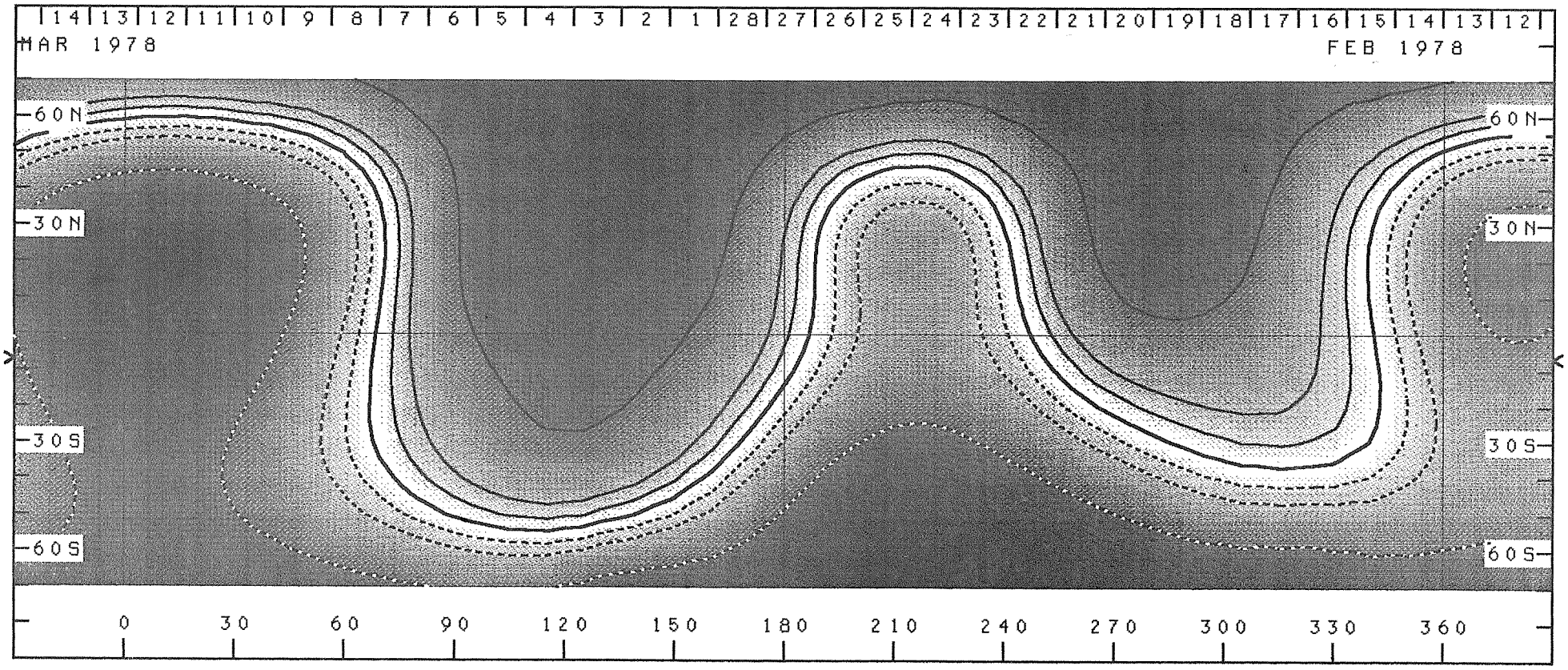
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

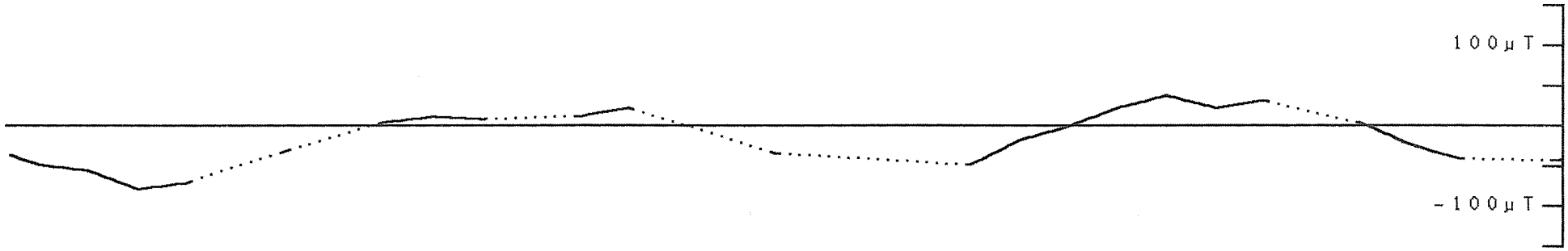
0, ±1, 2, 5, 10, 20 MICROTESLA



1665

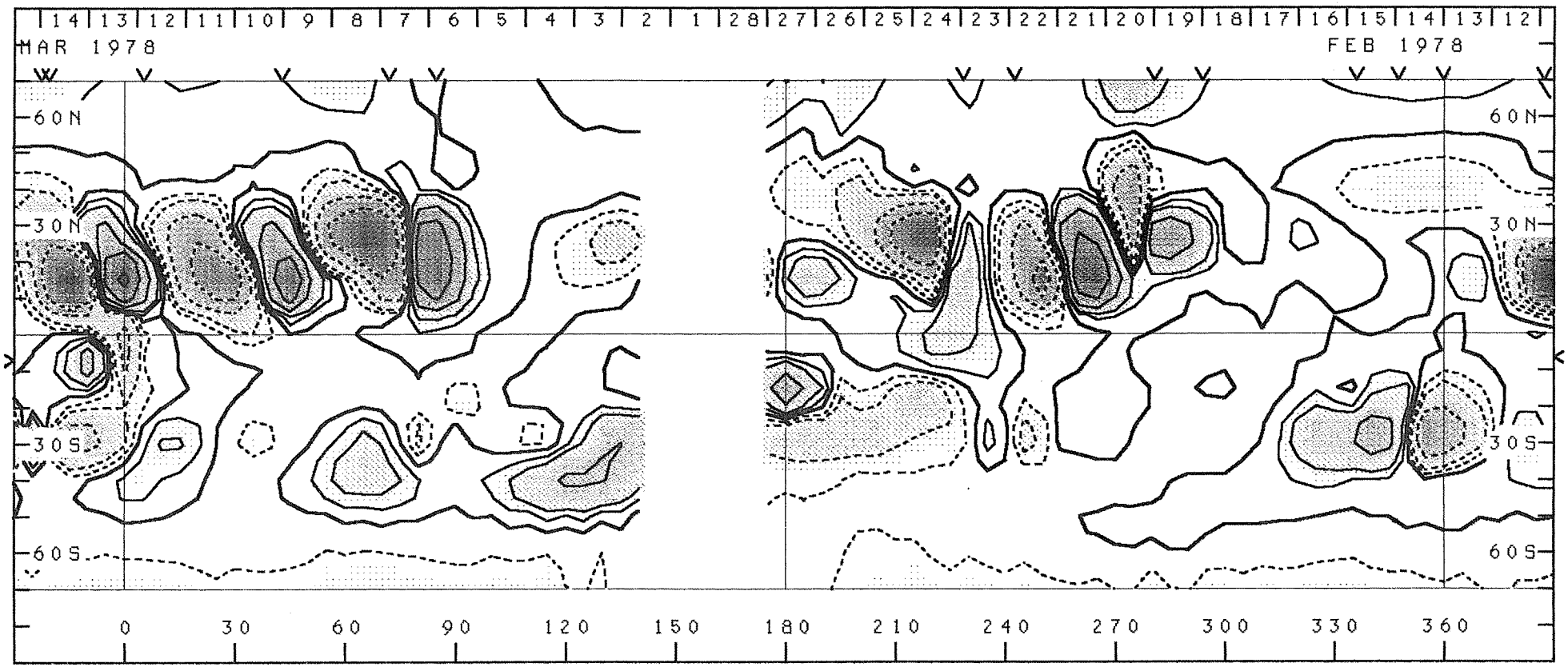
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

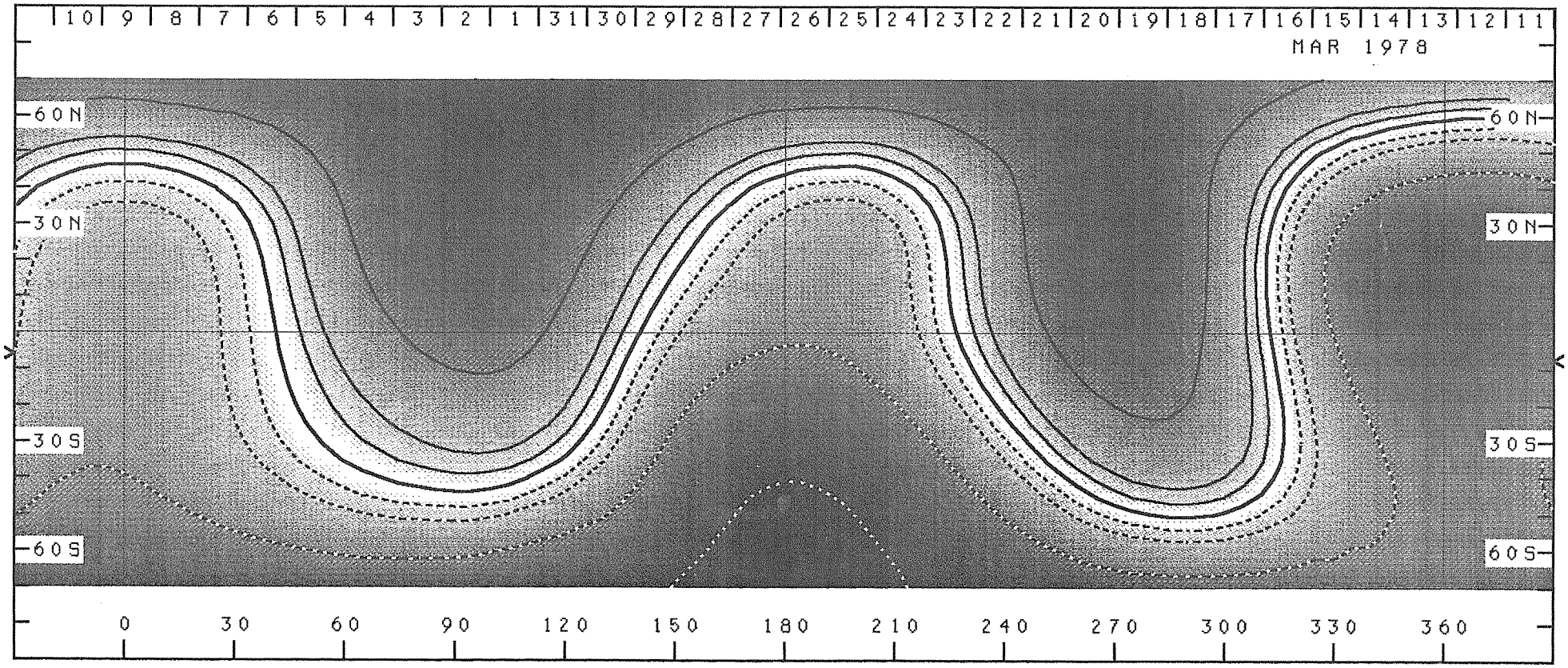
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

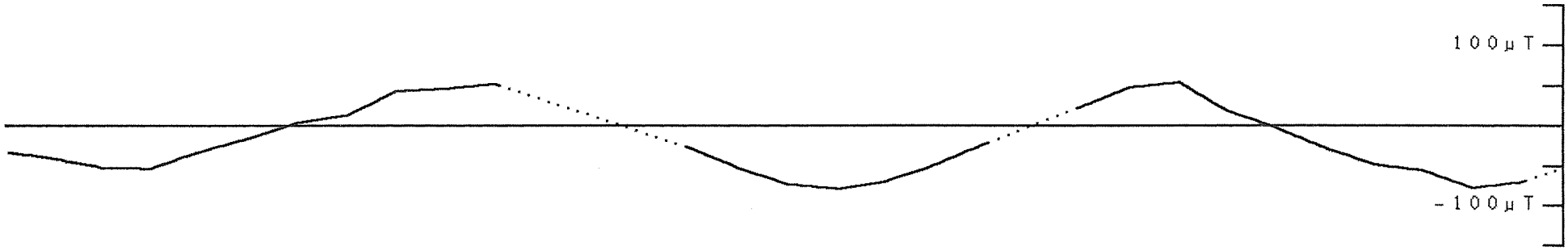
0, ±1, 2, 5, 10, 20 MICROTESLA



1666

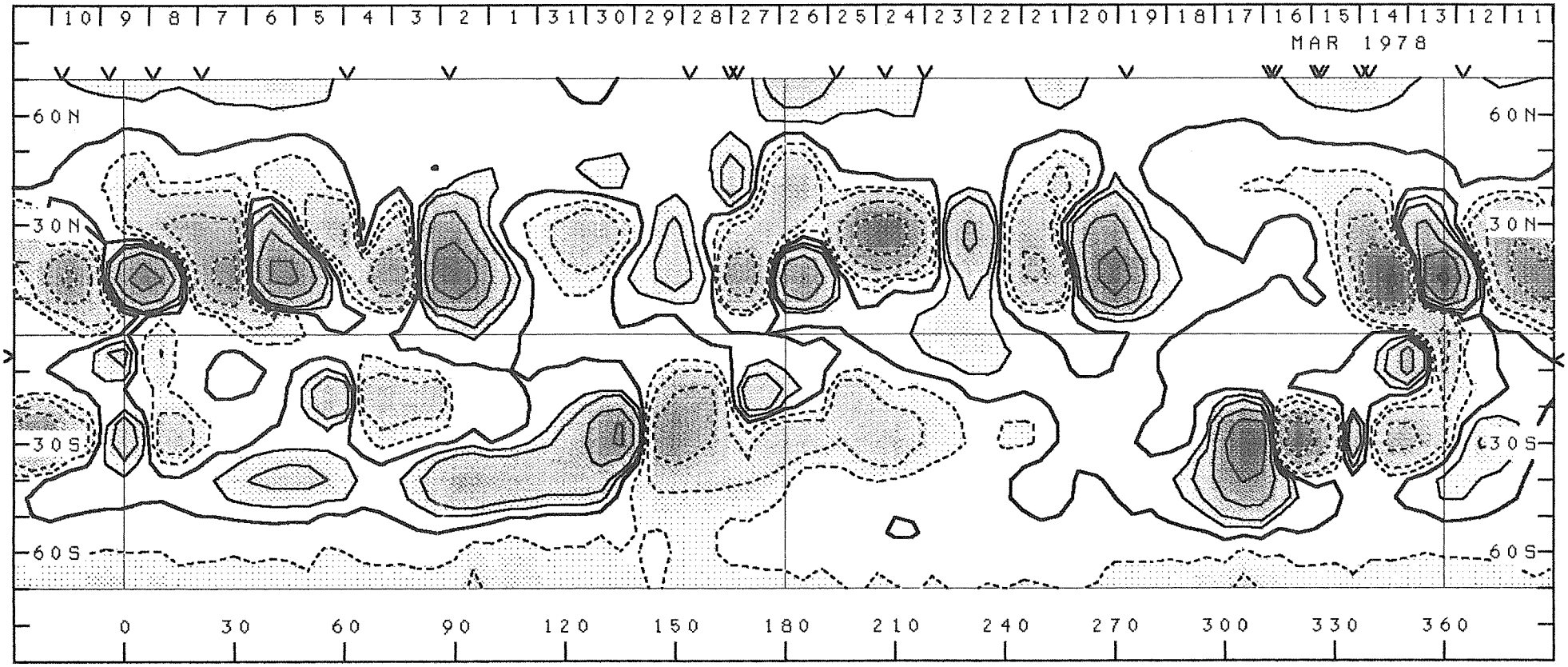
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

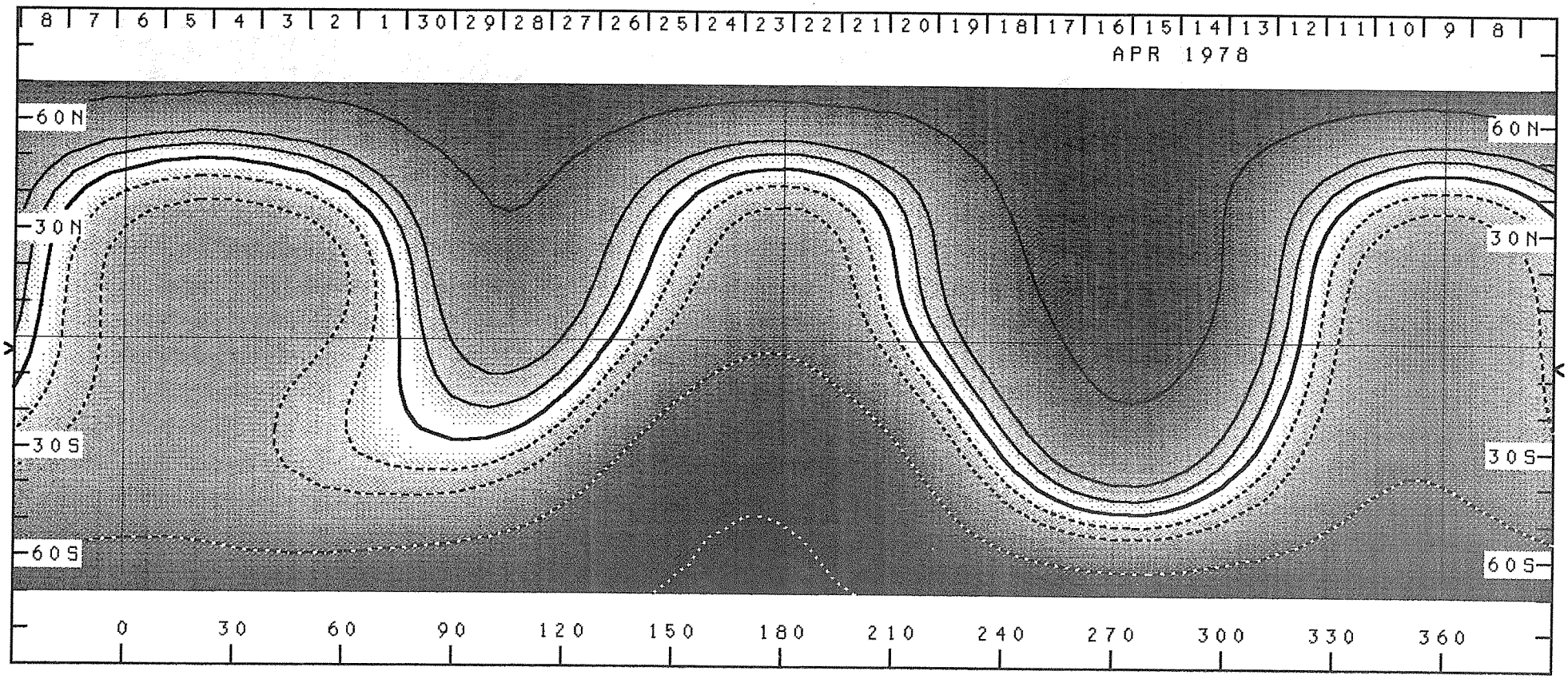
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

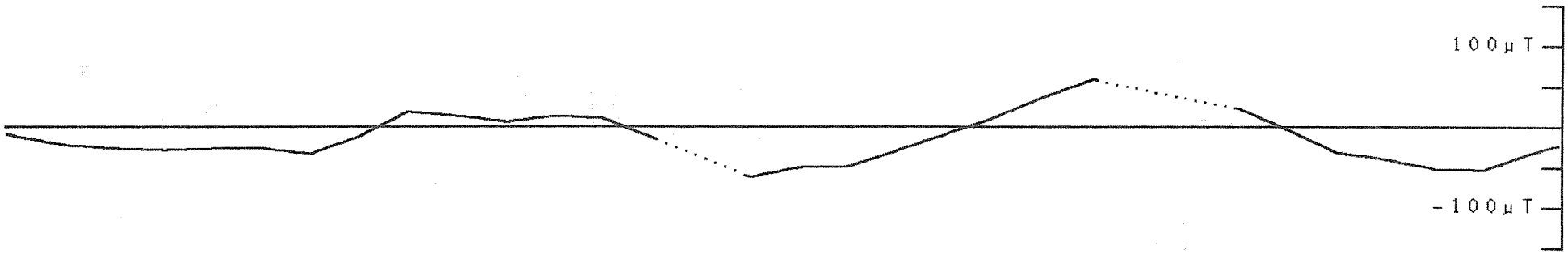
0, ±1, 2, 5, 10, 20 MICROTESLA



1667

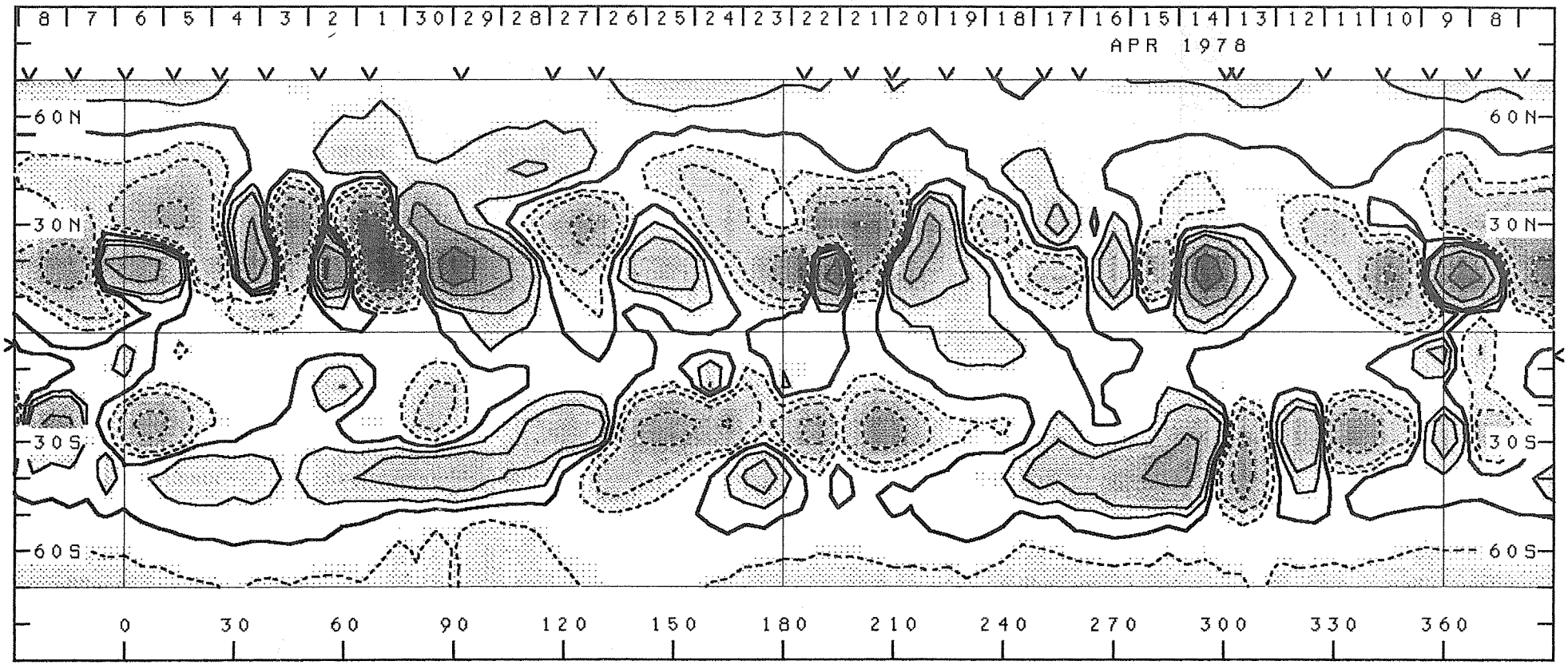
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

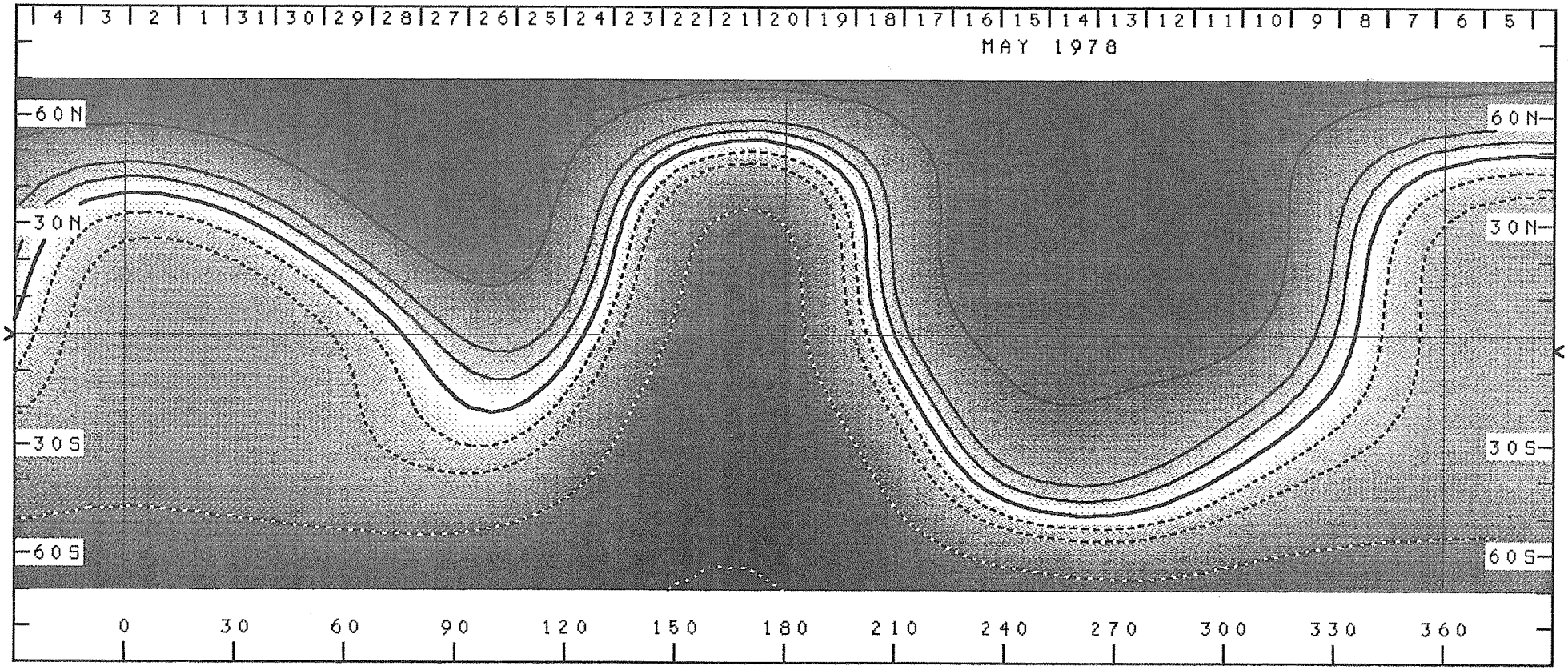
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

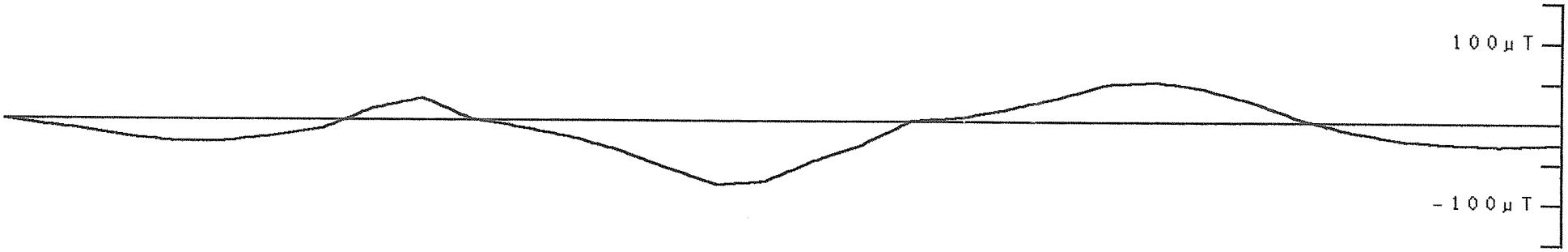
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



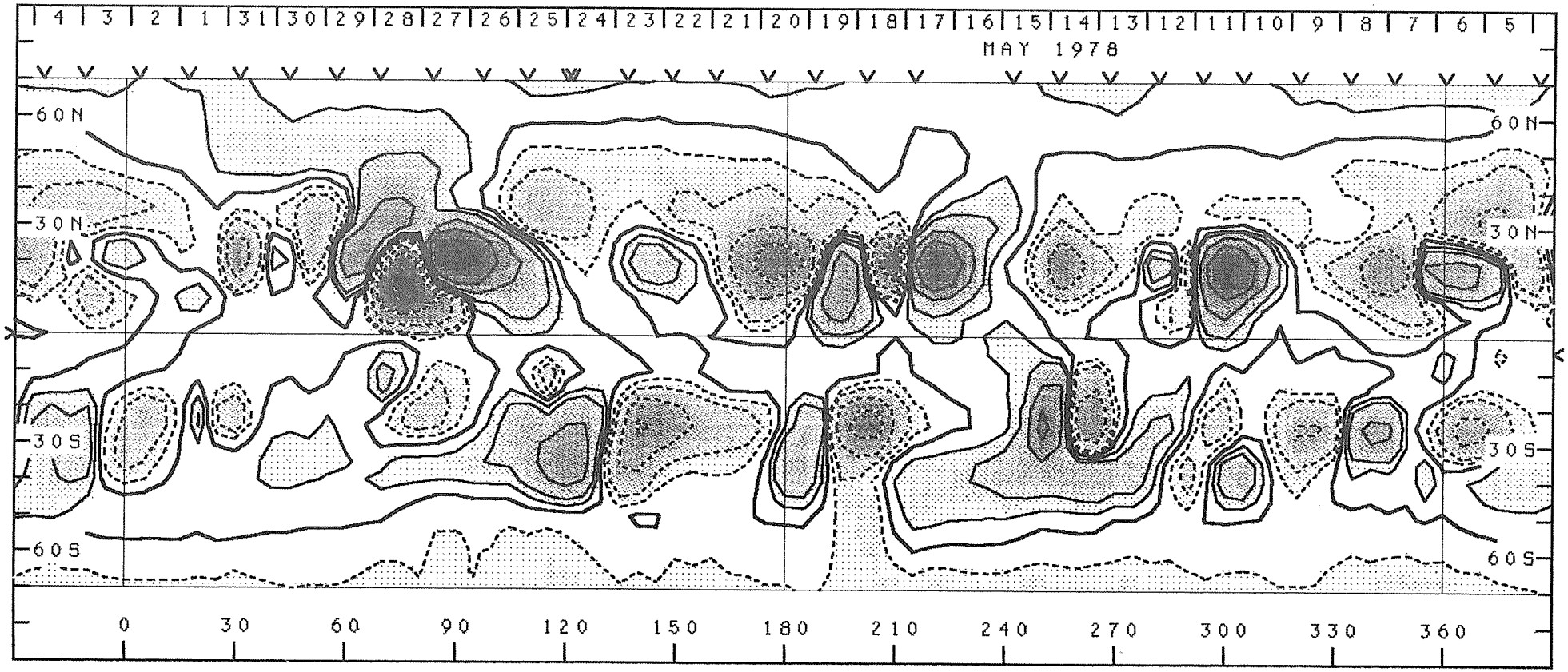
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

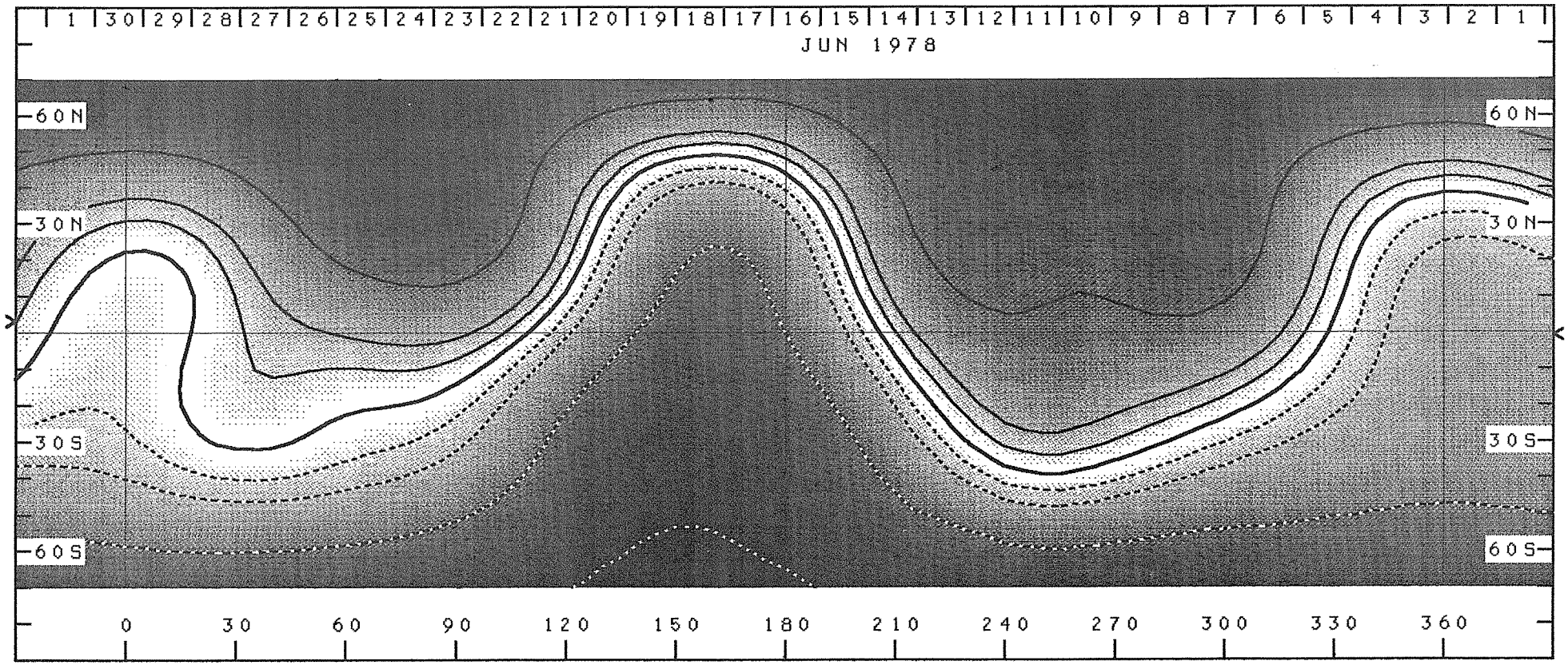
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

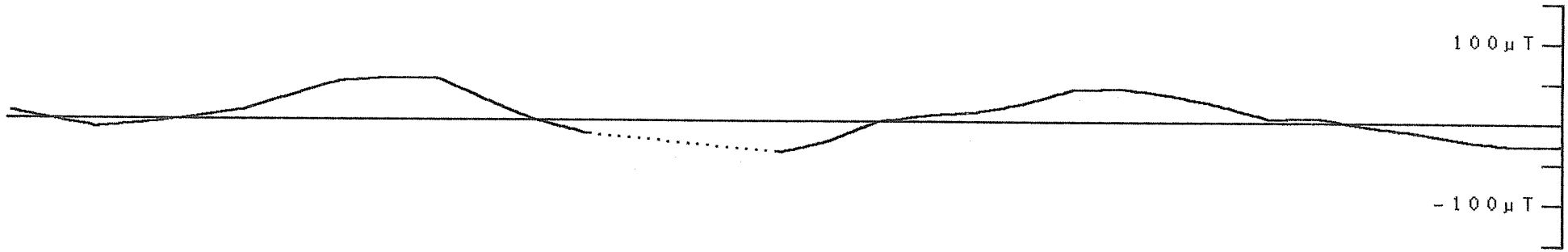
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



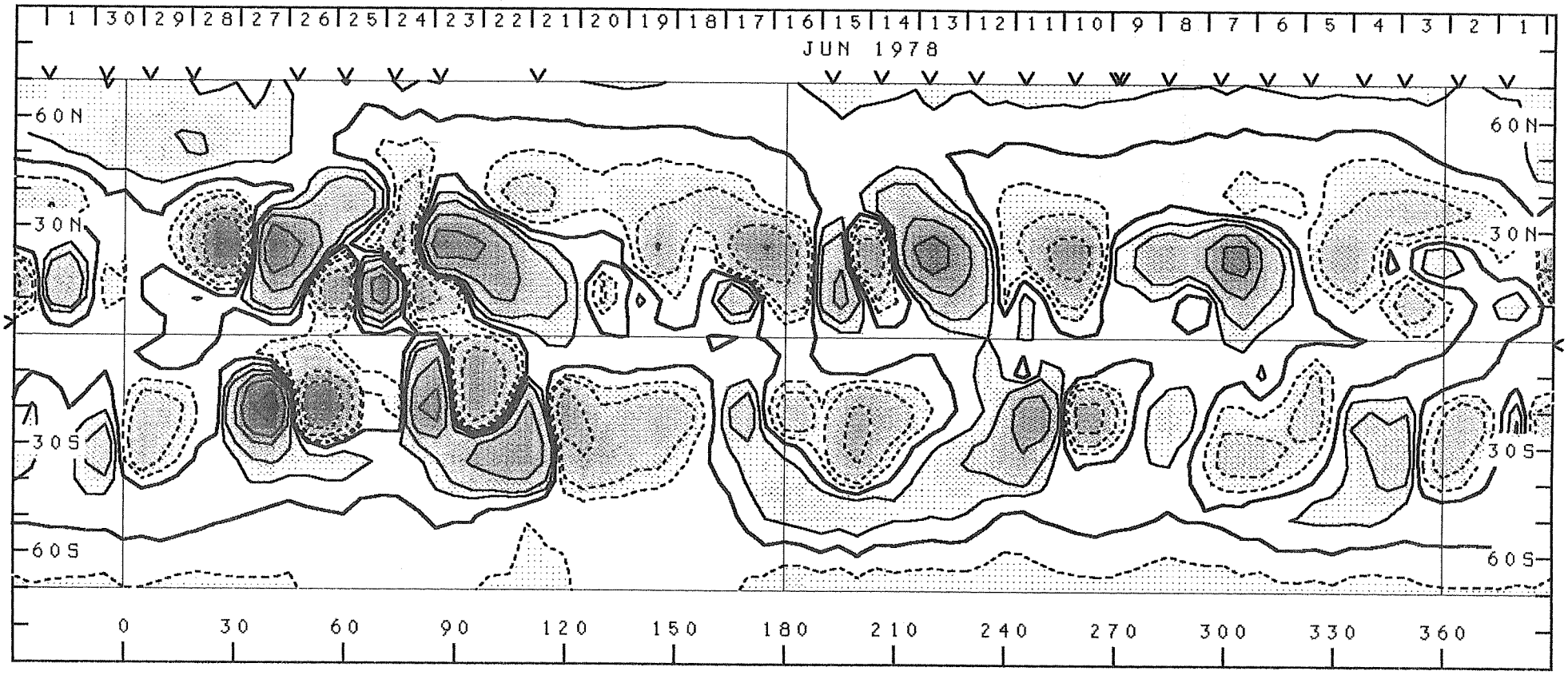
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

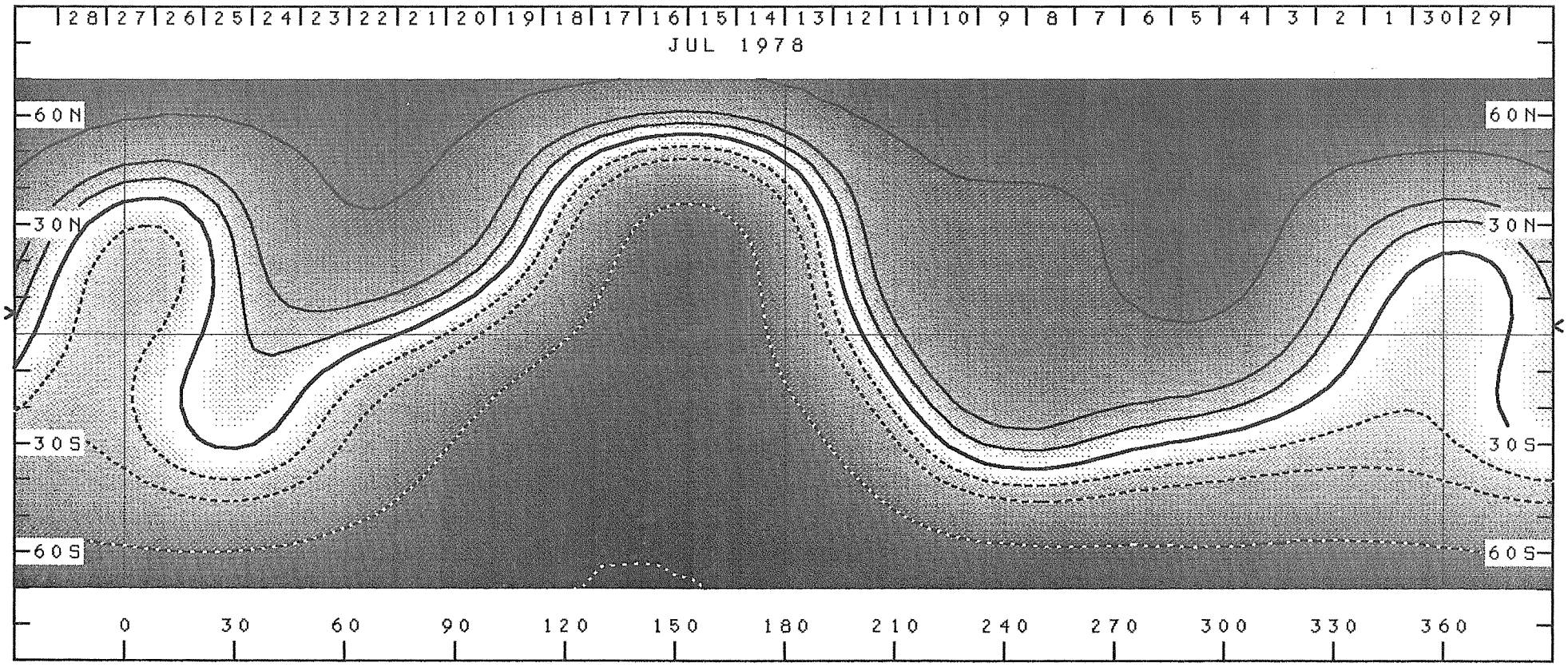
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

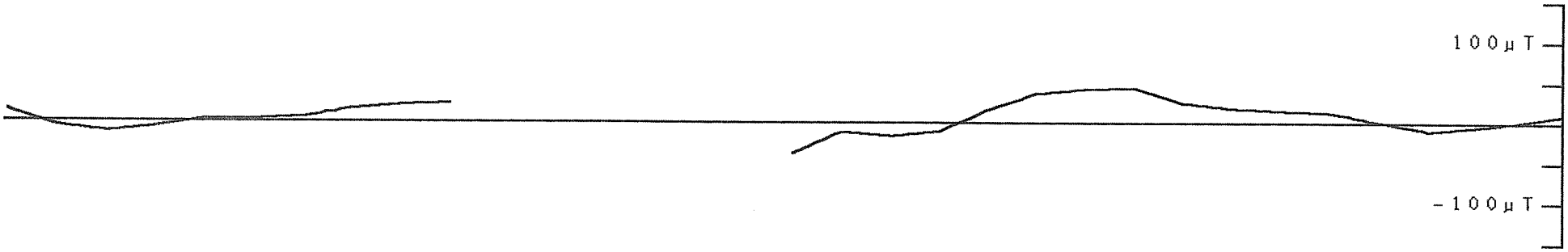
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



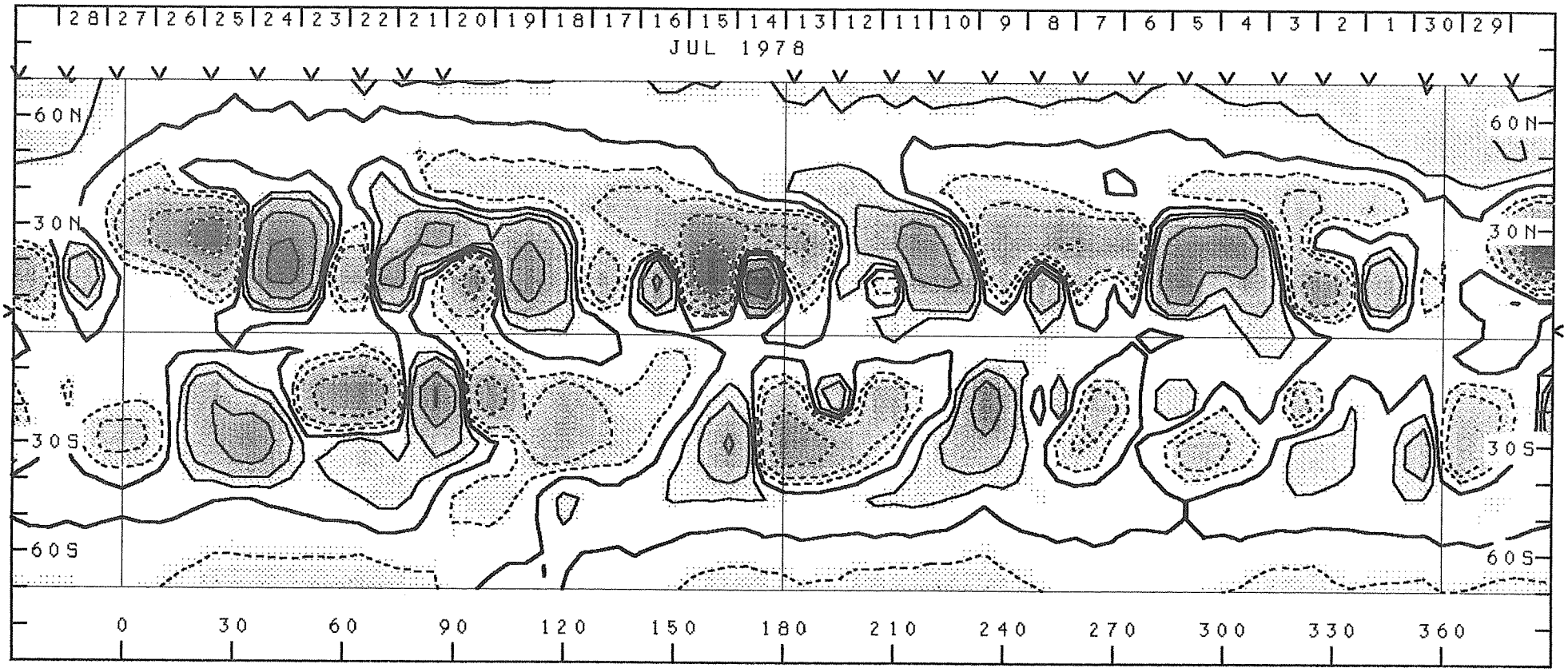
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

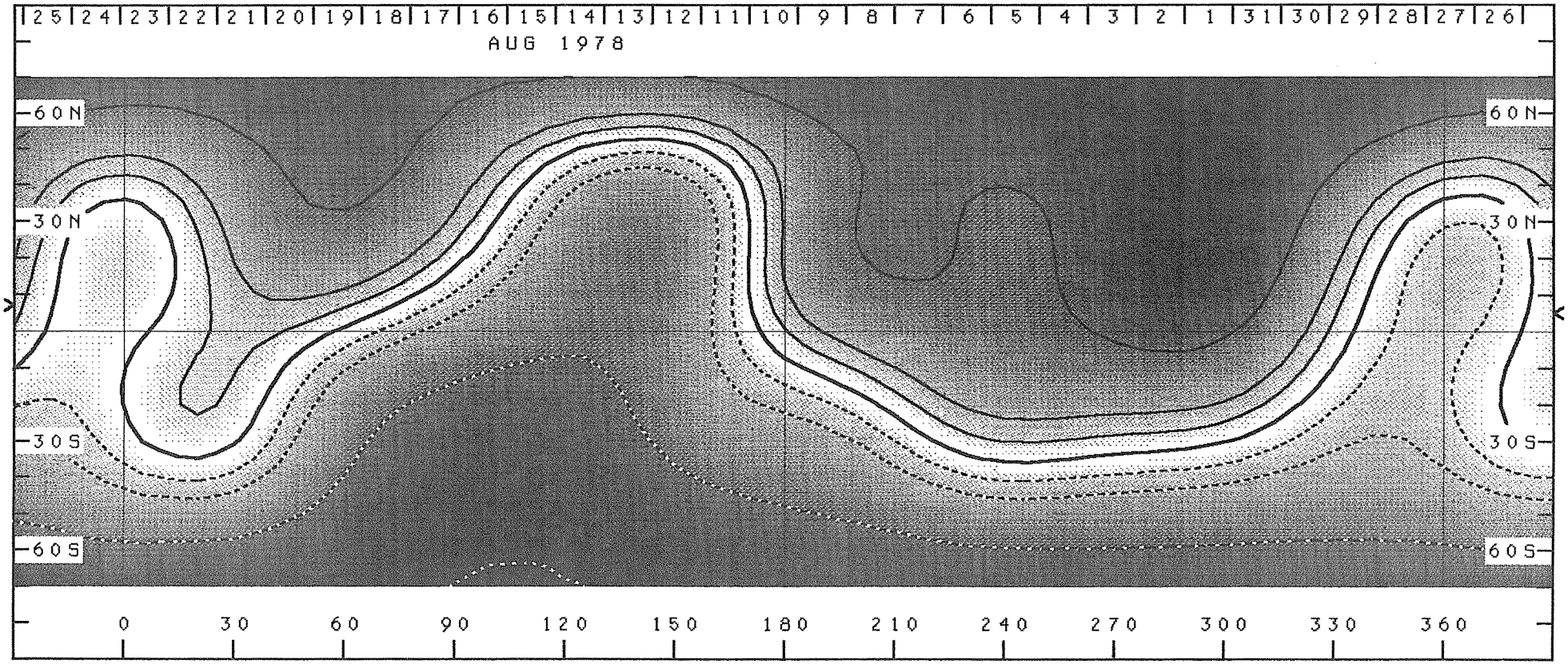
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

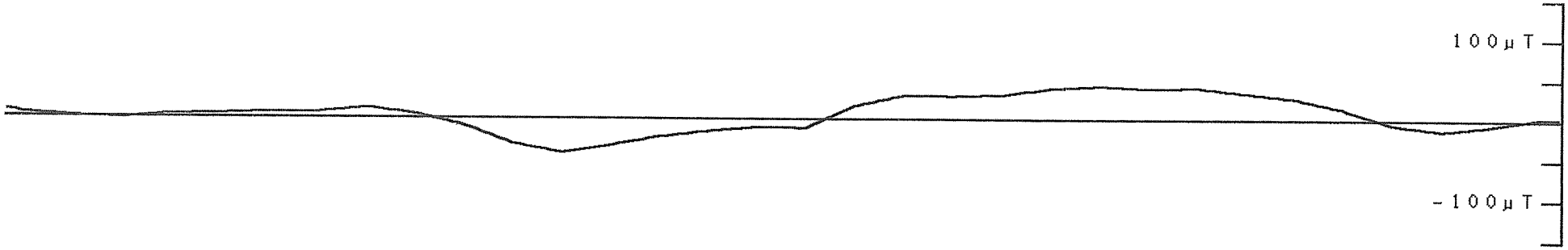
0, ±1, 2, 5, 10, 20 MICROTESLA



1671

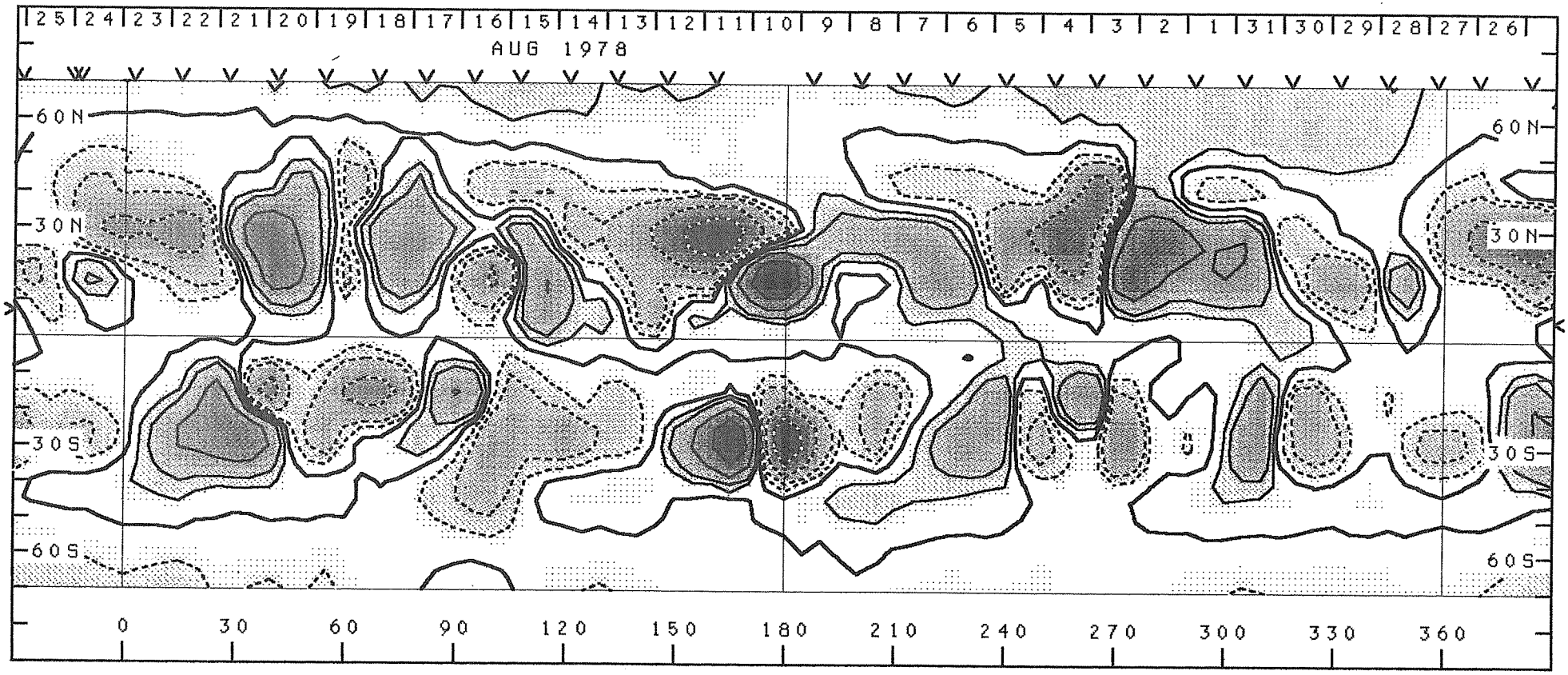
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

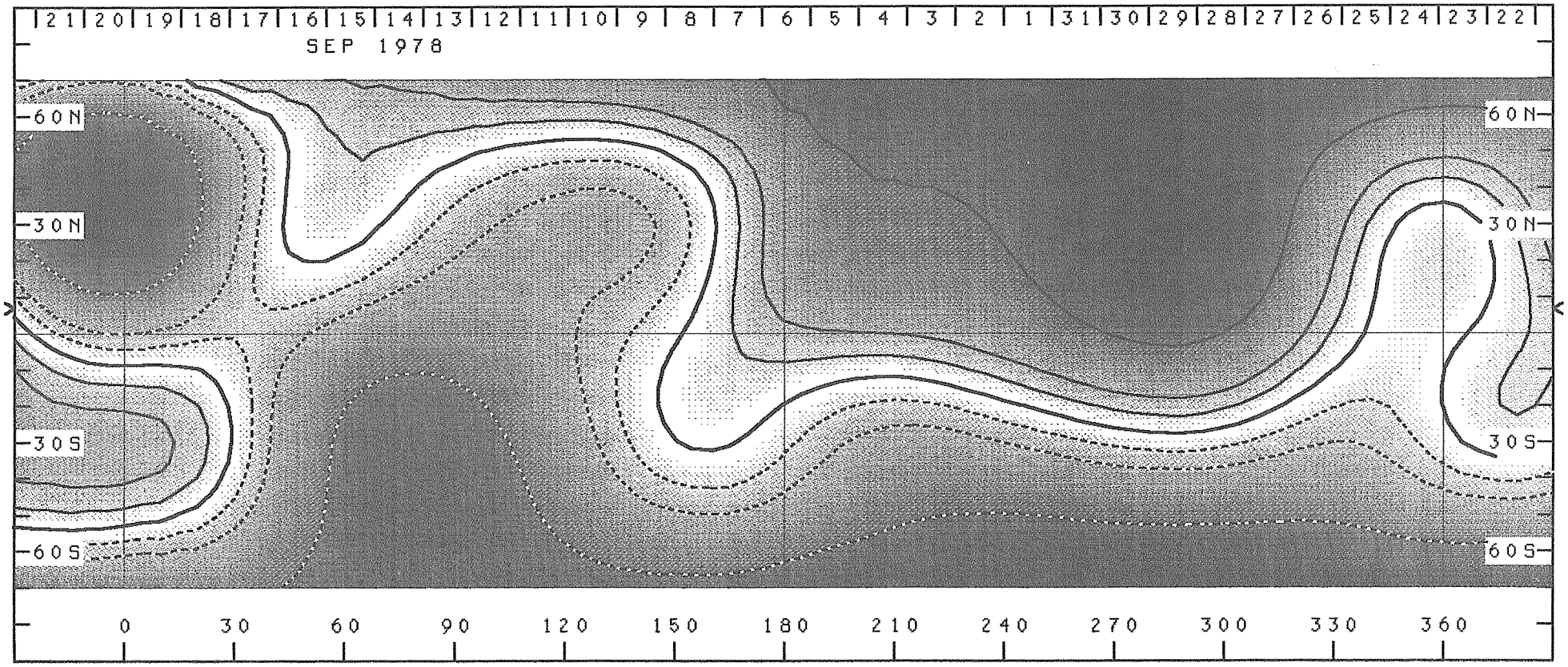
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

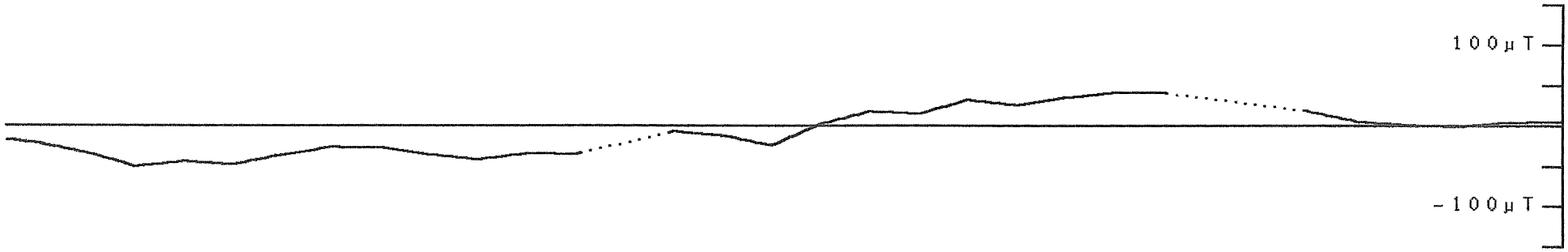
0, ±1, 2, 5, 10, 20 MICROTESLA



1672

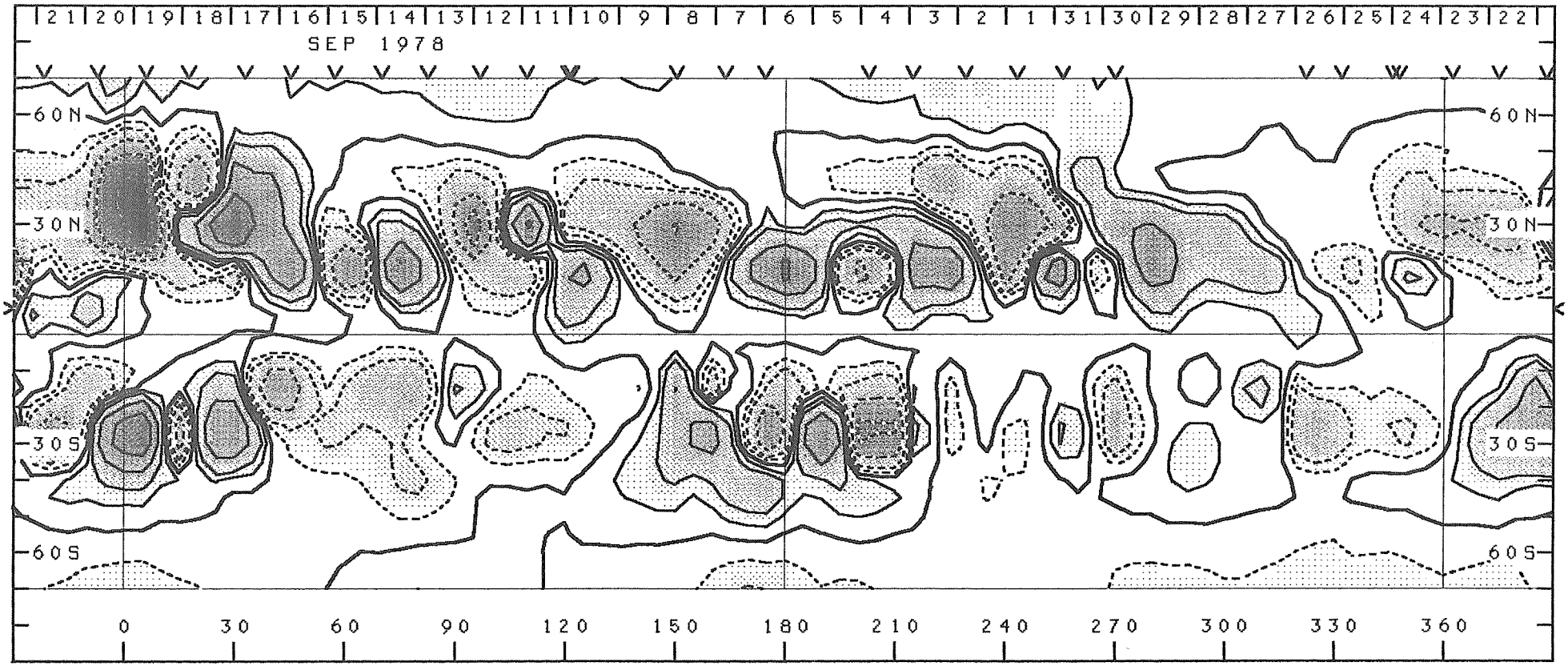
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

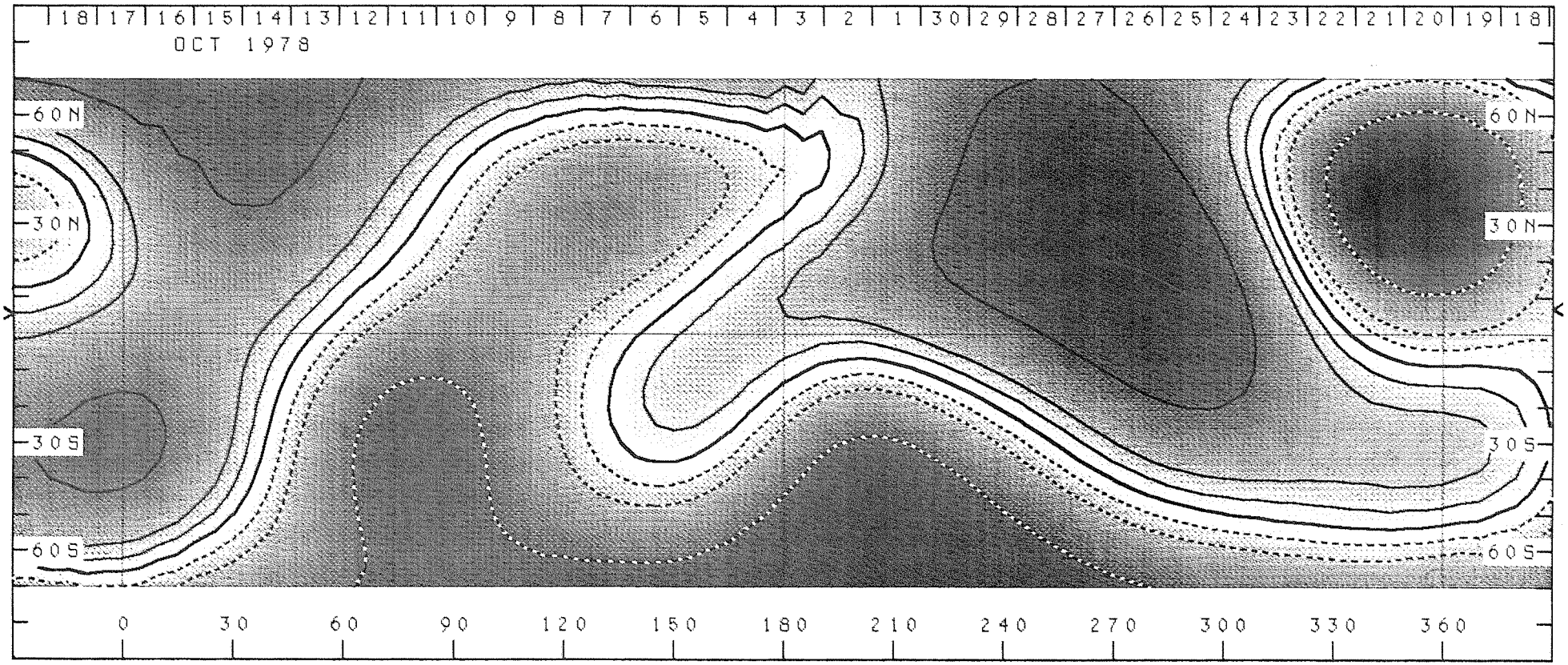
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

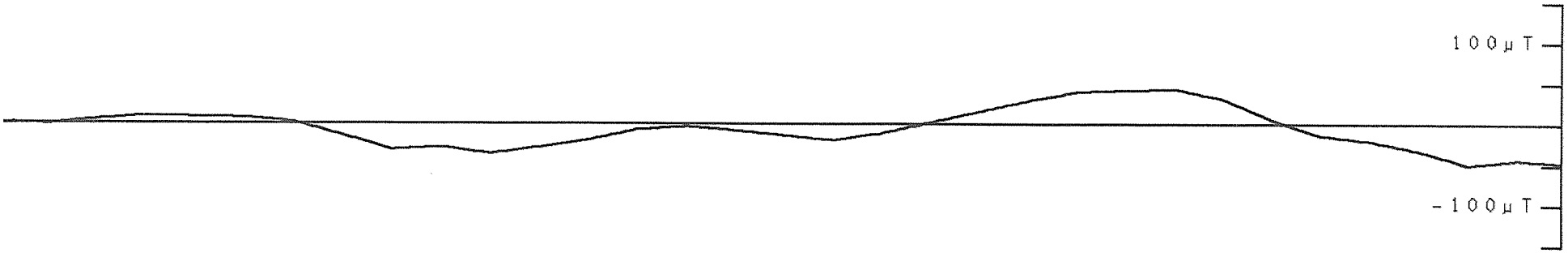
0, ±1, 2, 5, 10, 20 MICROTESLA



1673

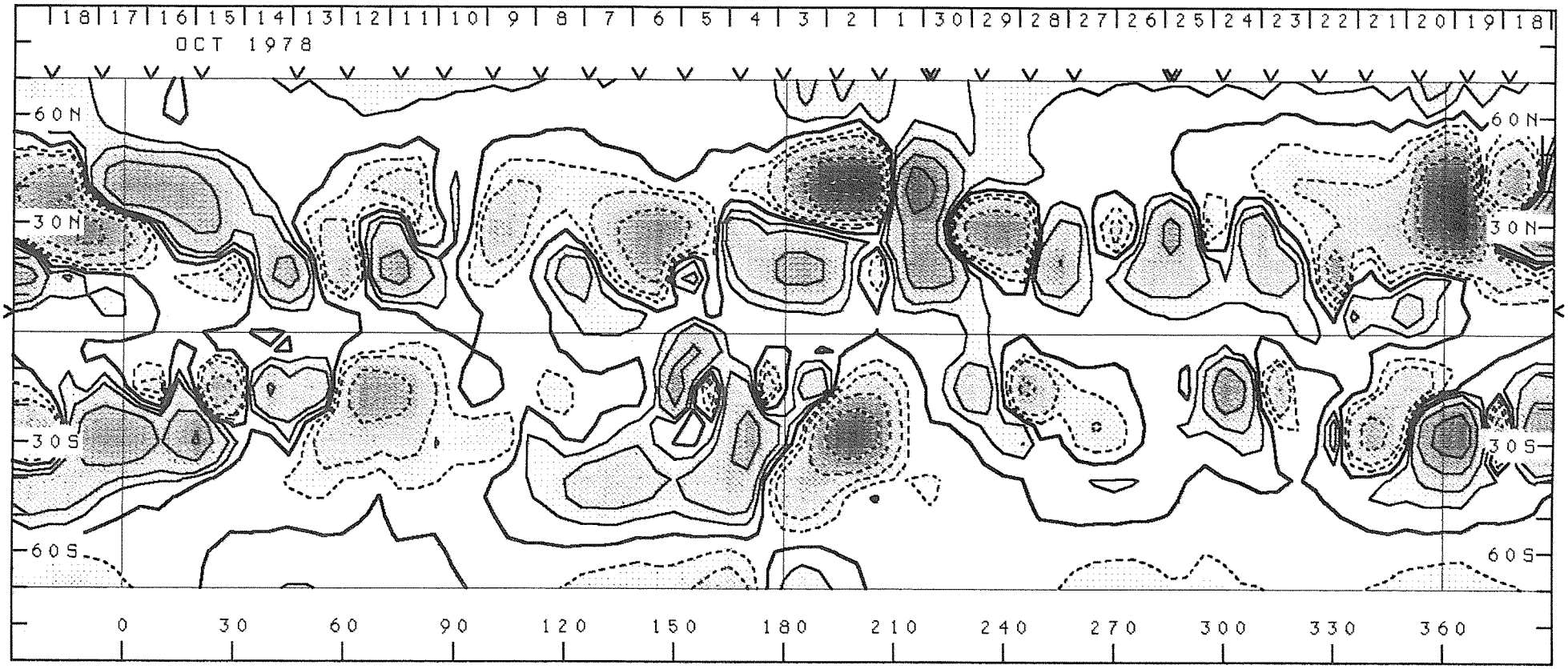
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

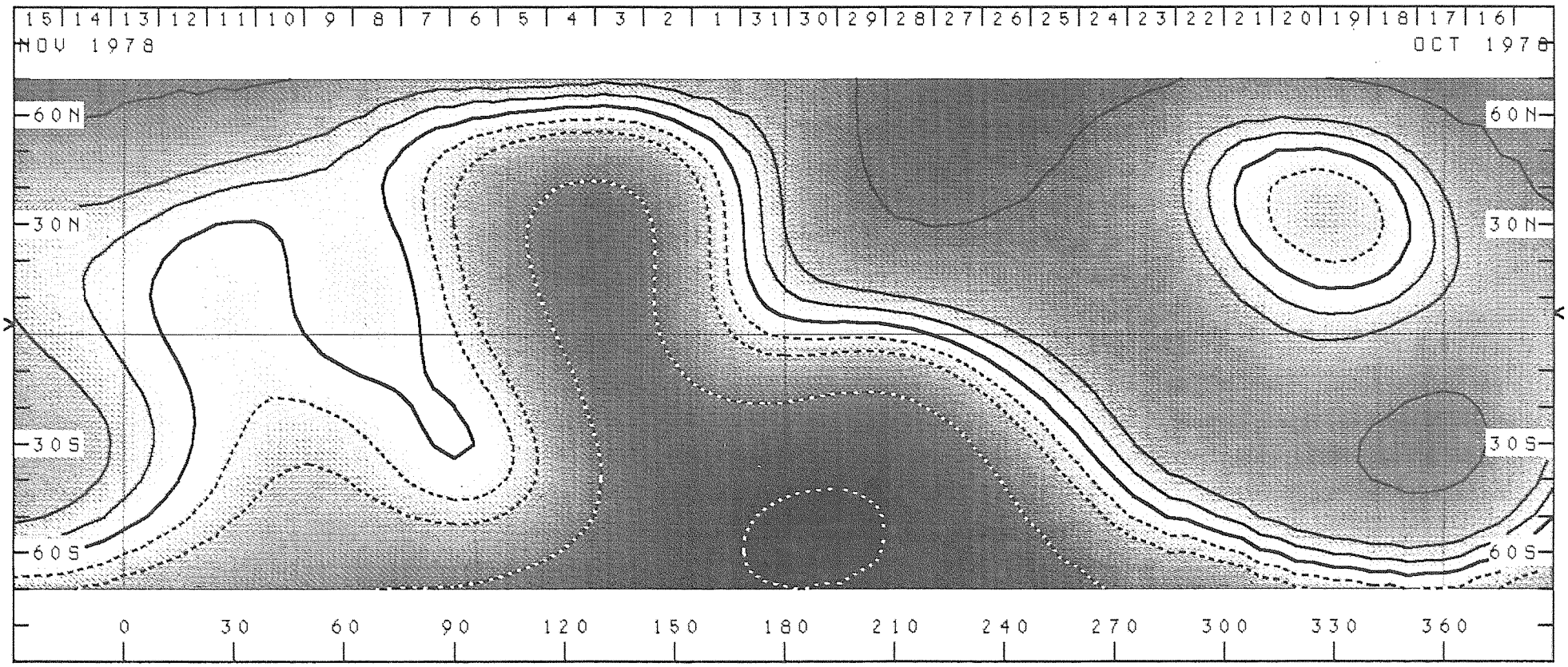
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

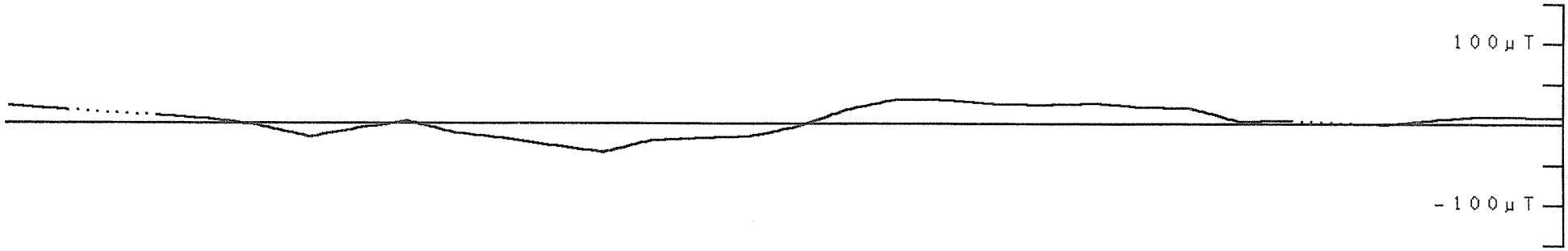
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



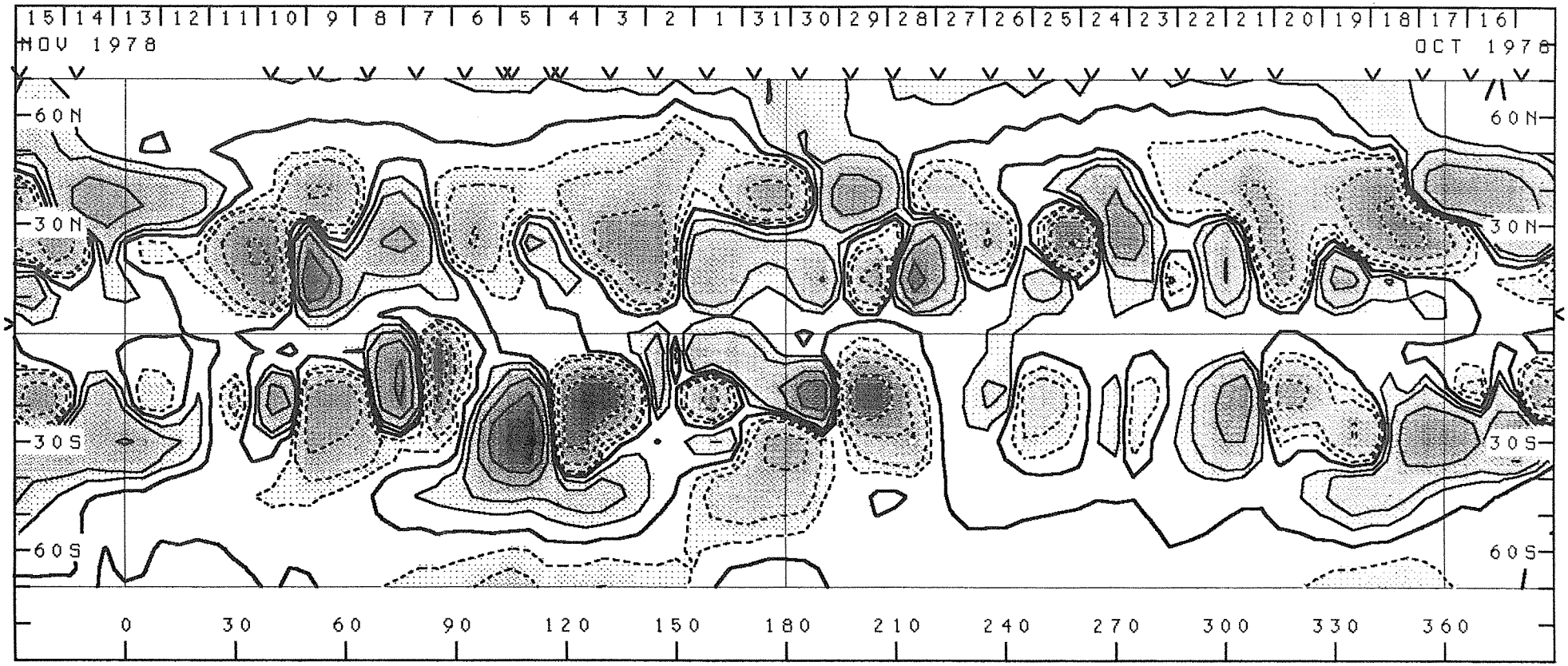
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

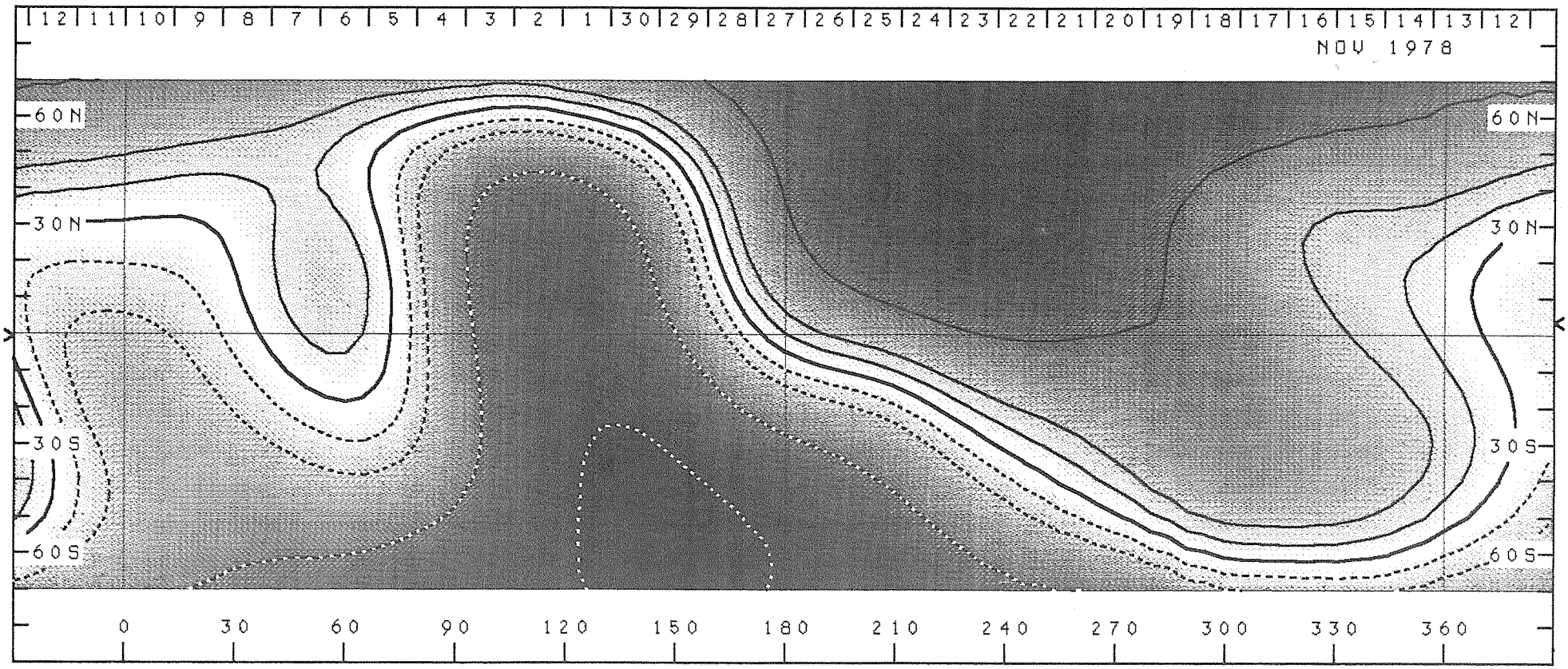
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

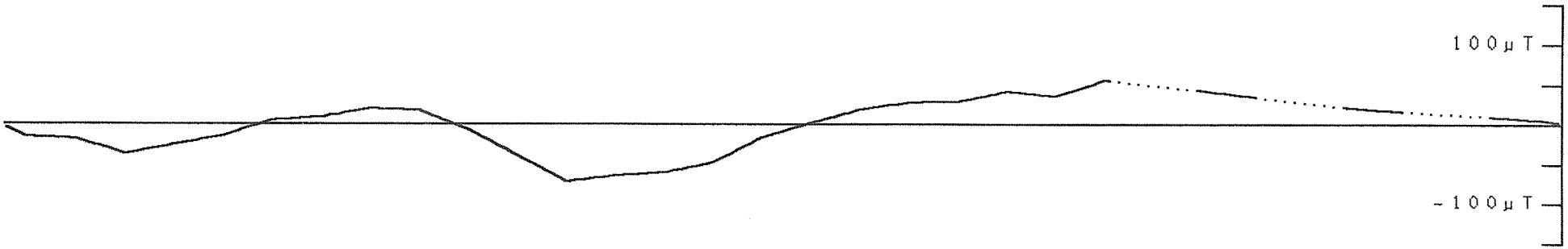
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



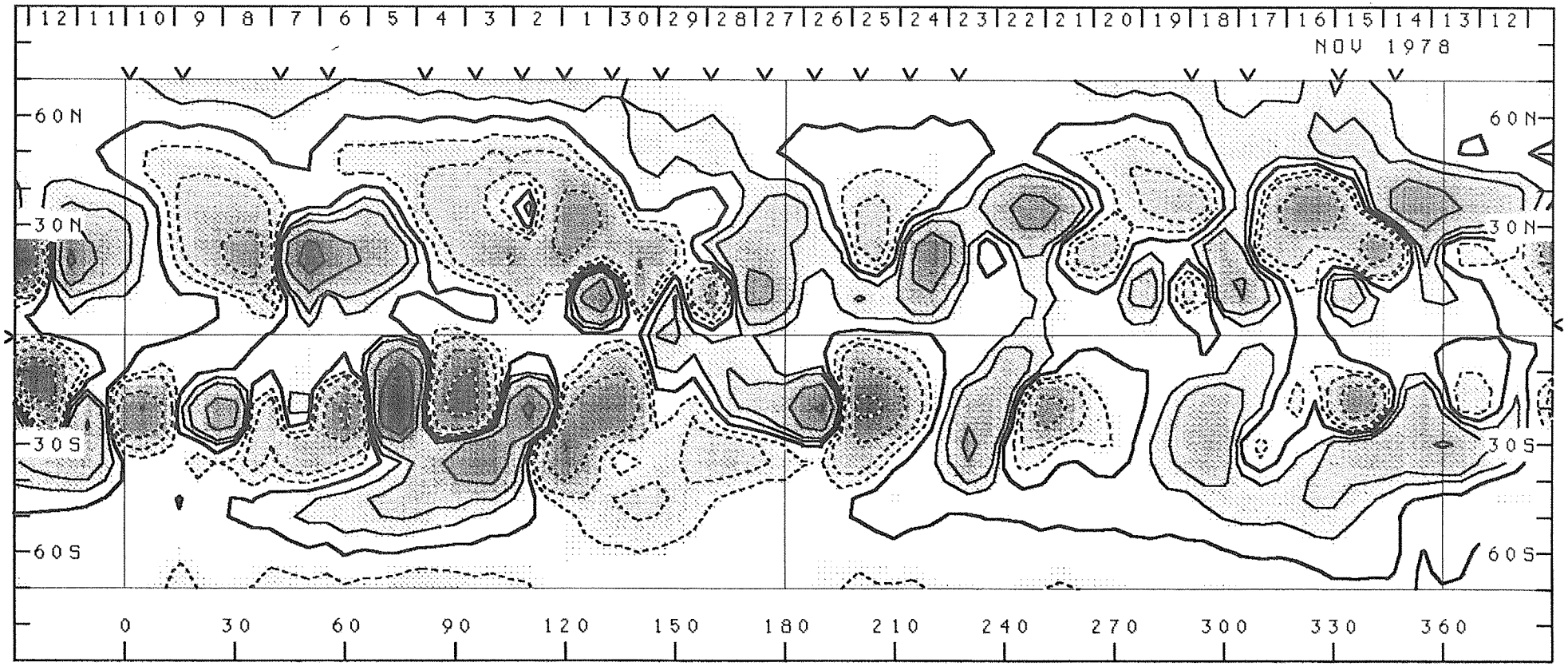
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

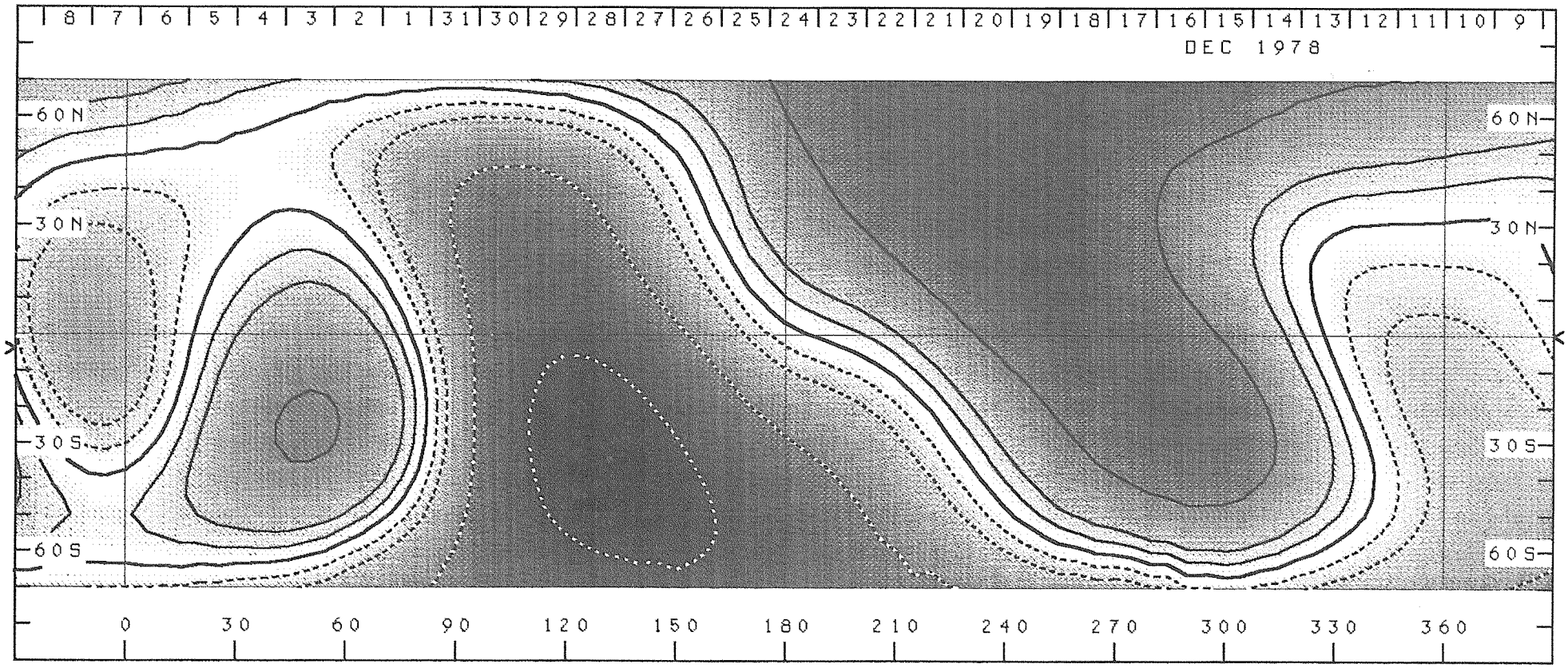
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

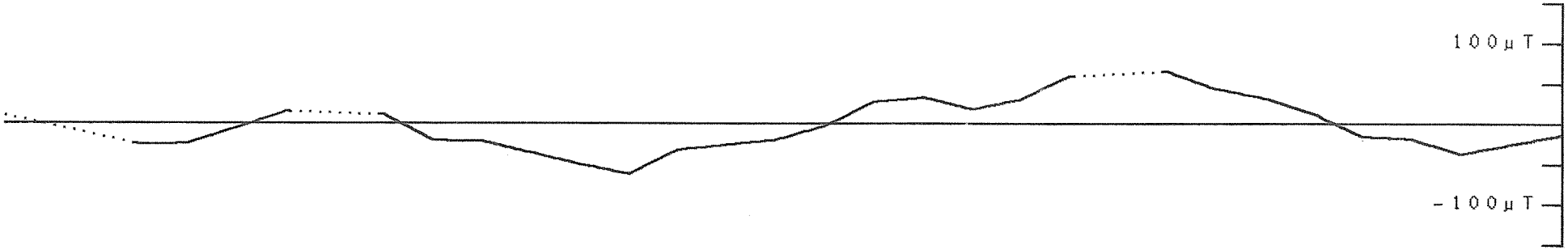
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



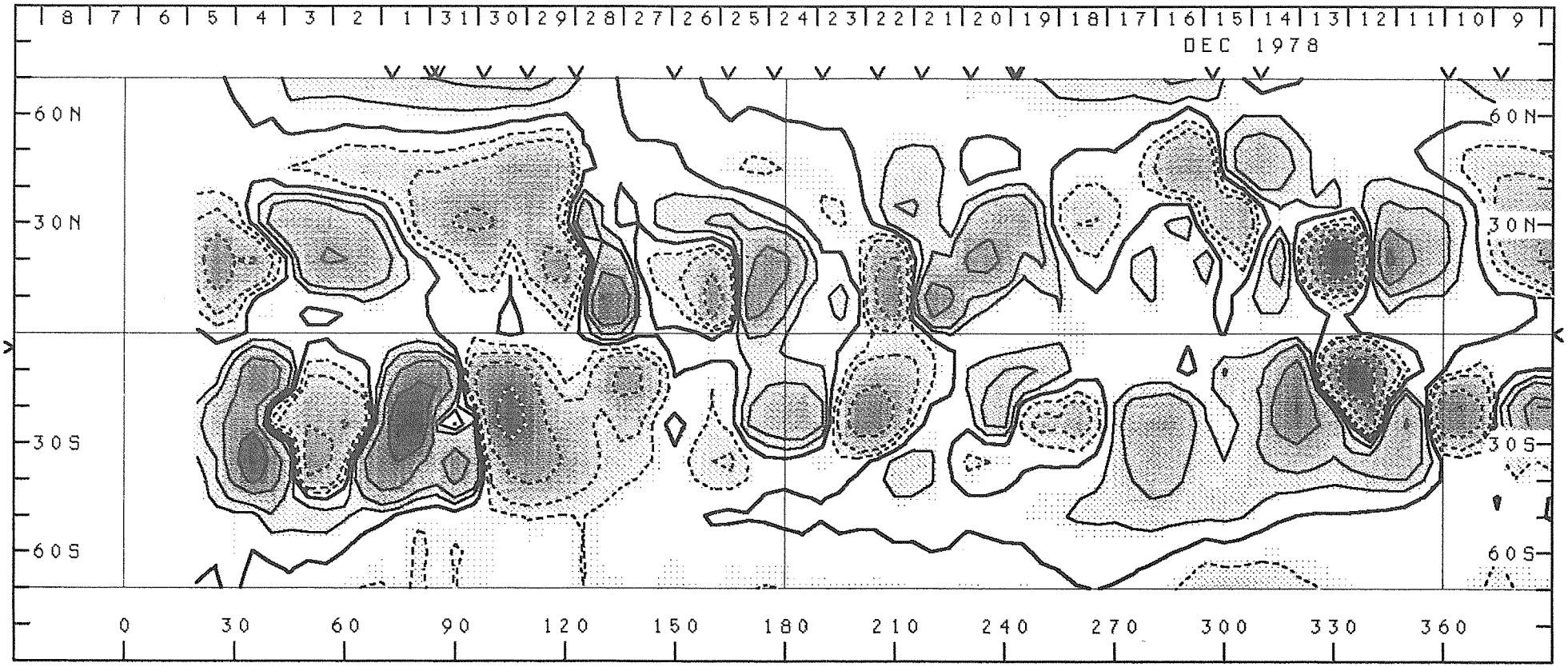
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

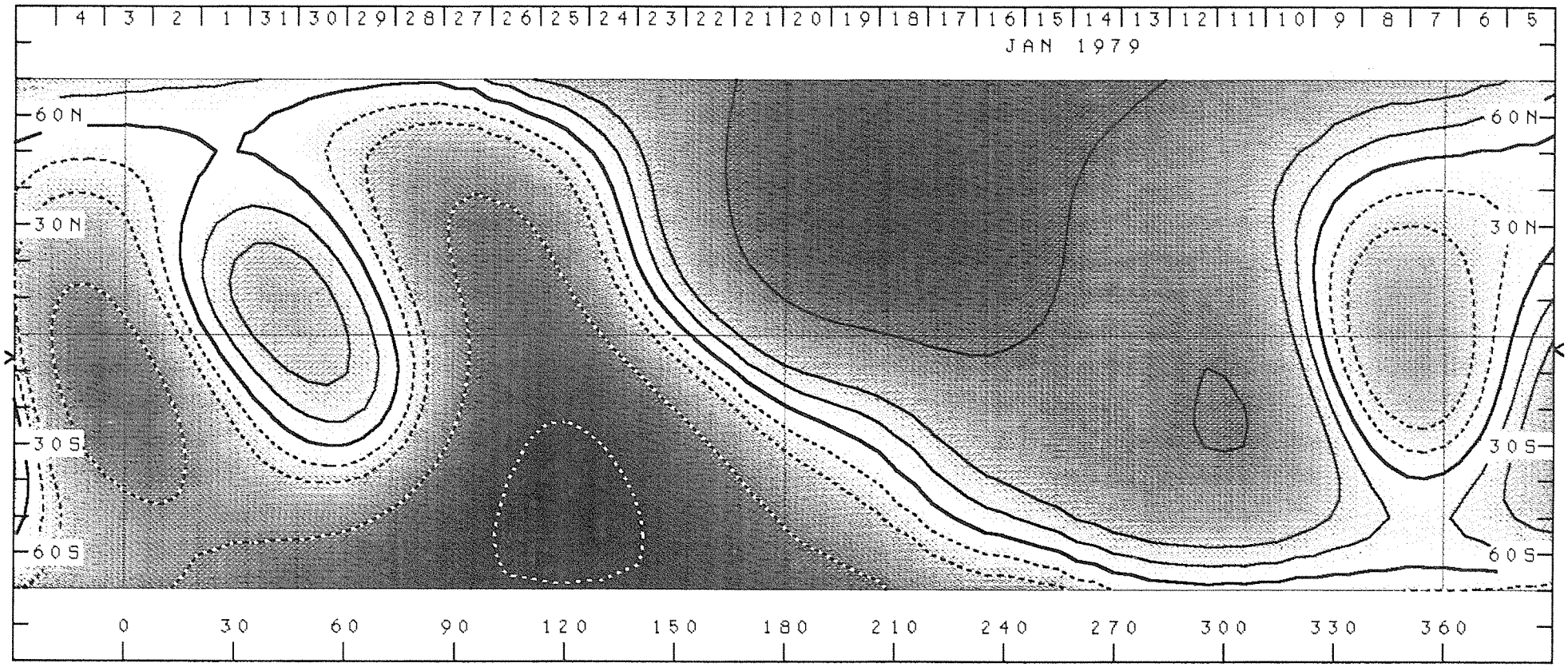
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

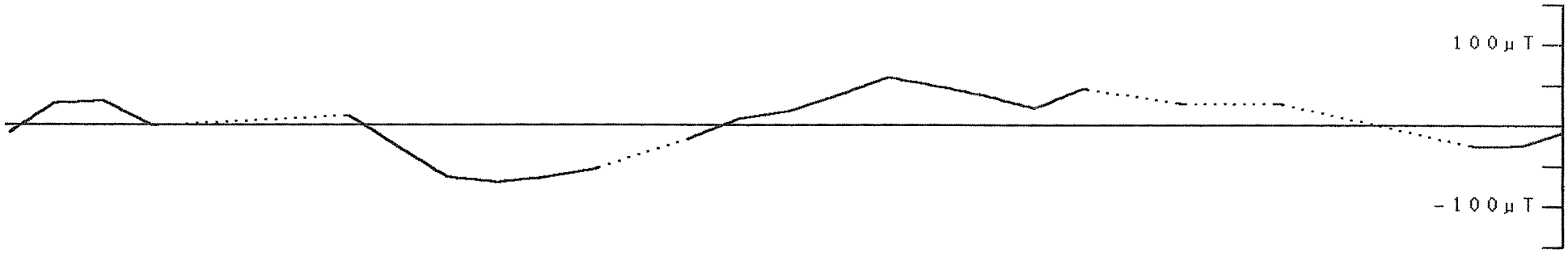
0, ±1, 2, 5, 10, 20 MICROTESLA



1677

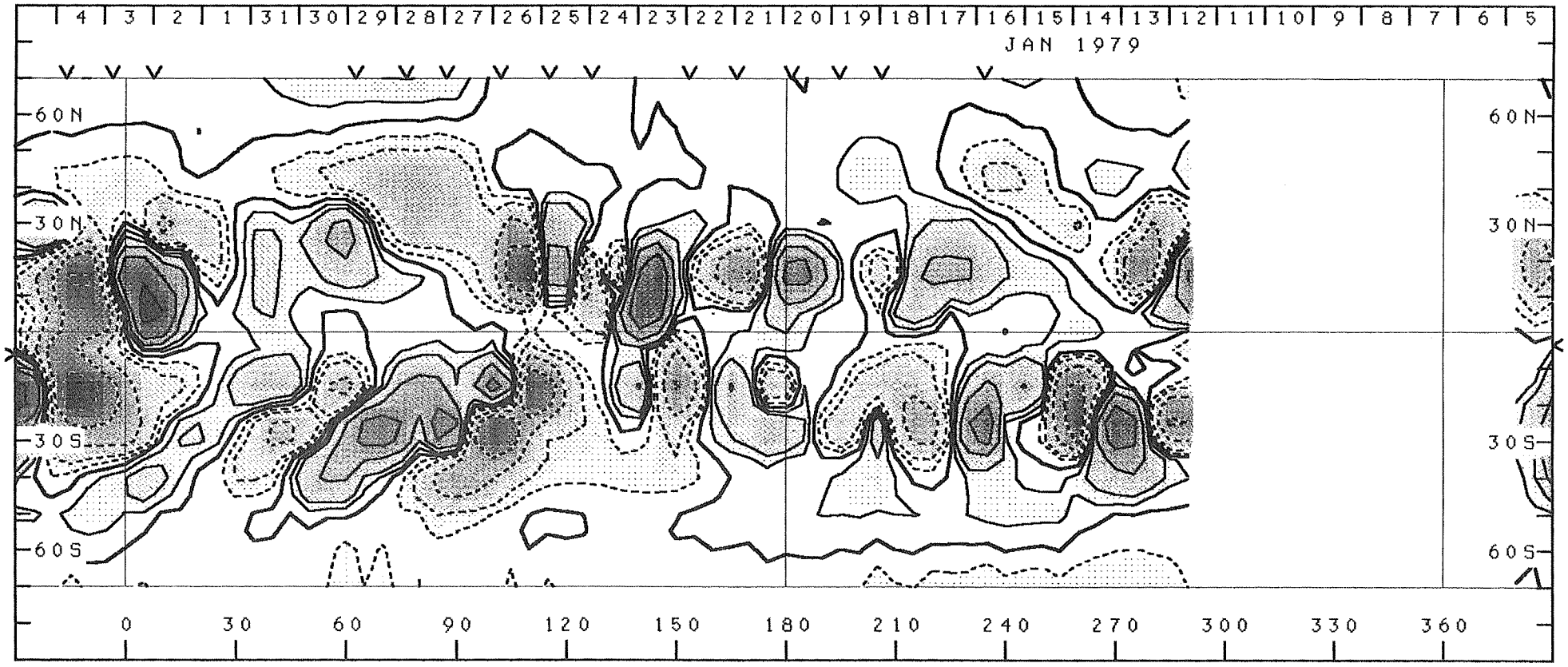
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

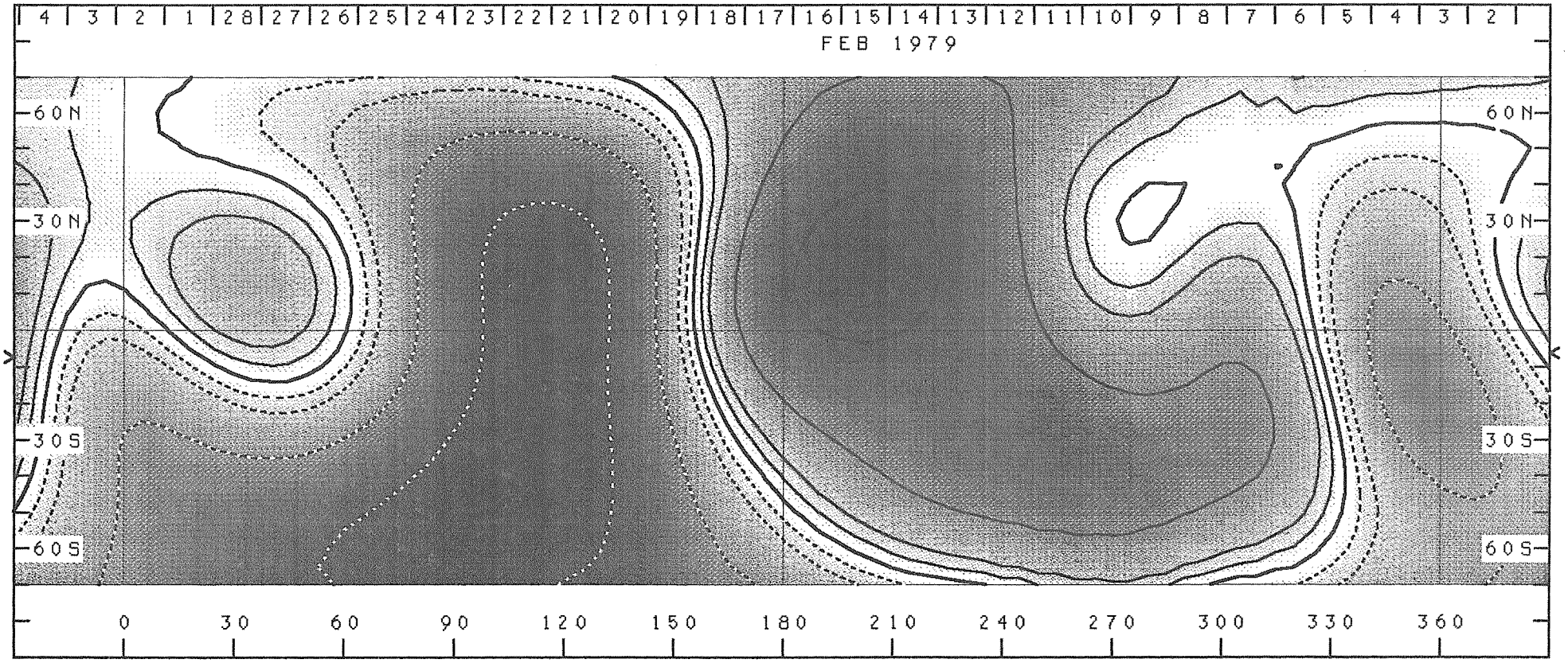
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

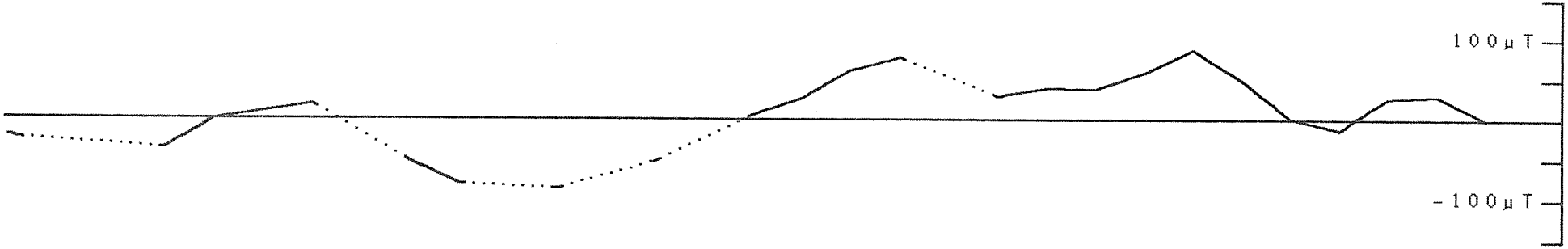
0, ±1, 2, 5, 10, 20 MICROTESLA



1678

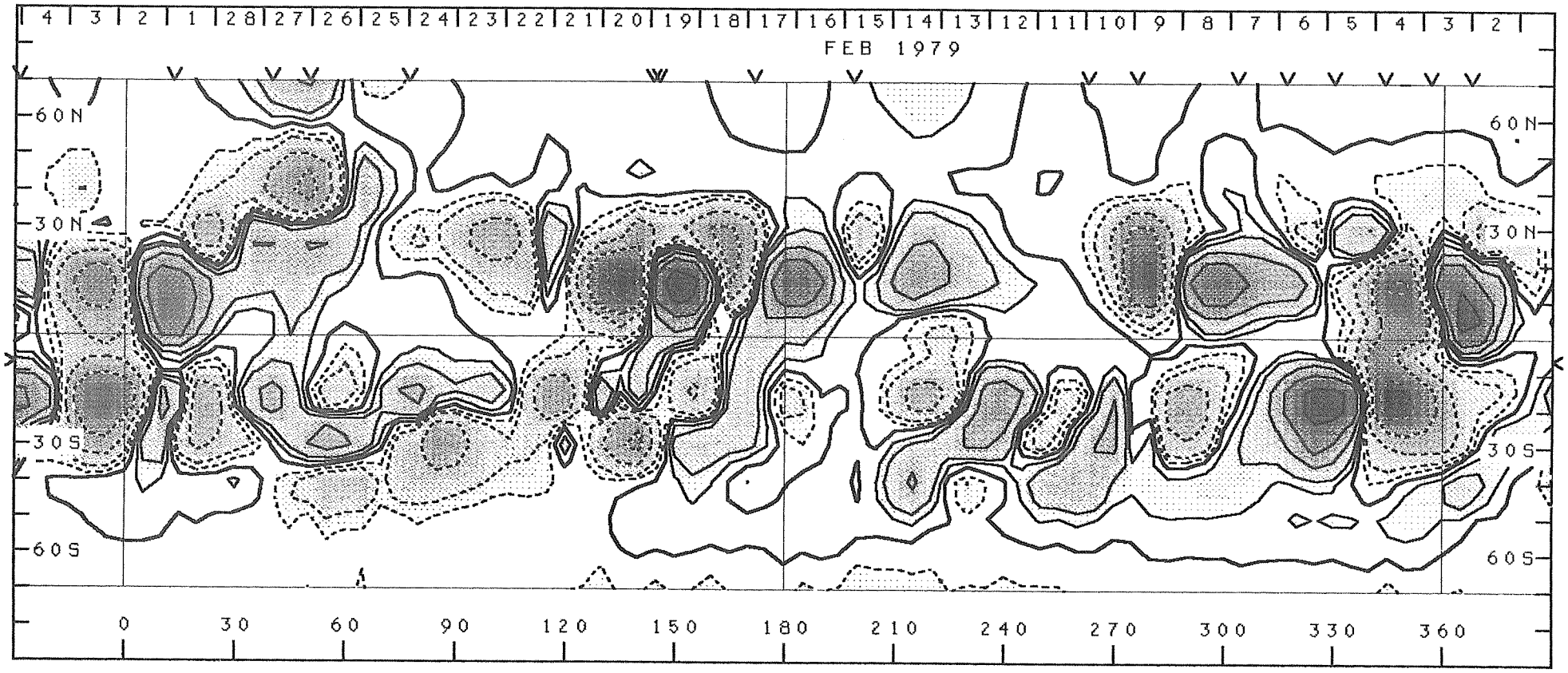
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

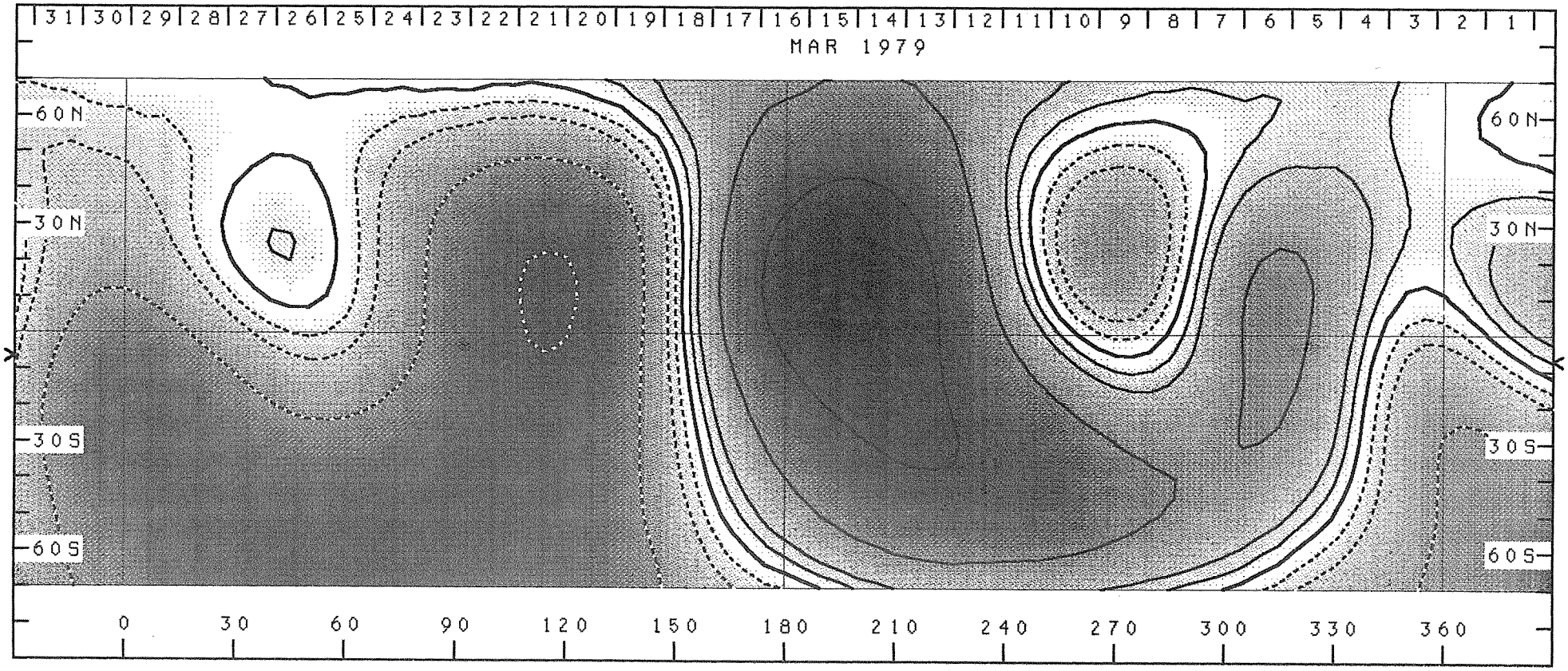
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

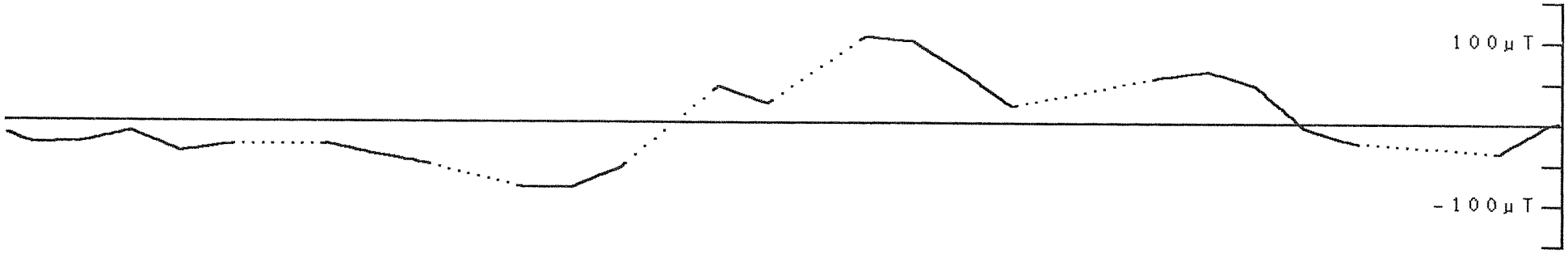
0, ±1, 2, 5, 10, 20 MICROTESLA



1679

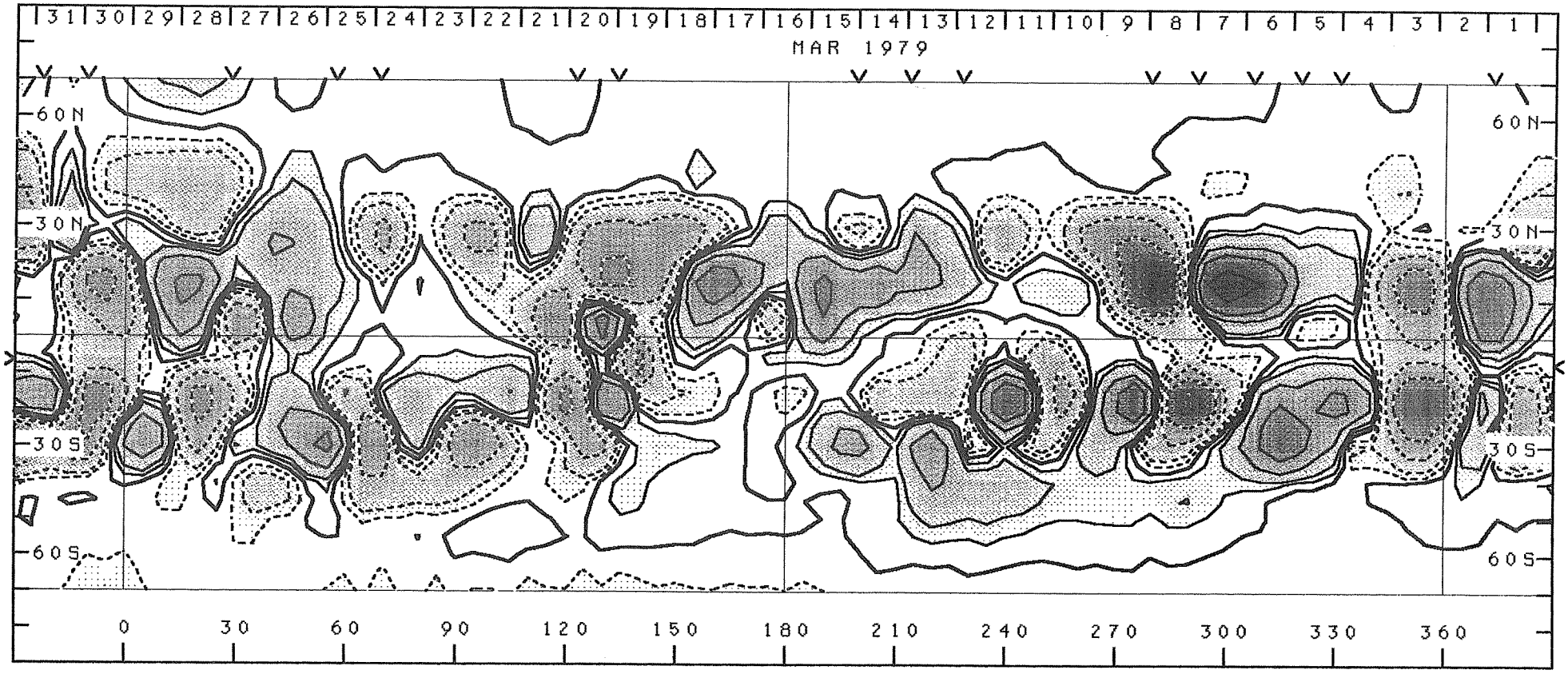
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

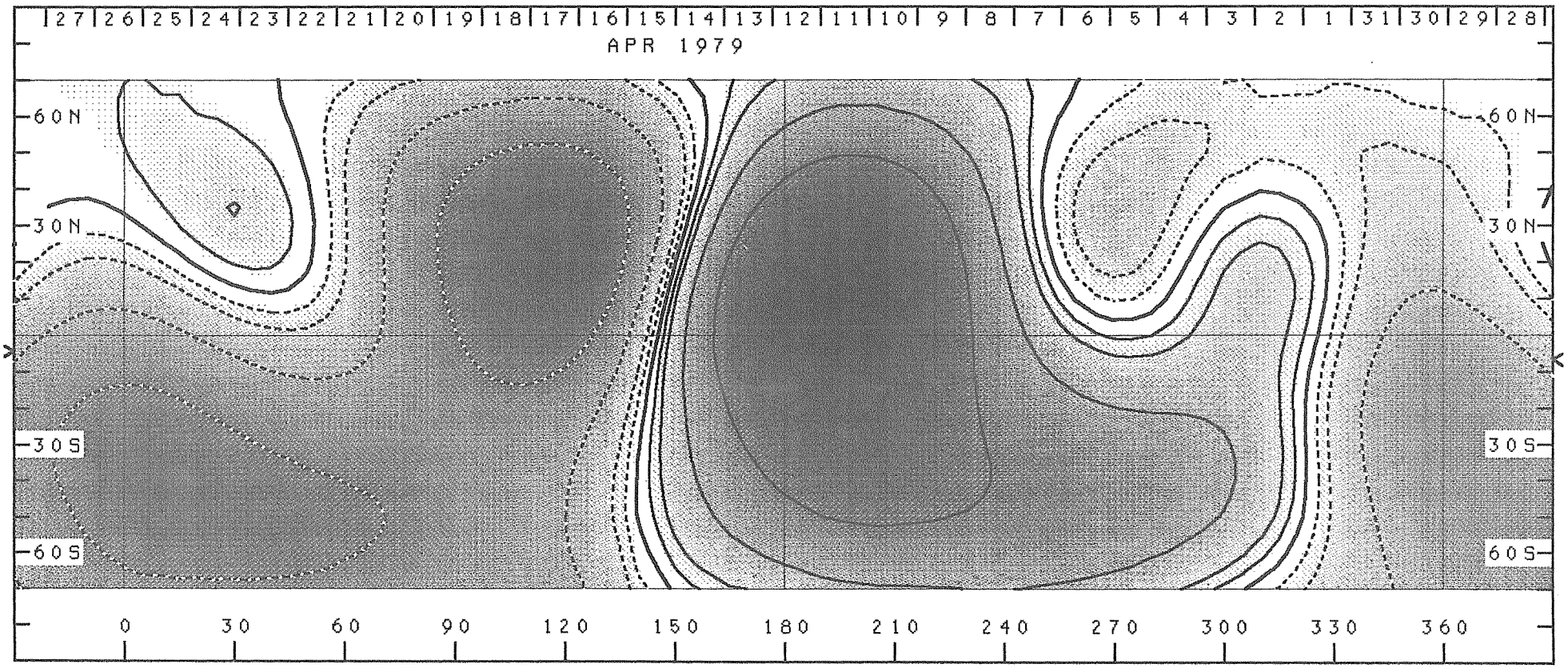


1679

WILCOX SOLAR OBSERVATORY

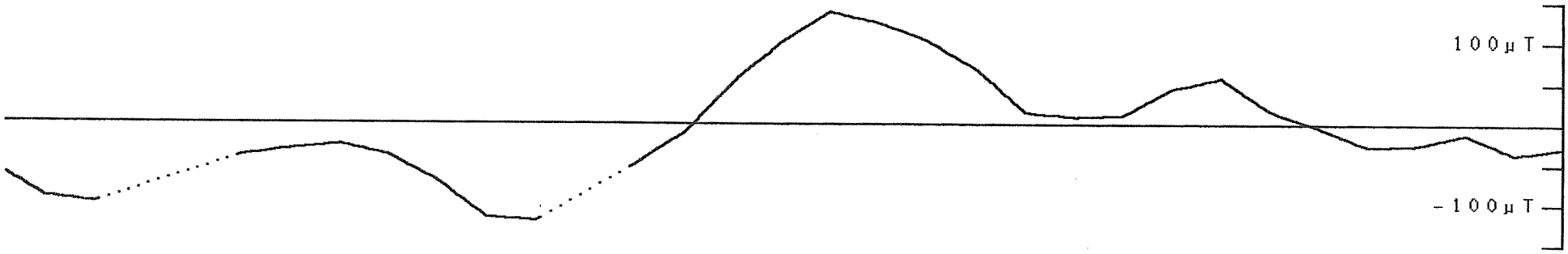
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



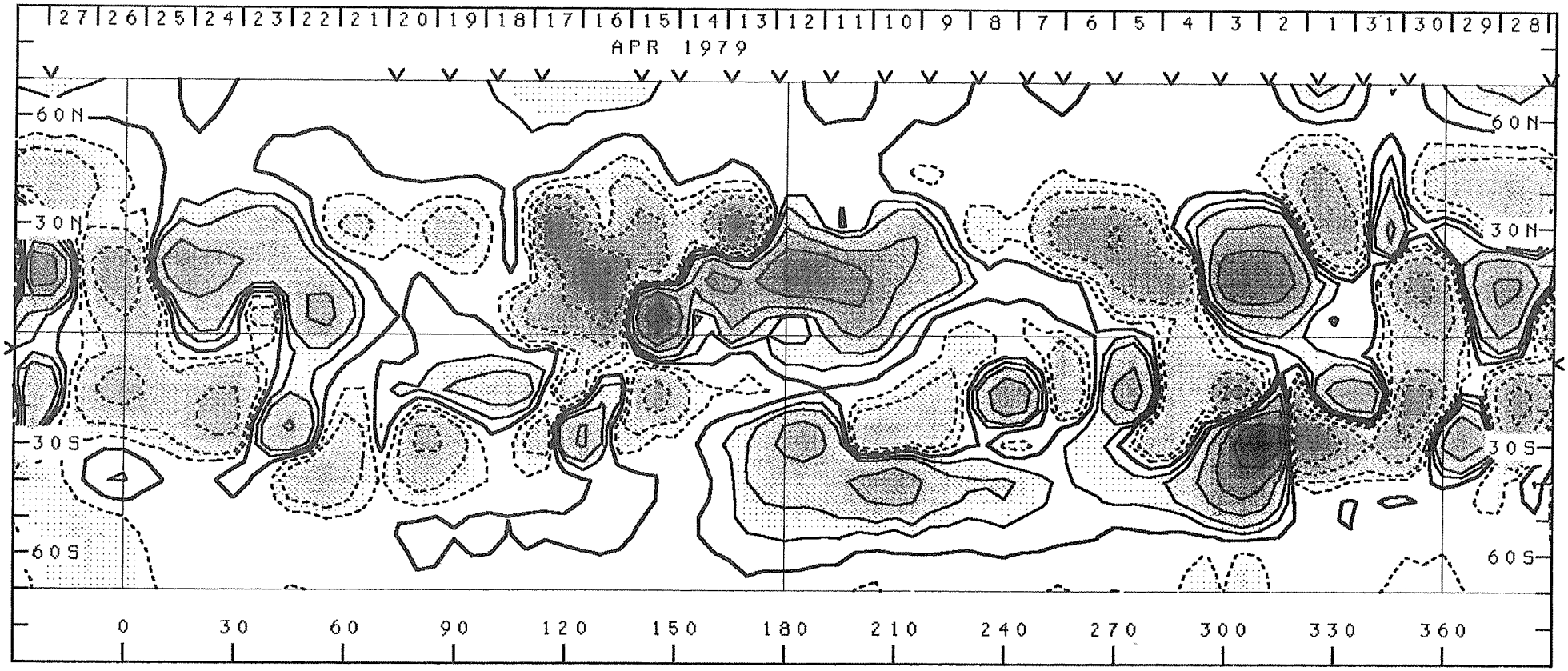
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

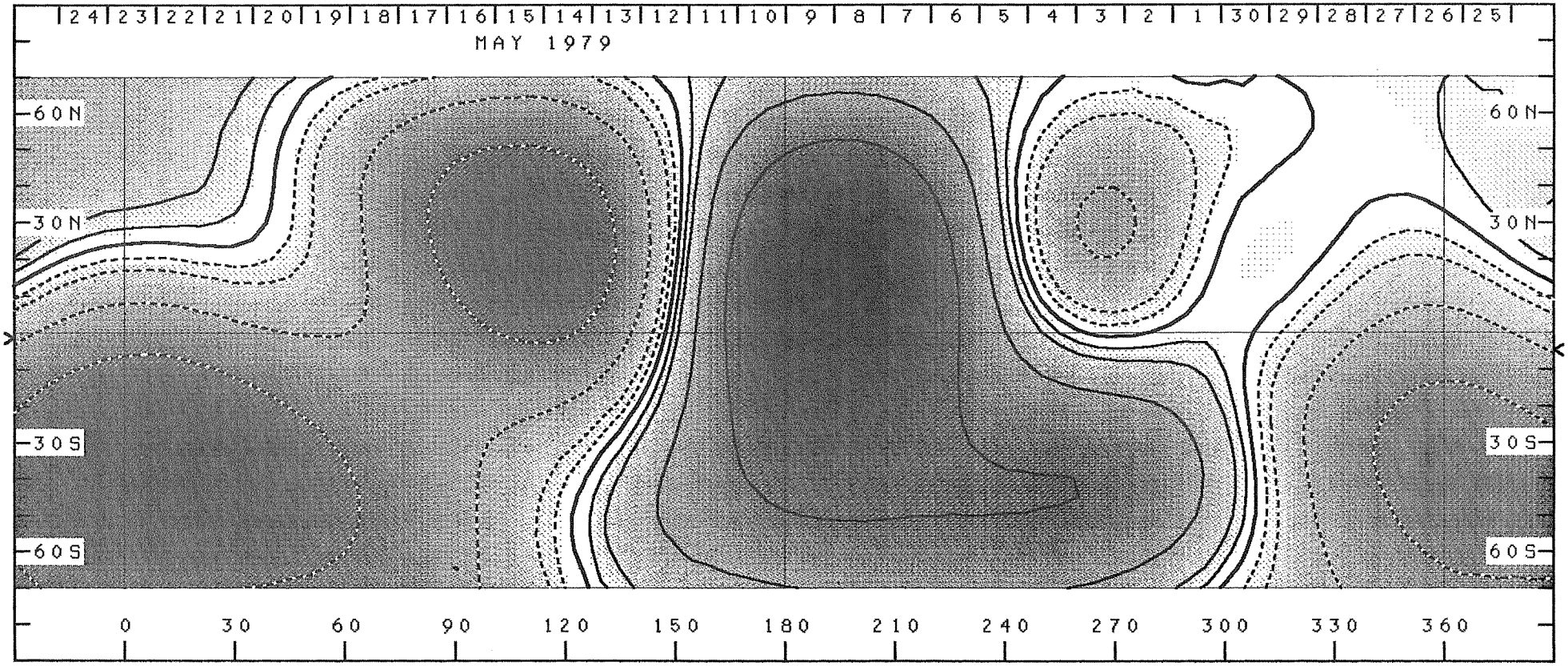
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

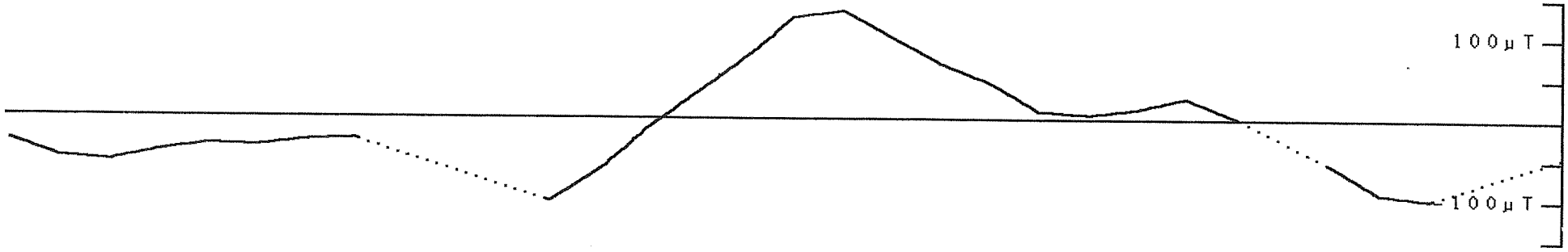
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



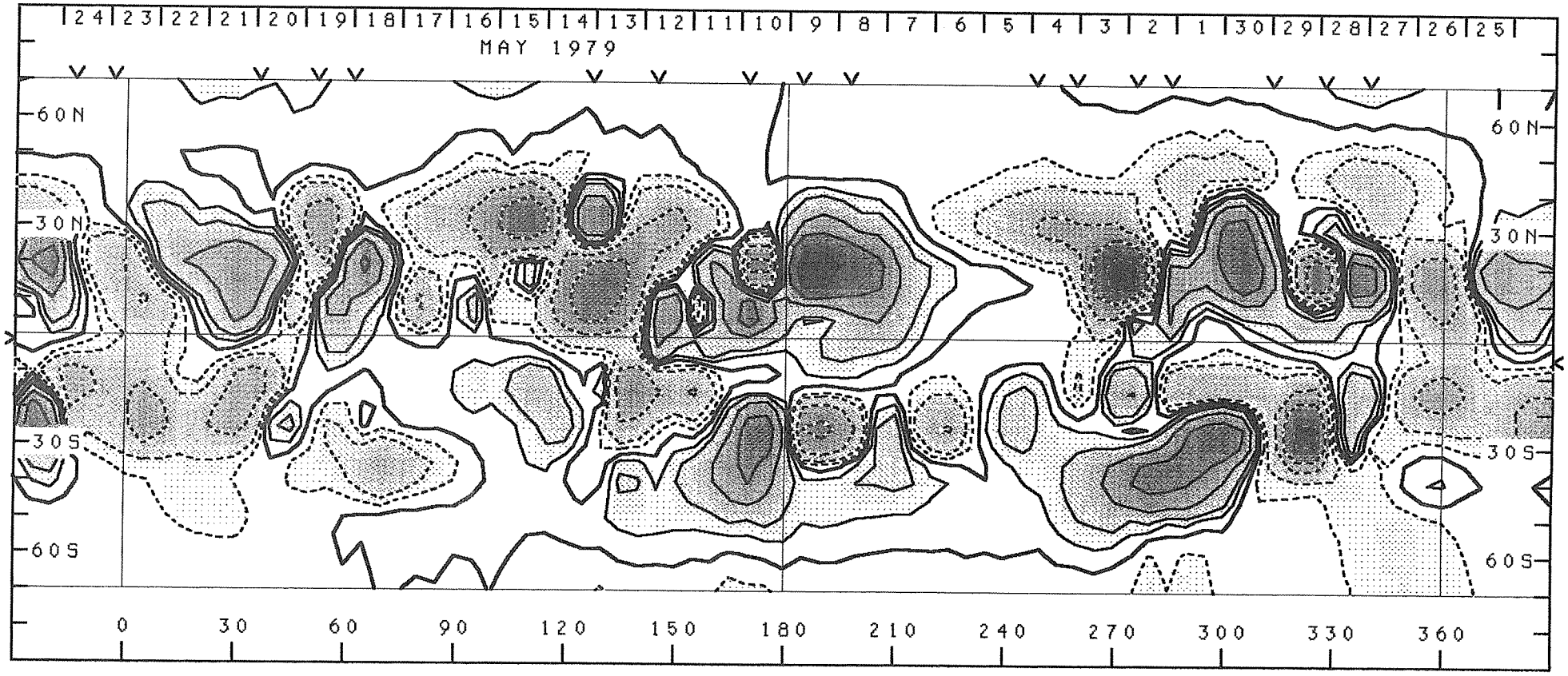
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

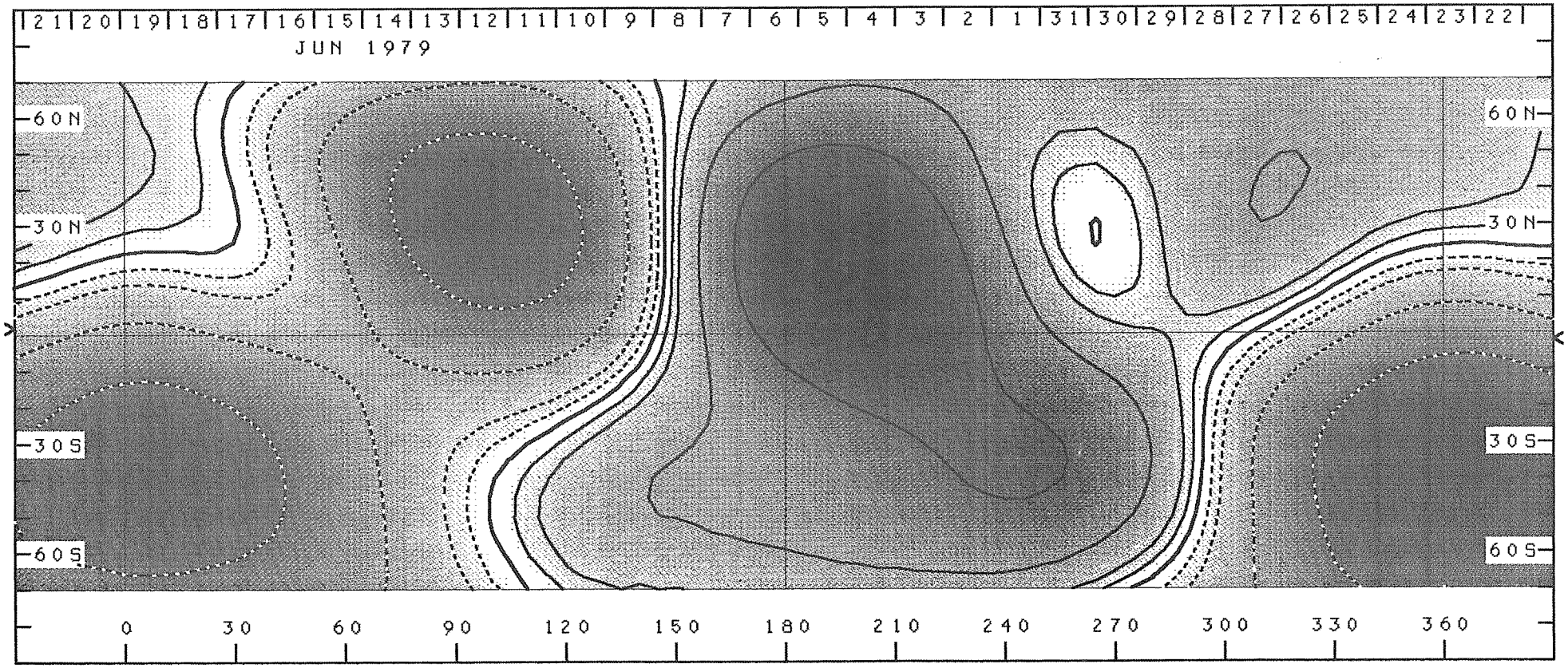
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

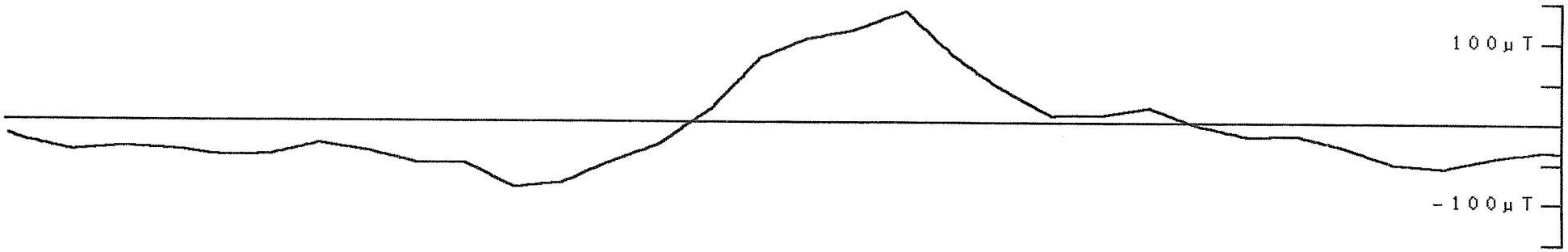
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



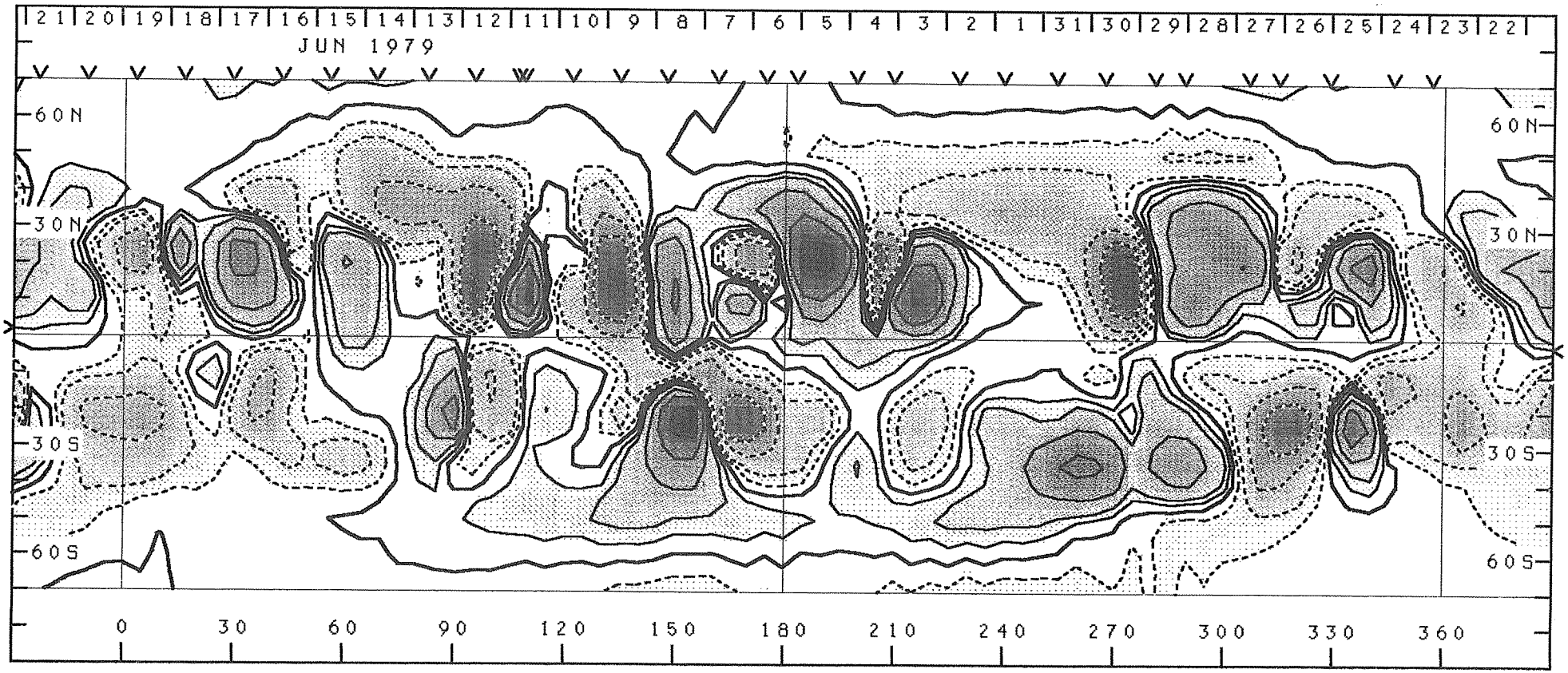
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

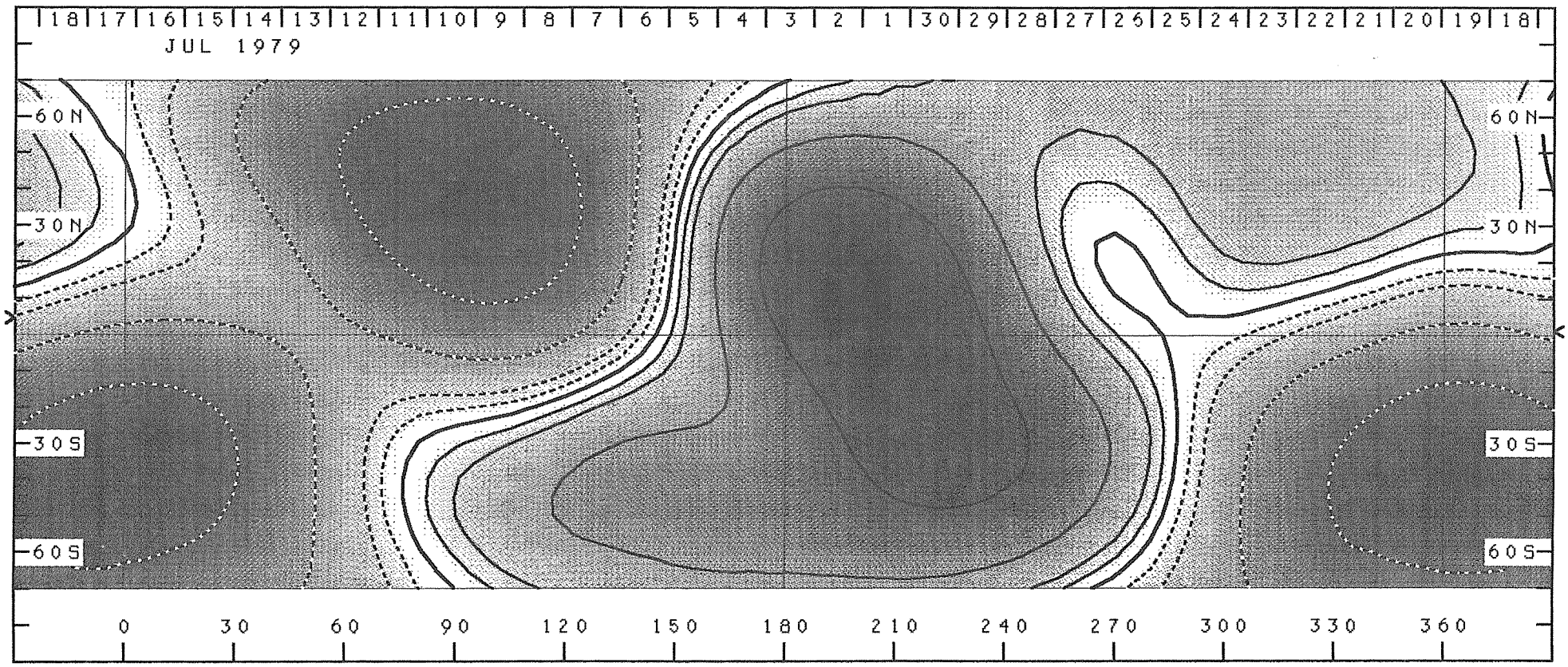
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

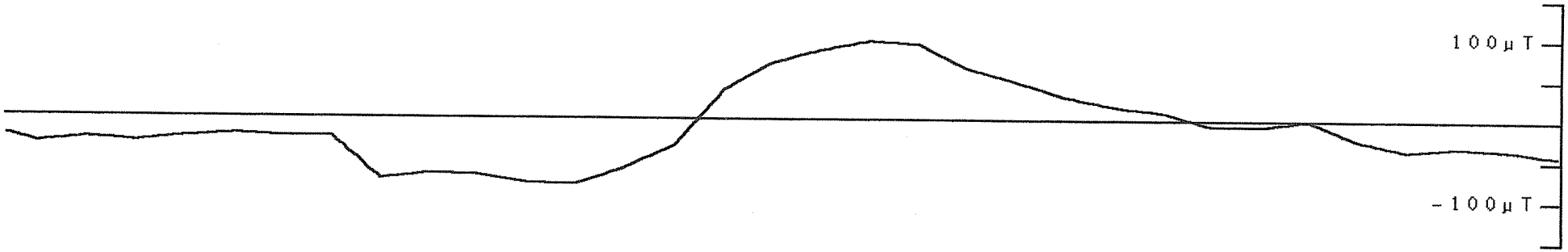
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



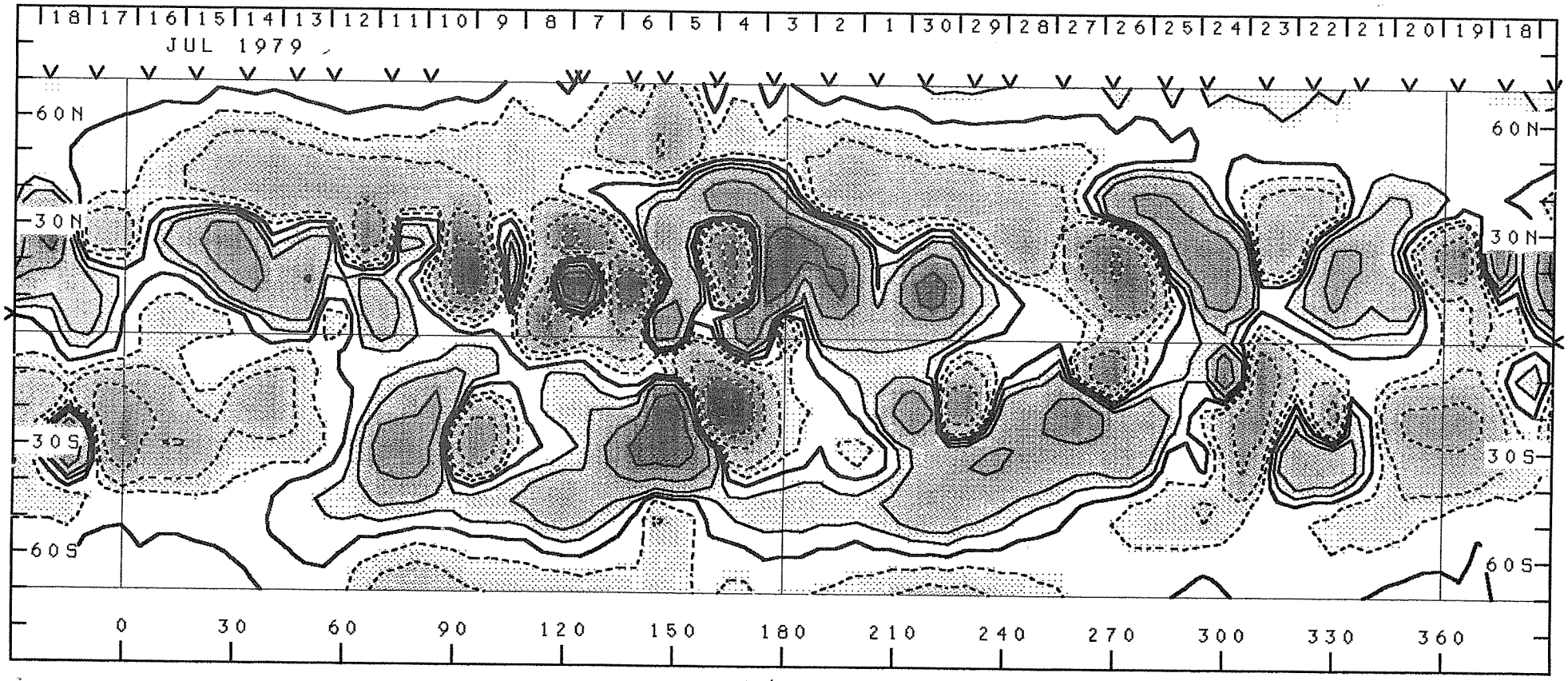
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

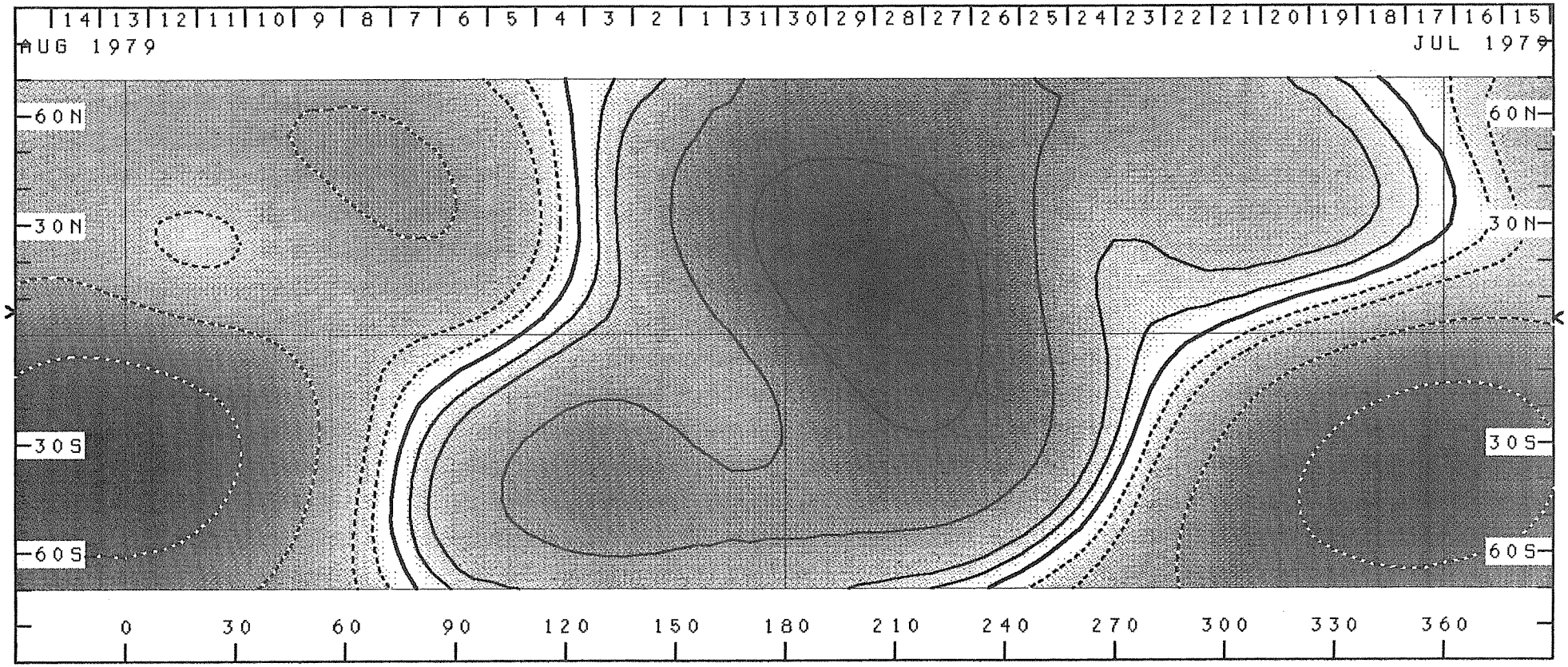
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

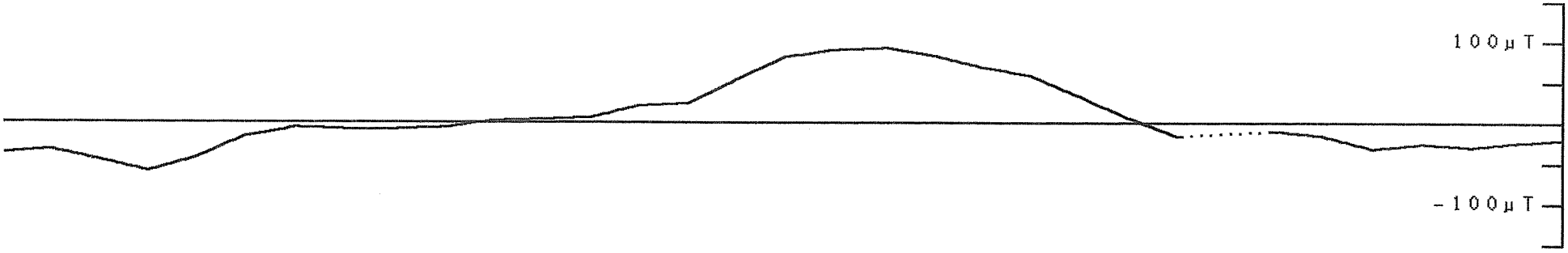
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



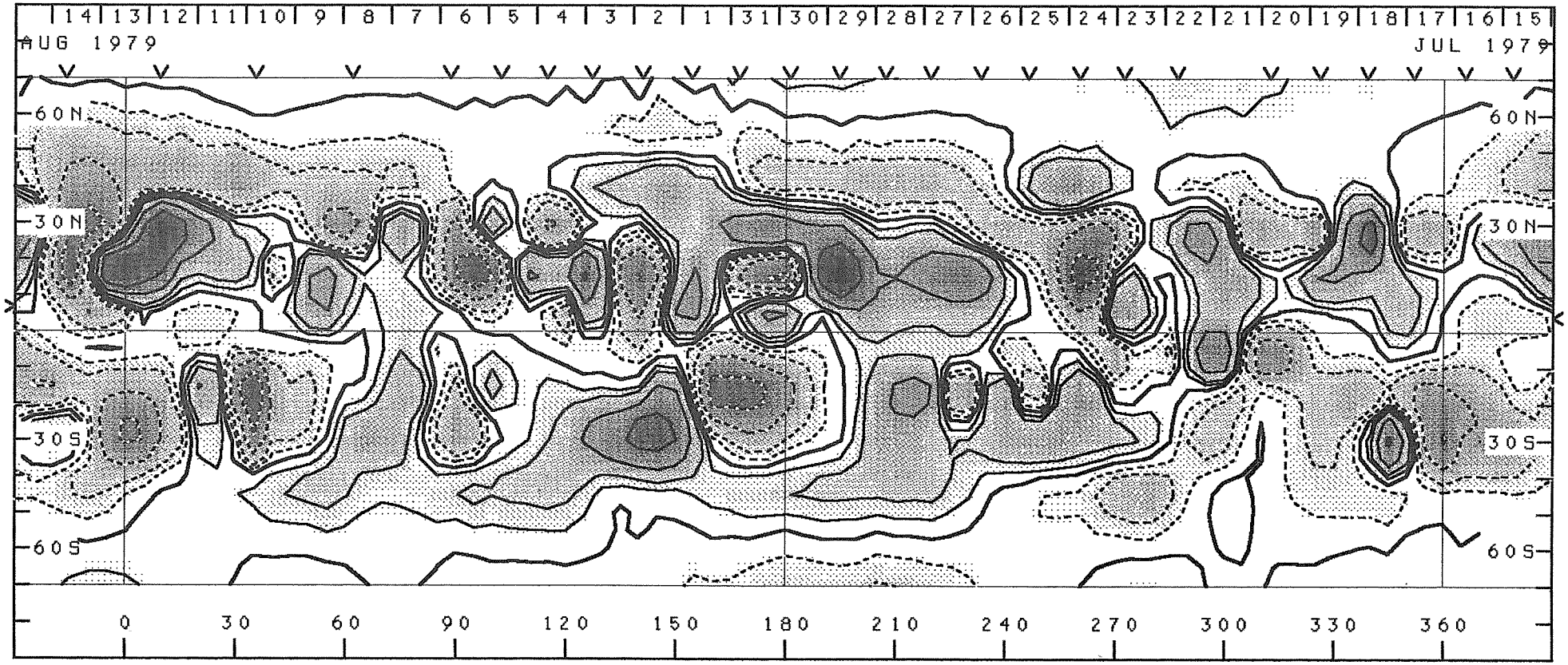
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

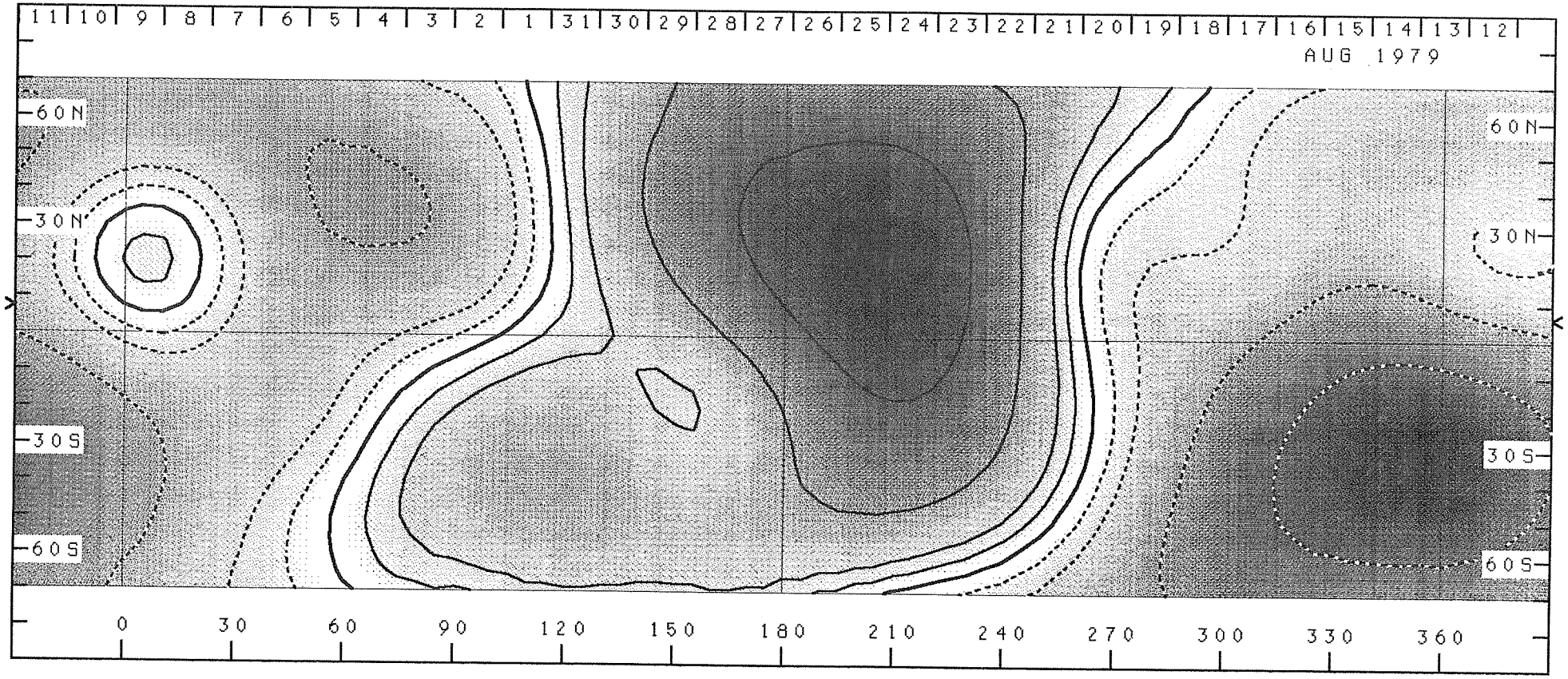
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

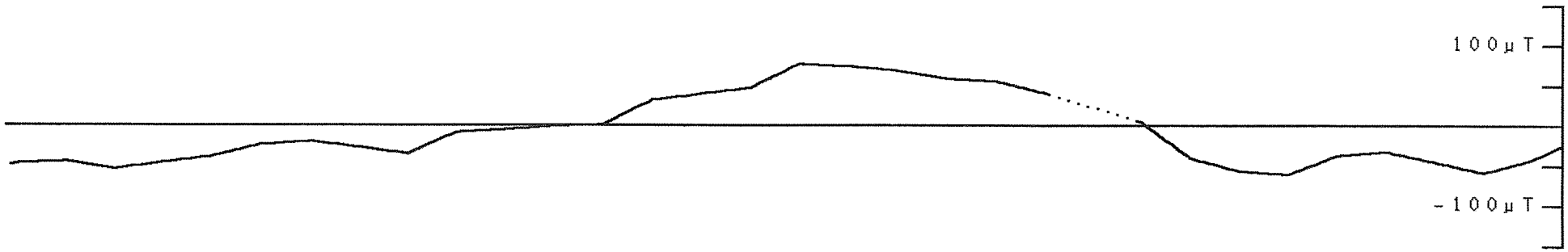
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



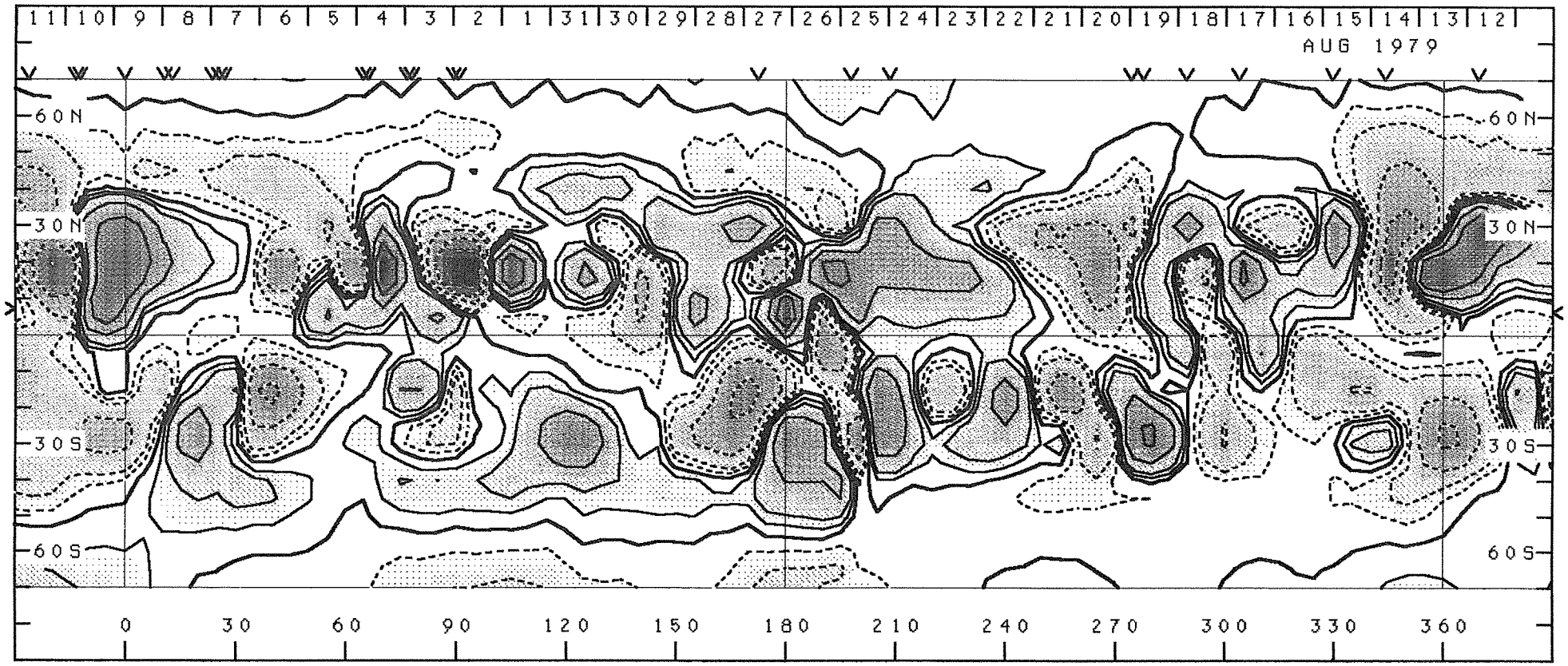
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

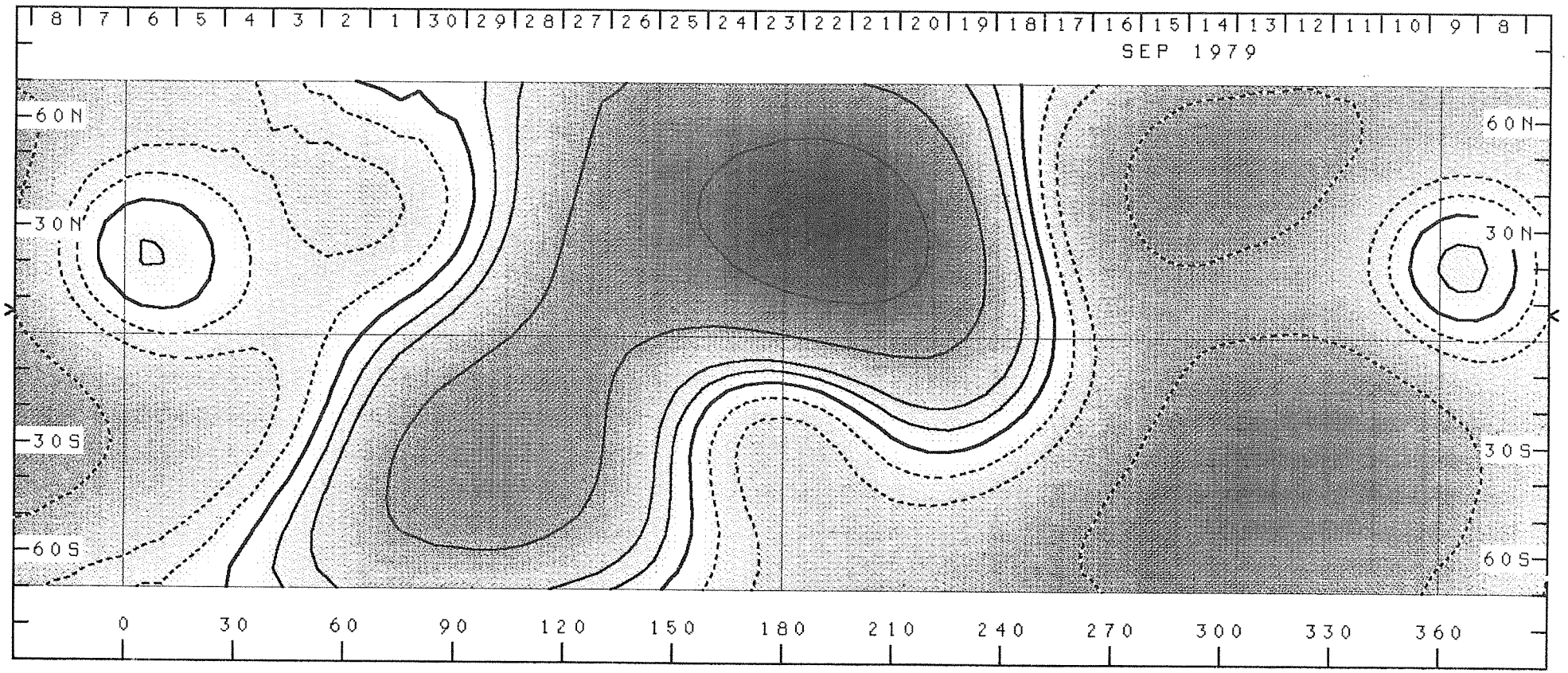
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

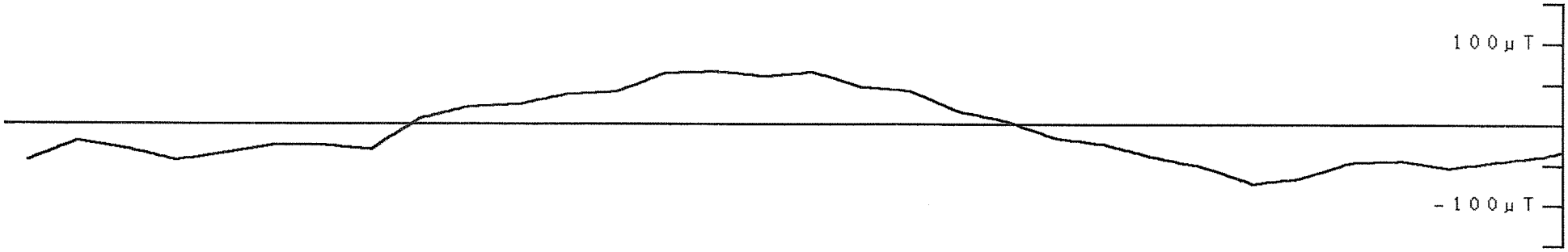
0, ±1, 2, 5, 10, 20 MICROTESLA



1686

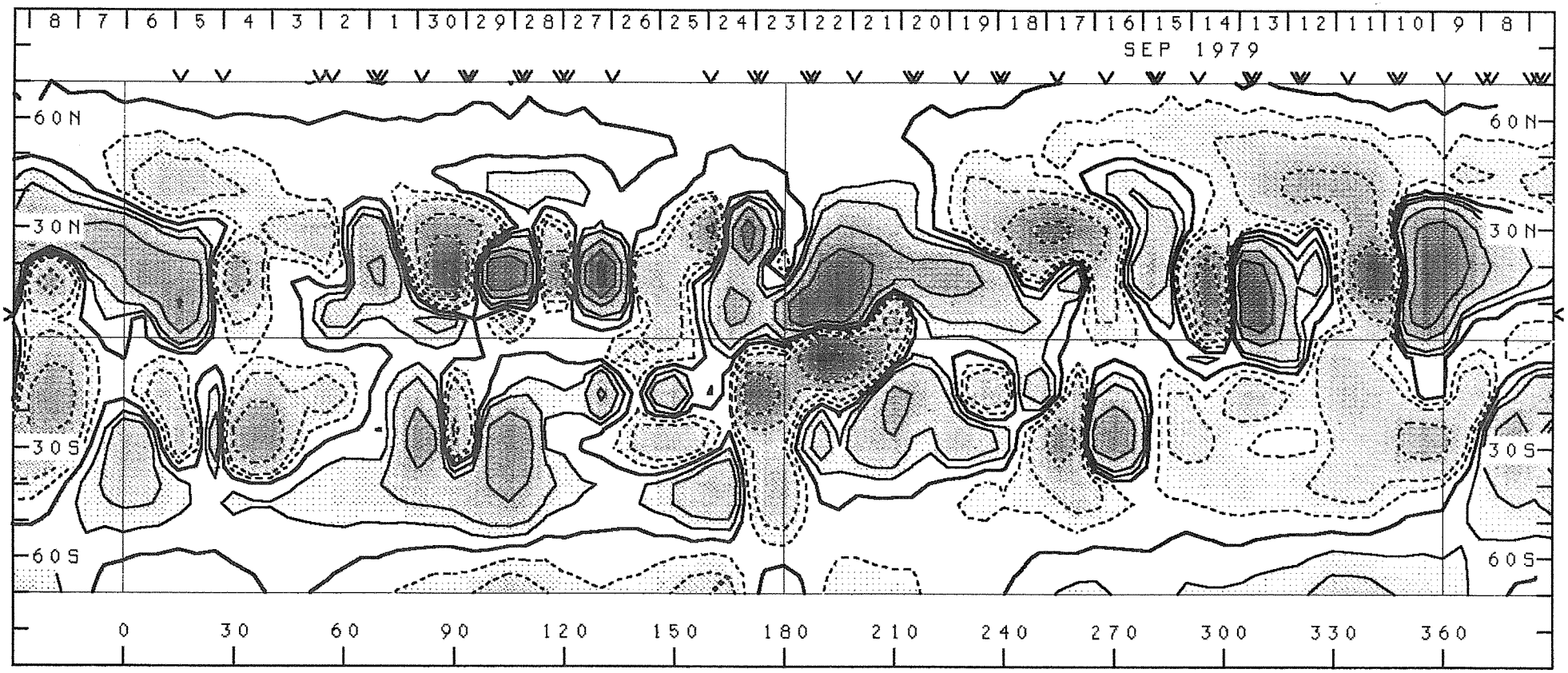
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

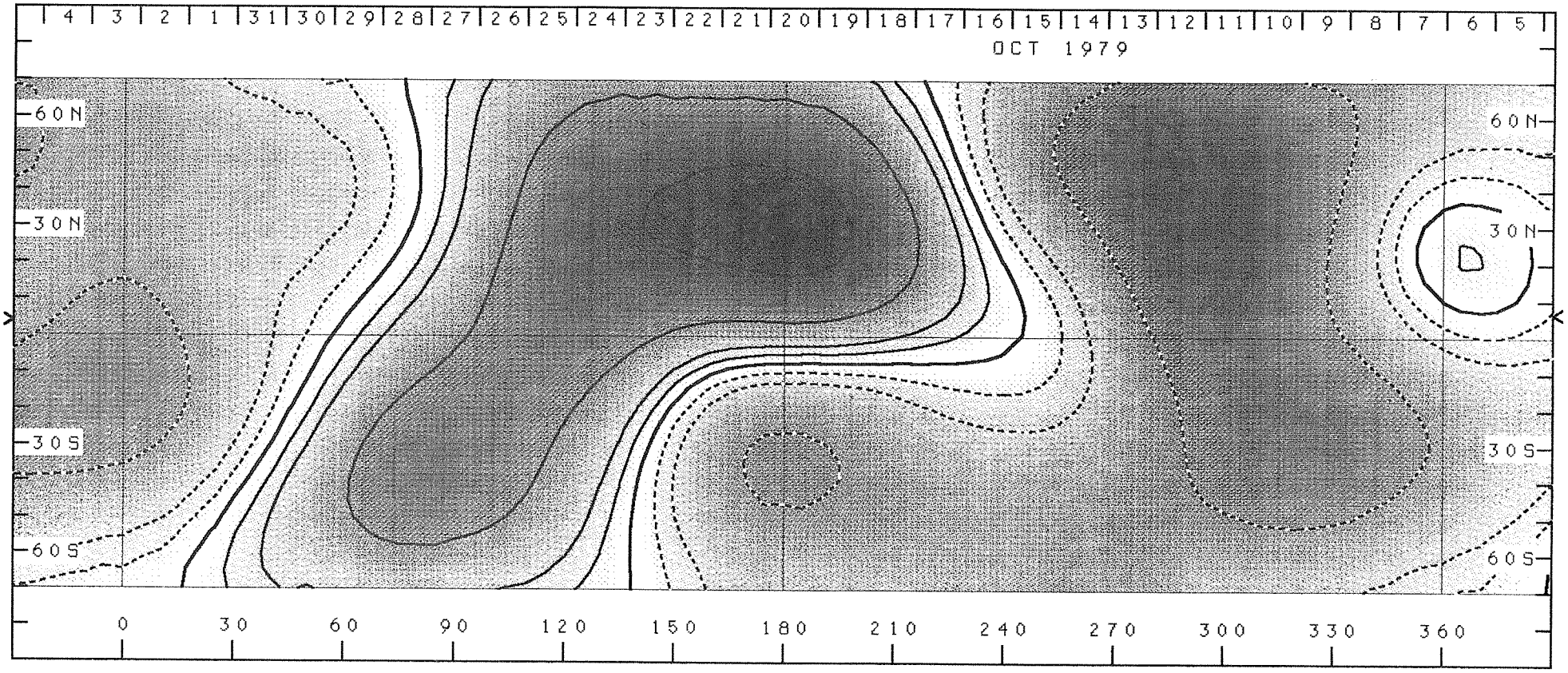
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

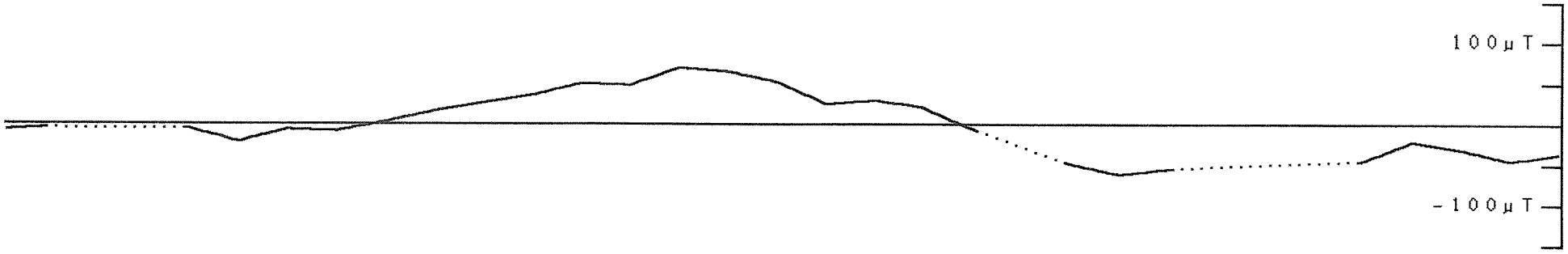
0, ±1, 2, 5, 10, 20 MICROTESLA



1687

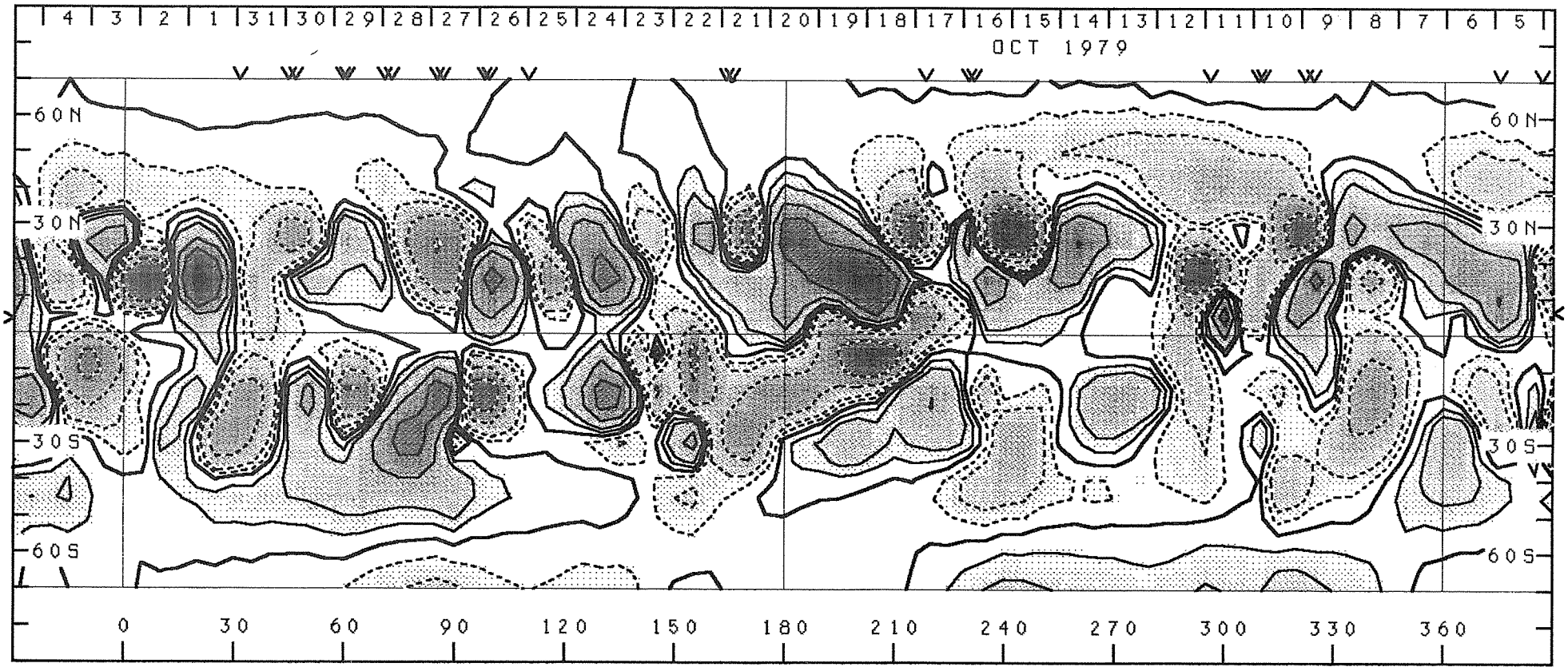
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

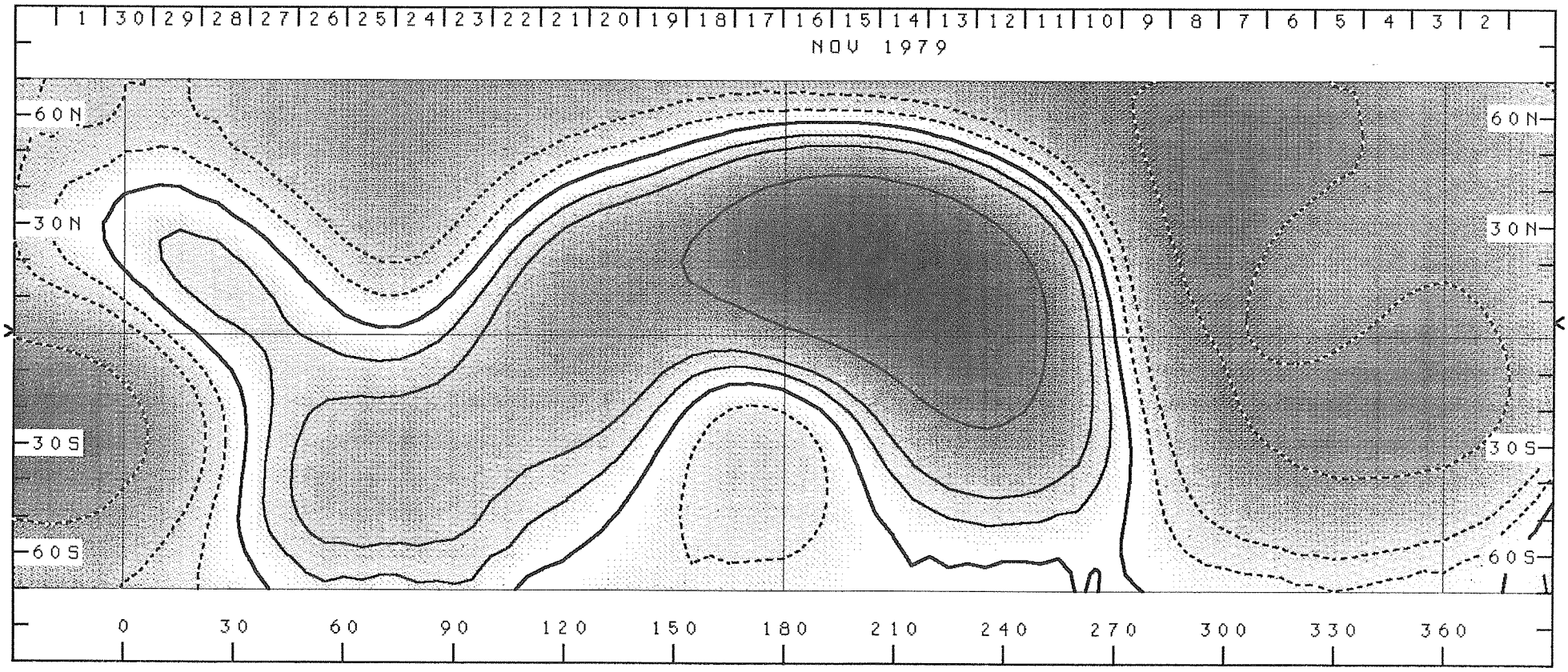
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

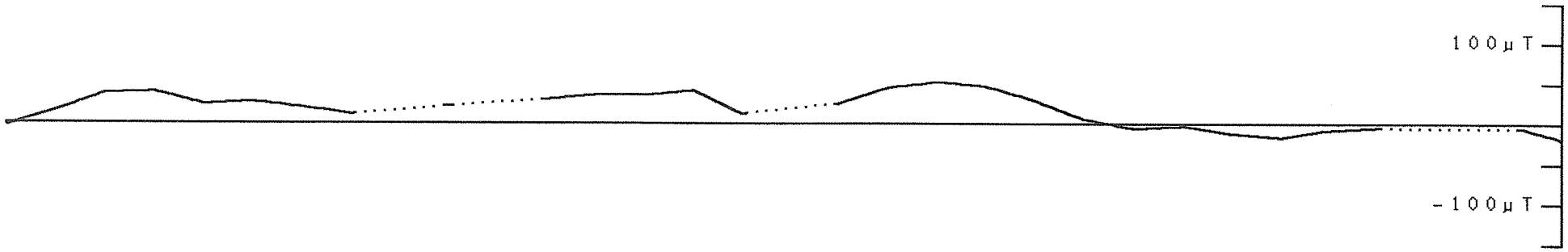
0, ±1, 2, 5, 10, 20 MICROTESLA



1688

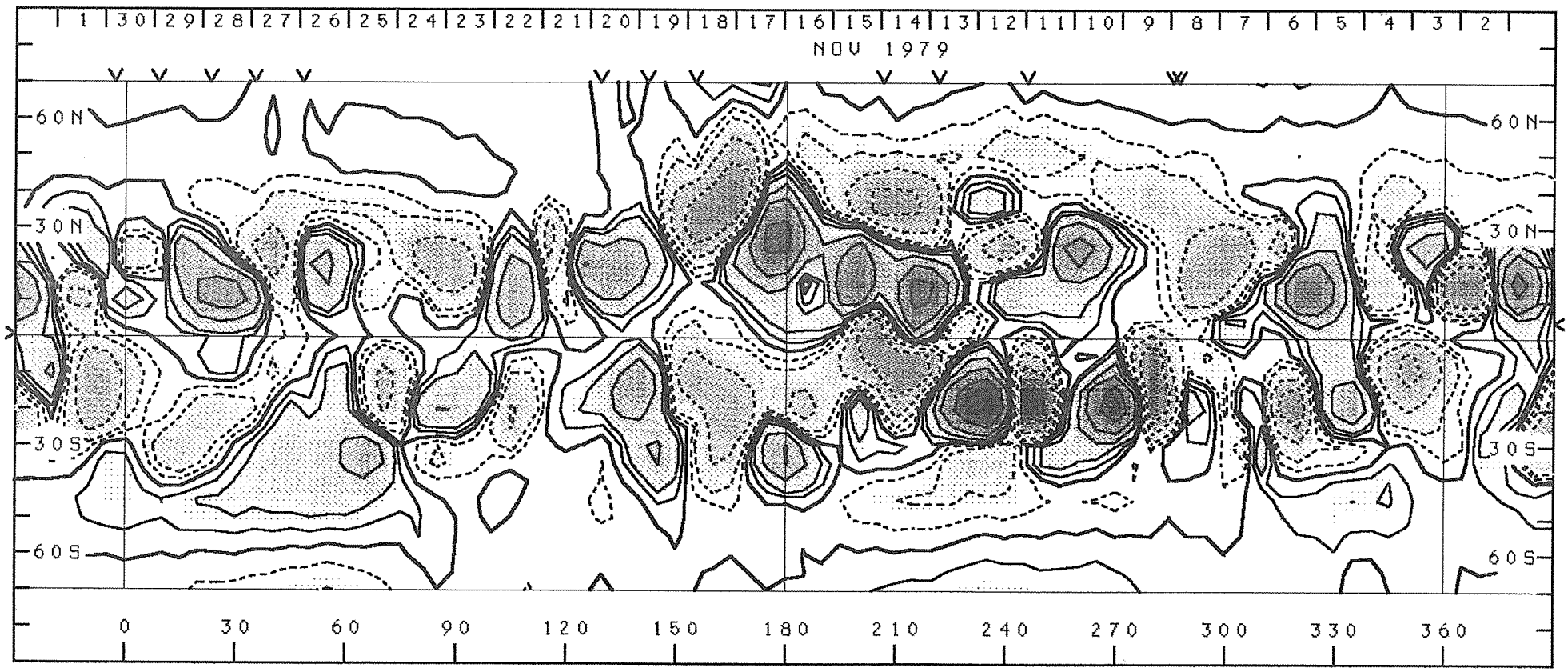
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

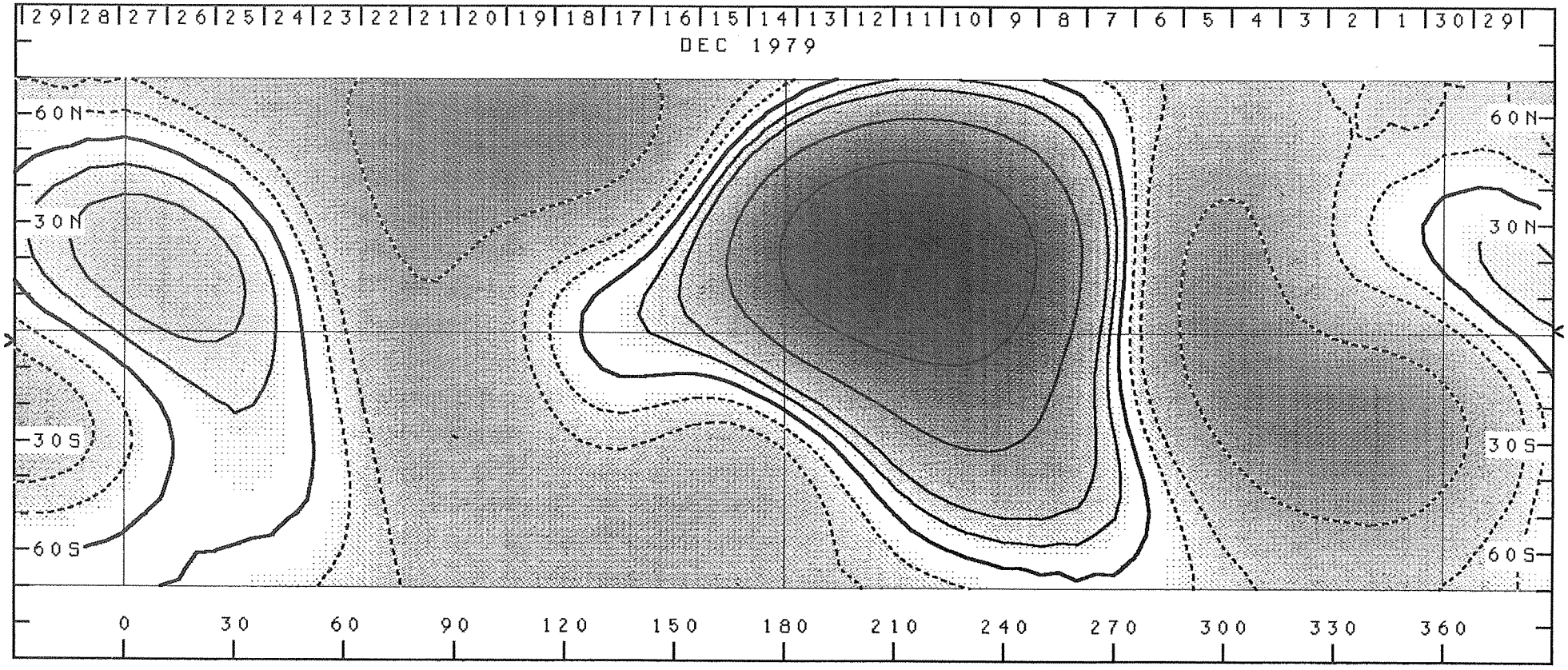
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

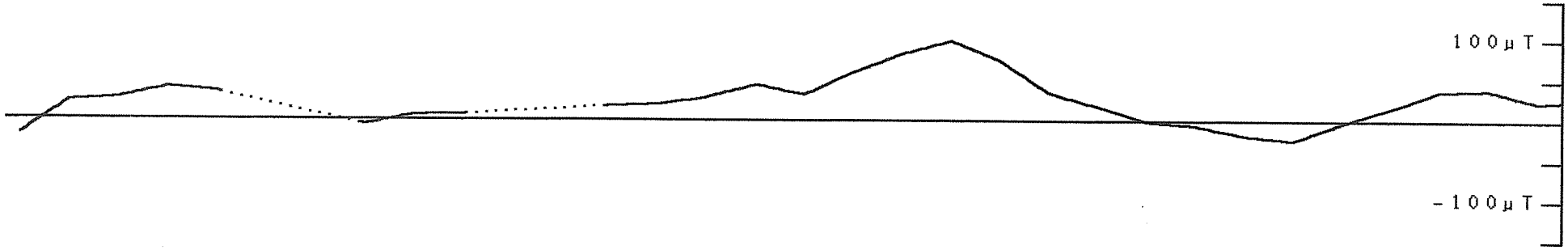
0, ±1, 2, 5, 10, 20 MICROTESLA



1689

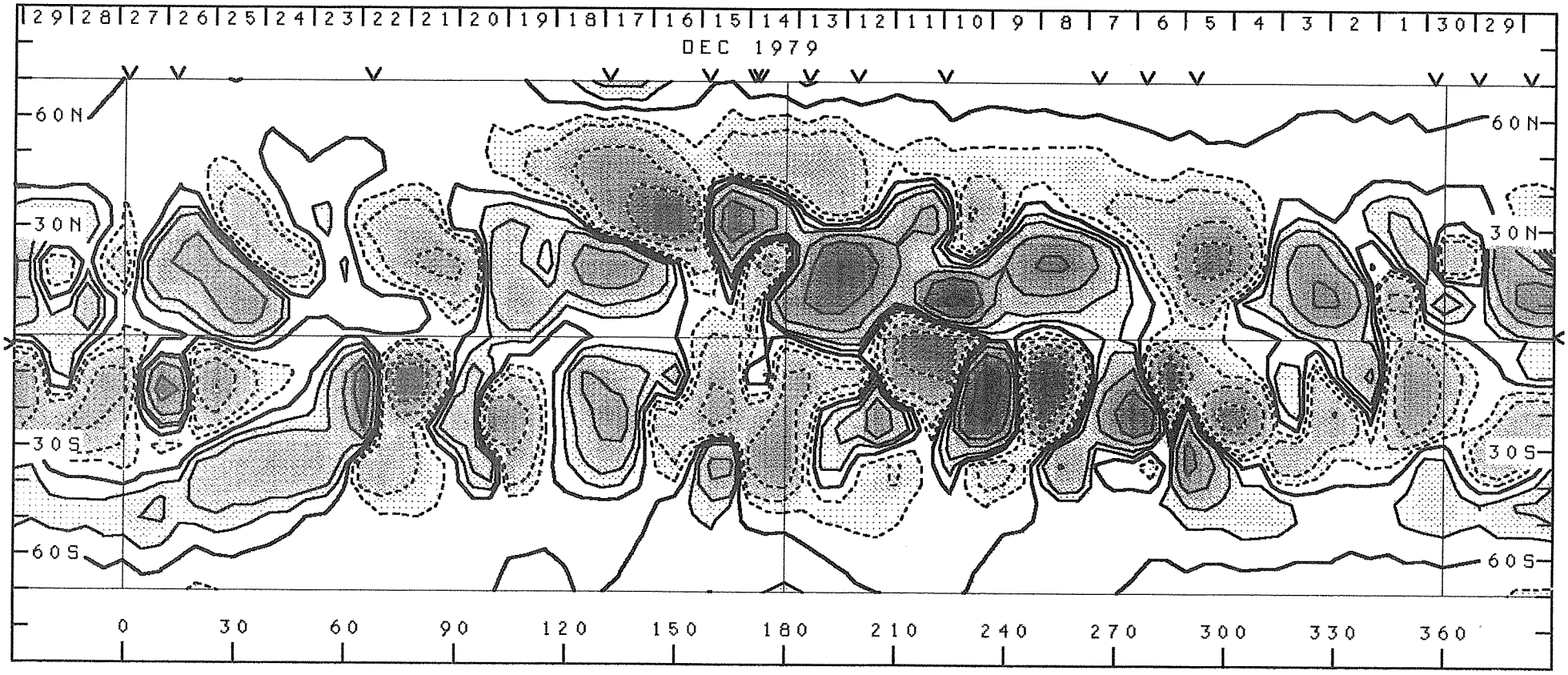
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

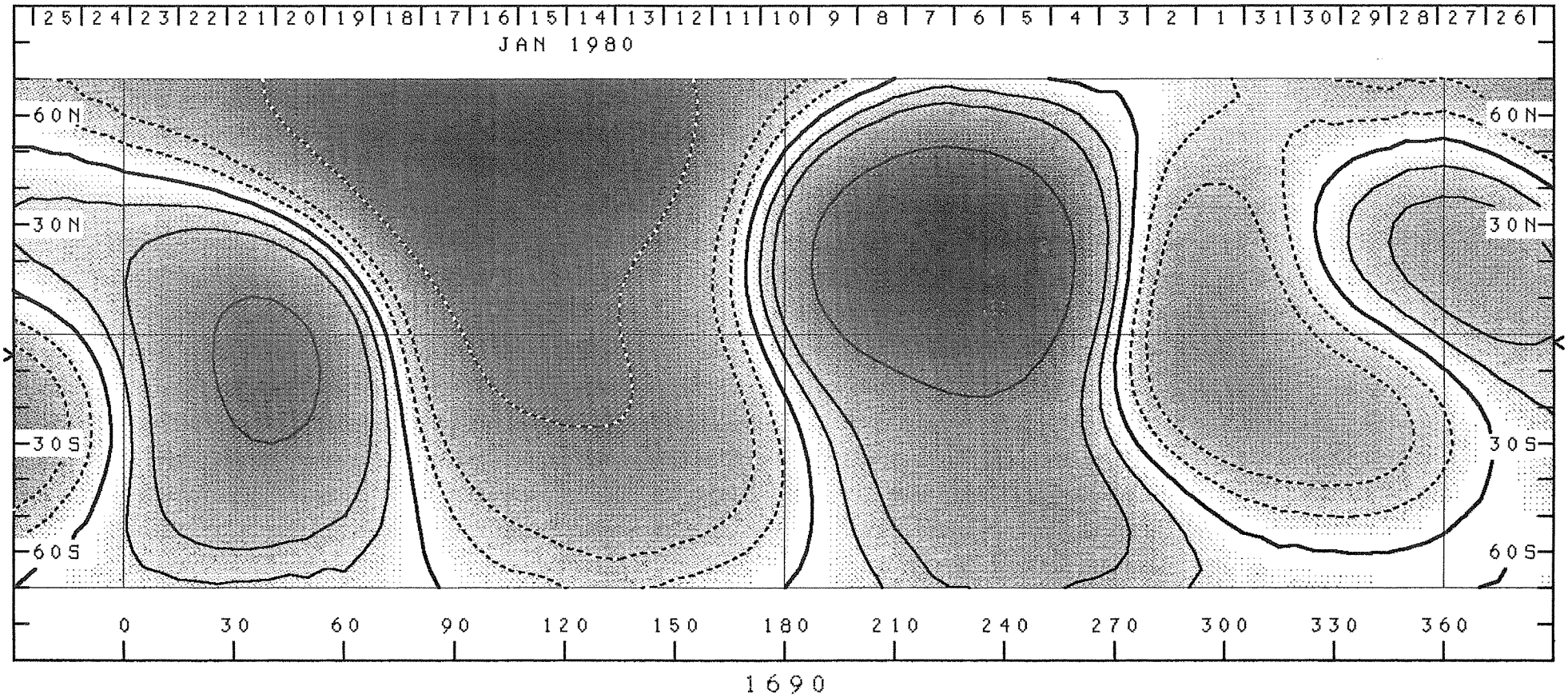
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

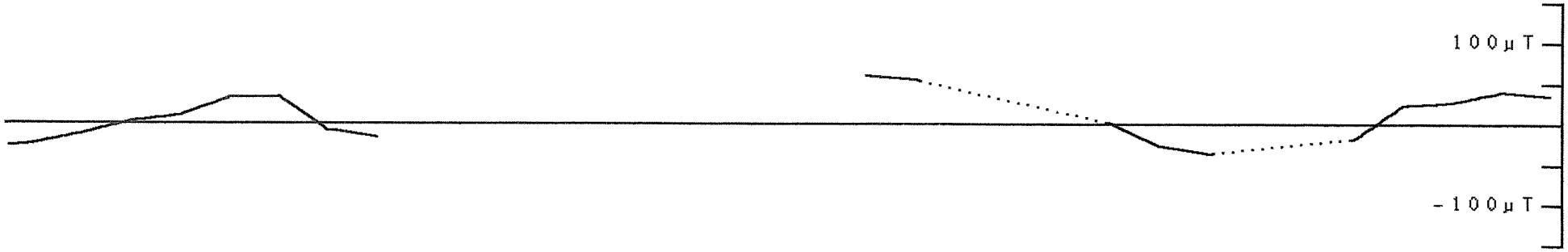
0, ±1, 2, 5, 10, 20 MICROTESLA



1690

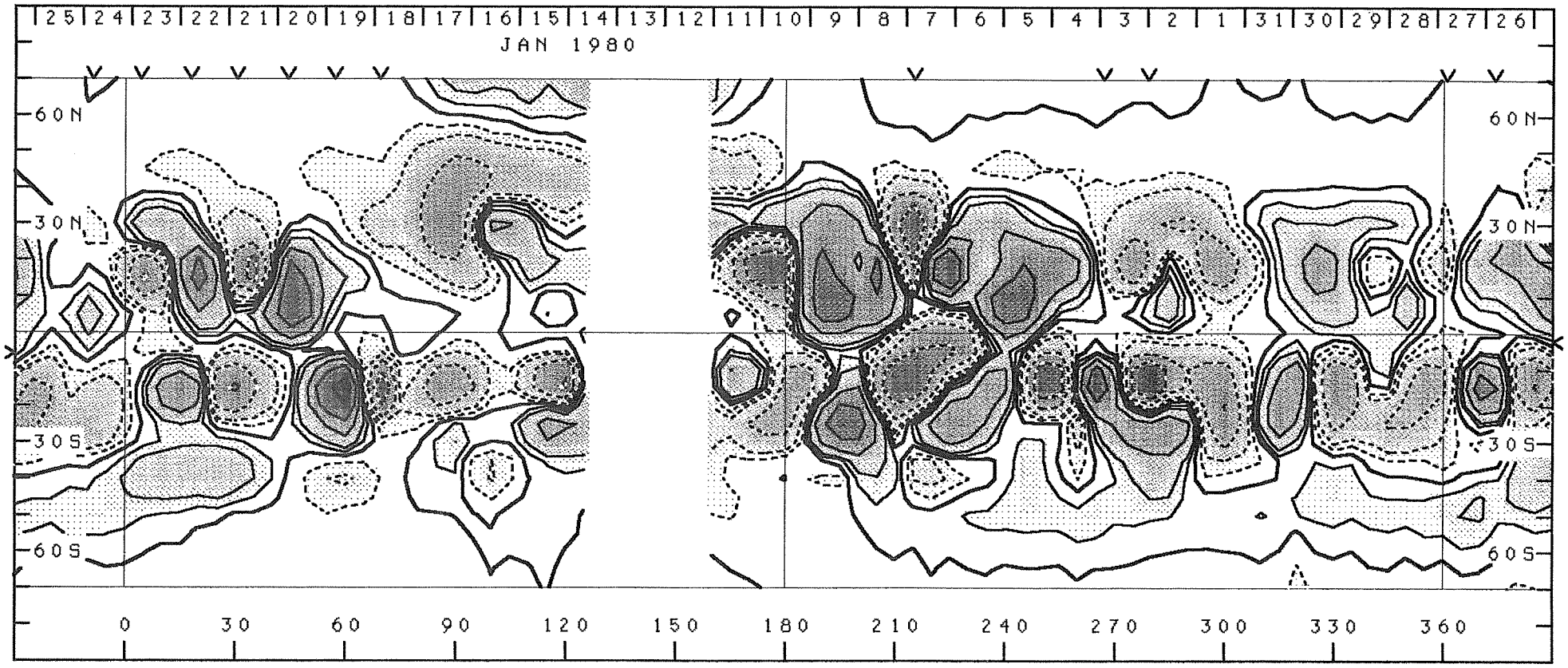
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

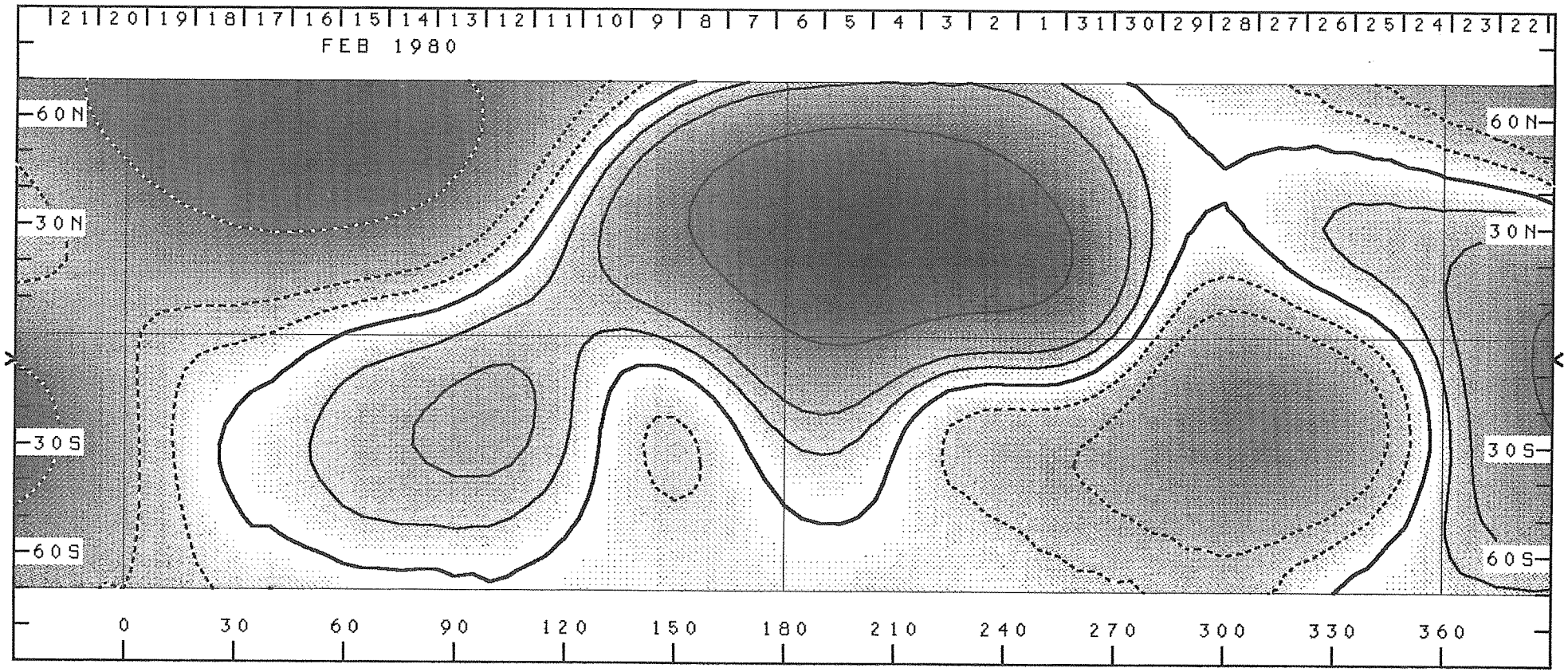
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

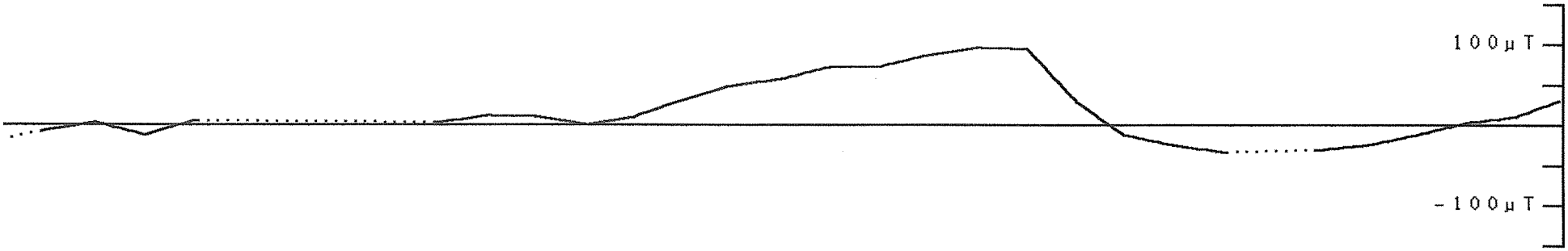
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



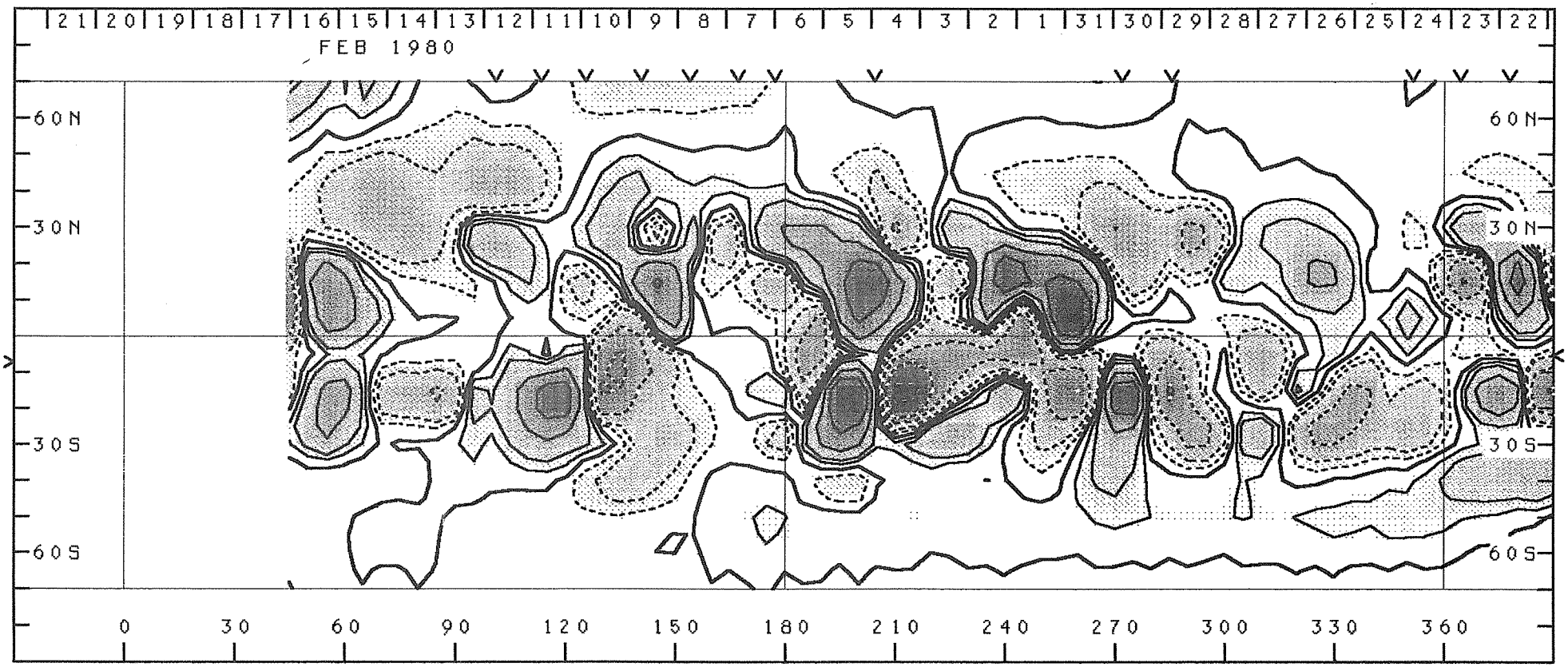
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

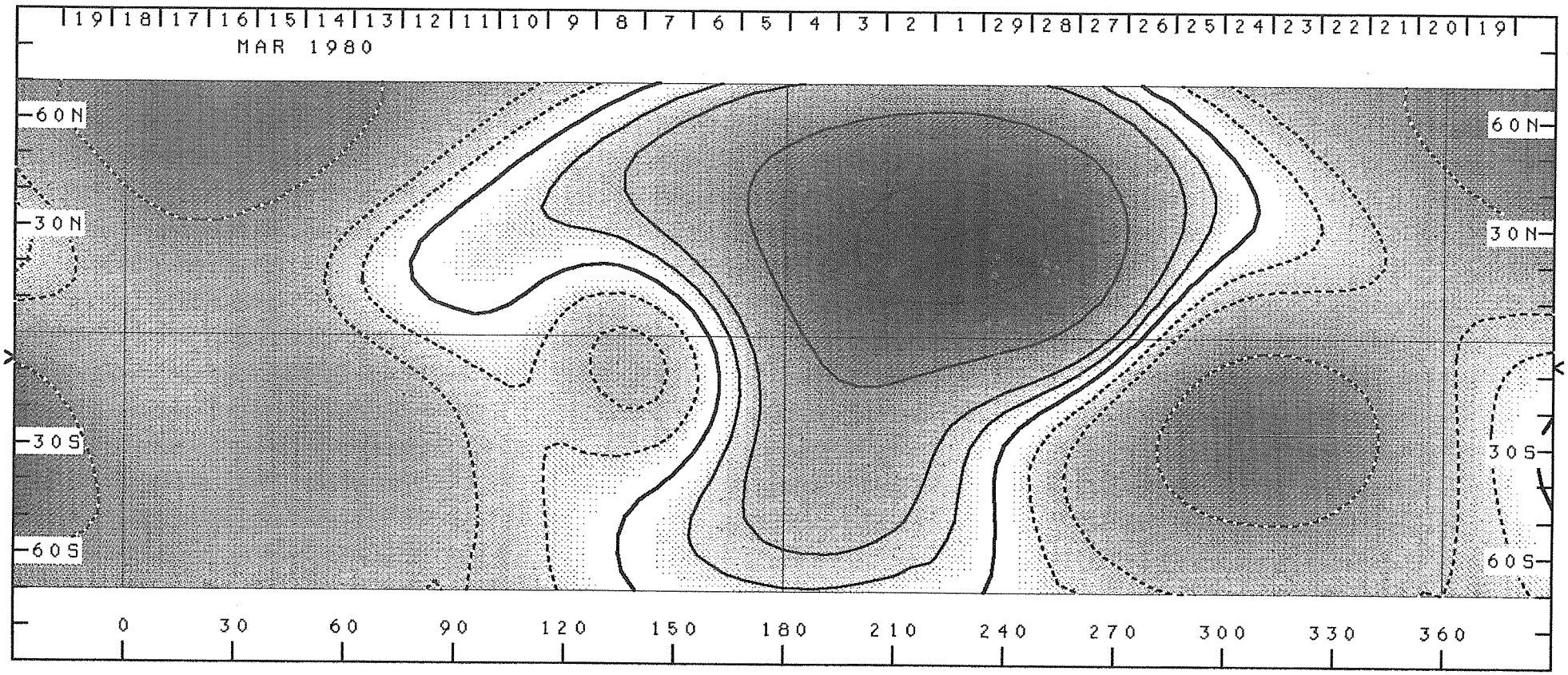
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

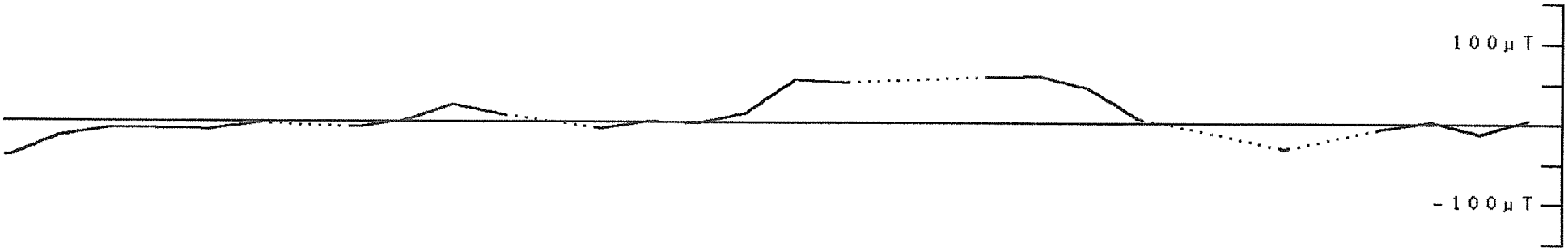
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



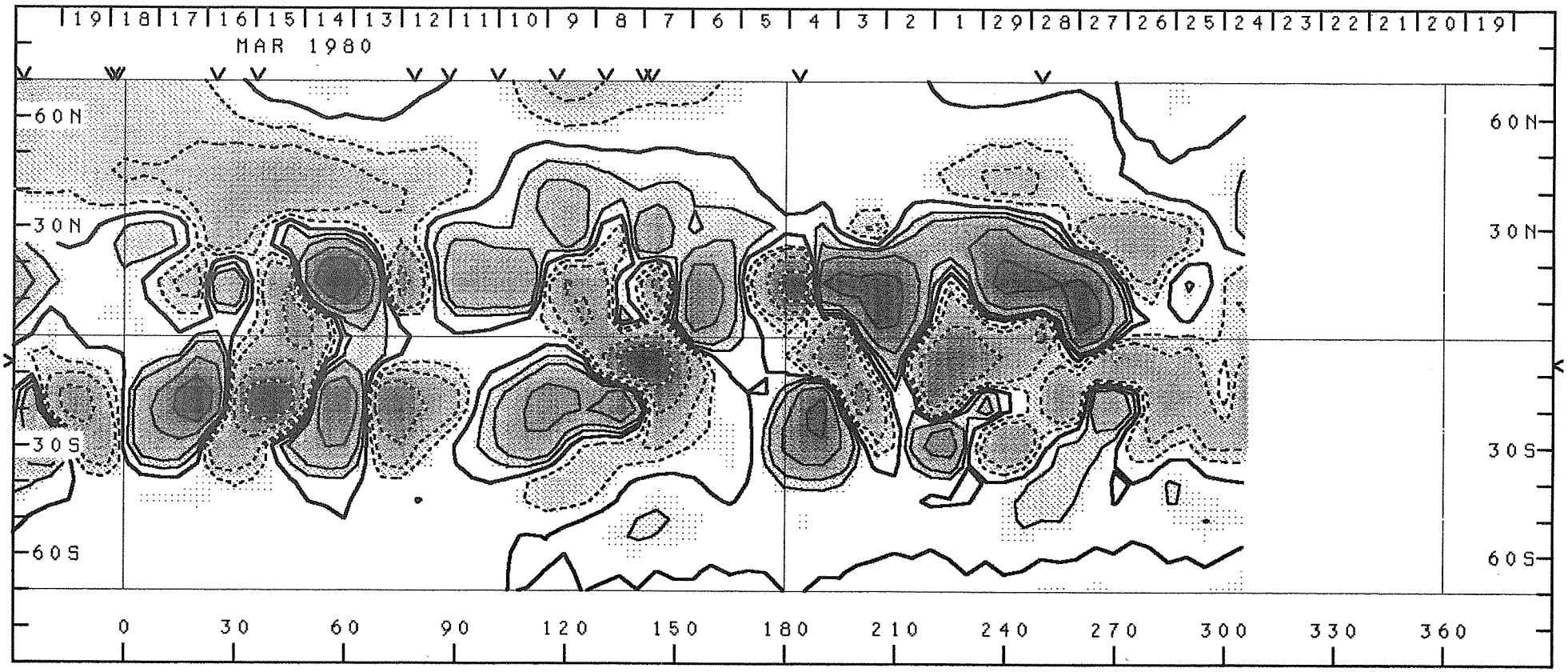
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

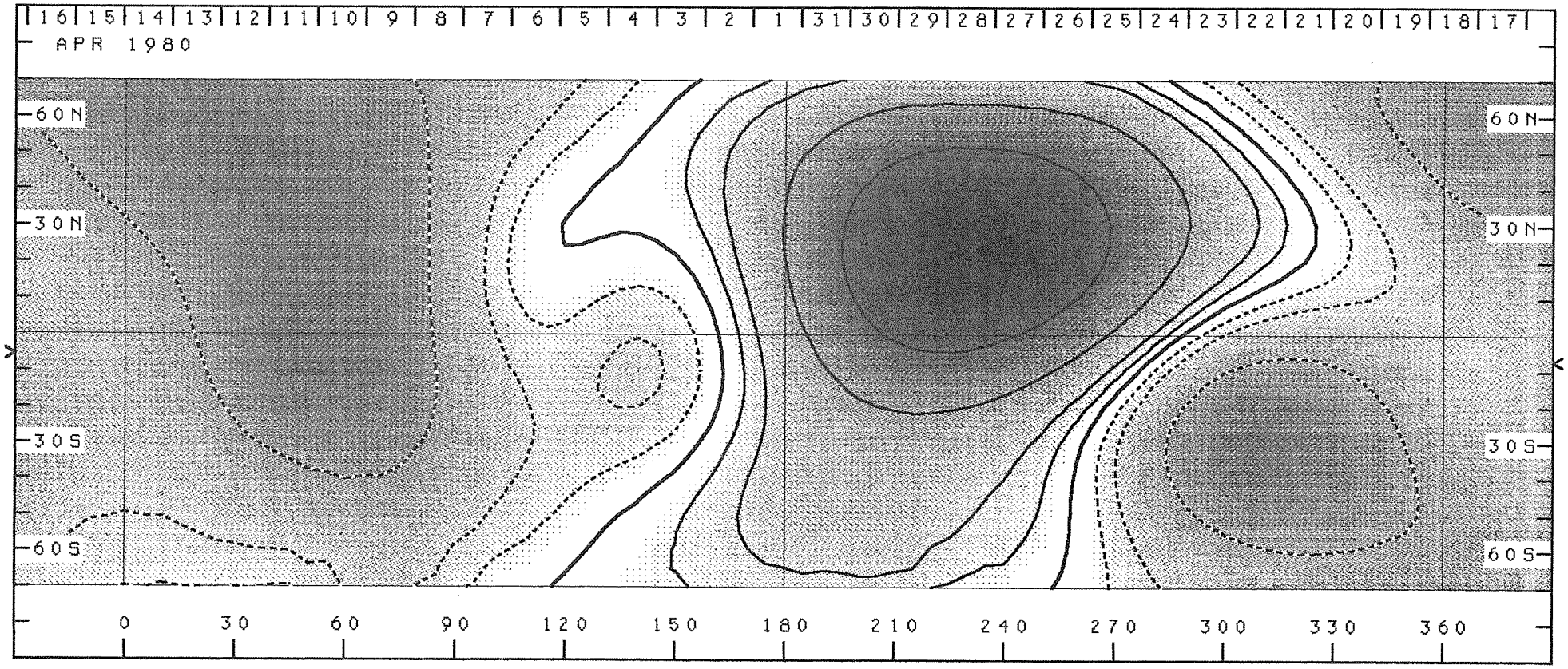
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5; 10, 20 MICROTESLA



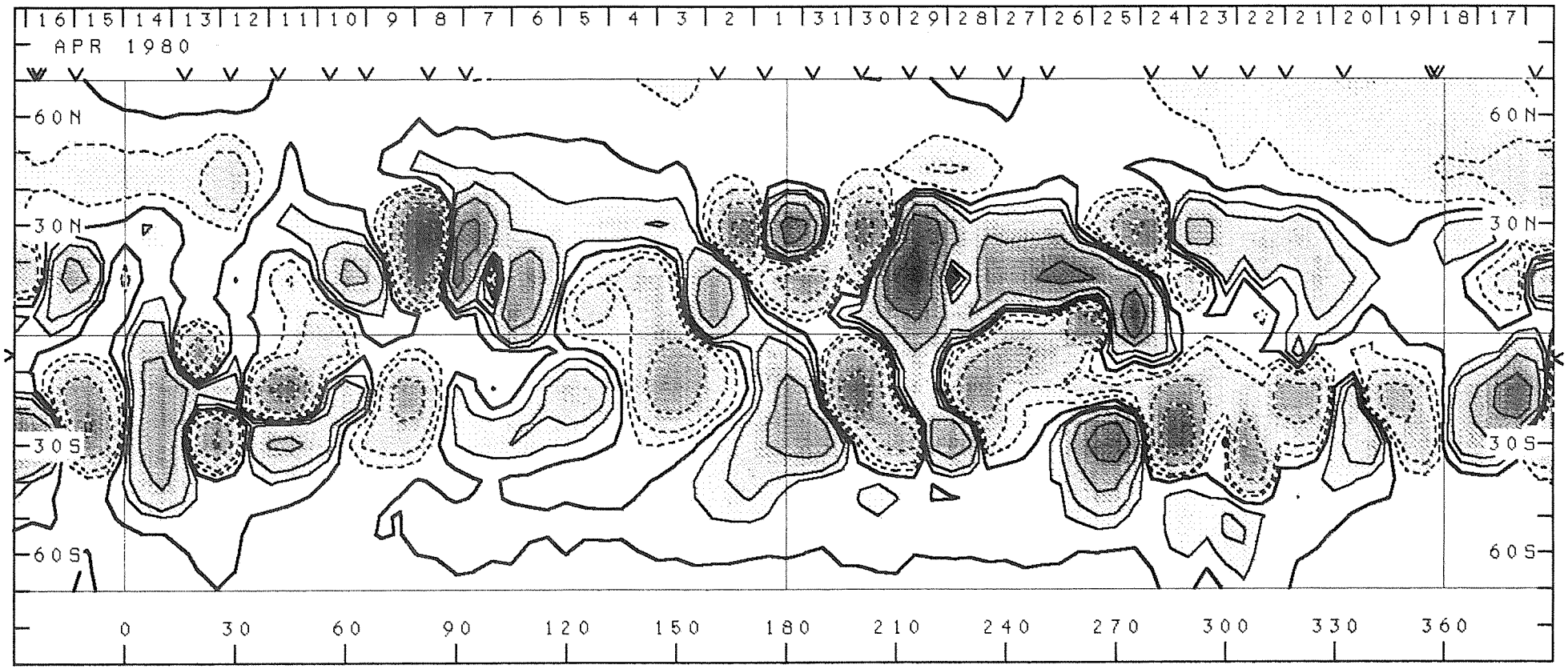
1693

WILCOX SOLAR OBSERVATORY

MEAN FIELD

PHOTOSPHERIC MAGNETIC FIELD

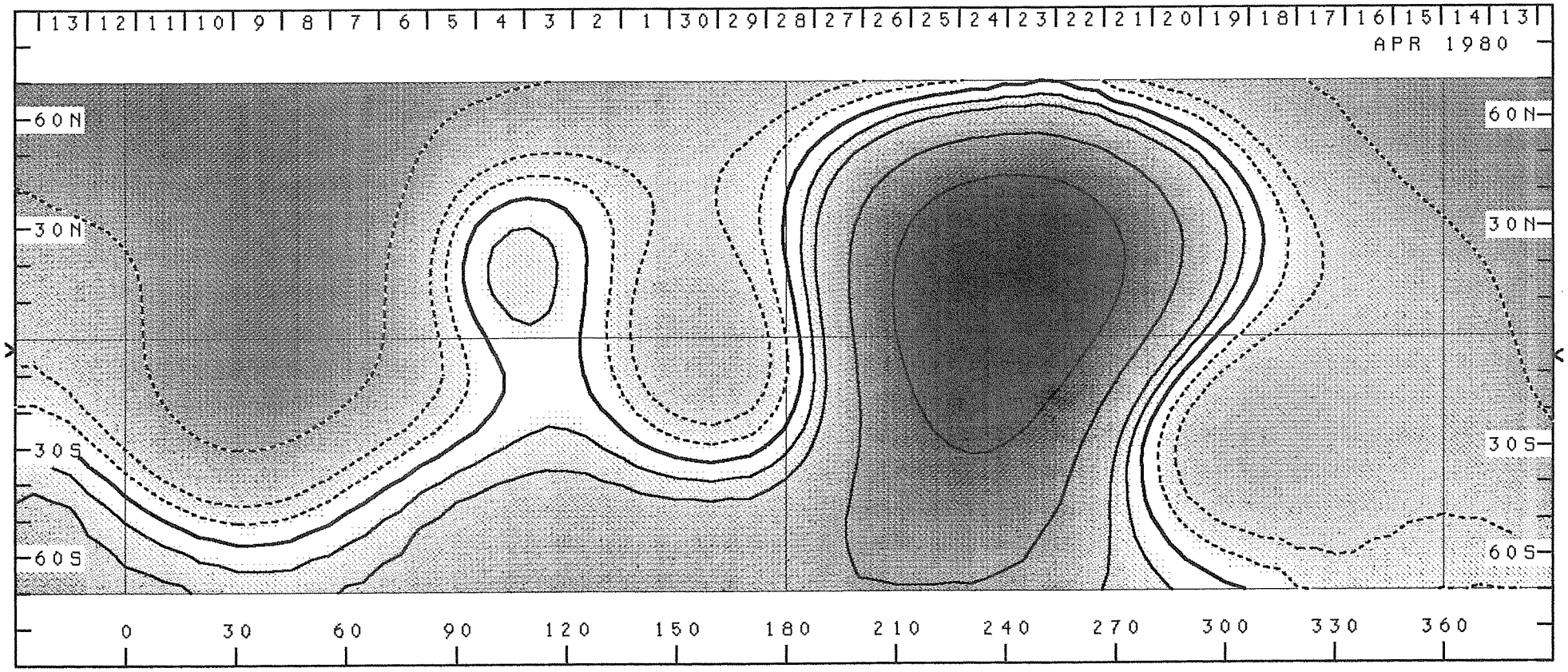
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

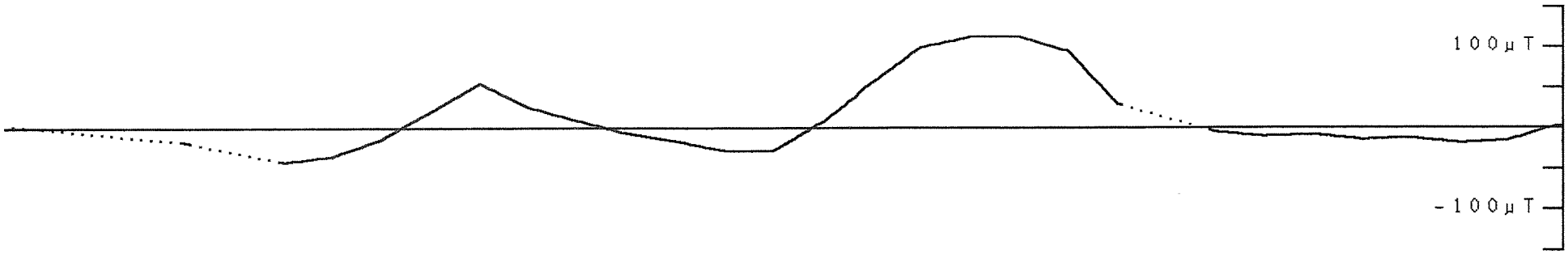
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



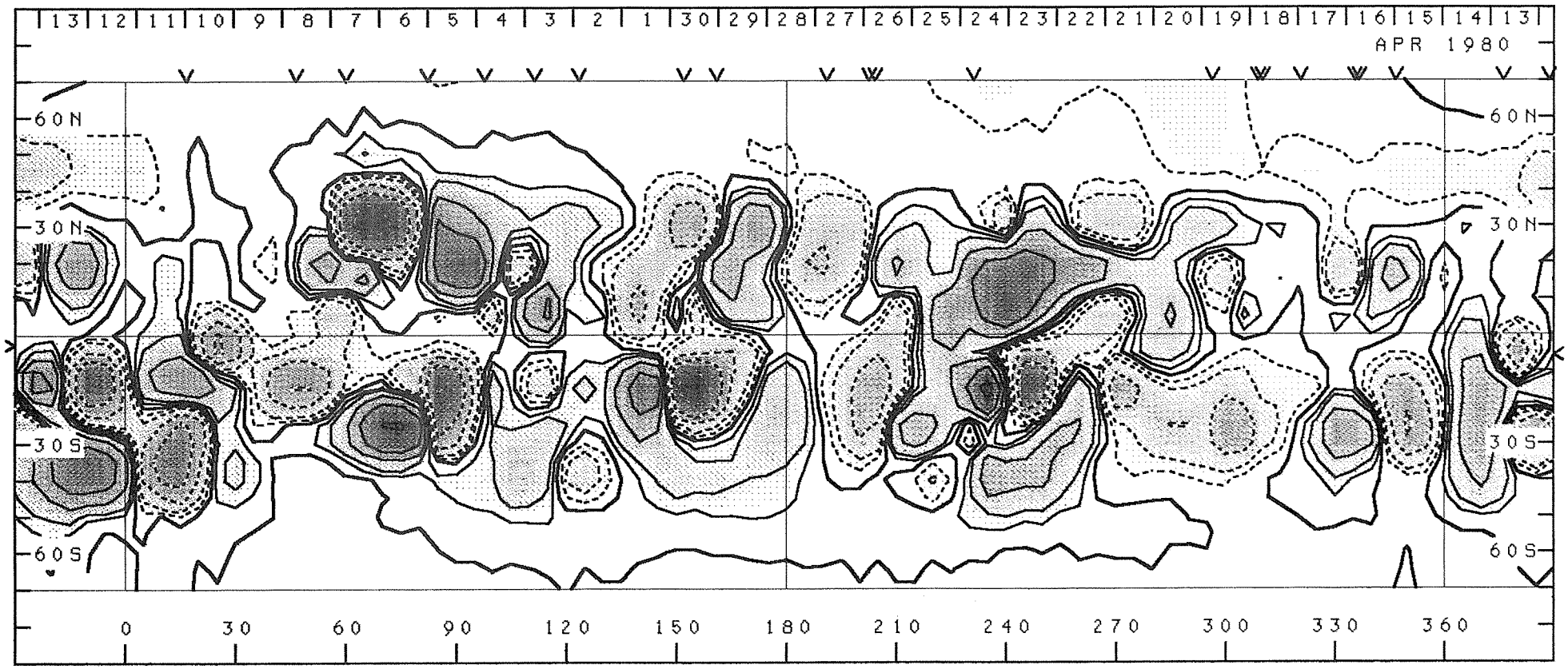
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

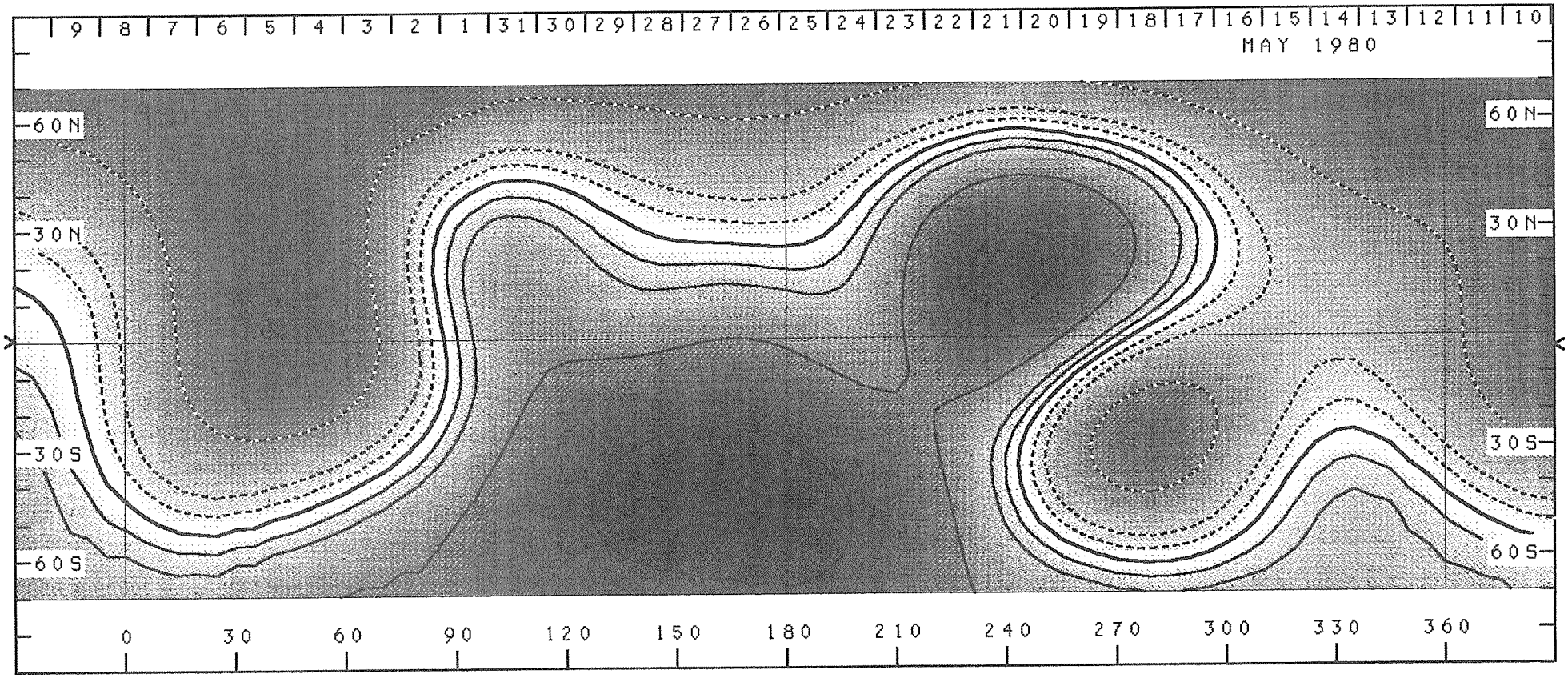
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

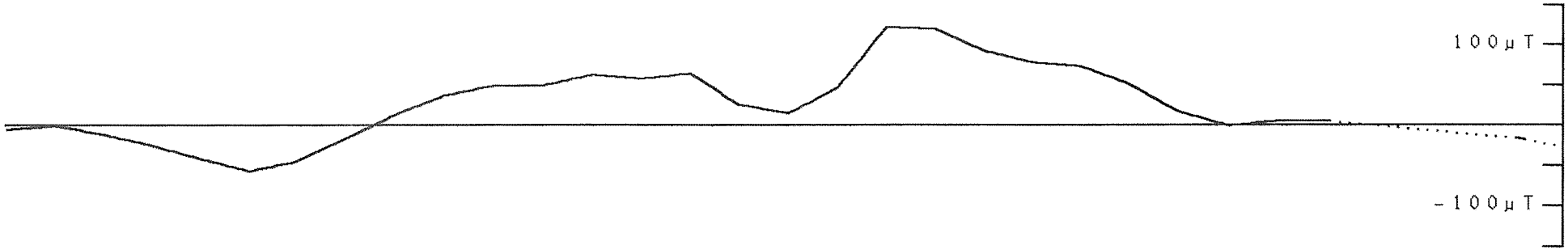
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



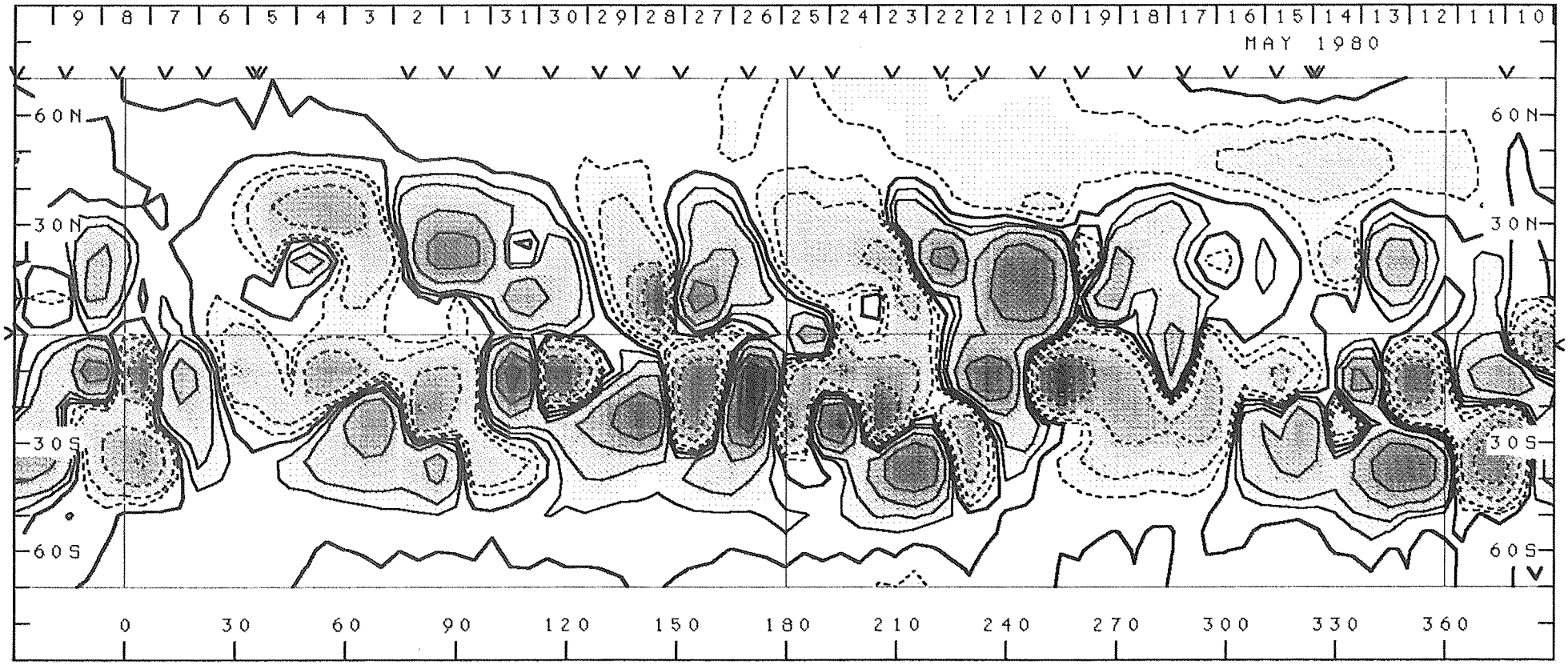
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

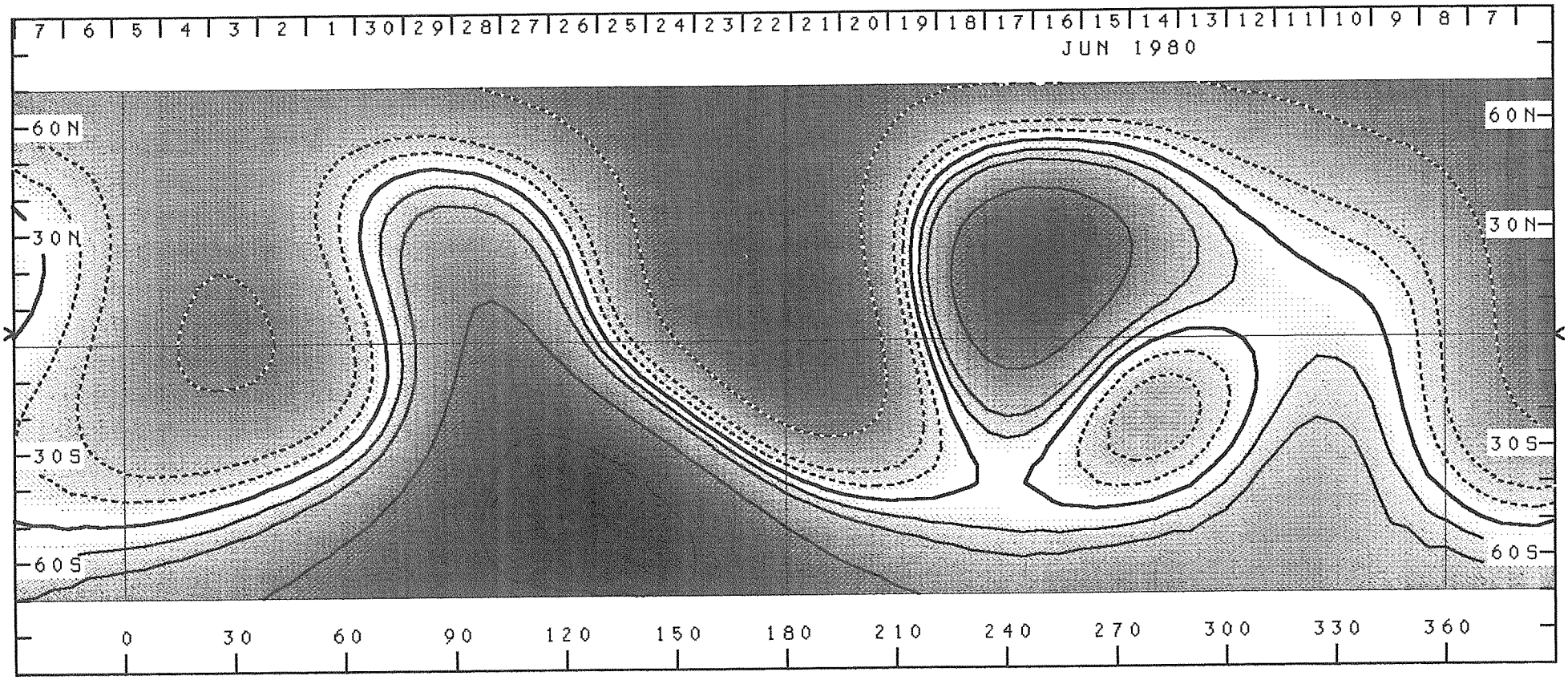
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

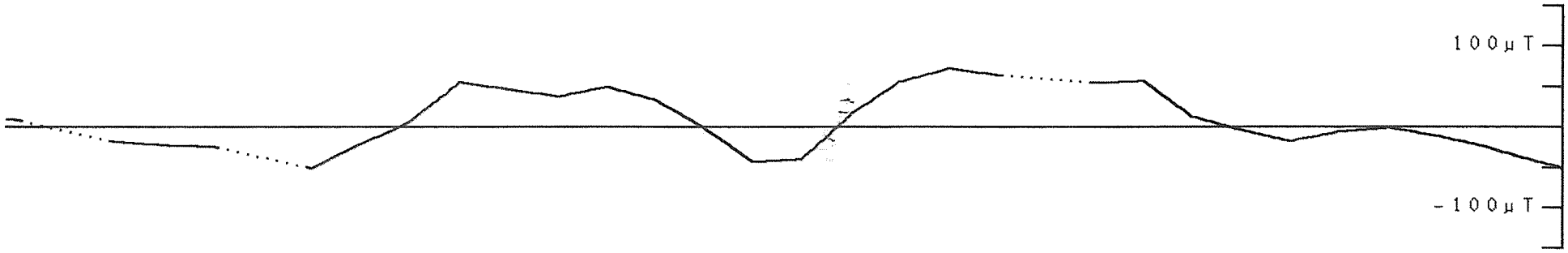
0, ±1, 2, 5, 10, 20 MICROTESLA



1696

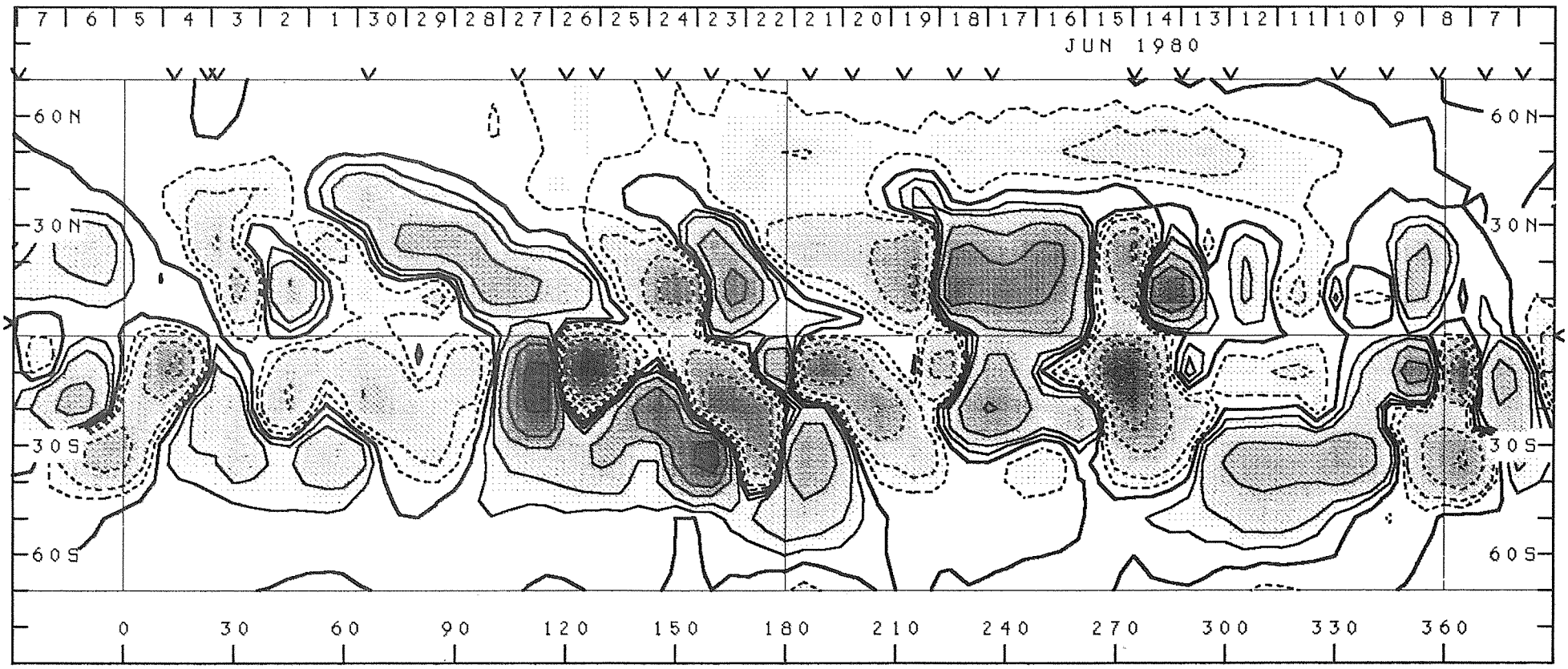
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

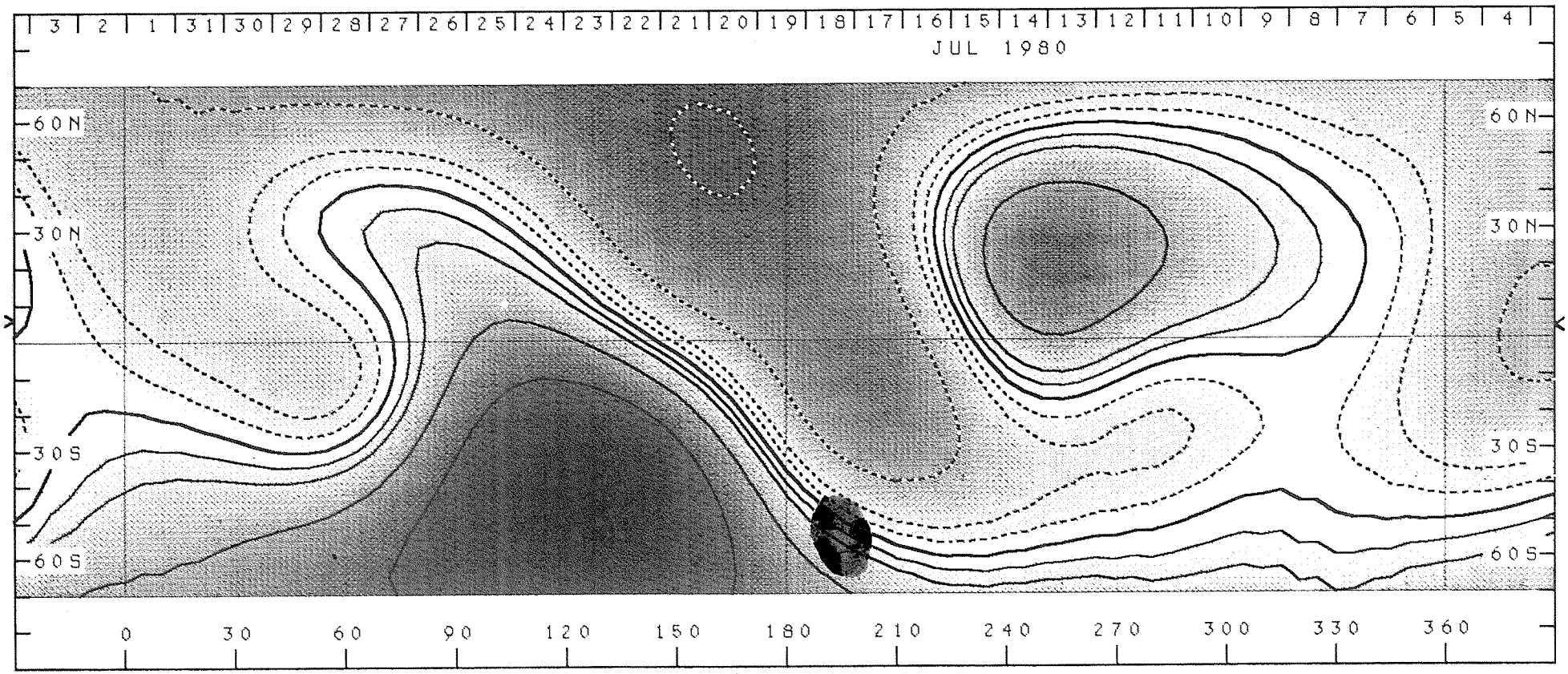
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

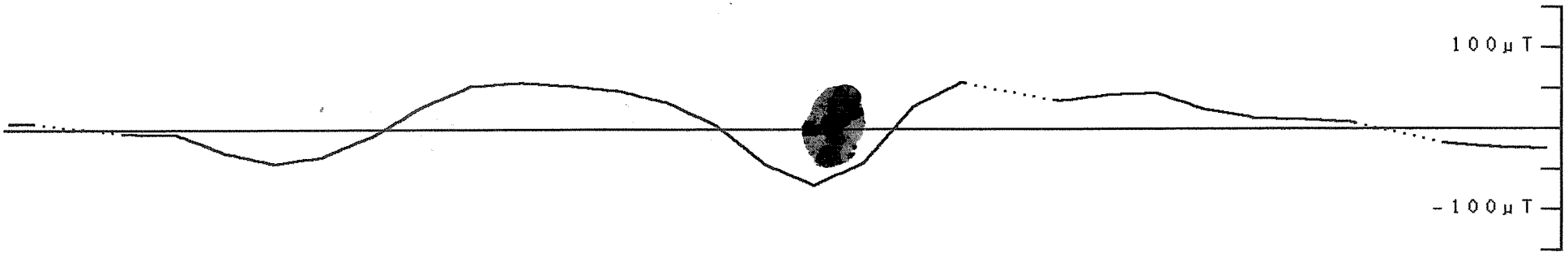
0, ±1, 2, 5, 10, 20 MICROTESLA



1697

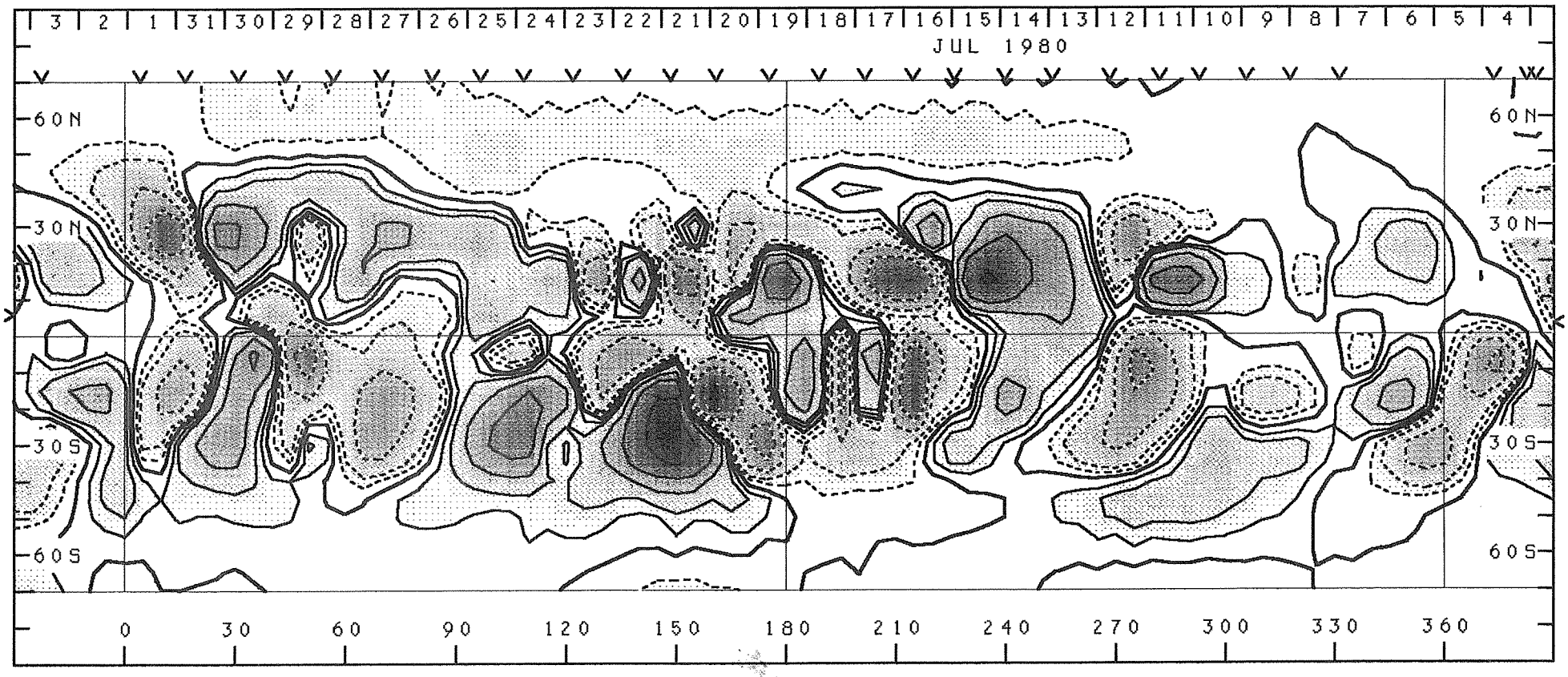
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

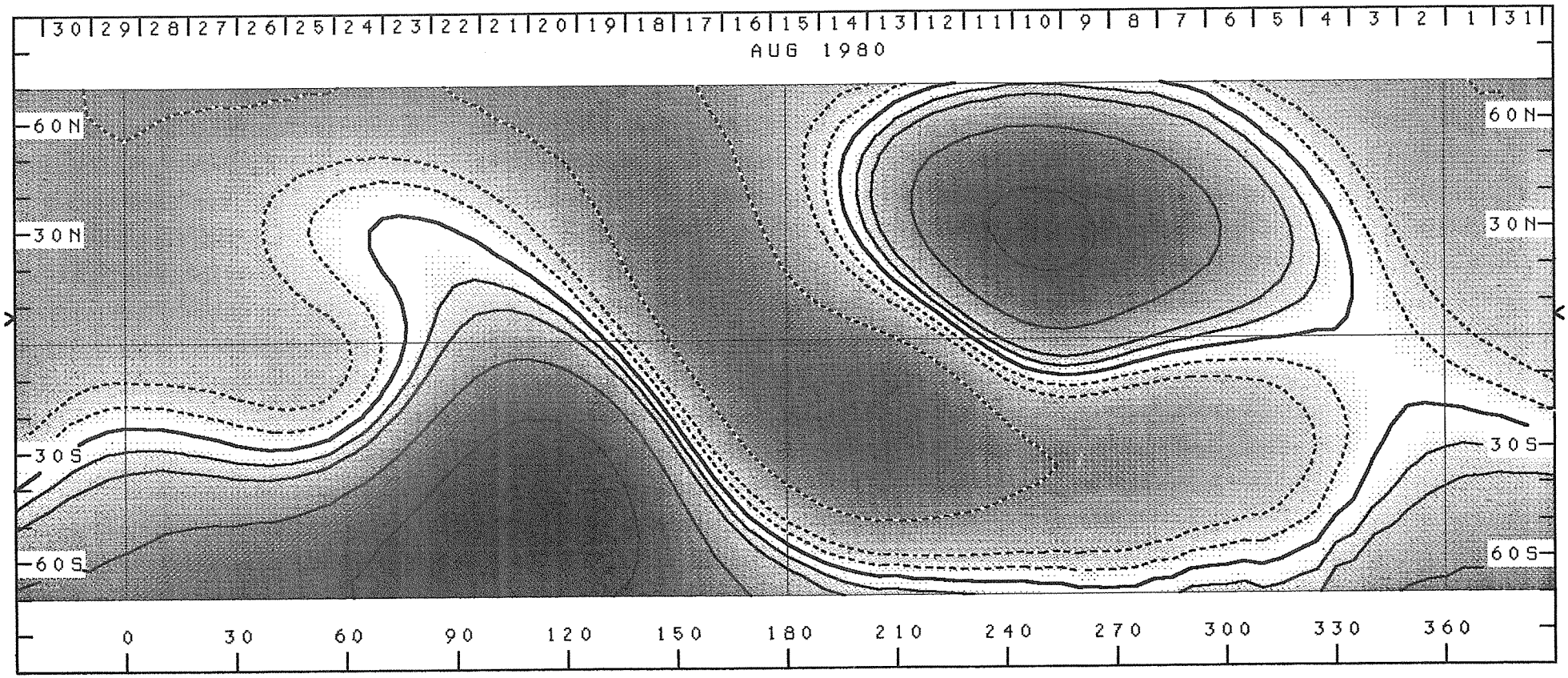
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

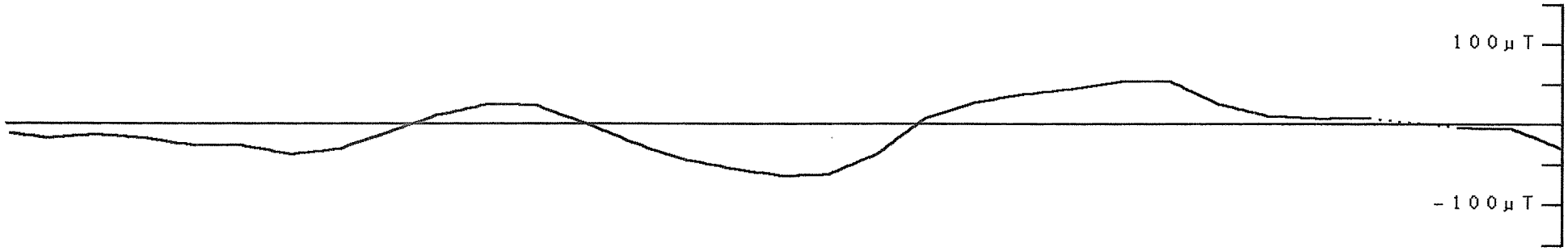
0, ±1, 2, 5, 10, 20 MICROTESLA



1698

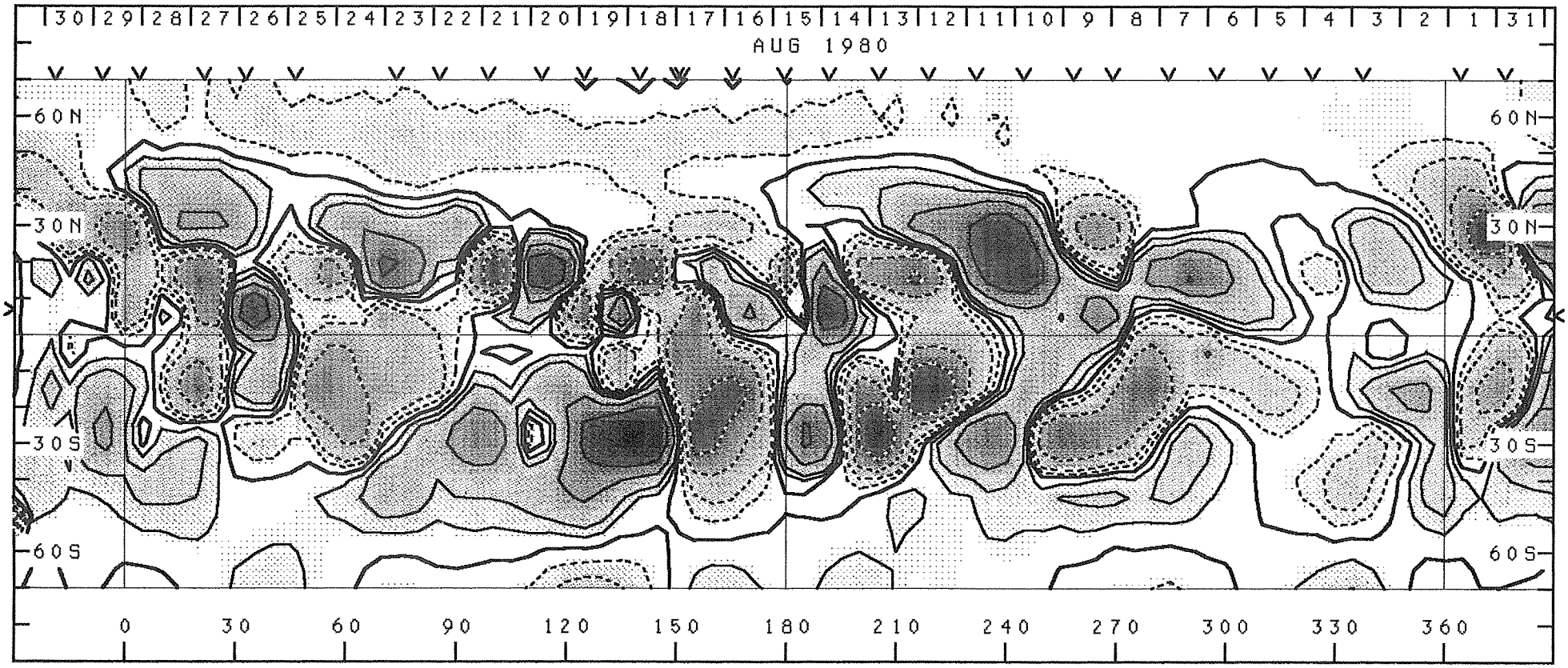
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

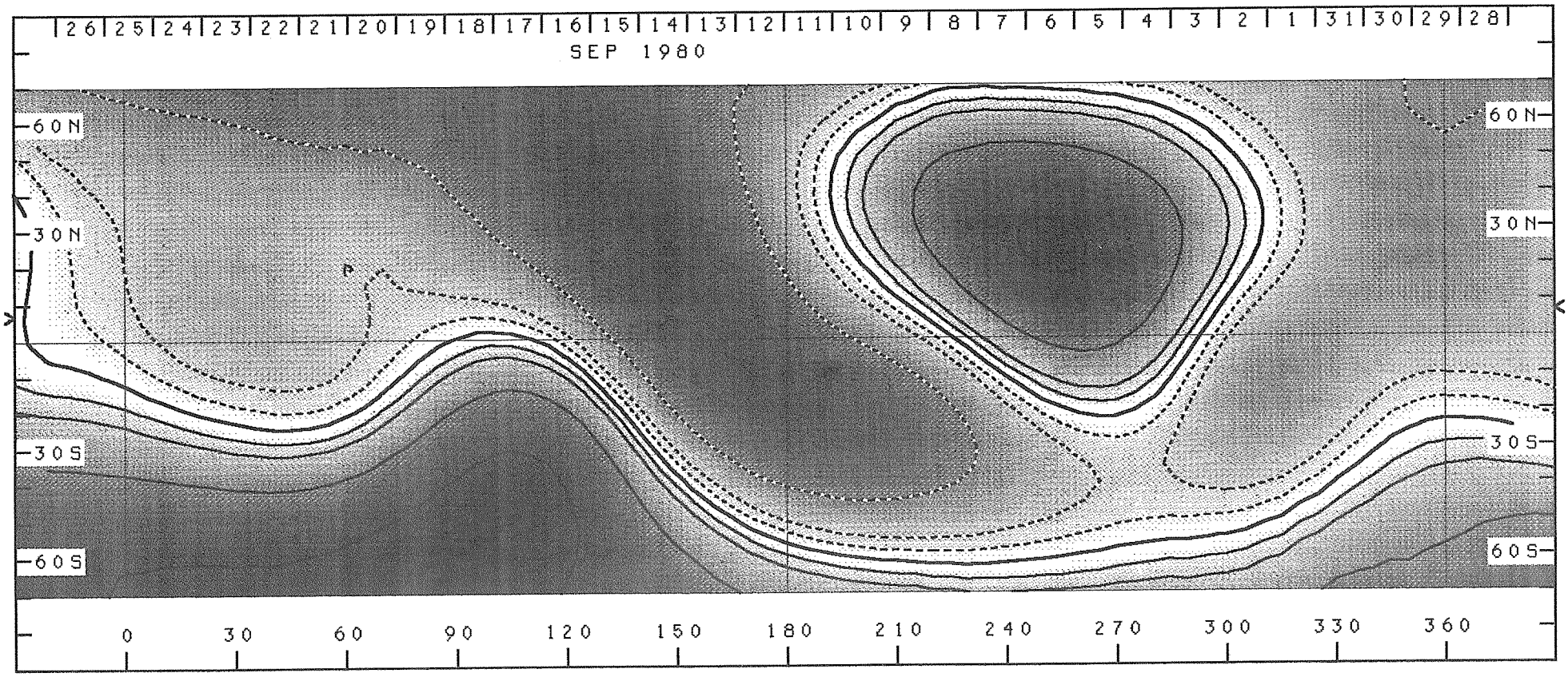
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

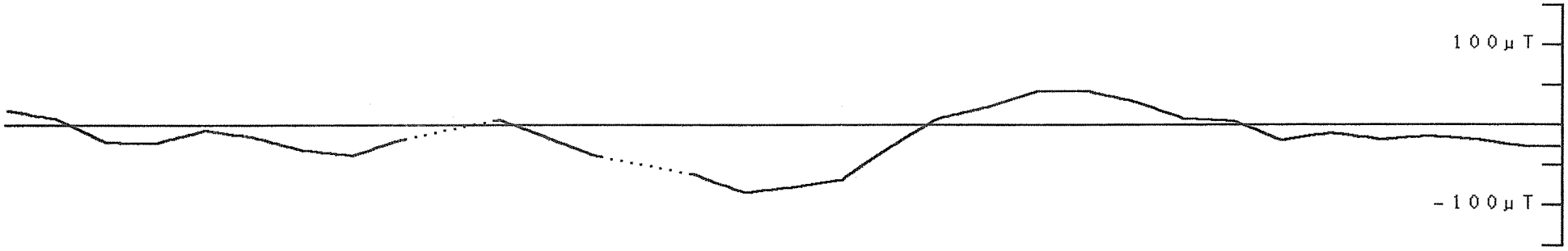
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



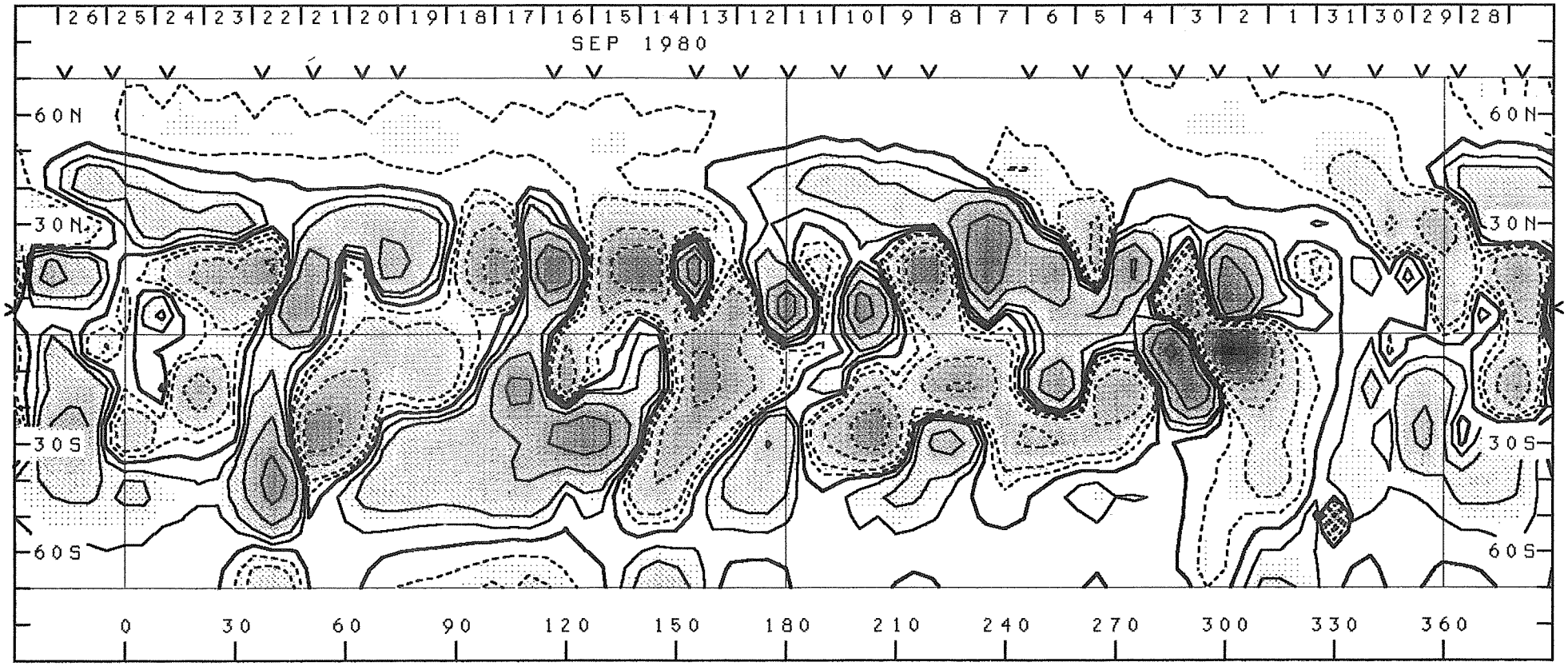
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

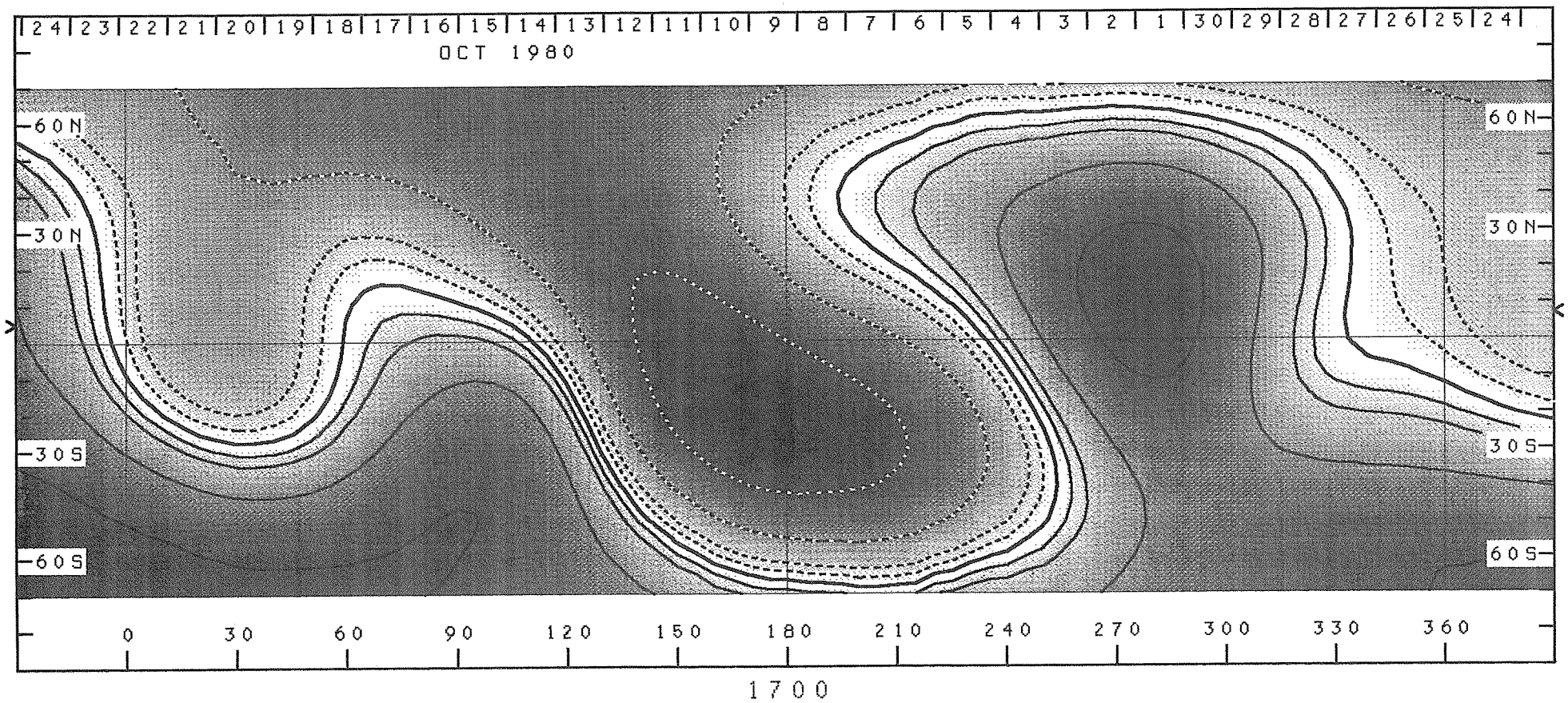
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

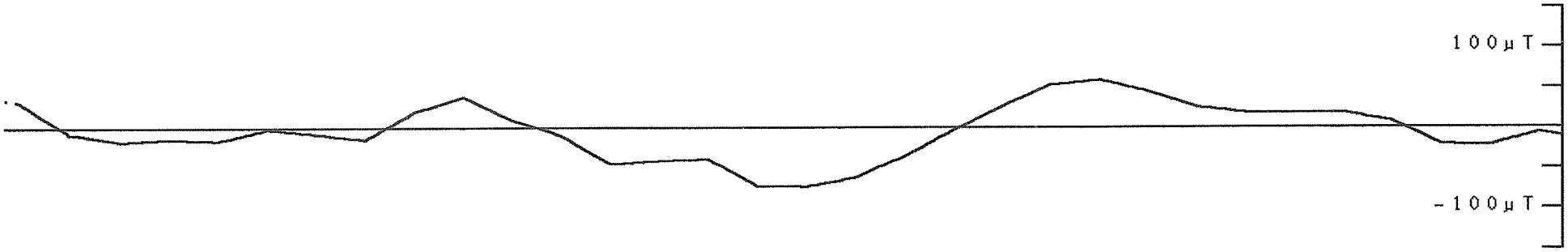
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



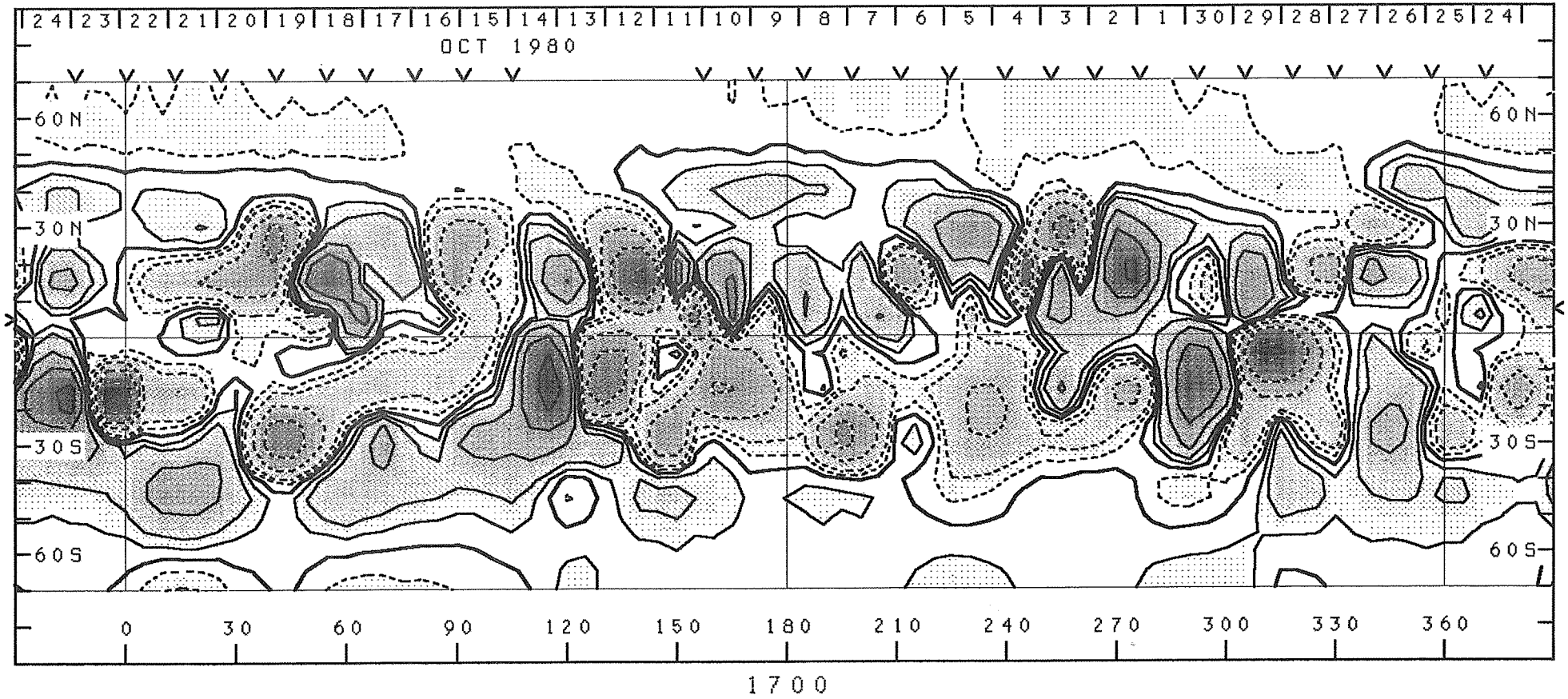
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

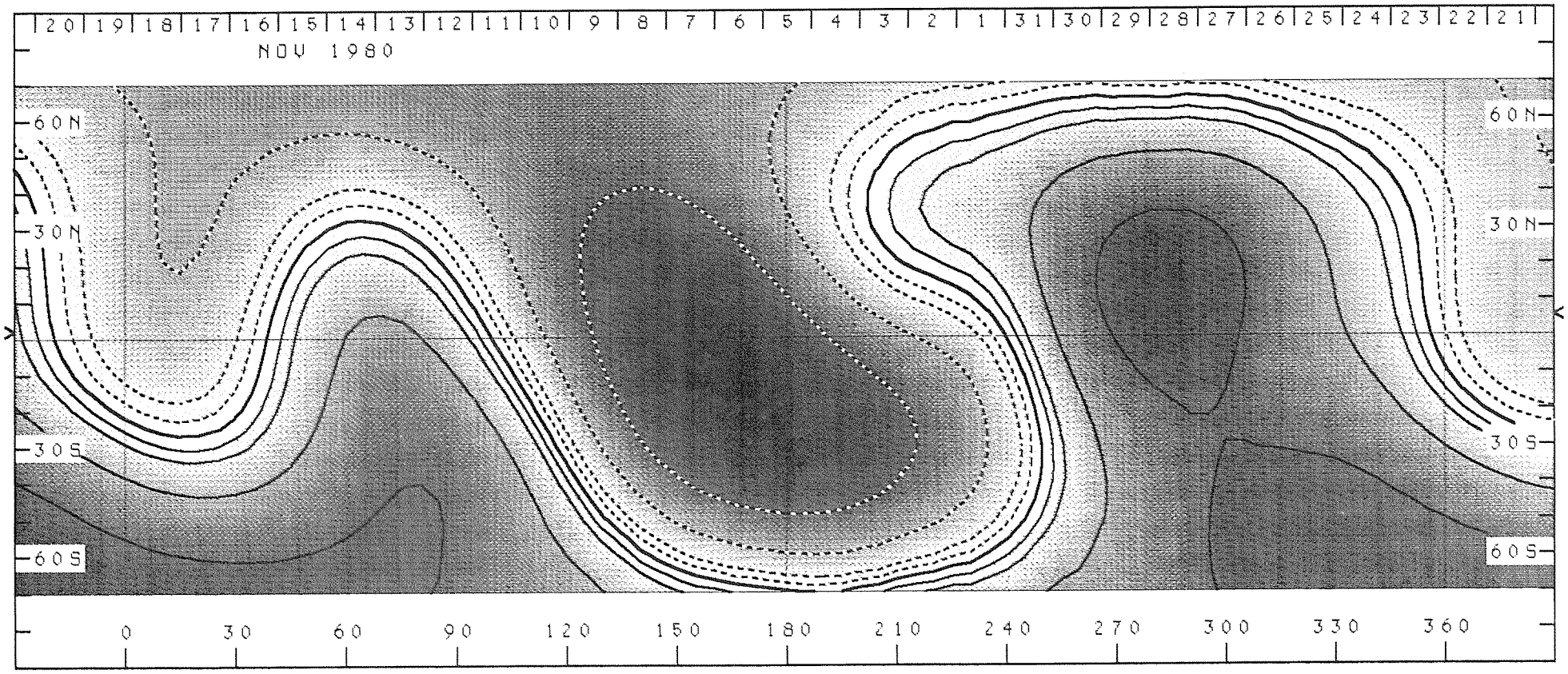
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

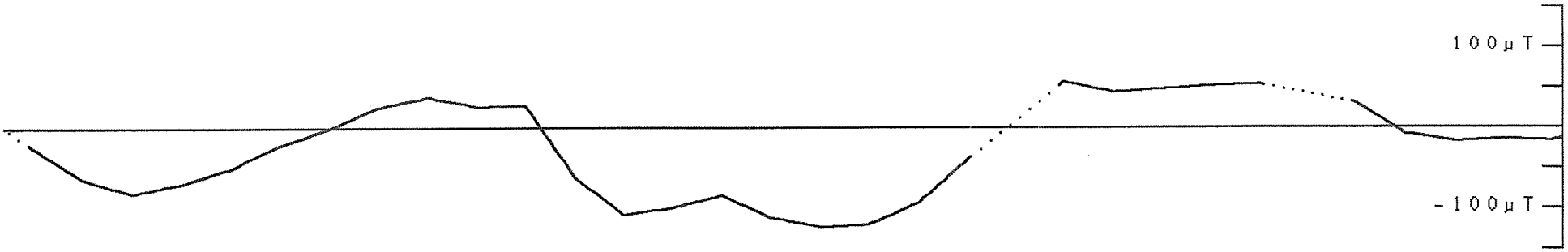
0, ±1, 2, 5, 10, 20 MICROTESLA



1701

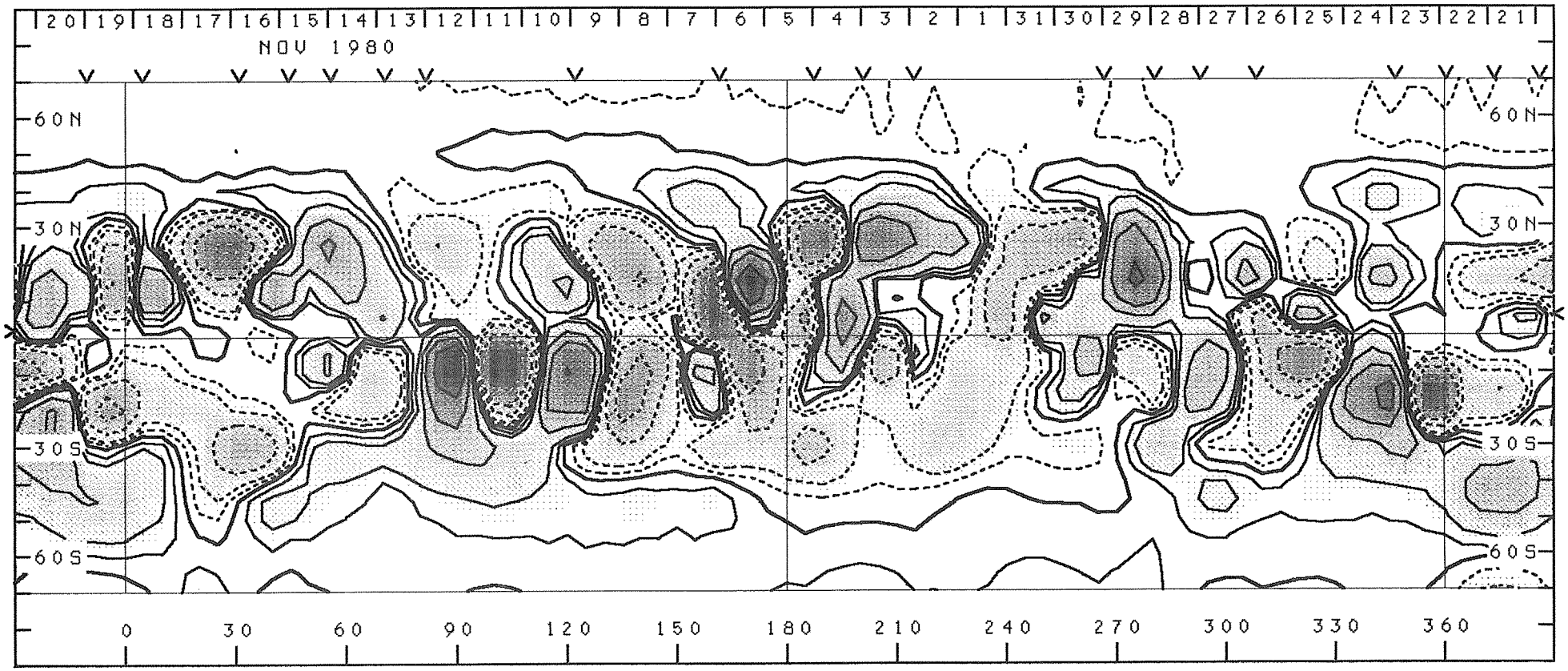
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

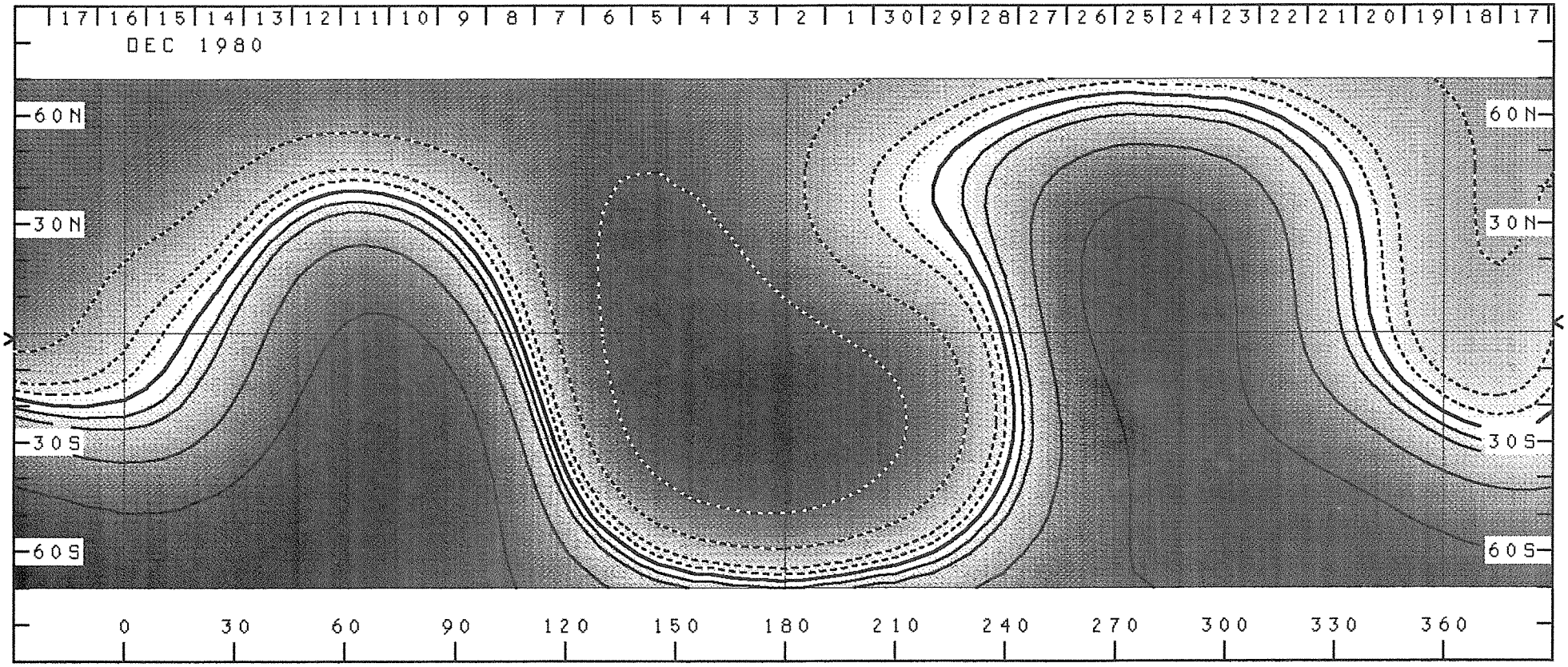
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

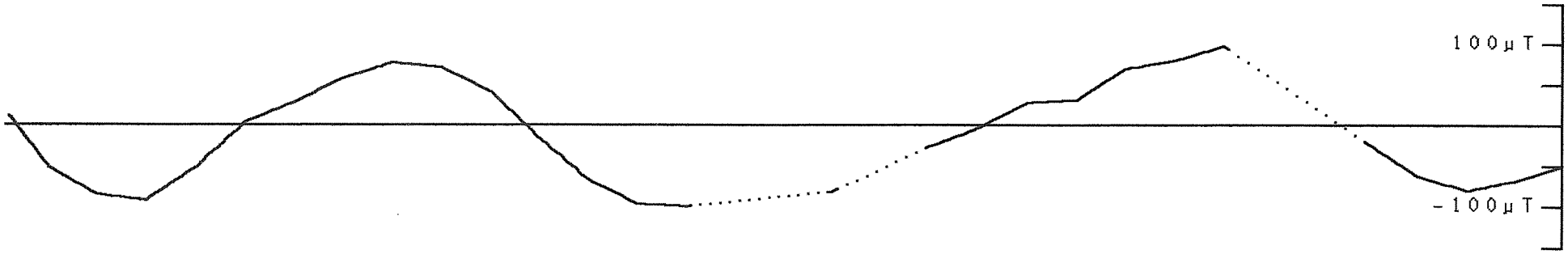
0, ±1, 2, 5, 10, 20 MICROTESLA



1702

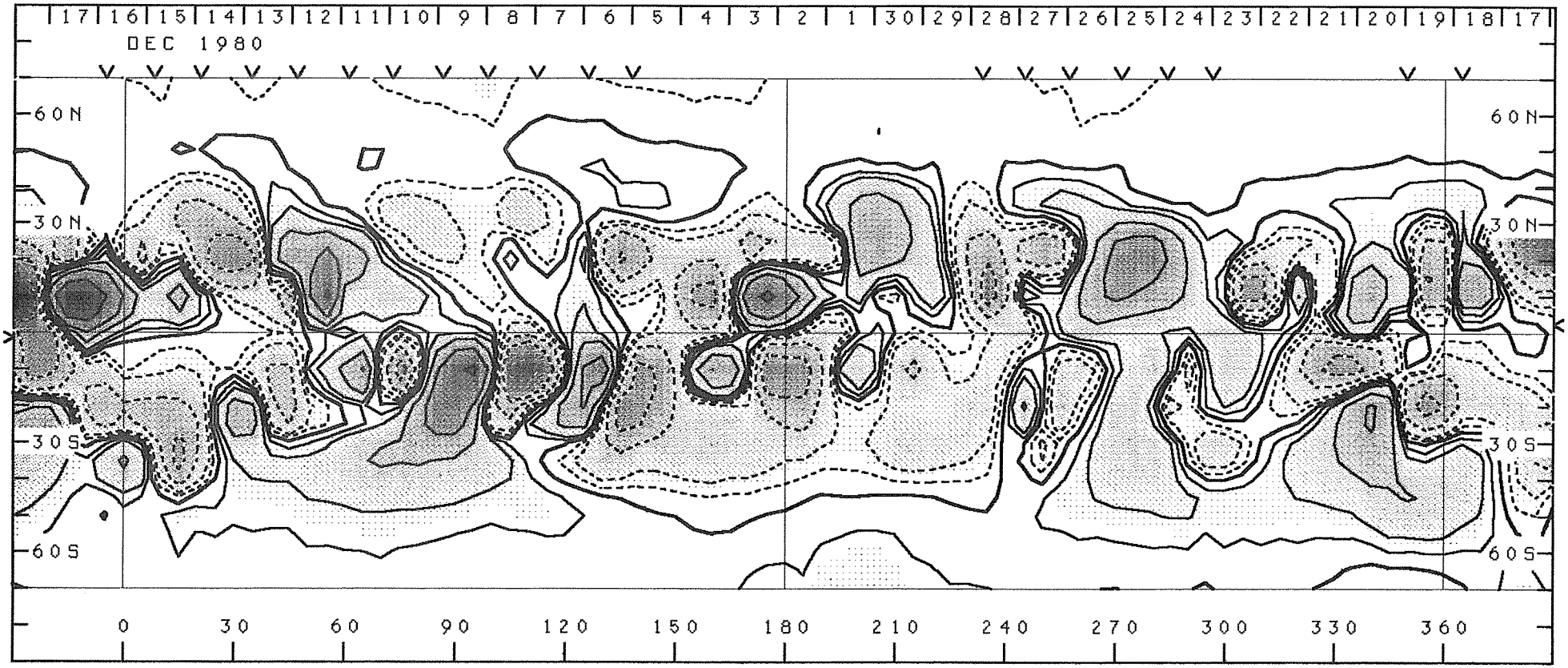
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

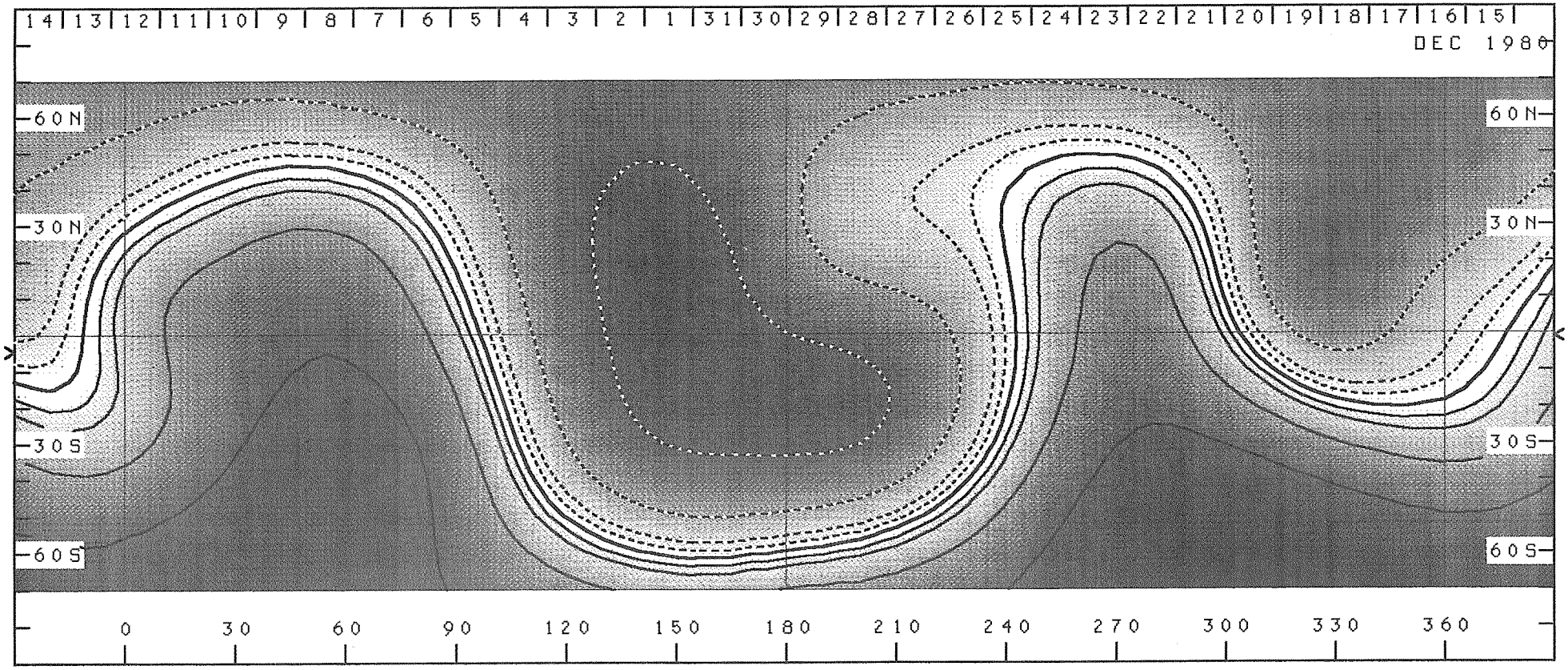
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

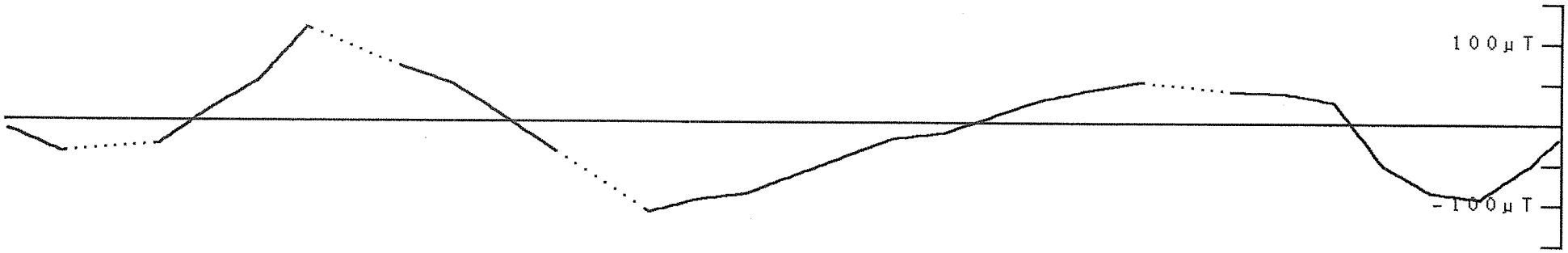
0, ±1, 2, 5, 10, 20 MICROTESLA



1703

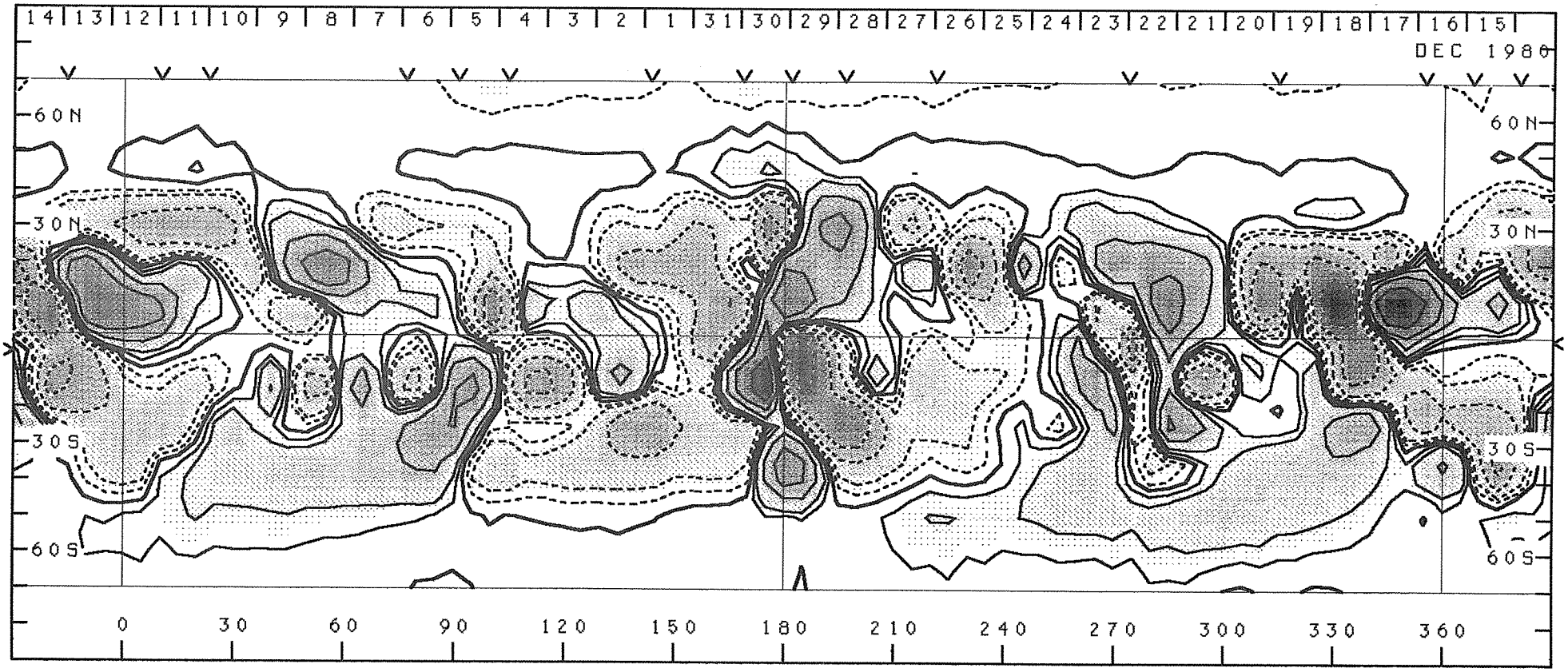
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

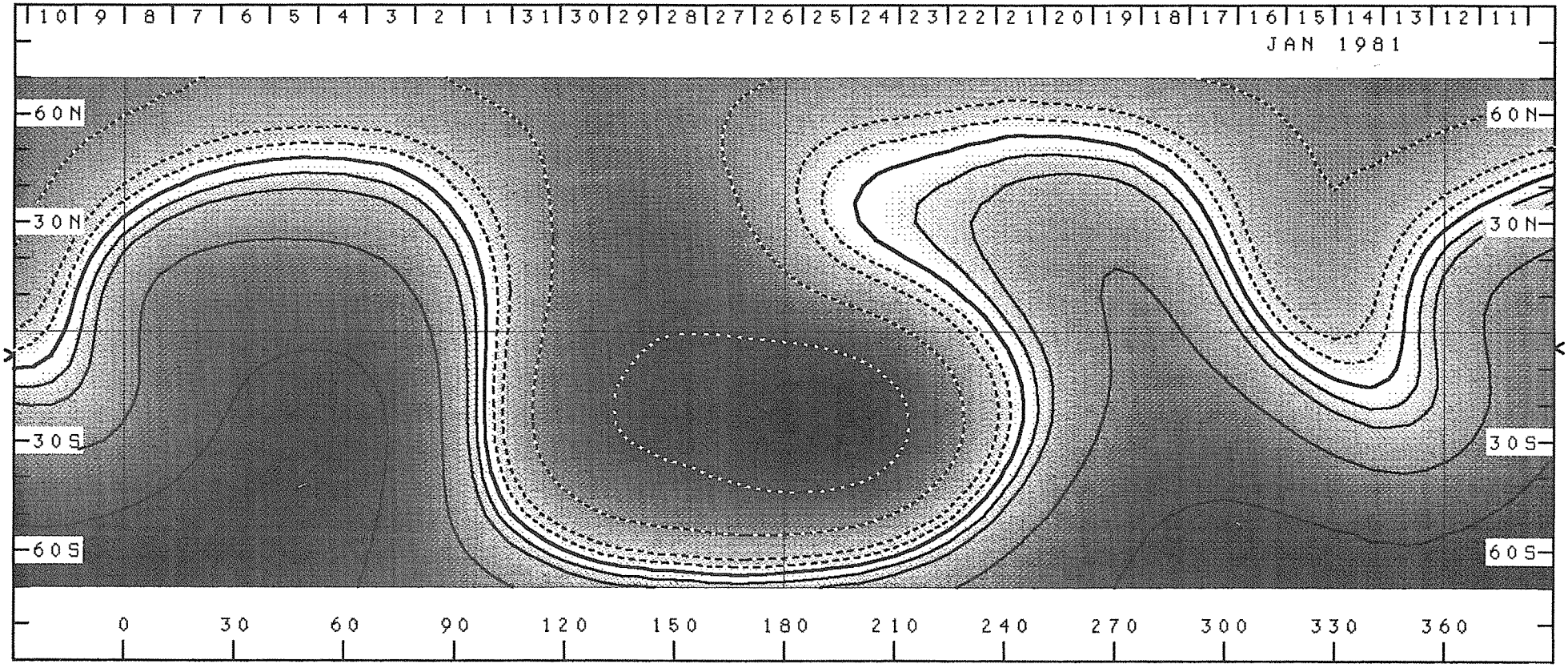
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

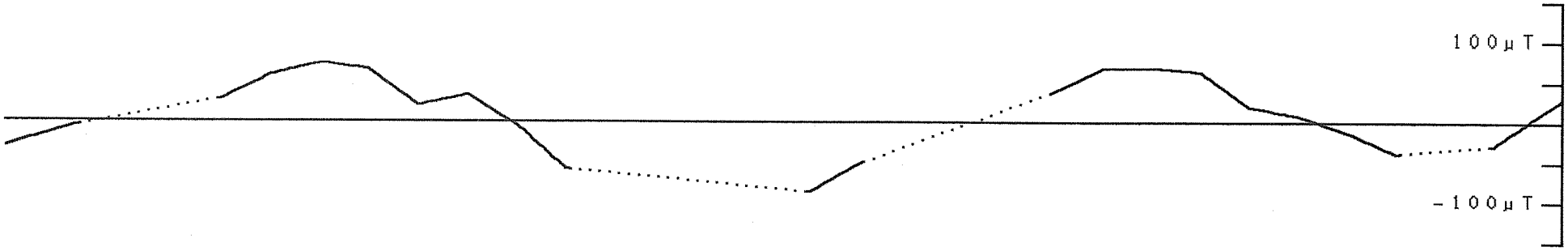
0, ±1, 2, 5, 10, 20 MICROTESLA



1704

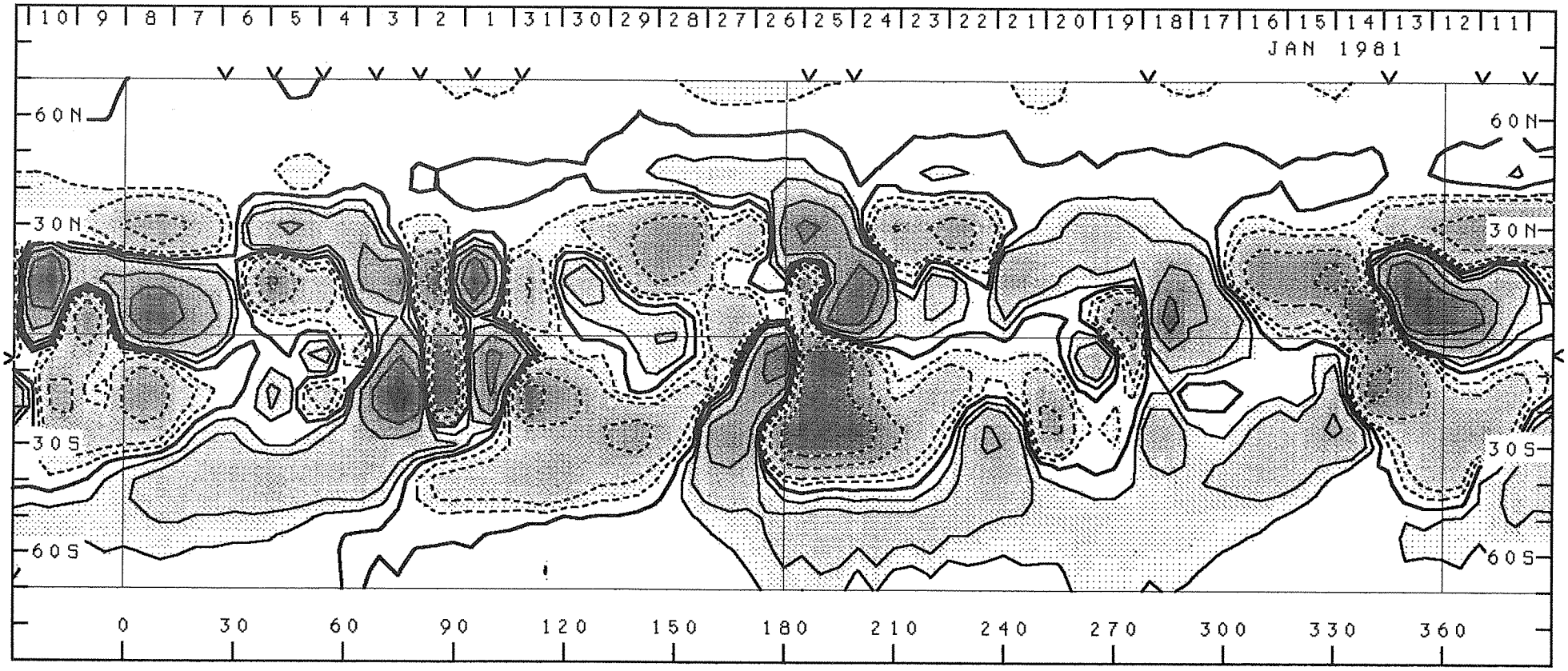
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

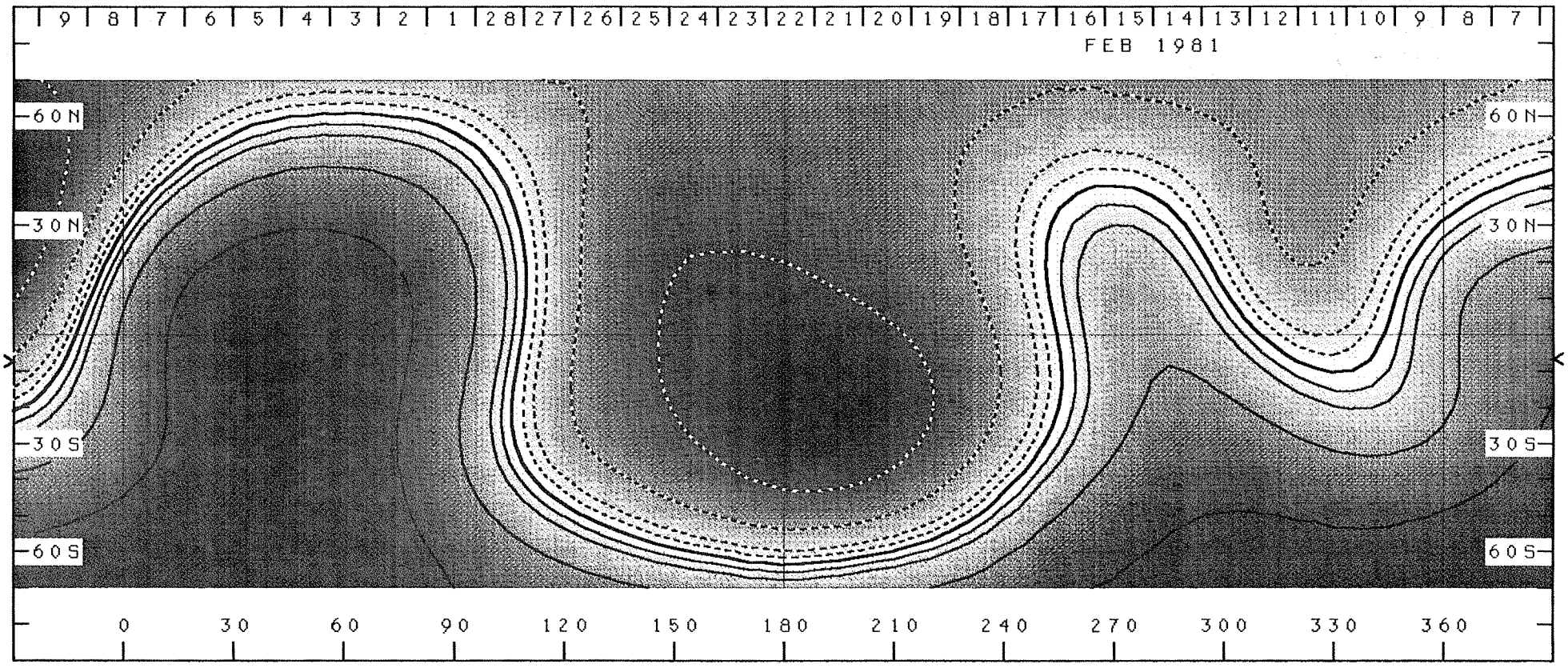
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

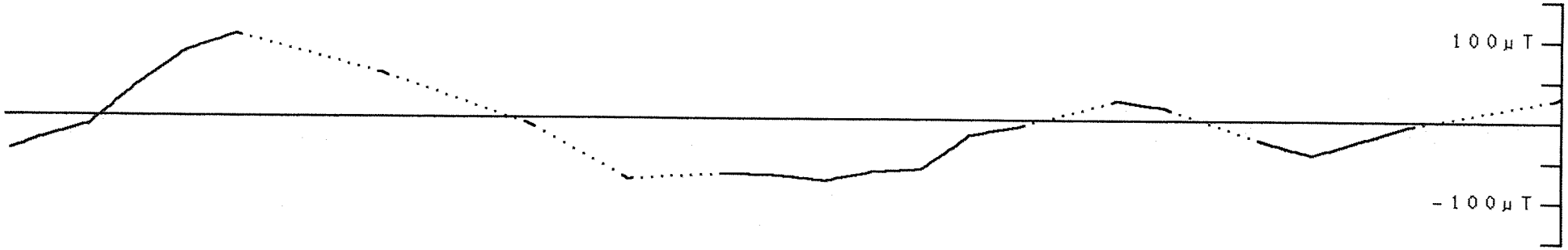
0, ±1, 2, 5, 10, 20 MICROTESLA



1705

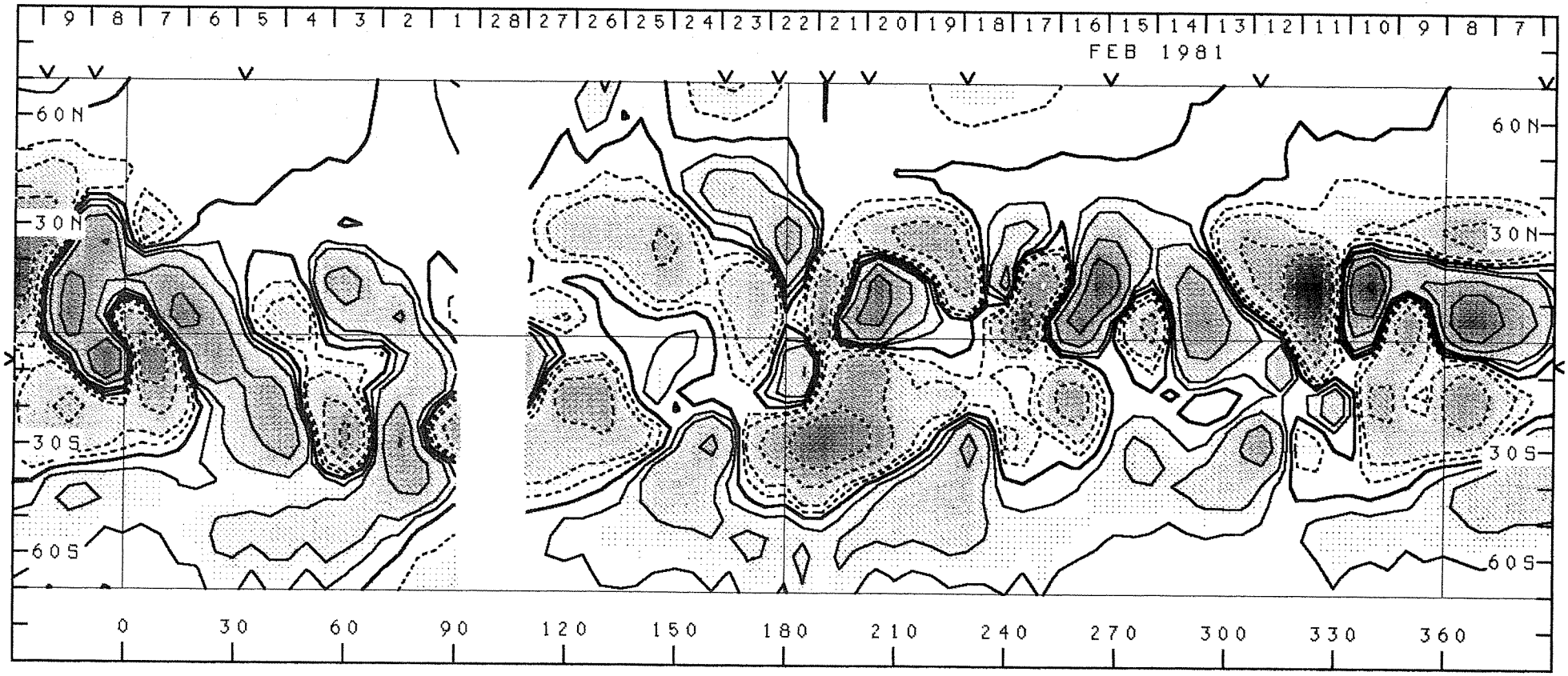
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

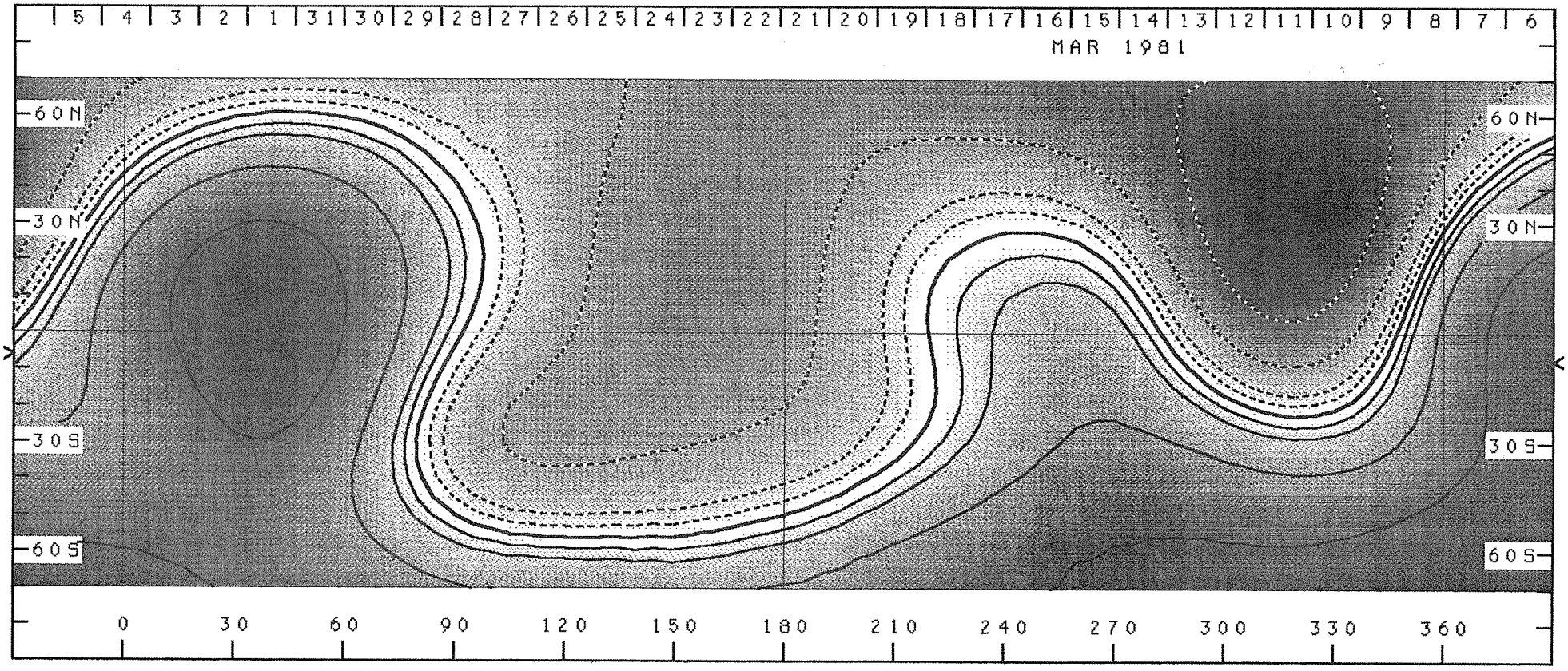
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

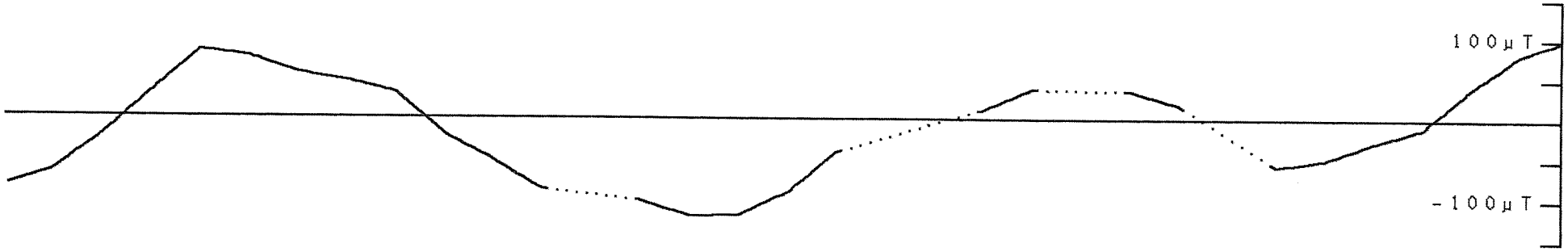
0, ±1, 2, 5, 10, 20 MICROTESLA



1706

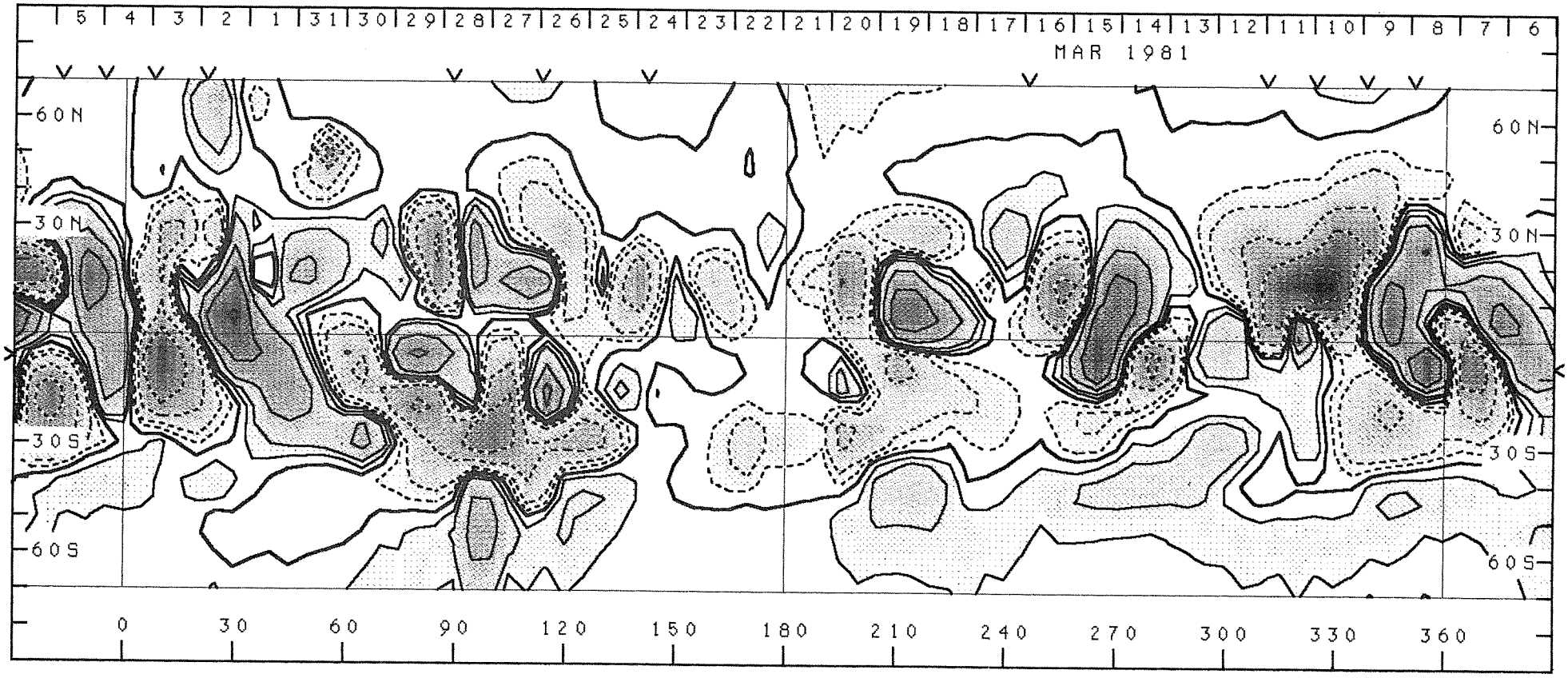
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

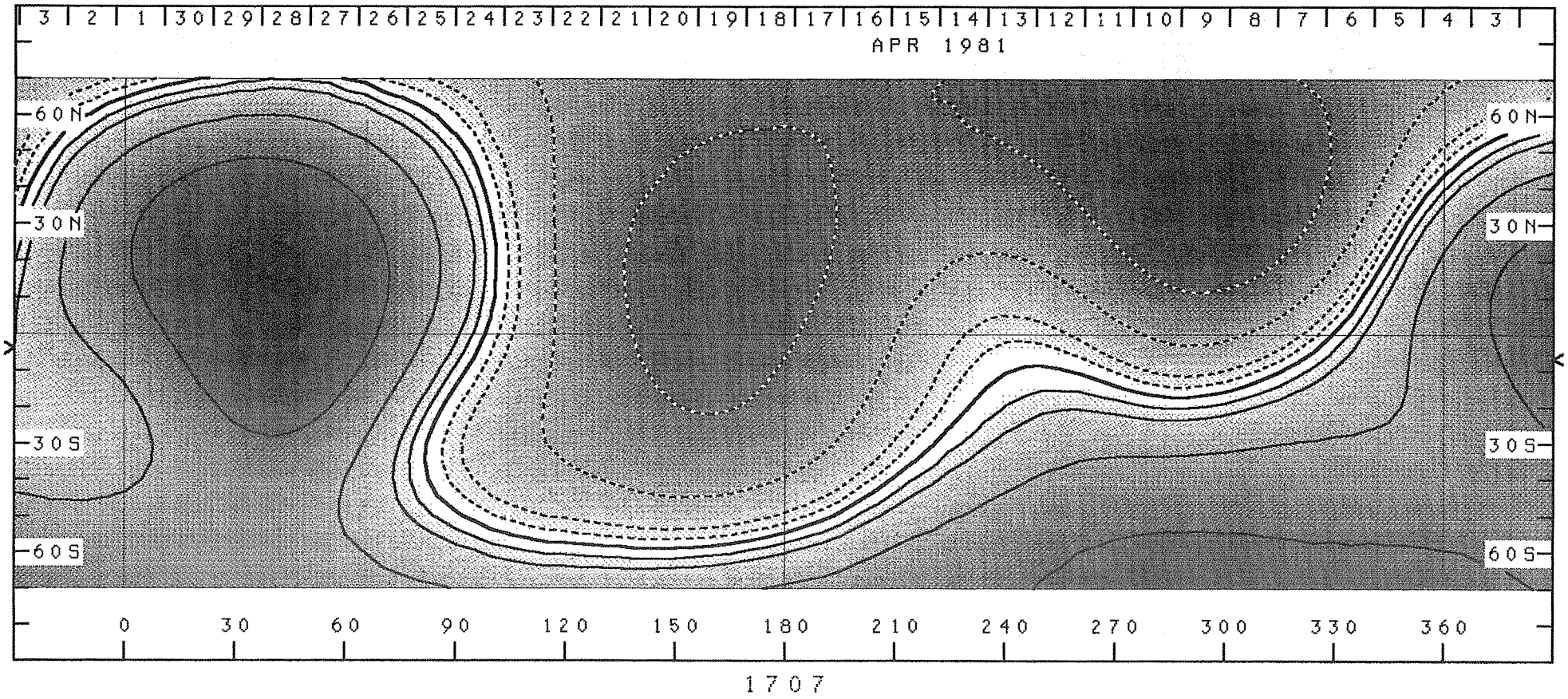
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

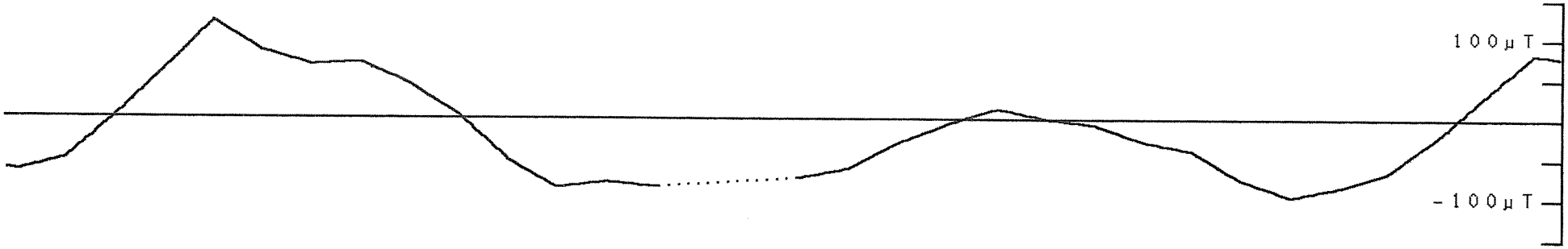
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



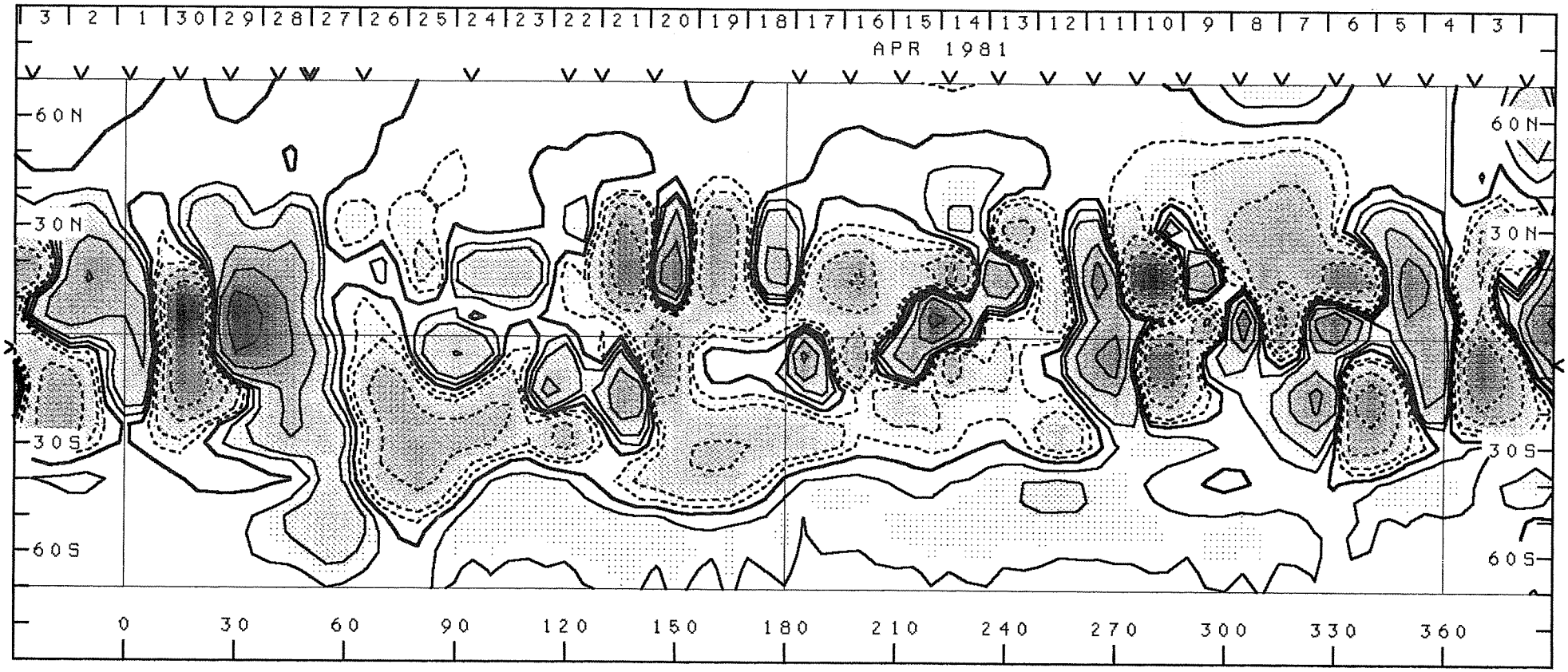
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

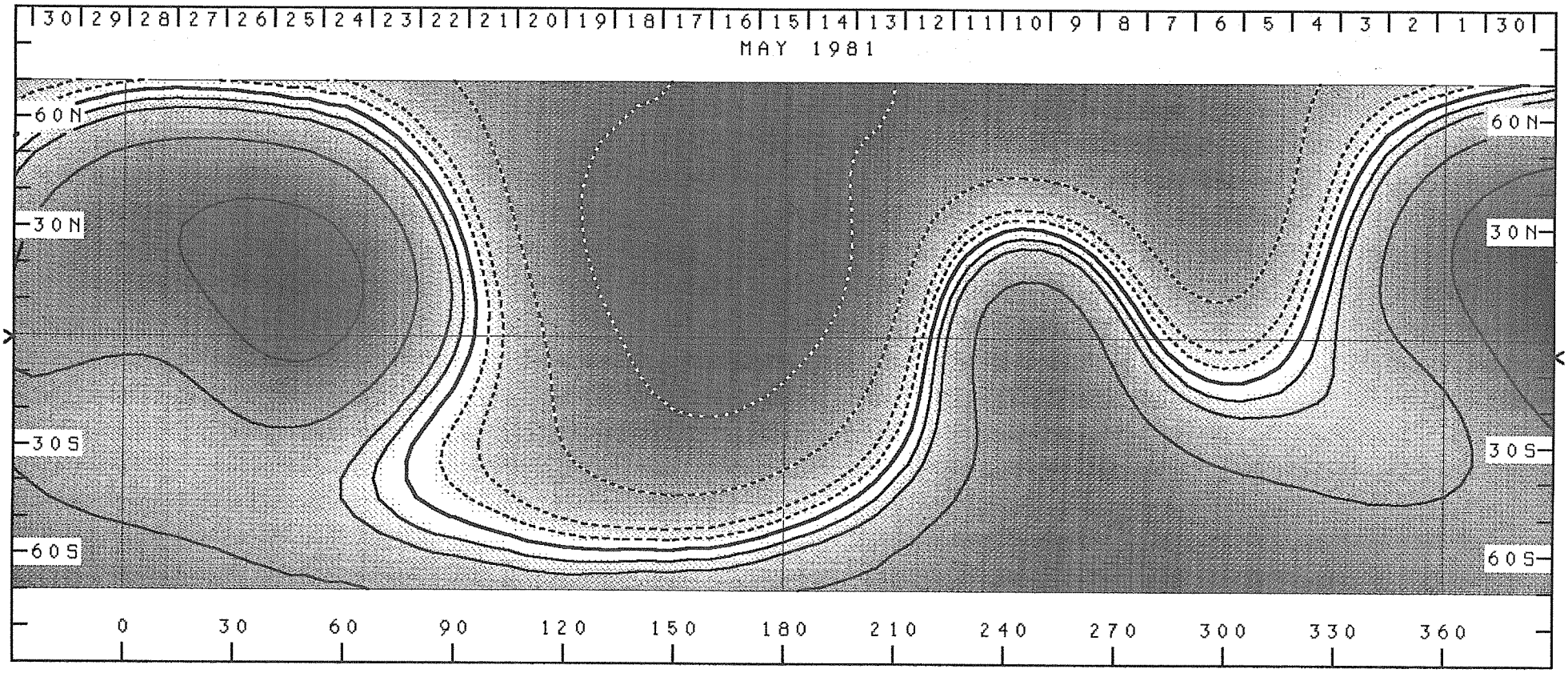
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

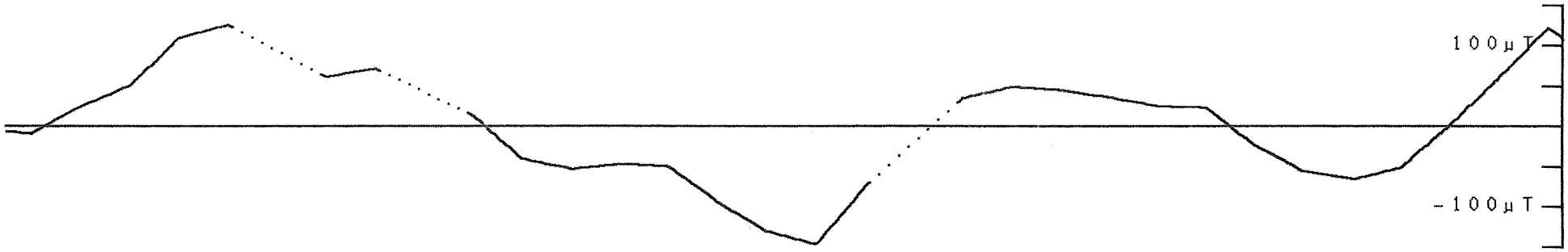
0, ±1, 2, 5, 10, 20 MICROTESLA



1708

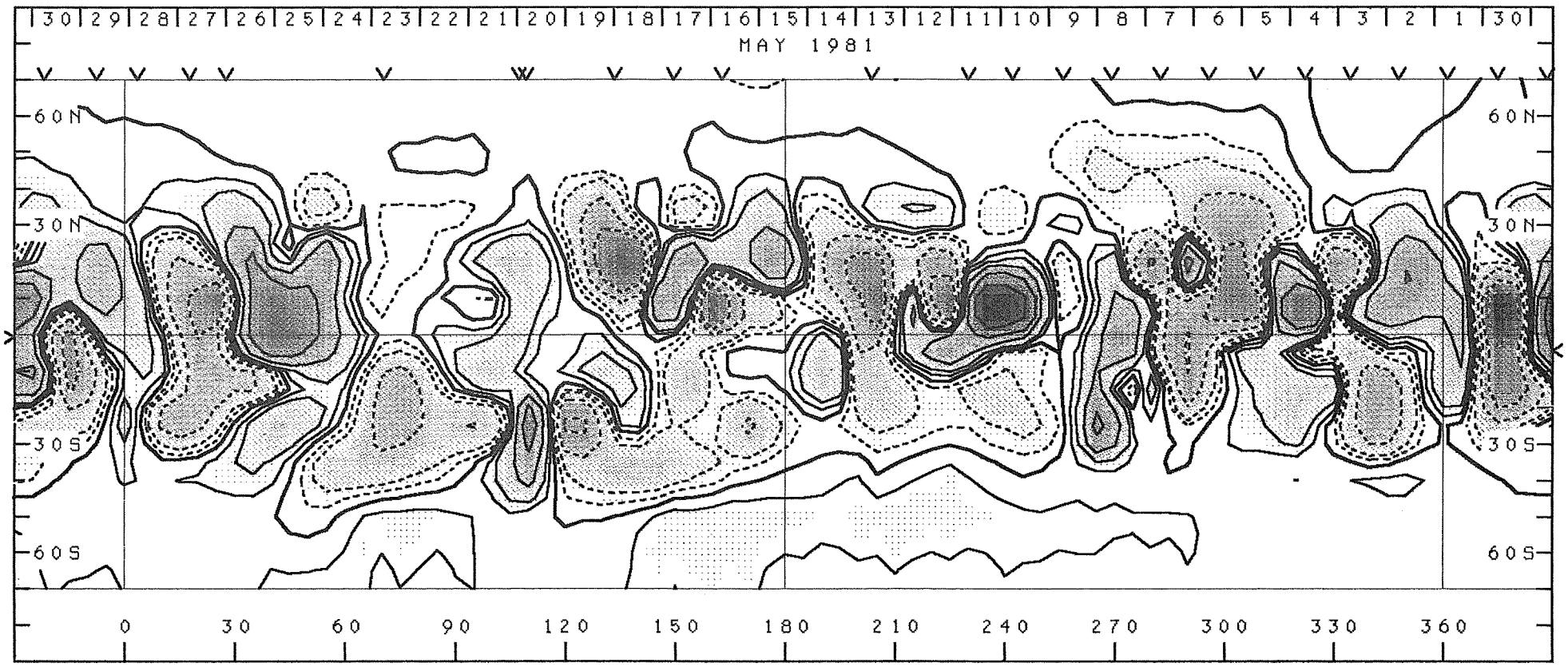
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

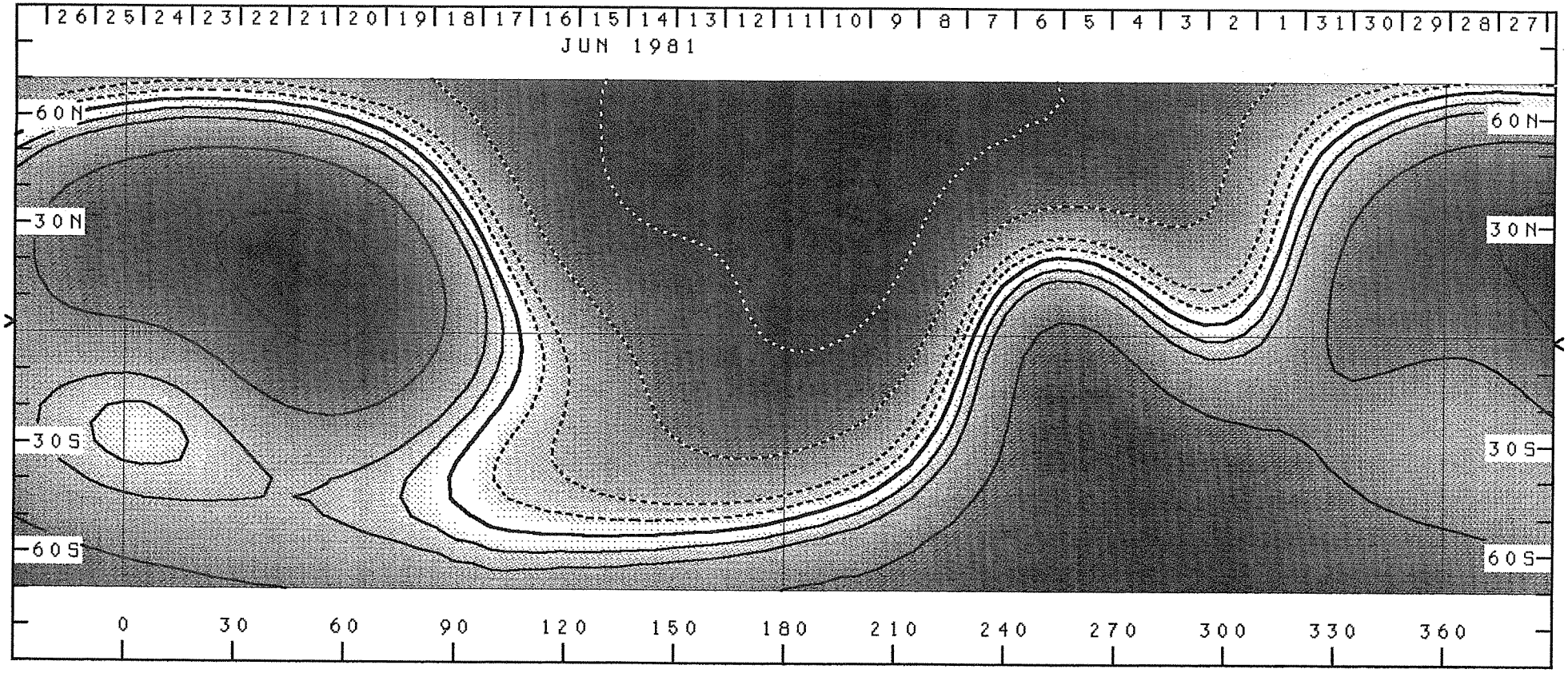


1708

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

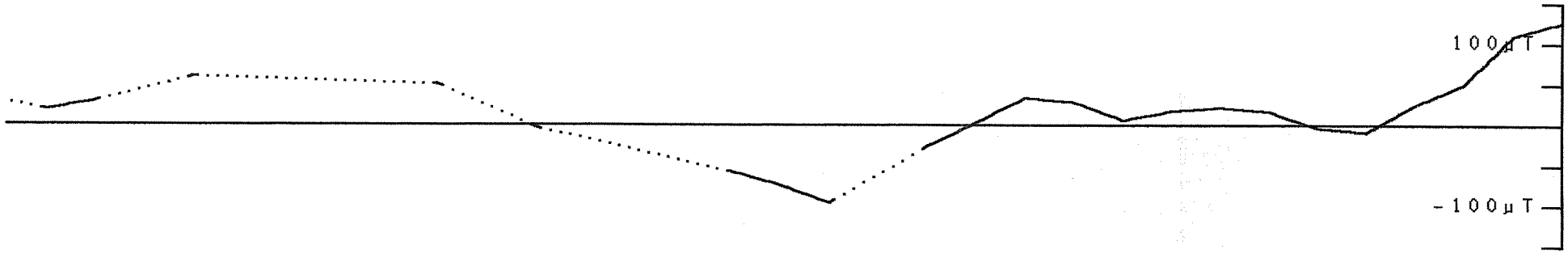
0, ±1, 2, 5, 10, 20 MICROTESLA



1709

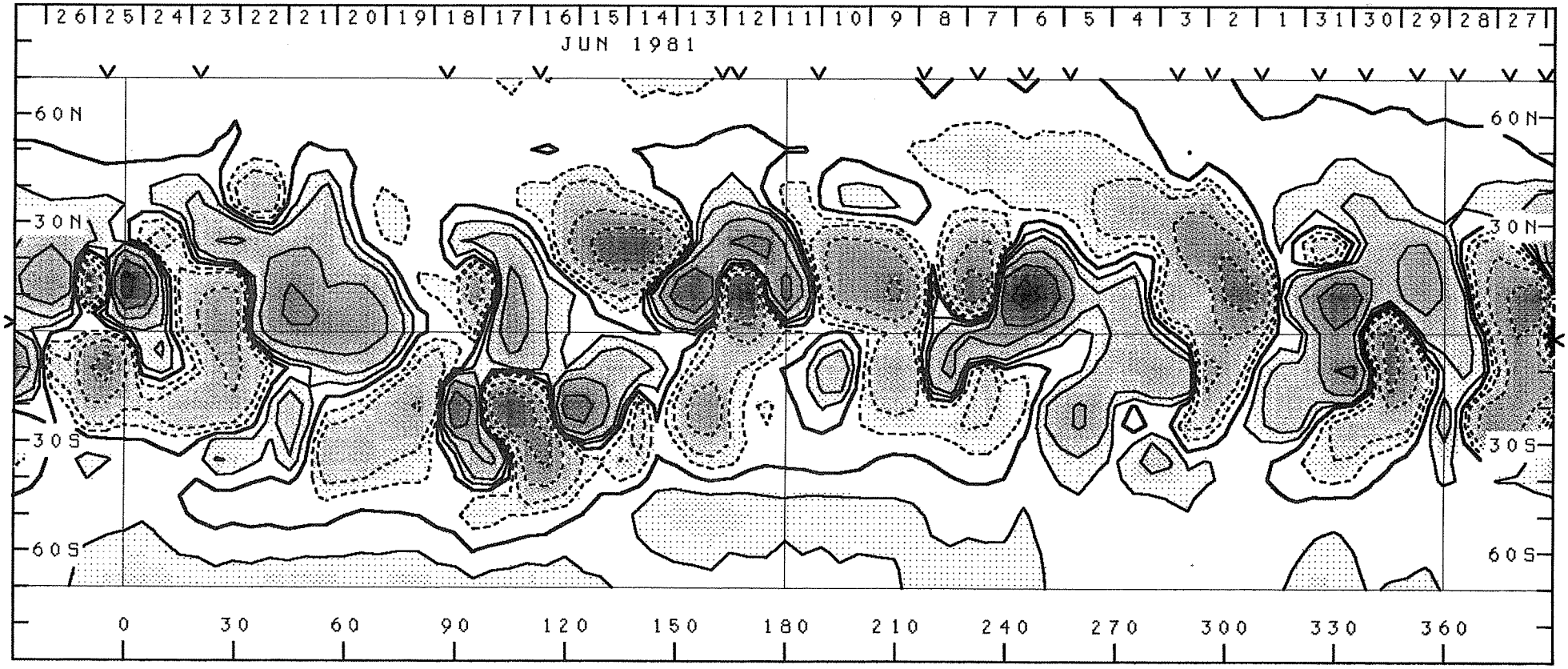
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

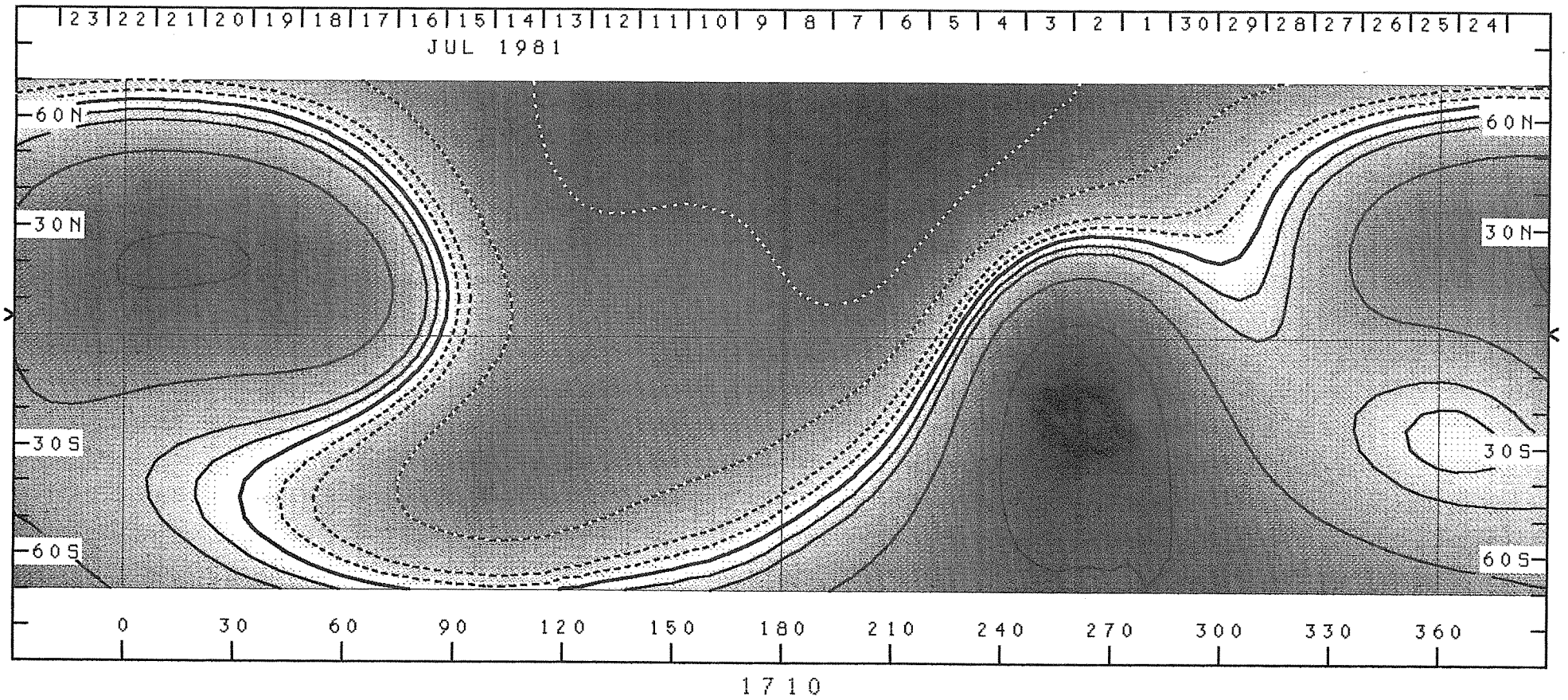
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

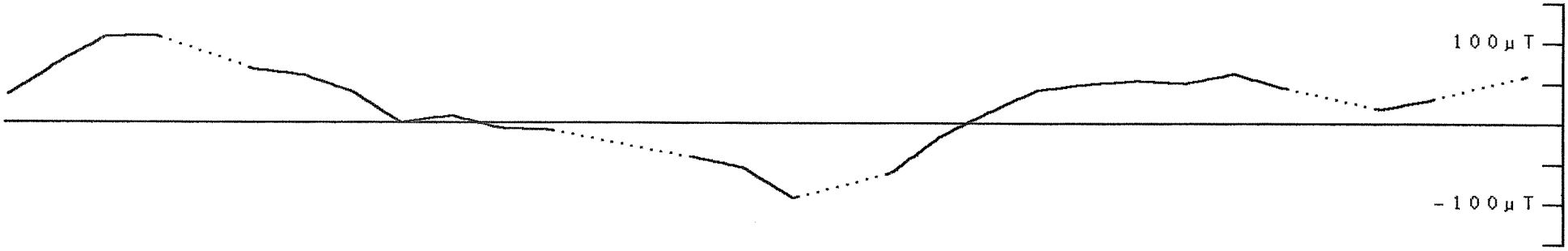
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



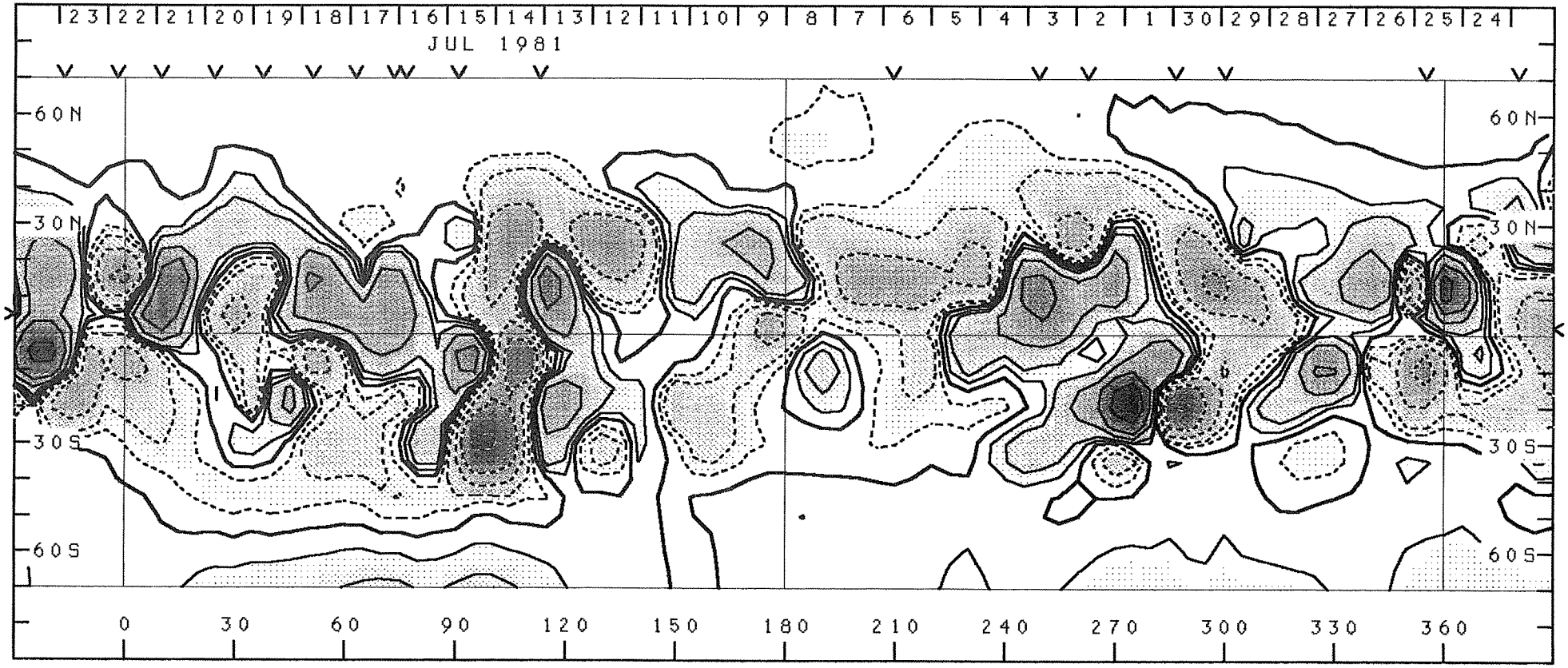
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

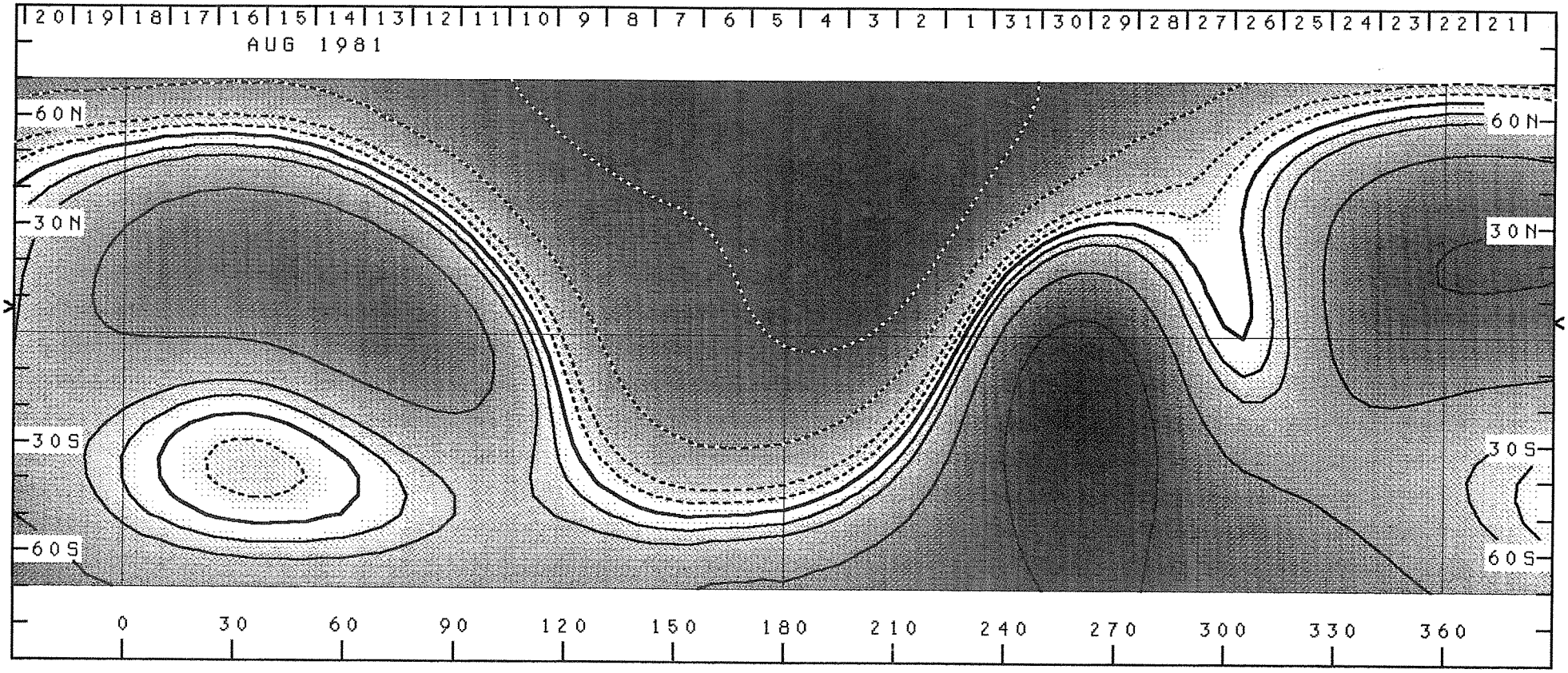
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

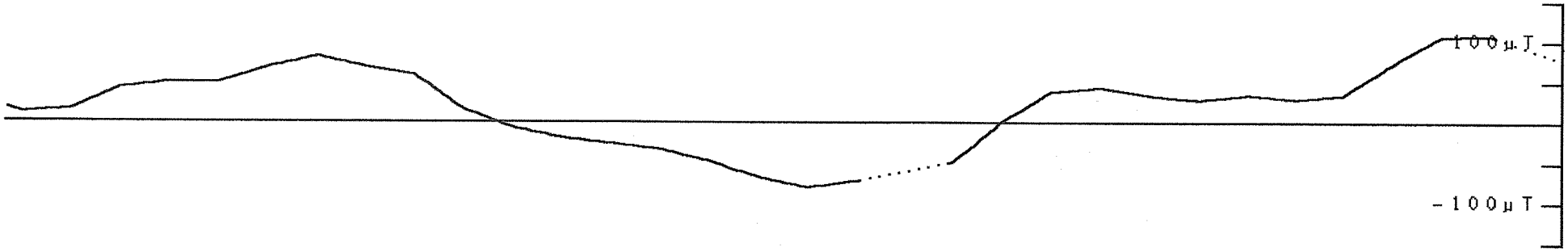
0, ±1, 2, 5, 10, 20 MICROTESLA



1711

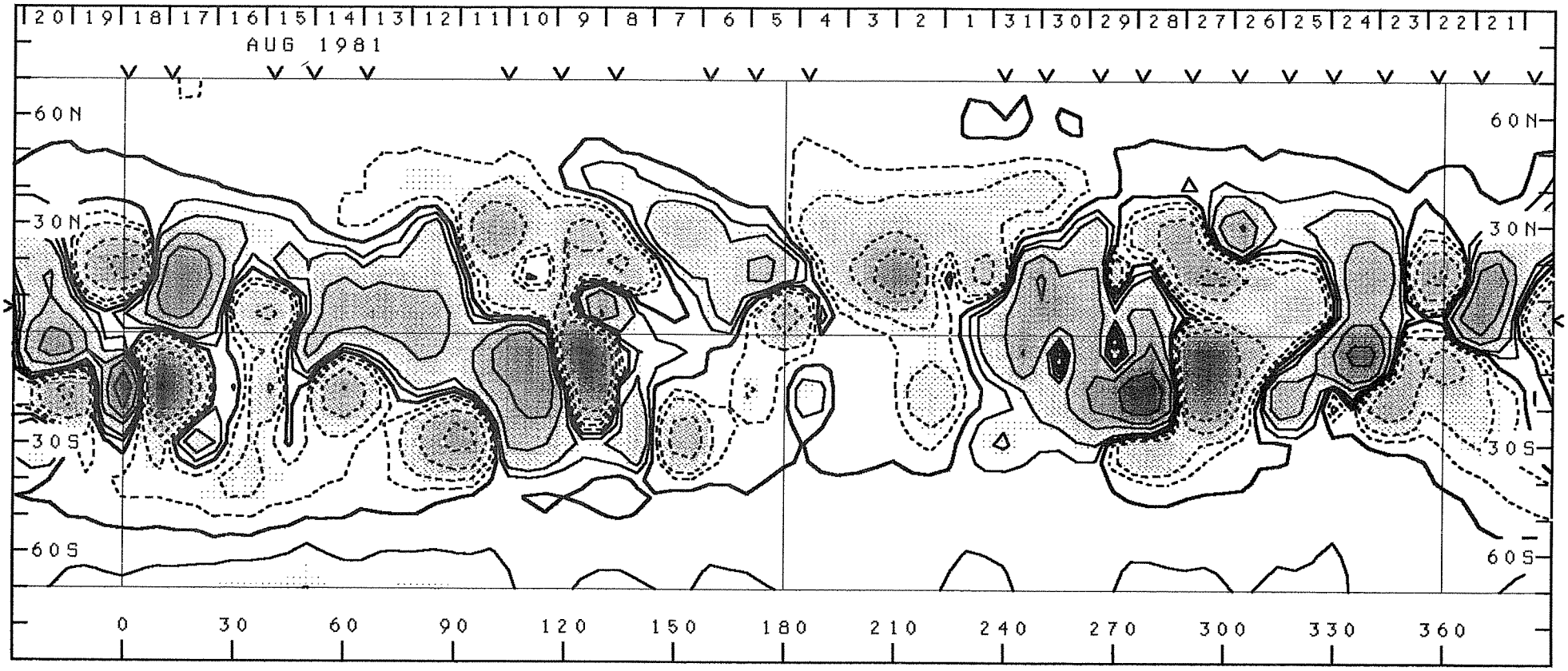
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

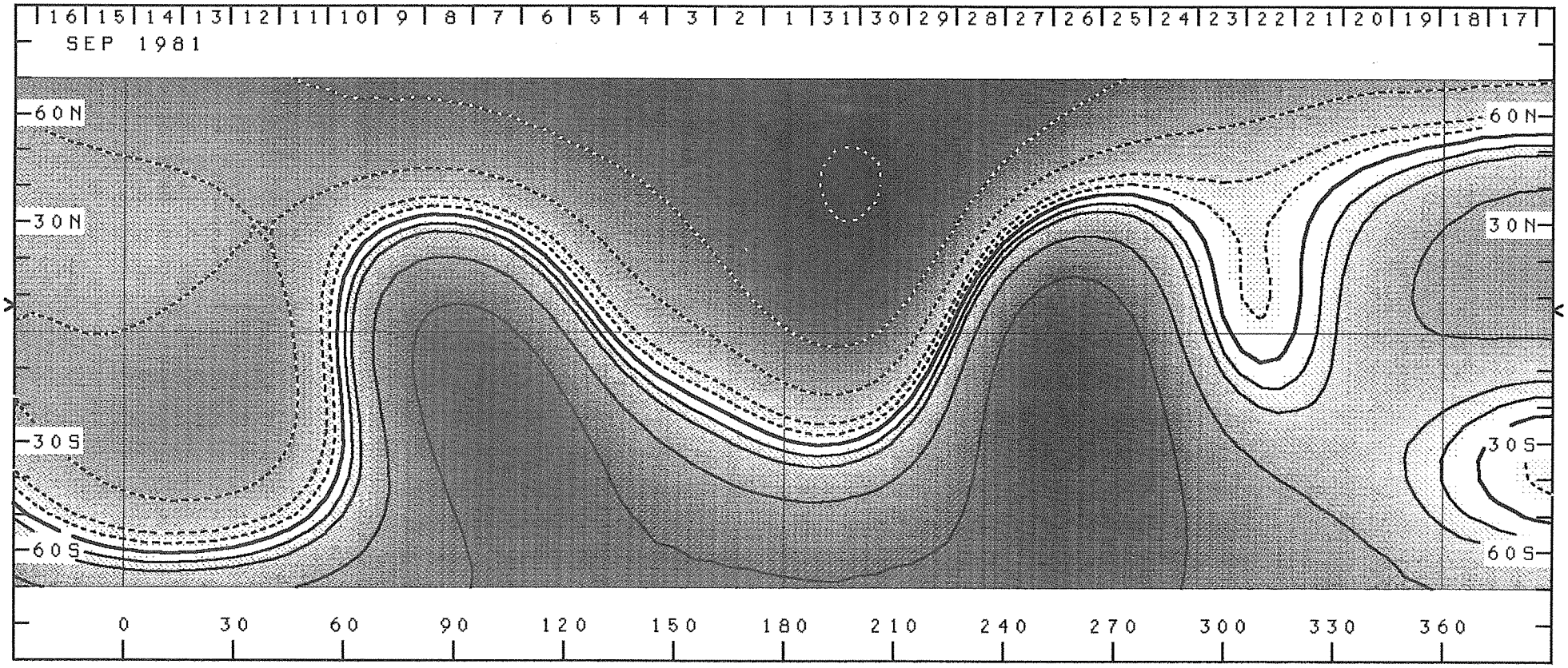
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

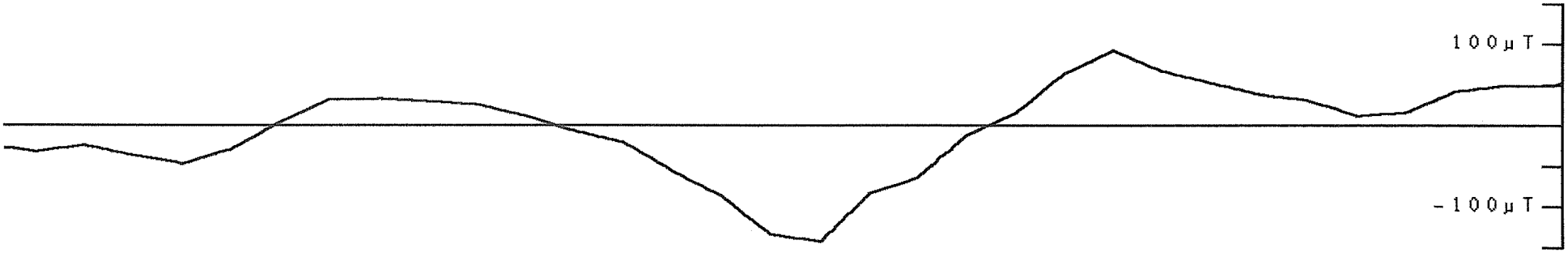
0, ±1, 2, 5, 10, 20 MICROTESLA



1712

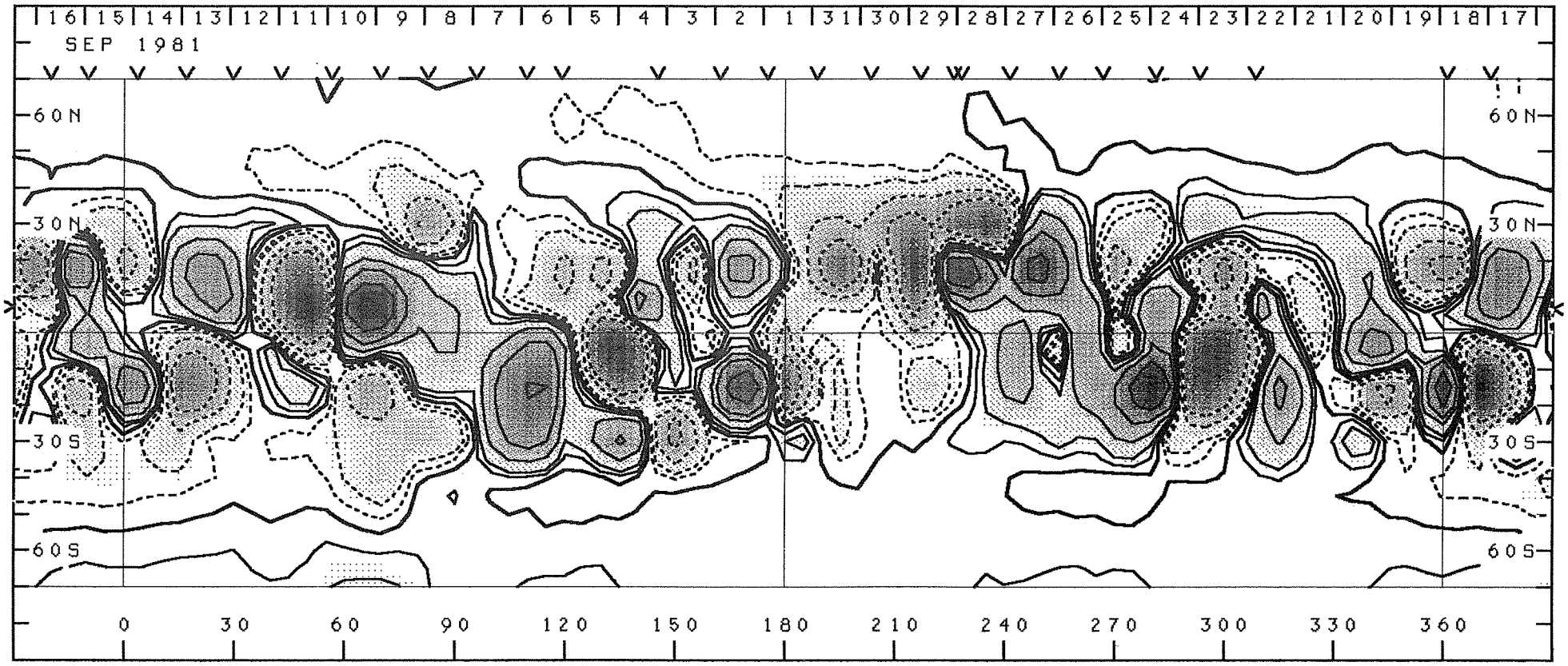
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

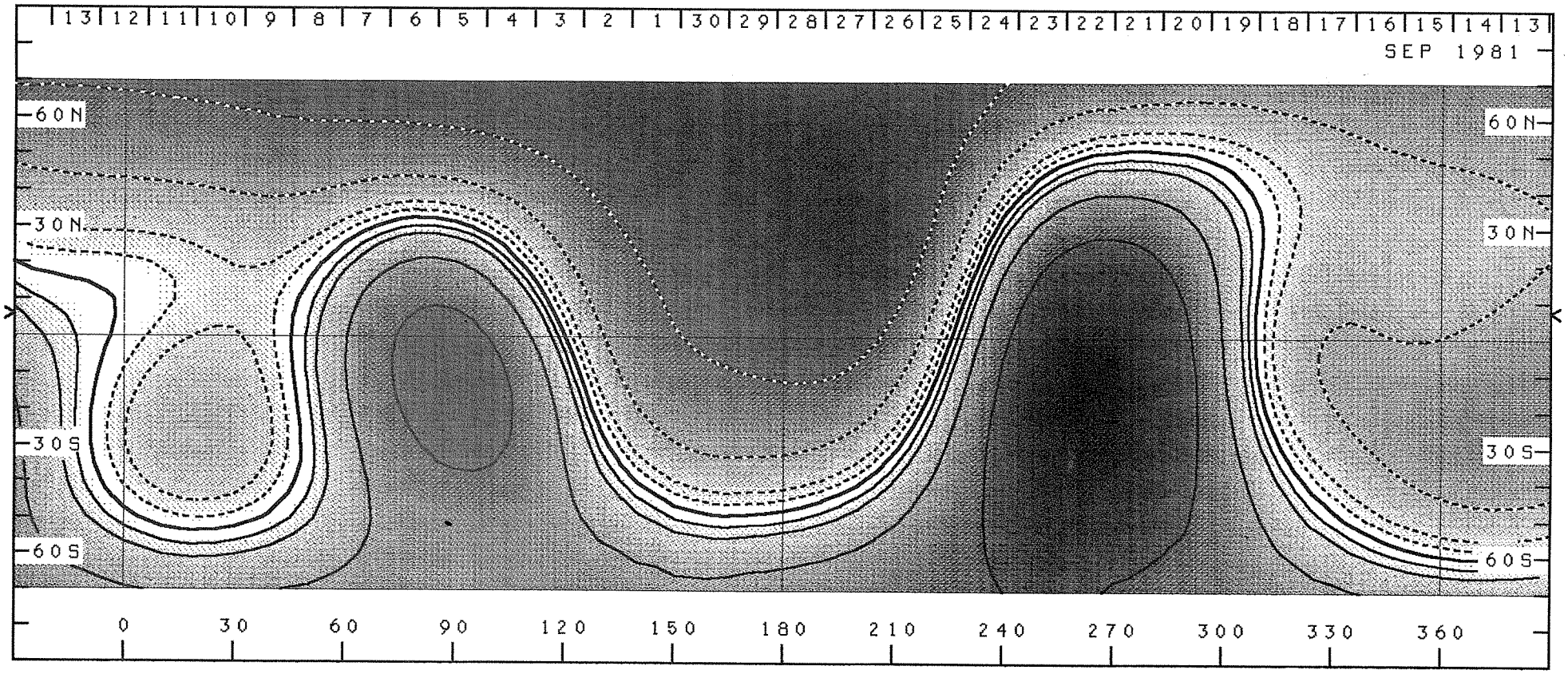
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

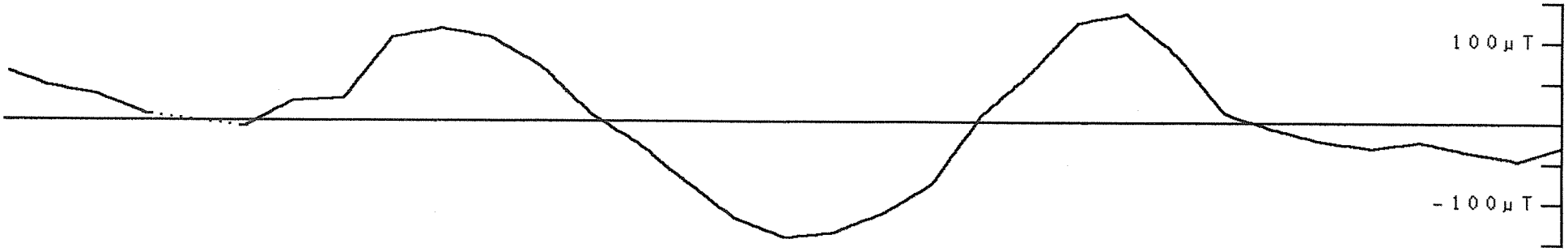
0, ±1, 2, 5, 10, 20 MICROTESLA



1713

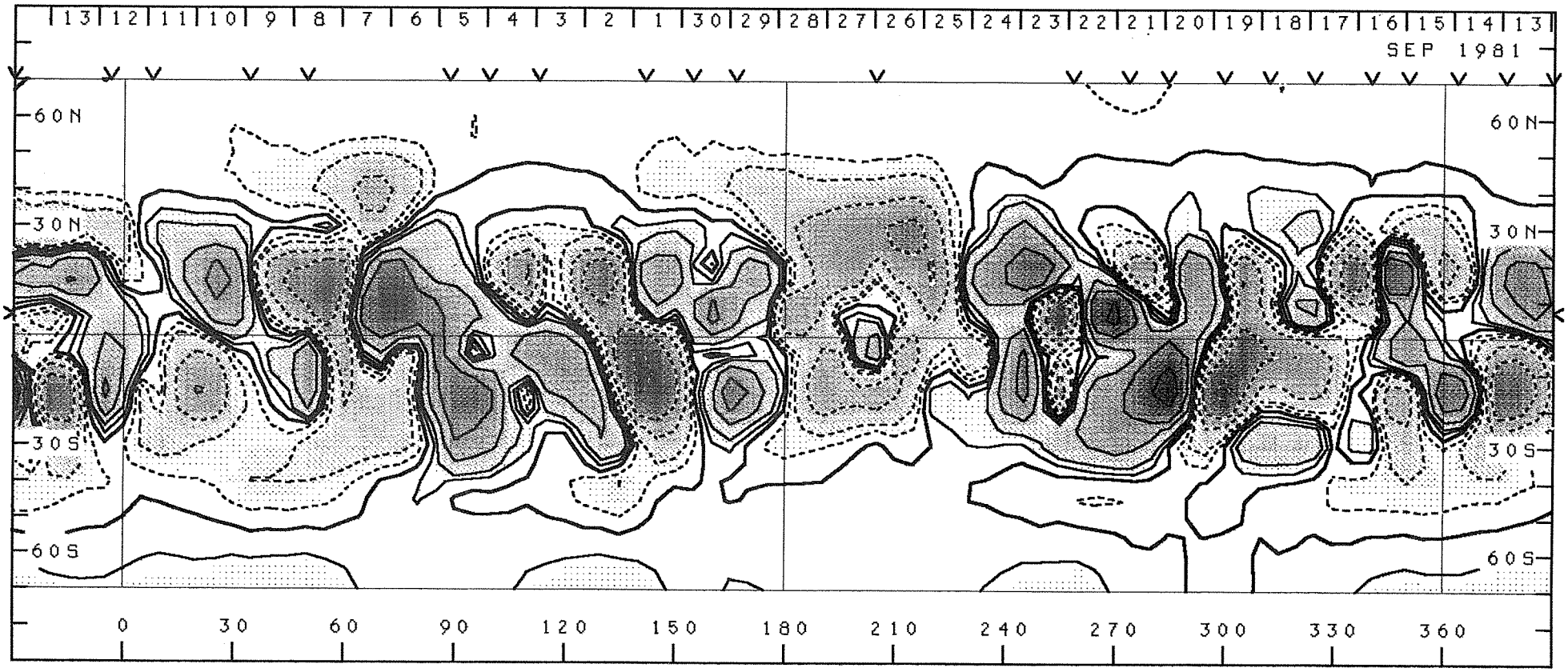
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

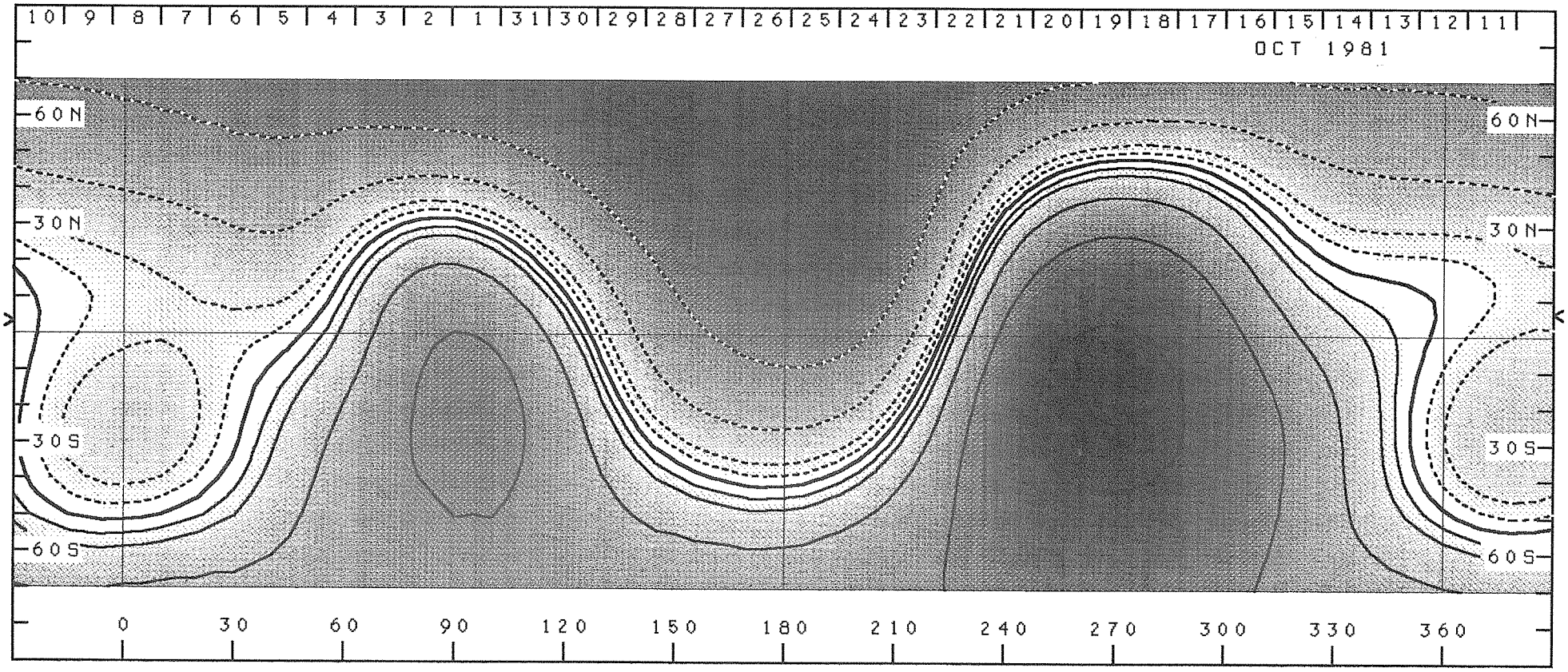
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

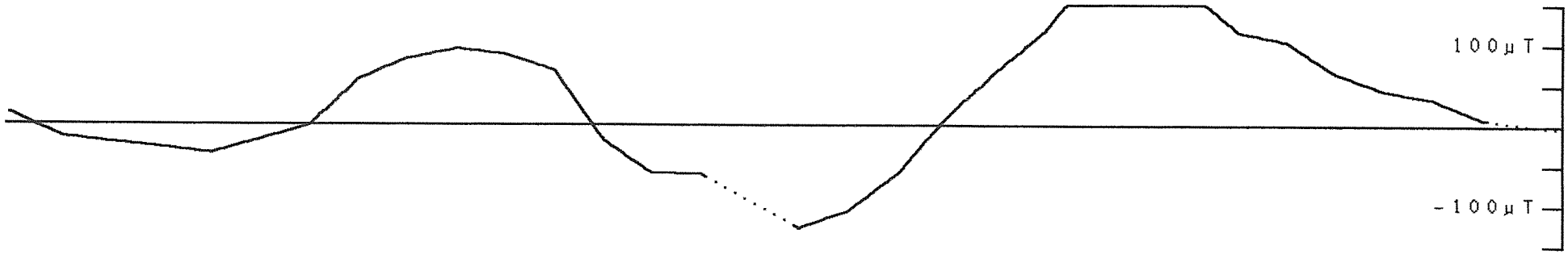
0, ±1, 2, 5, 10, 20 MICROTESLA



1714

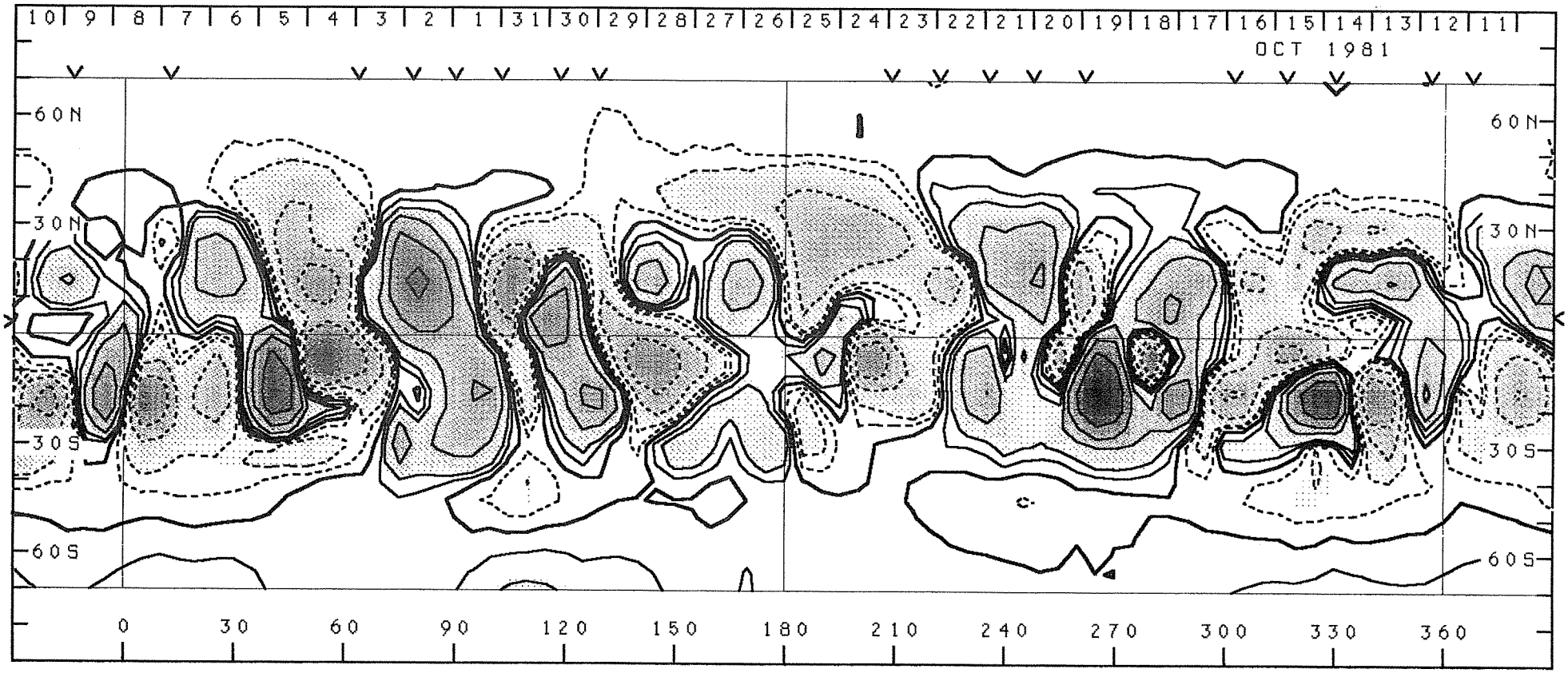
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

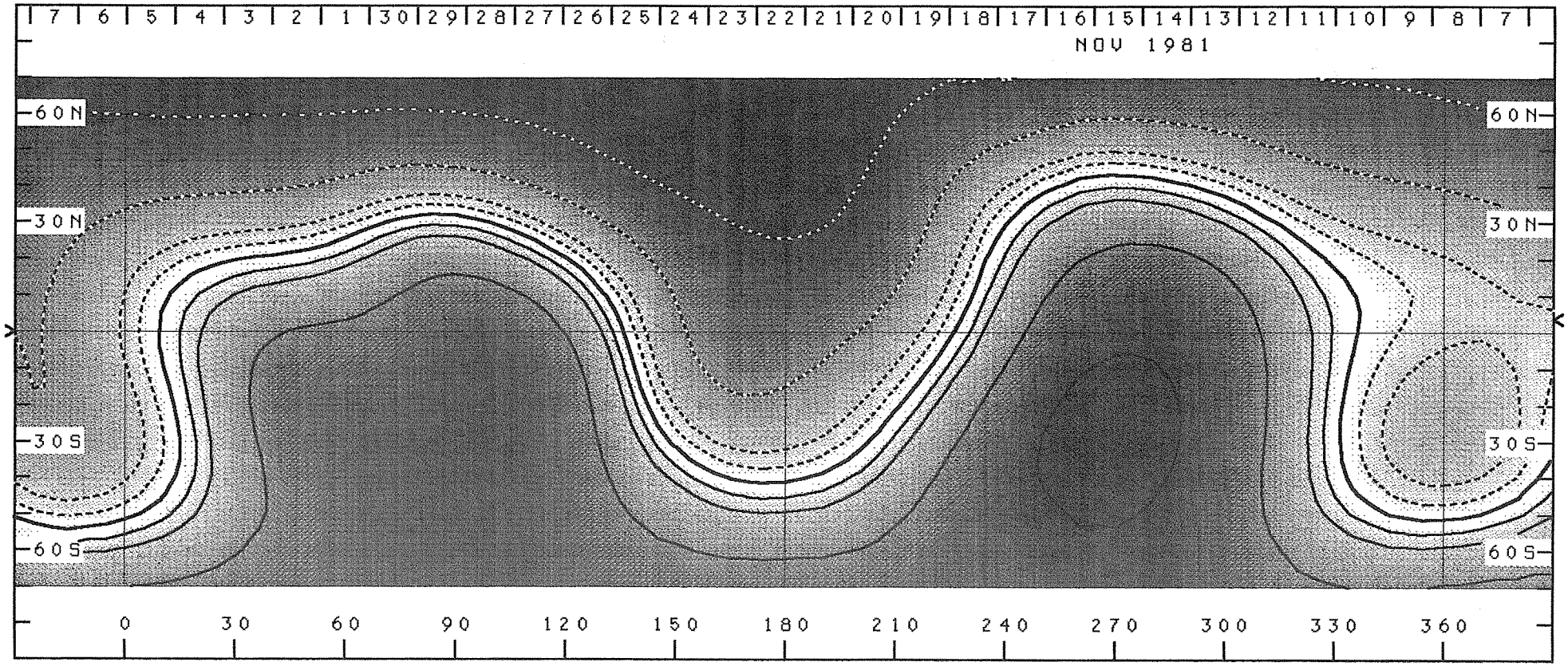
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

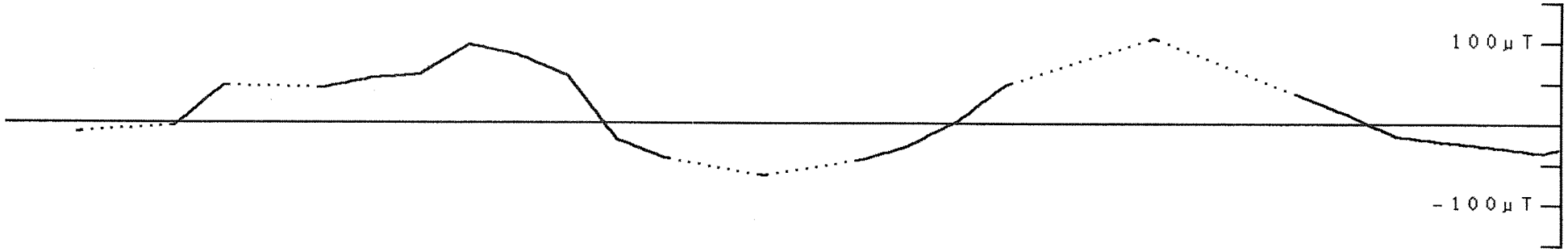
0, ±1, 2, 5, 10, 20 MICROTESLA



1715

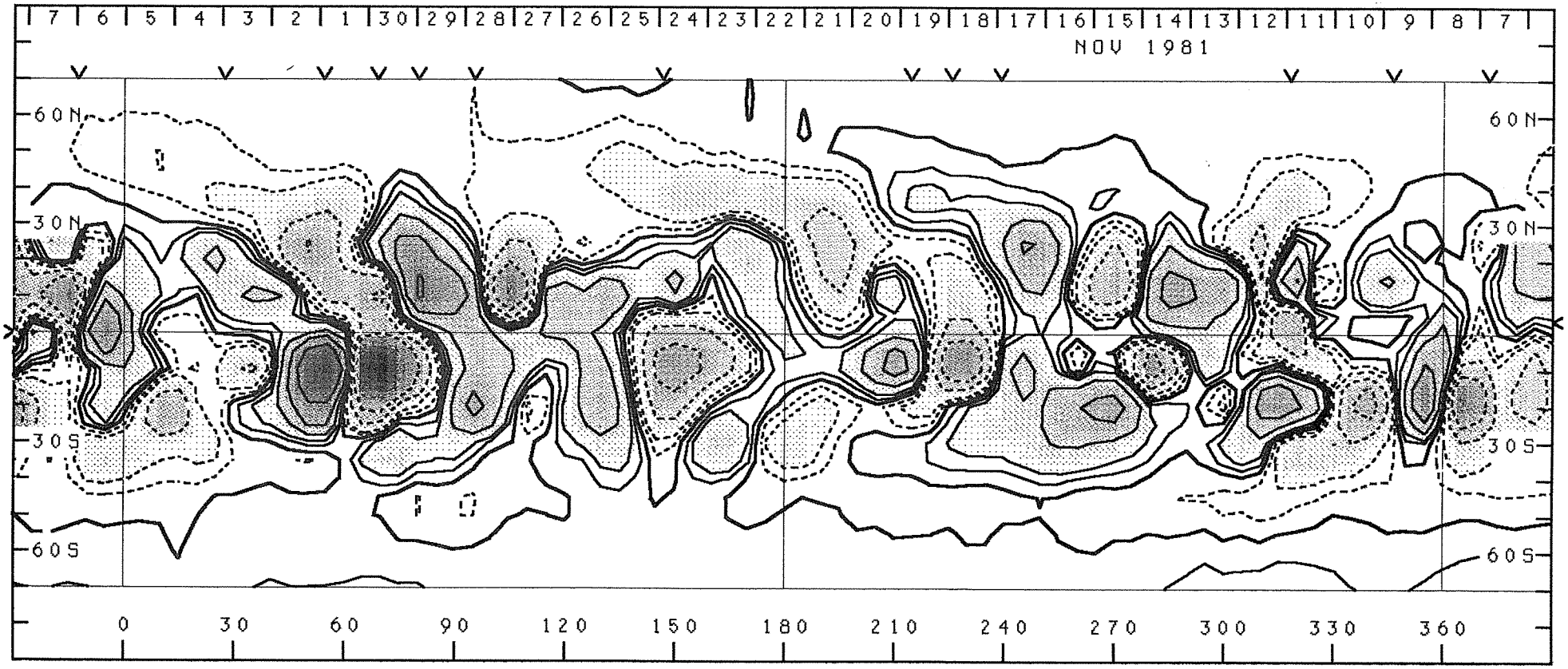
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

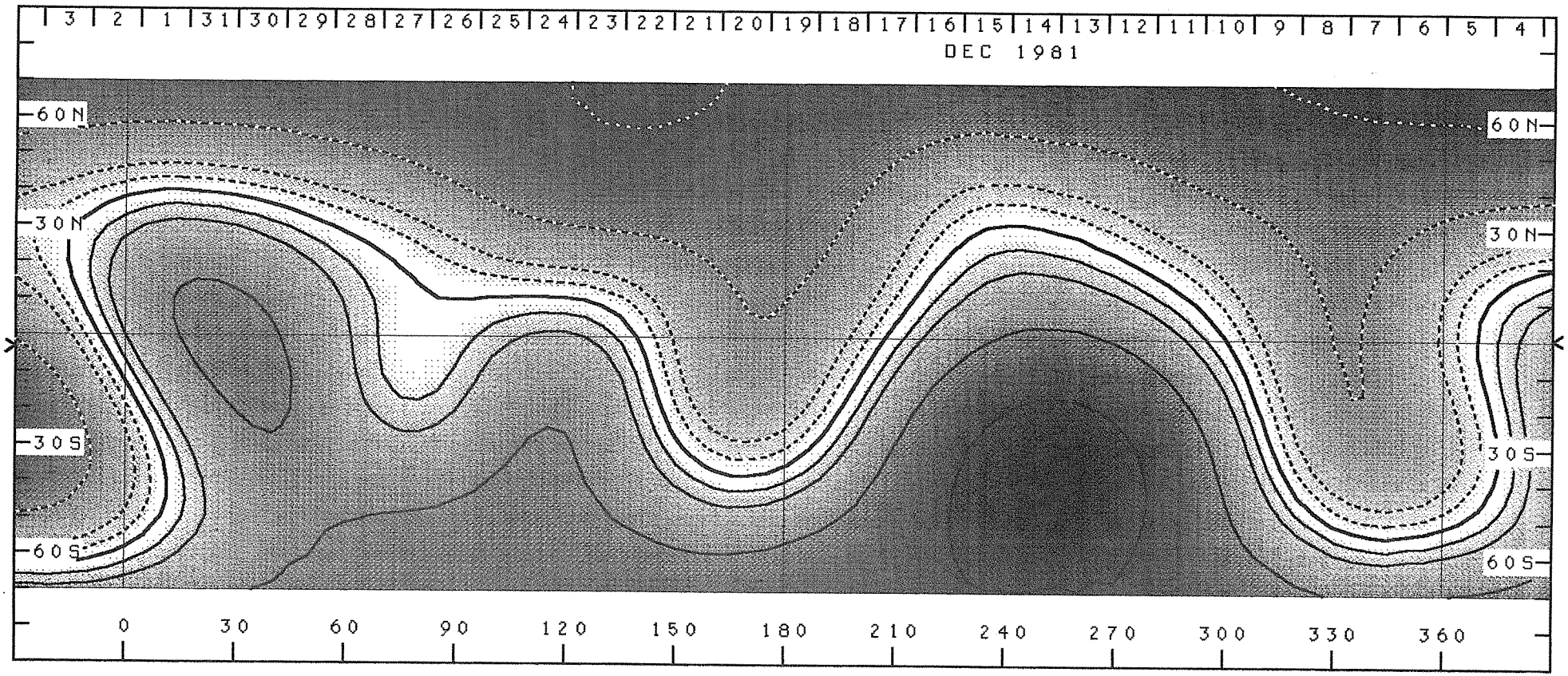
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

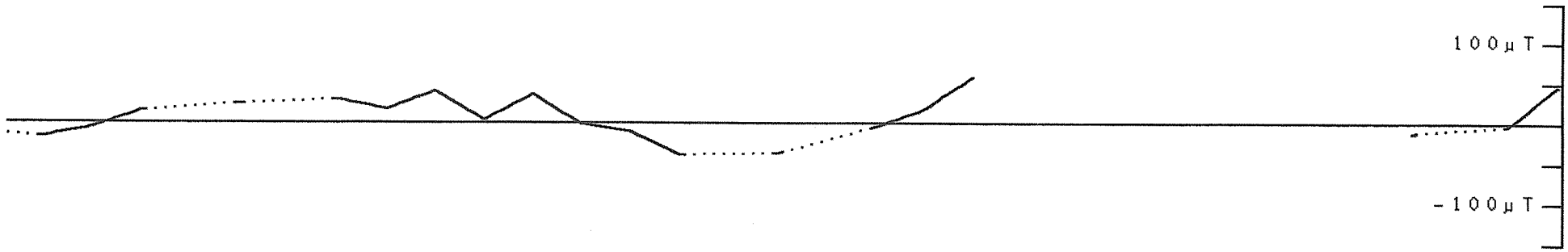
0, ±1, 2, 5, 10, 20 MICROTESLA



1716

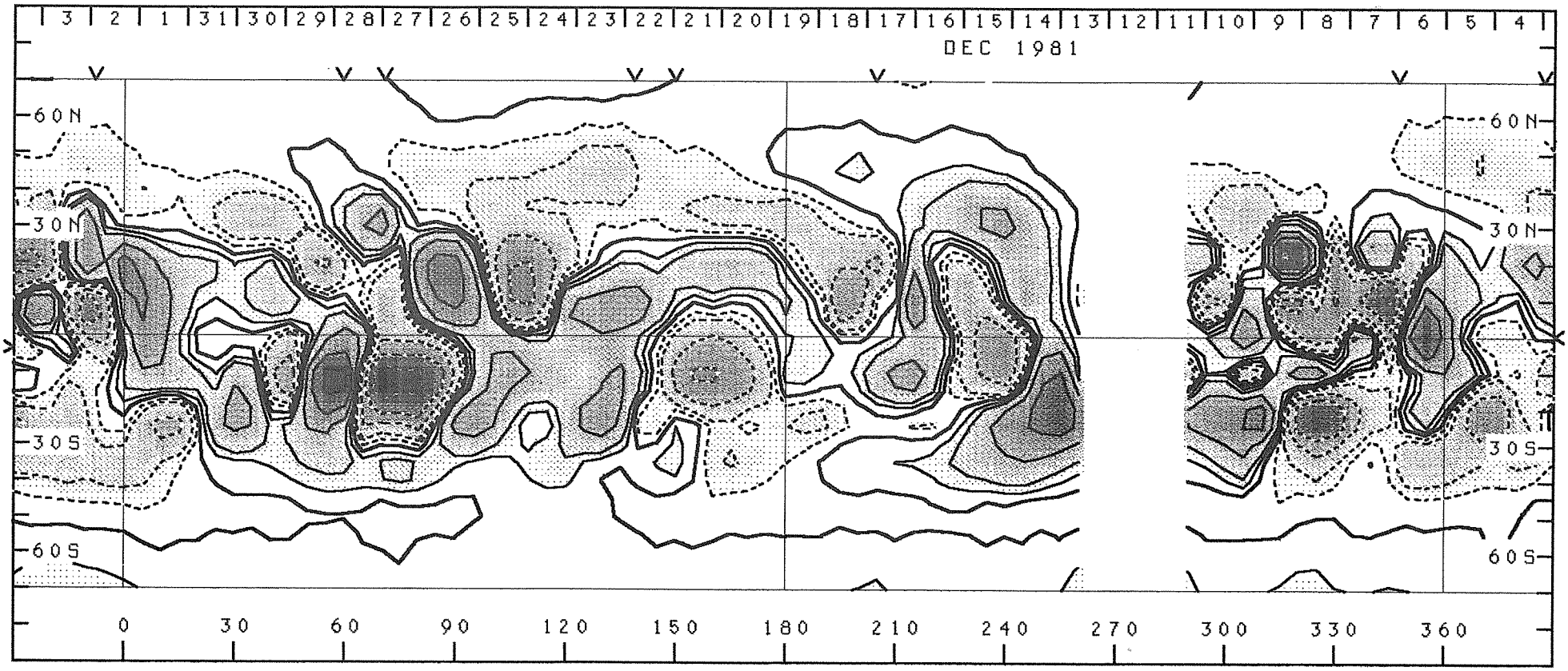
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

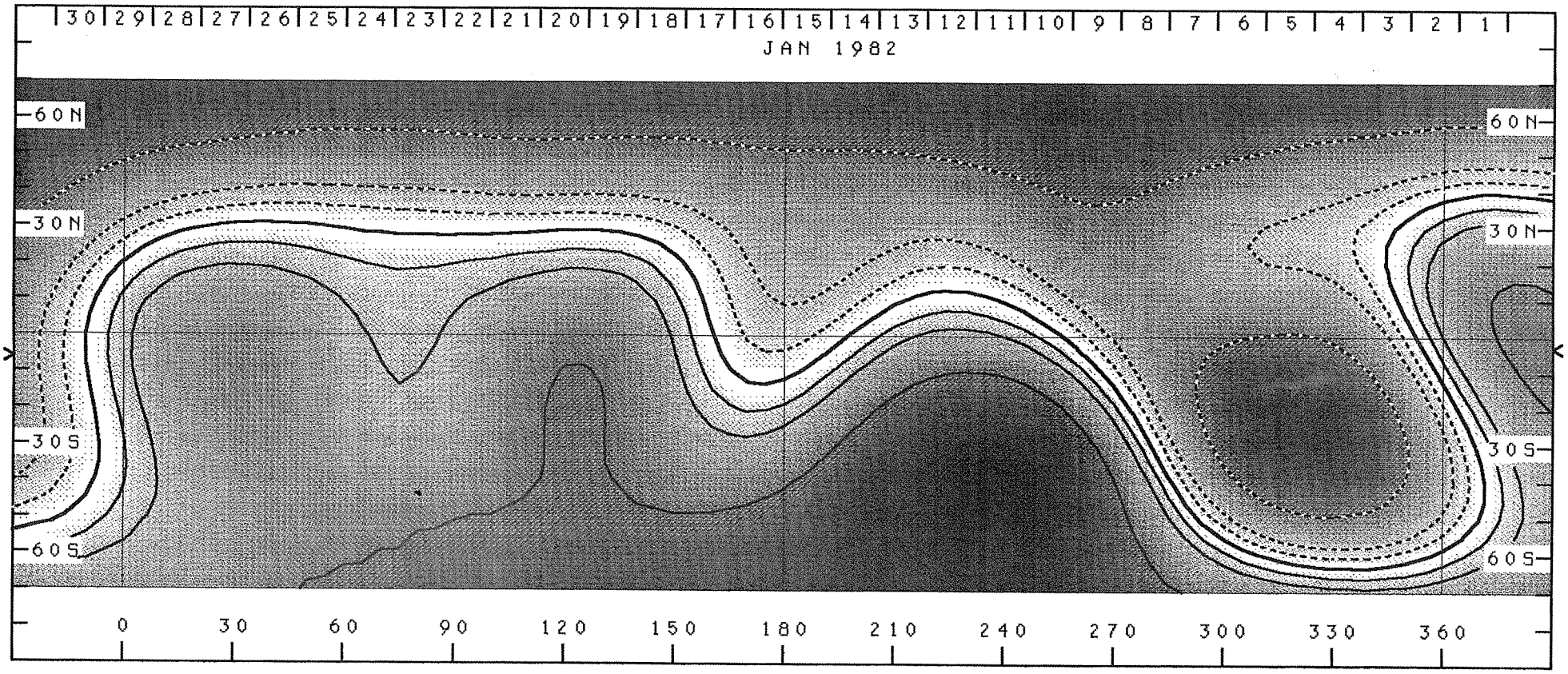
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

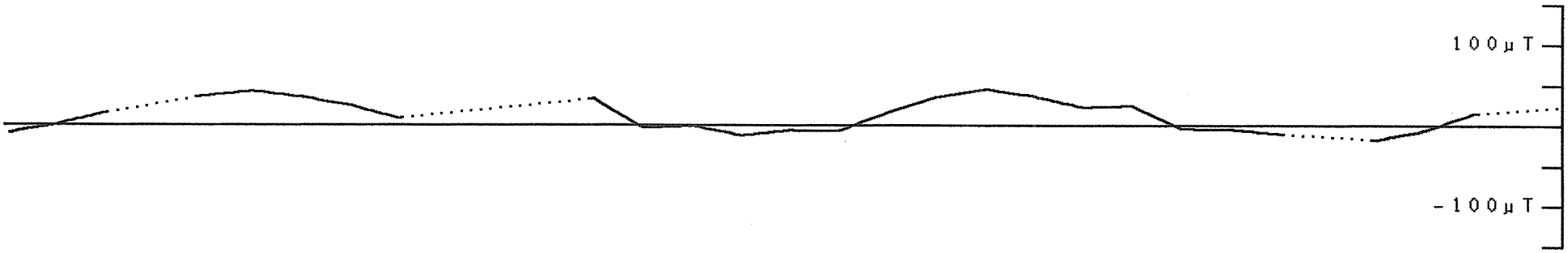
0, ±1, 2, 5, 10, 20 MICROTESLA



1717

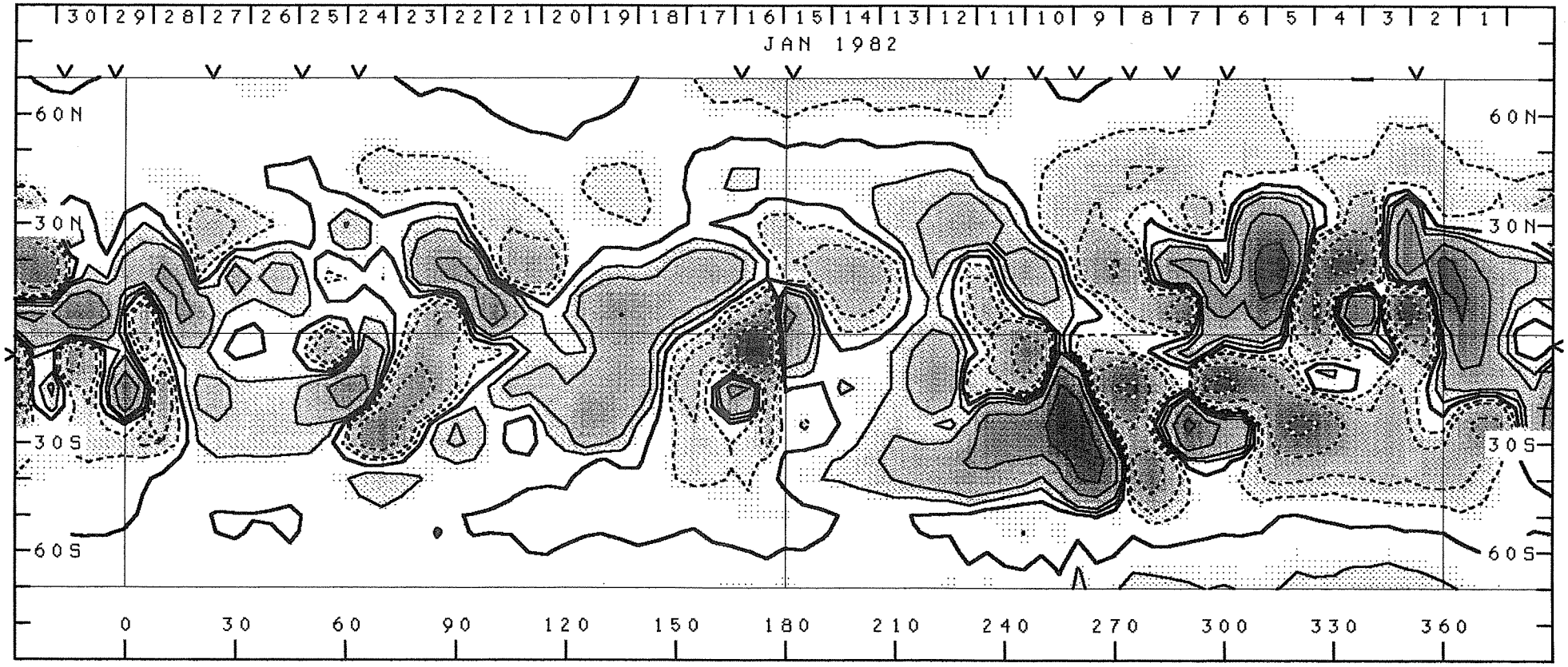
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

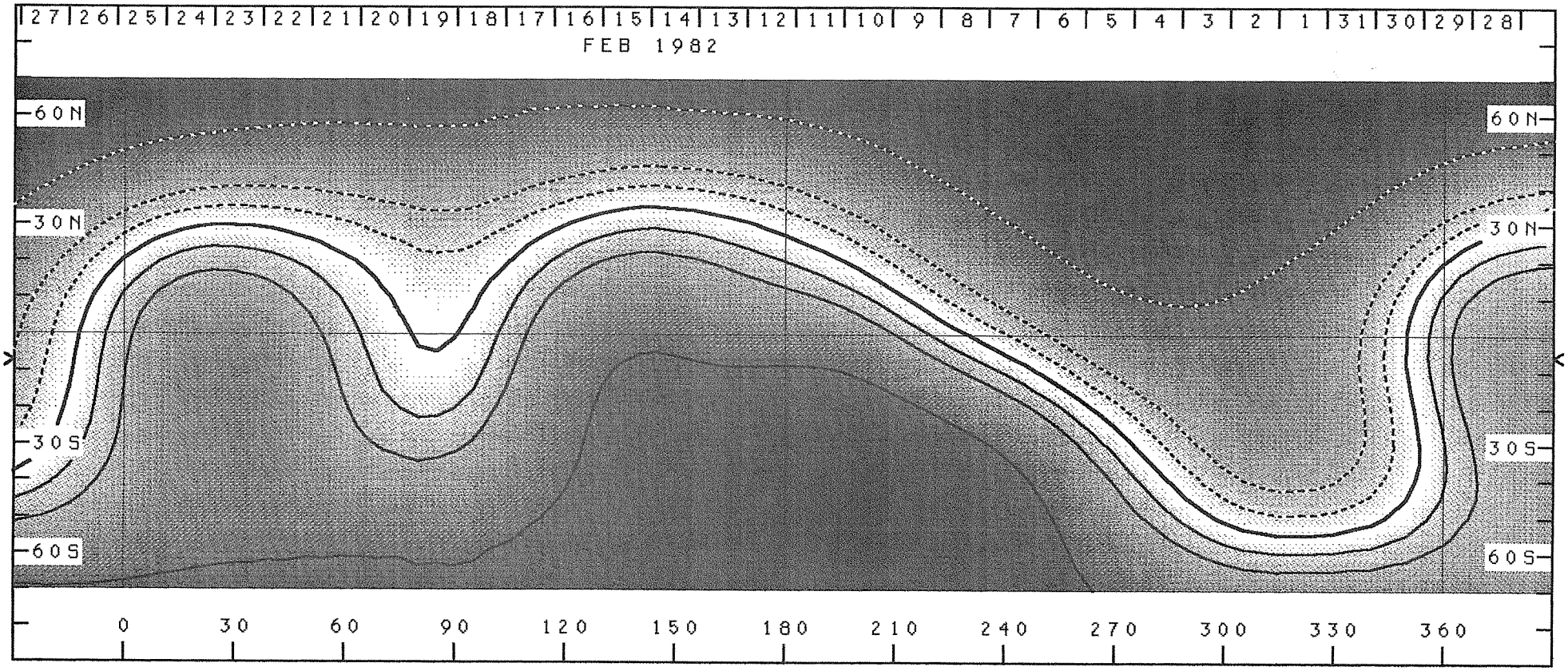
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

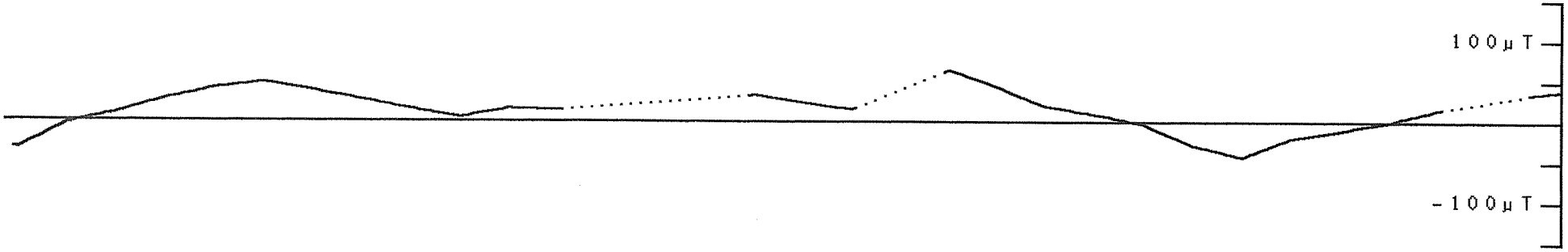
0, ±1, 2, 5, 10, 20 MICROTESLA



1718

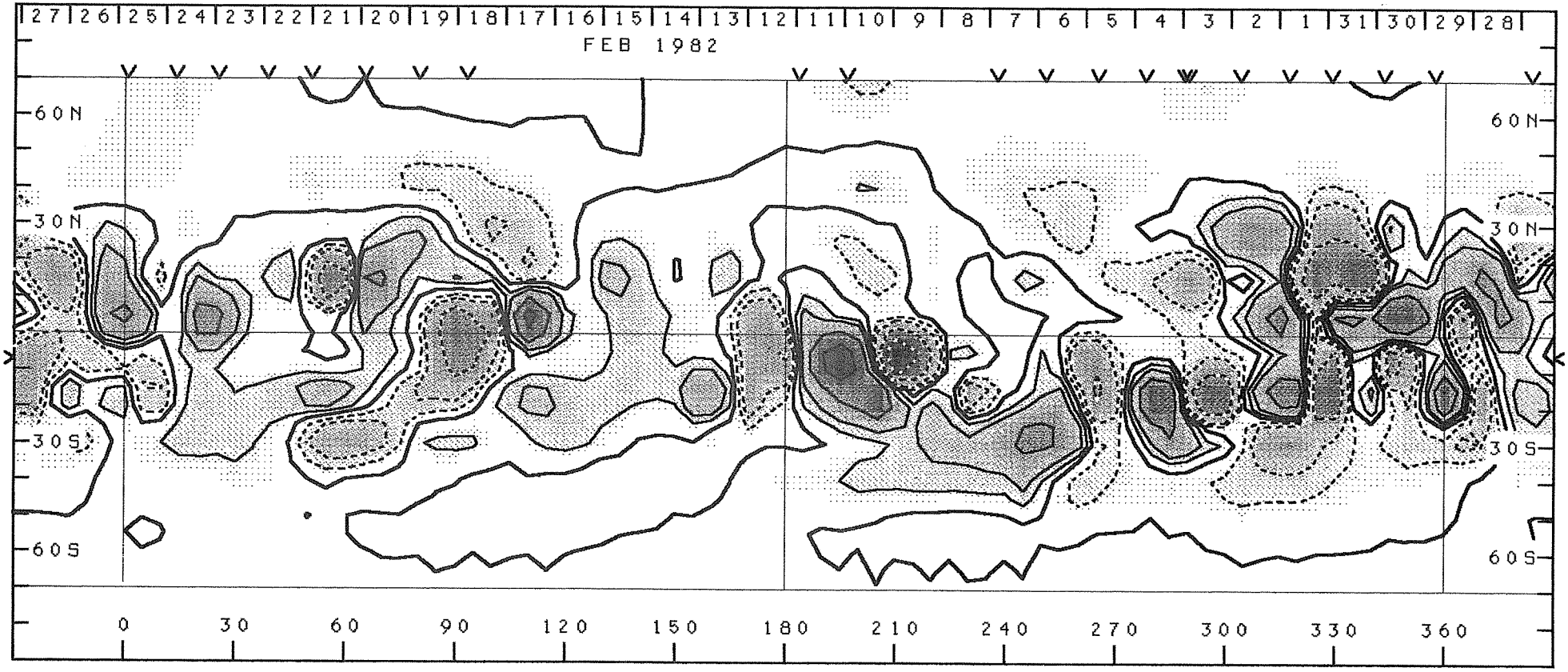
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

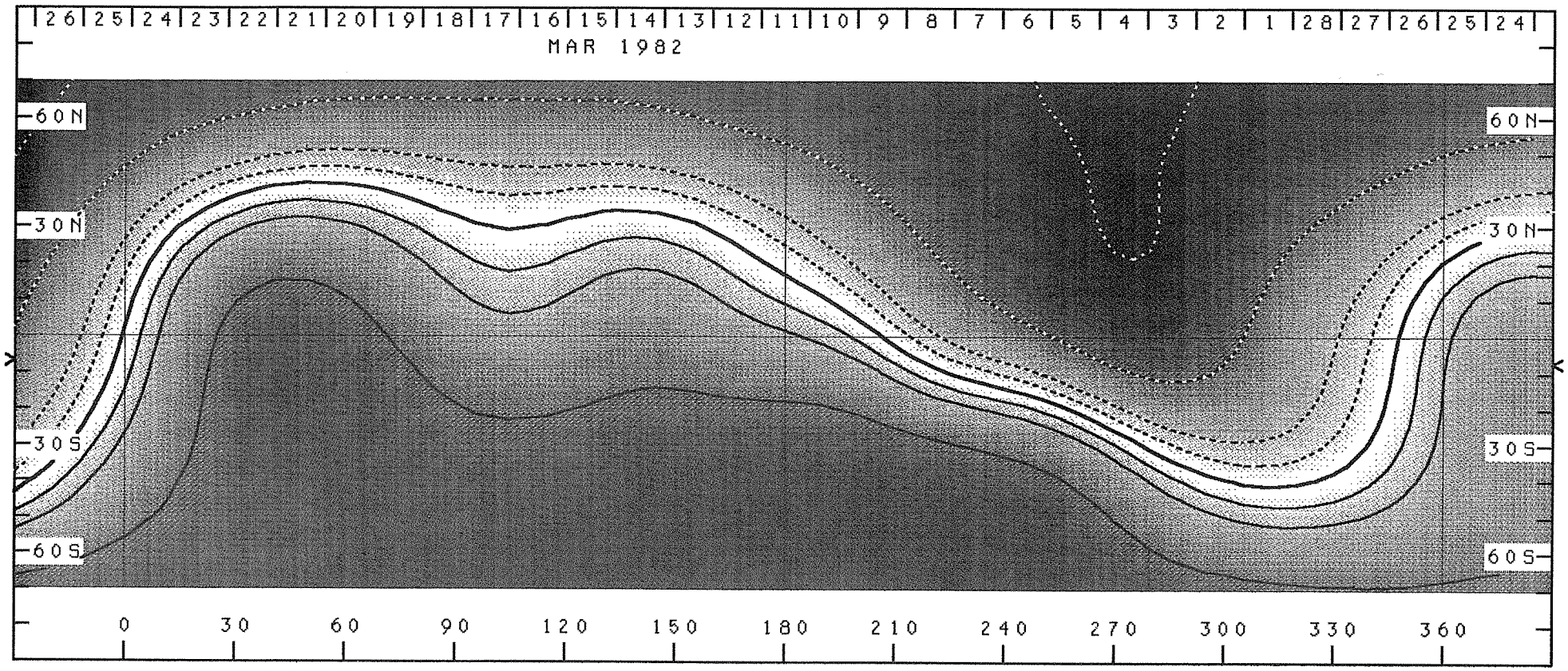
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

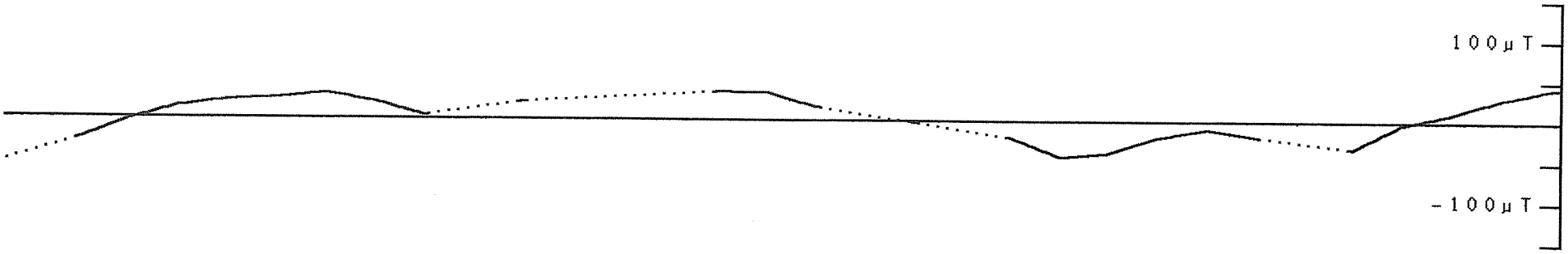
0, ±1, 2, 5, 10, 20 MICROTESLA



1719

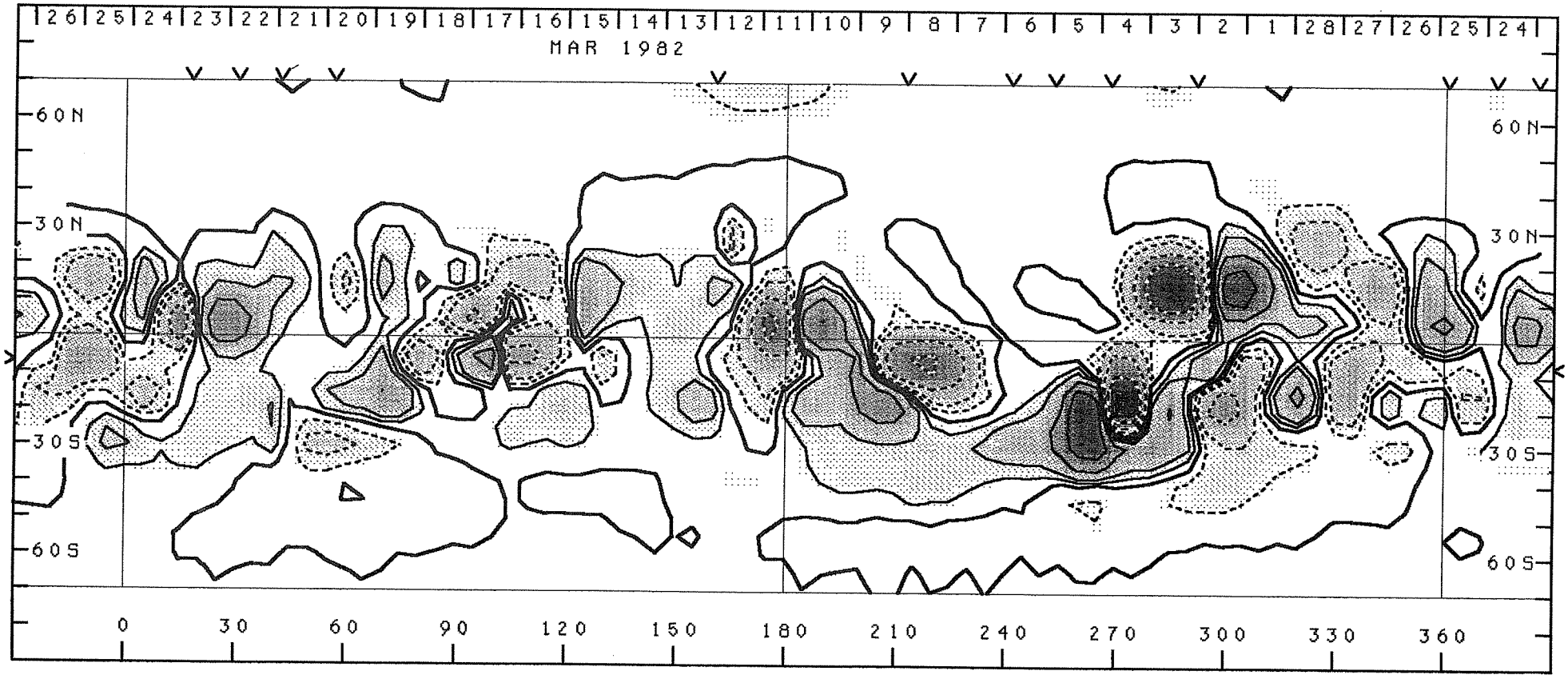
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

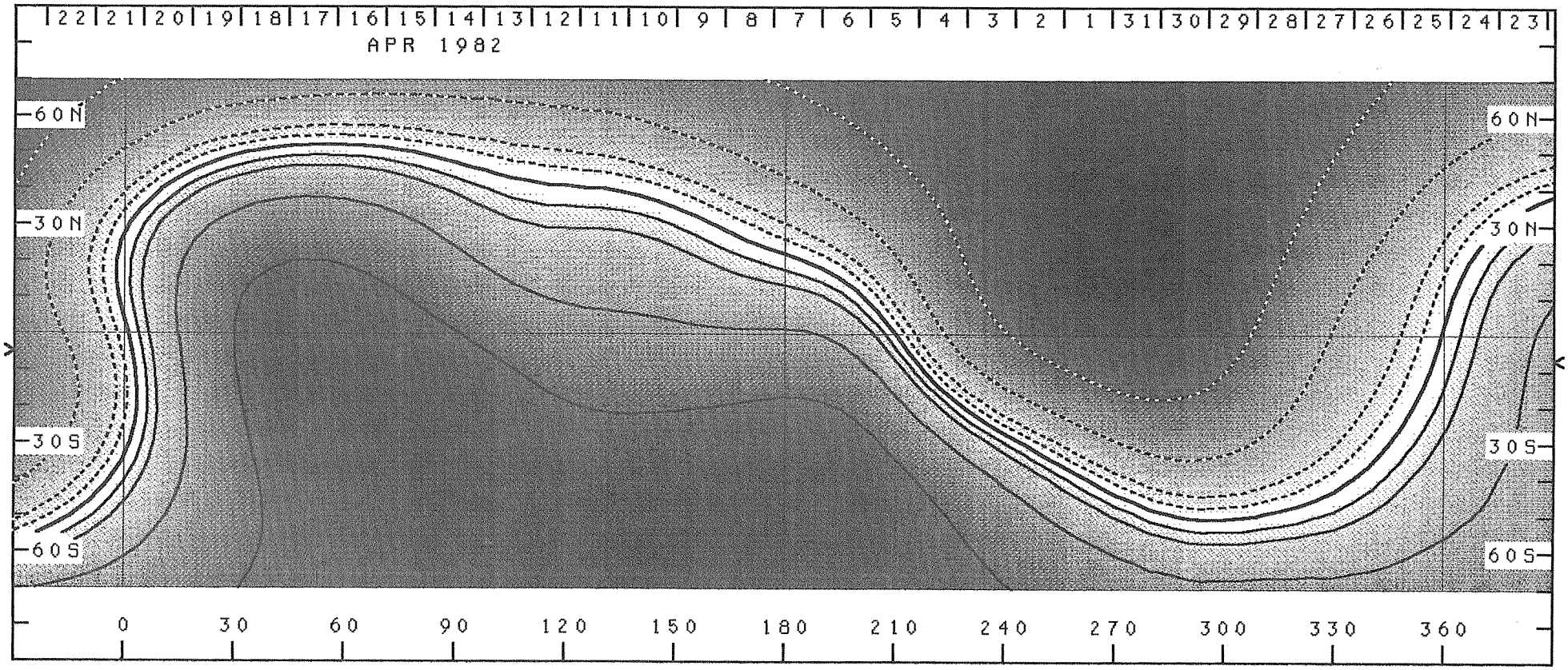
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

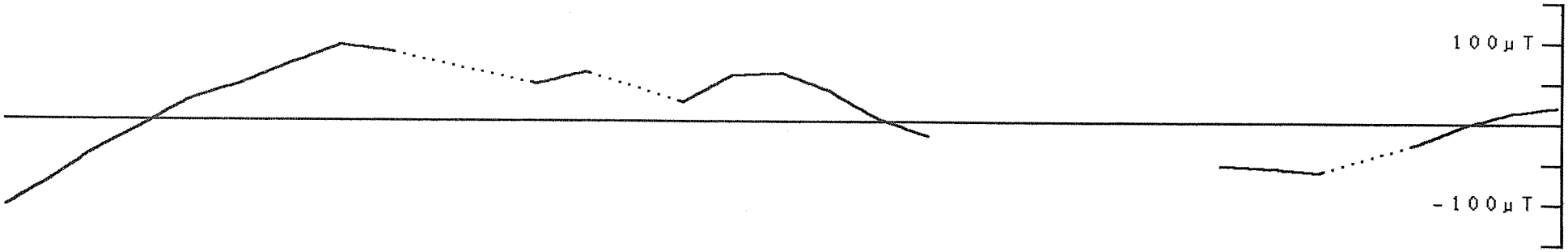
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



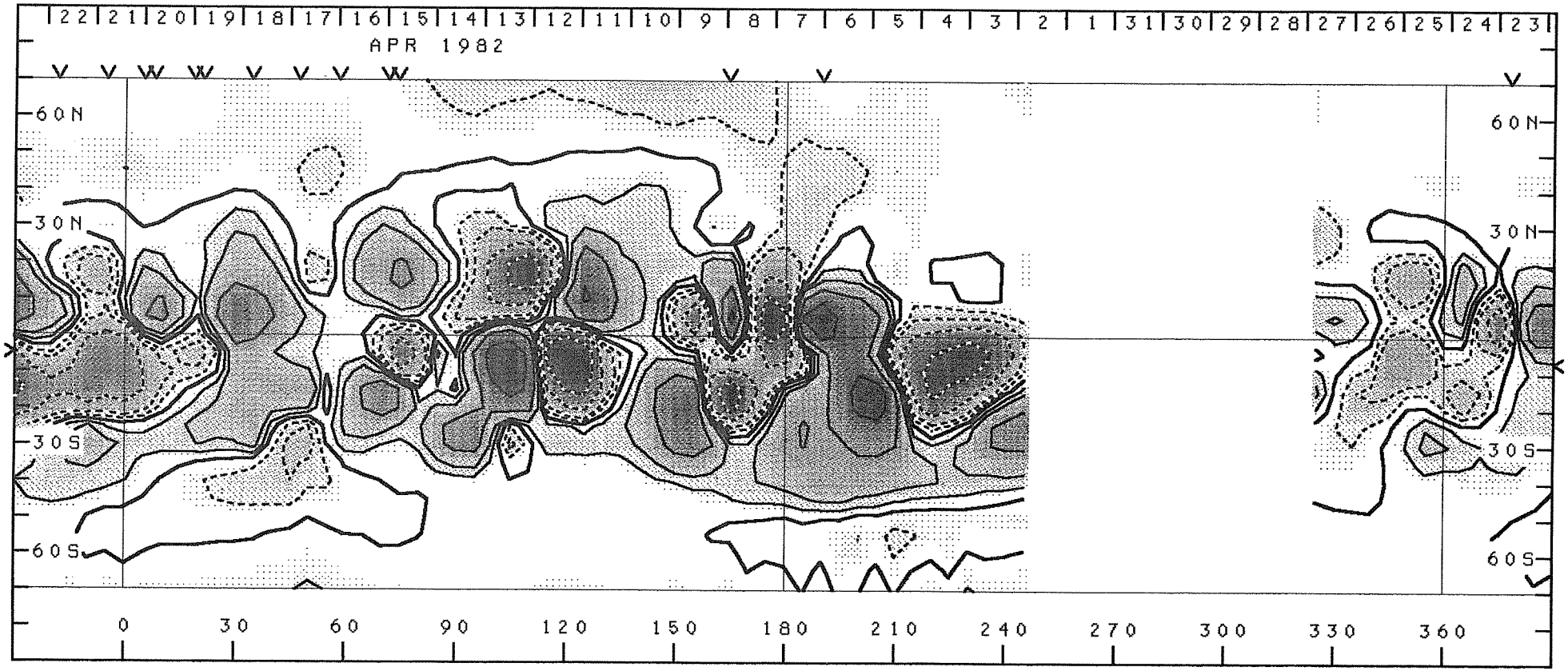
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

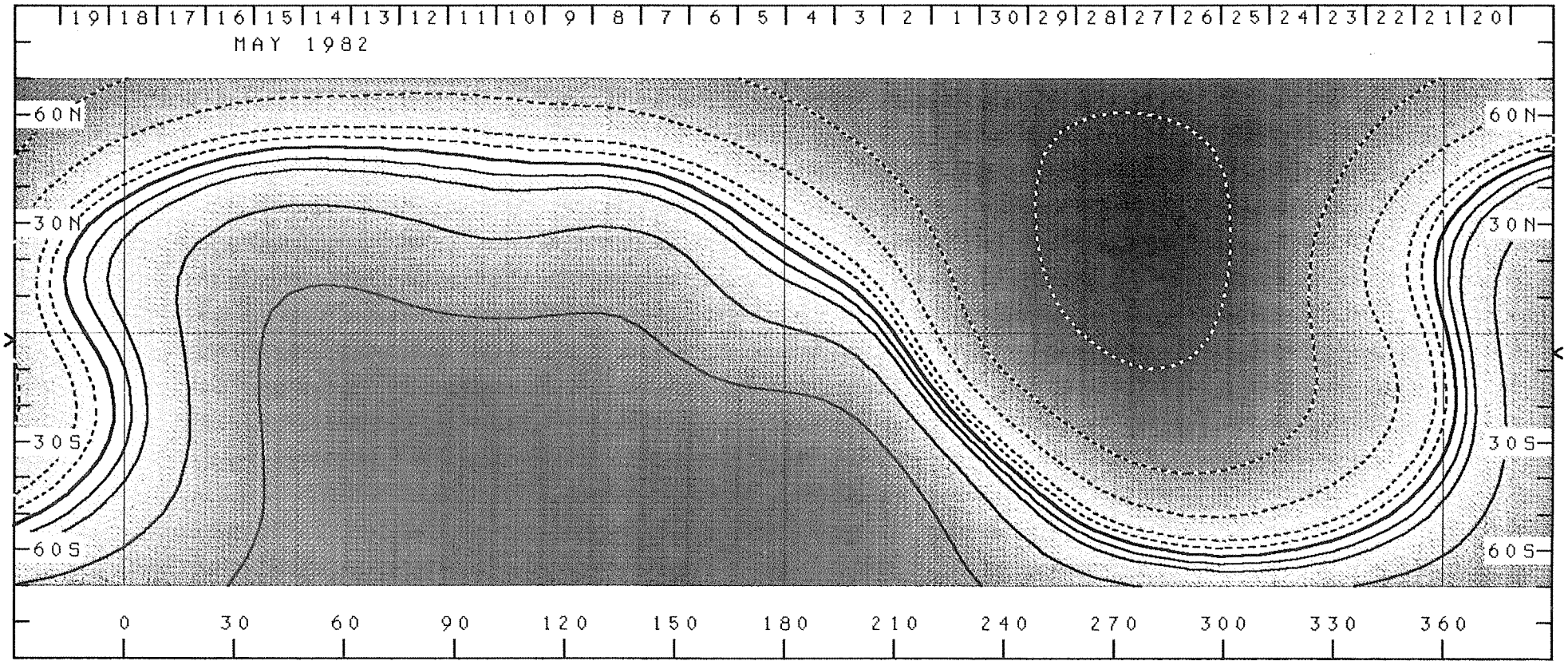


1720

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

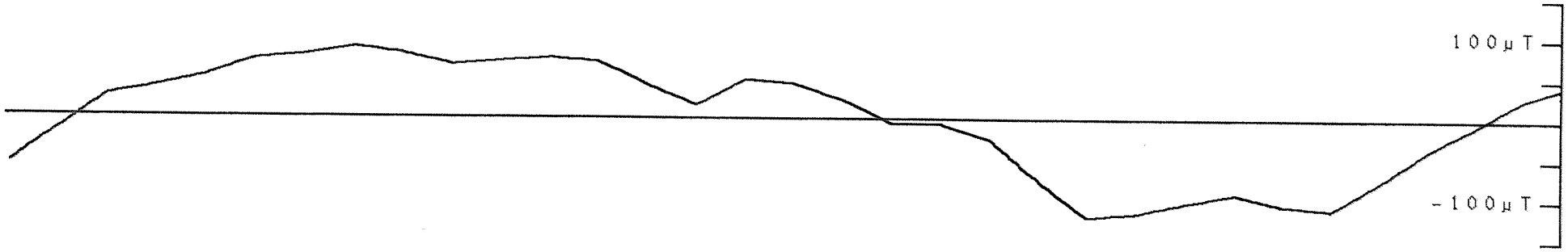
0, ±1, 2, 5, 10, 20 MICROTESLA



1721

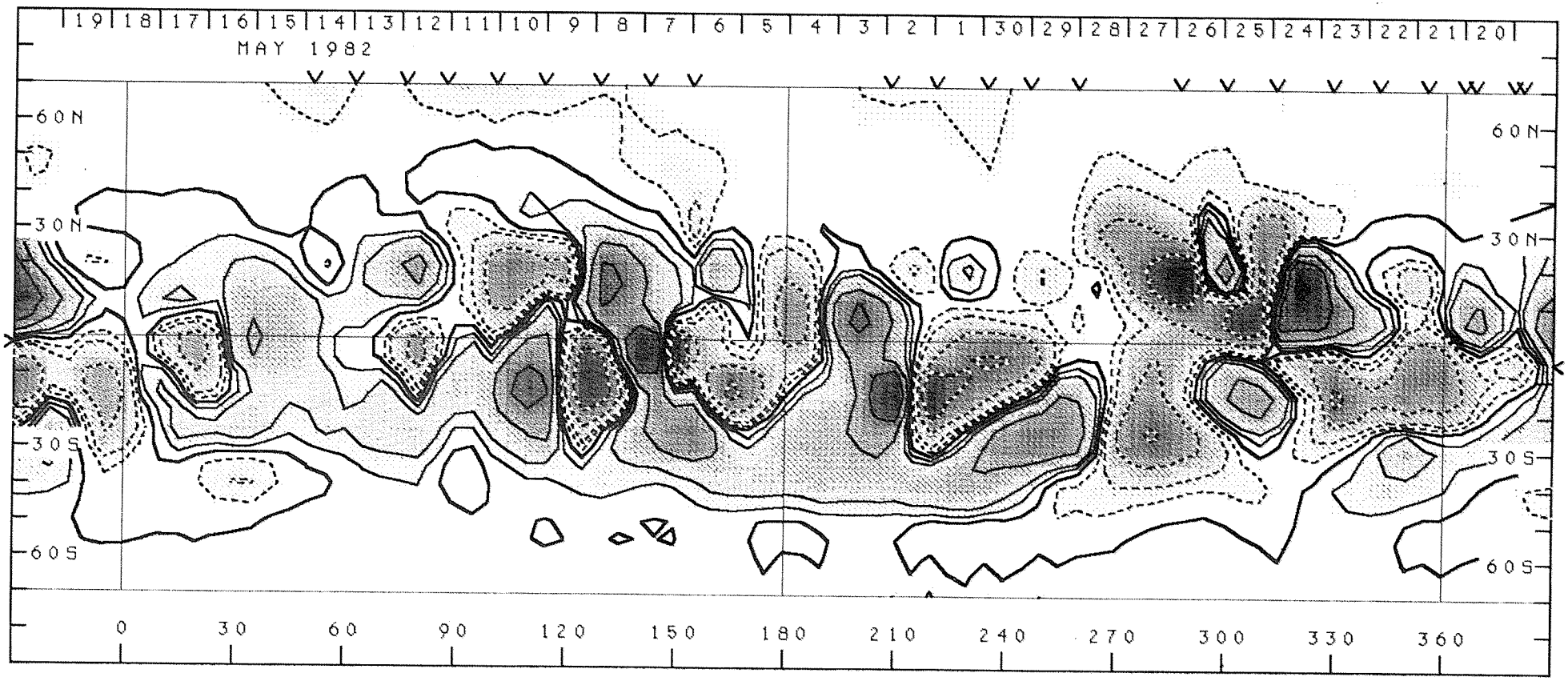
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

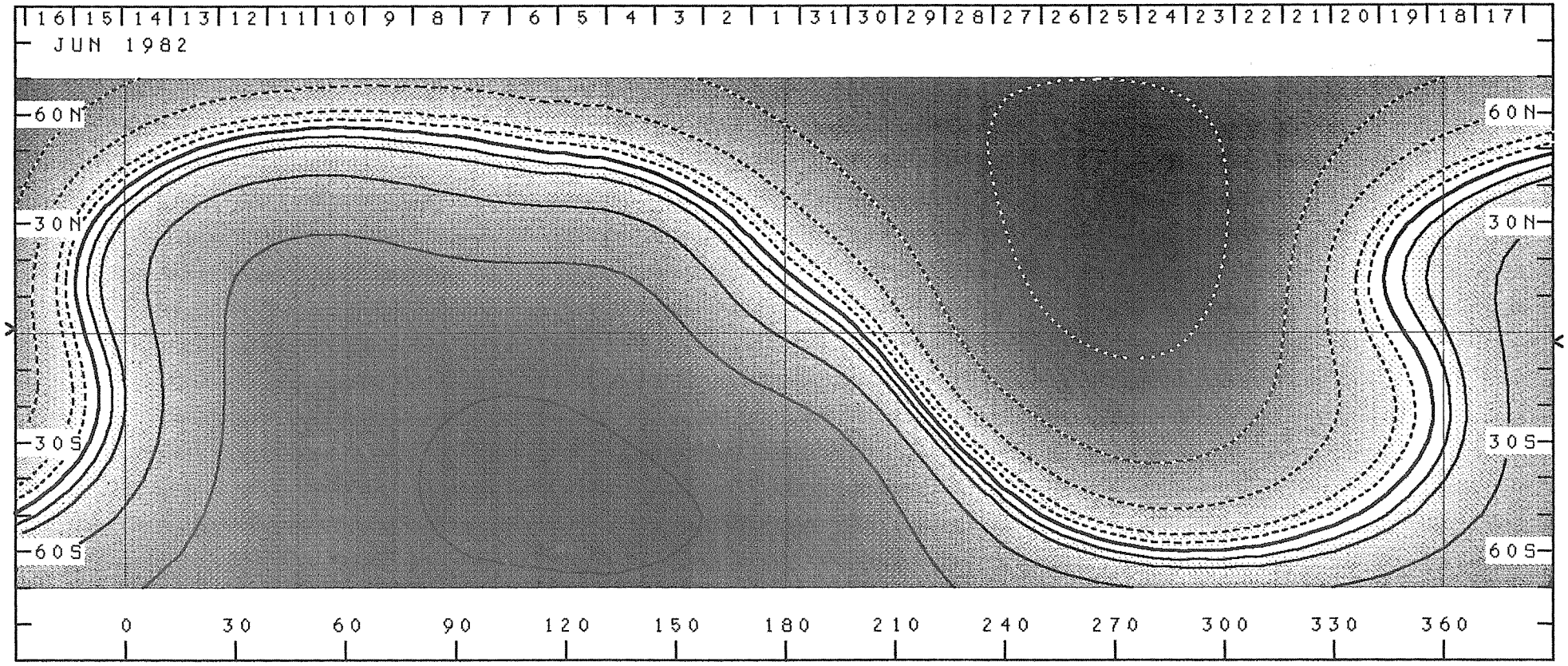
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

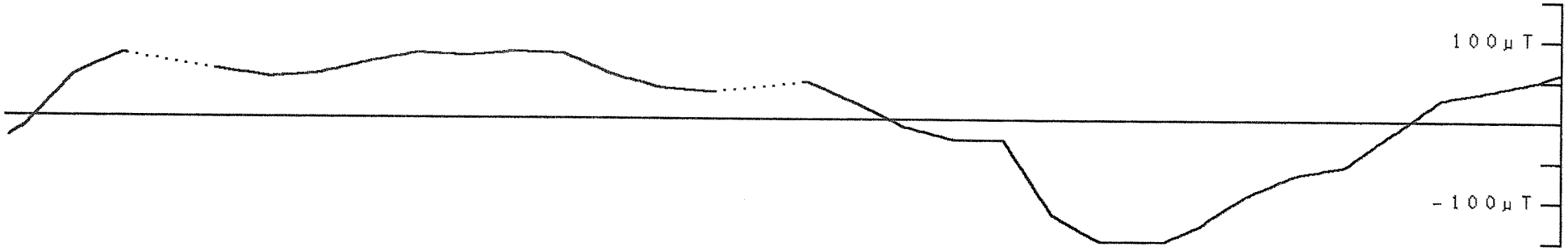
0, ±1, 2, 5, 10, 20 MICROTESLA



1722

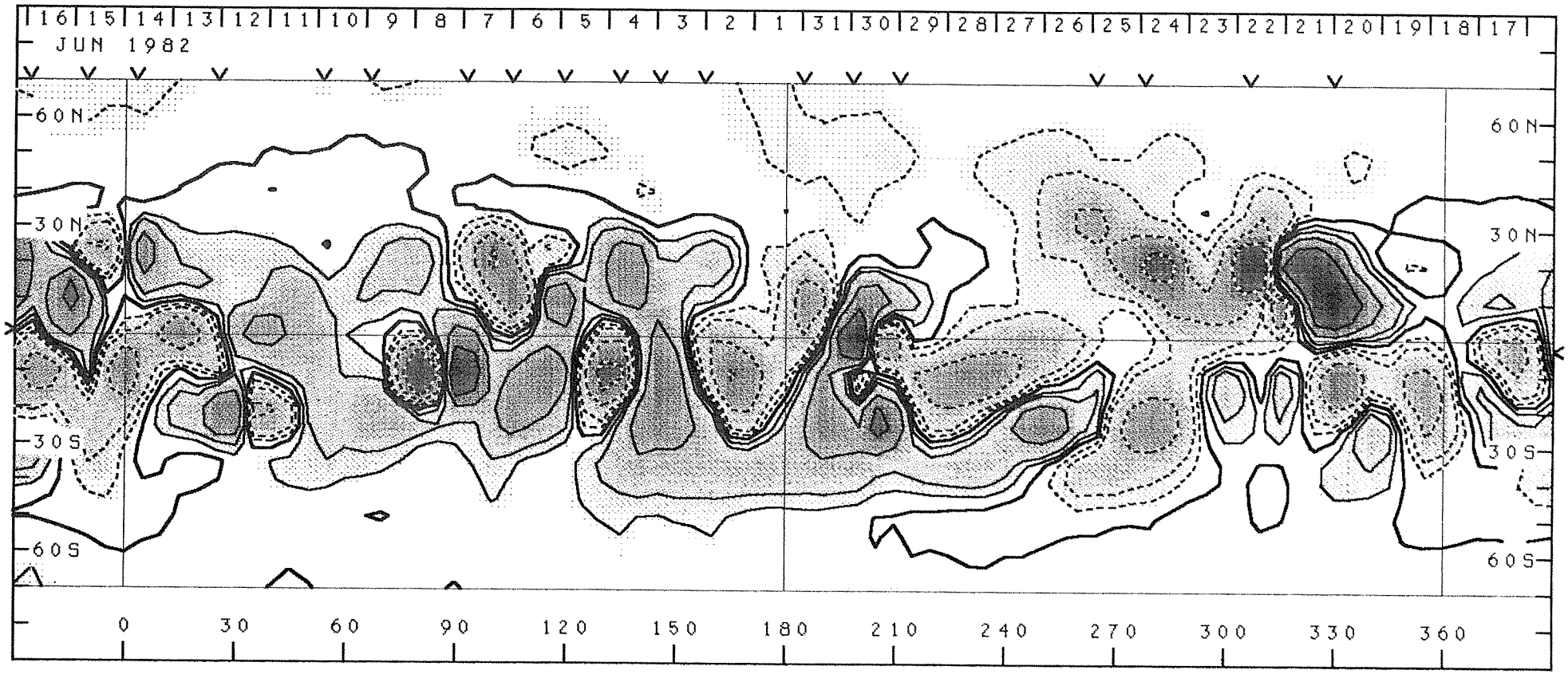
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

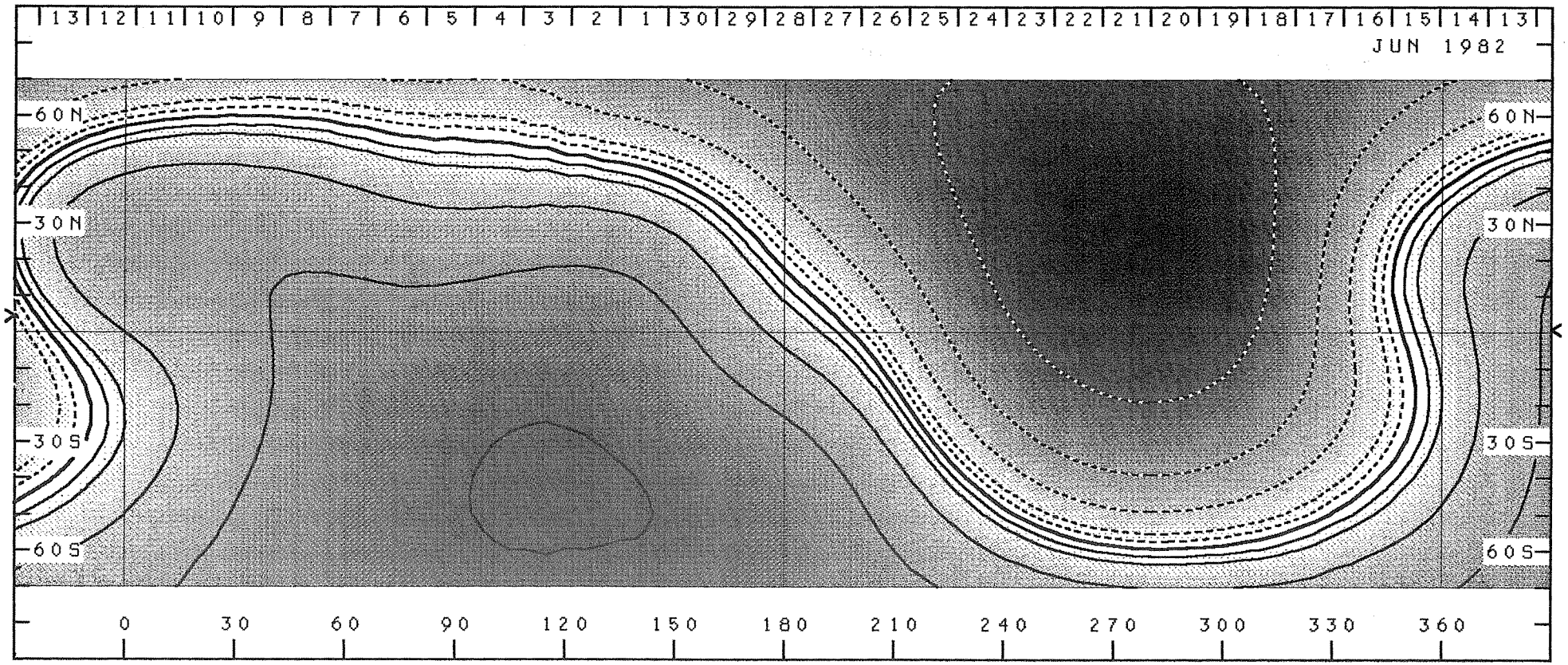
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

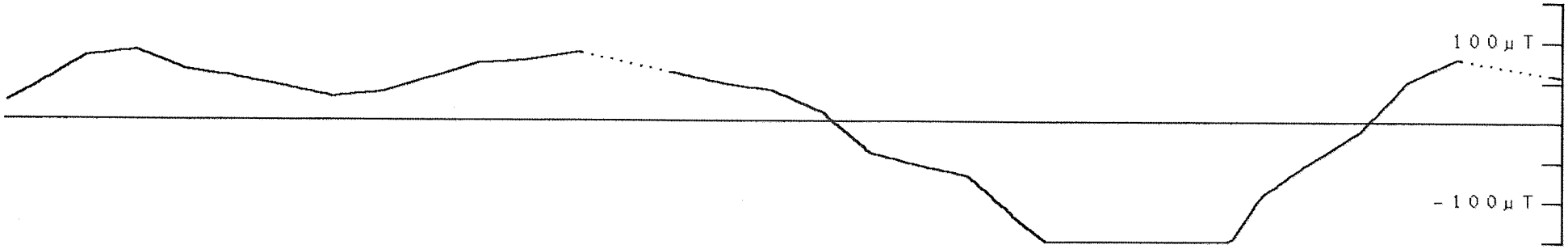
0, ±1, 2, 5, 10, 20 MICROTESLA



1723

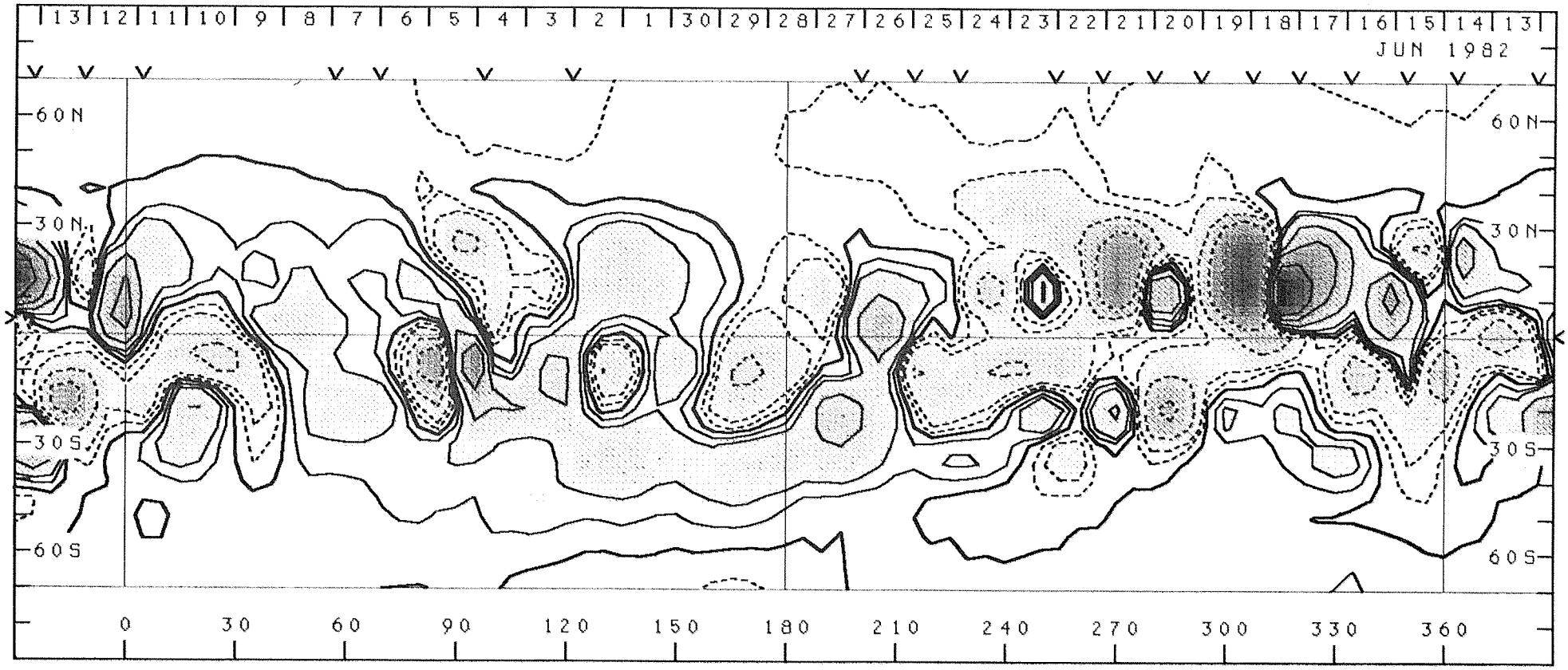
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

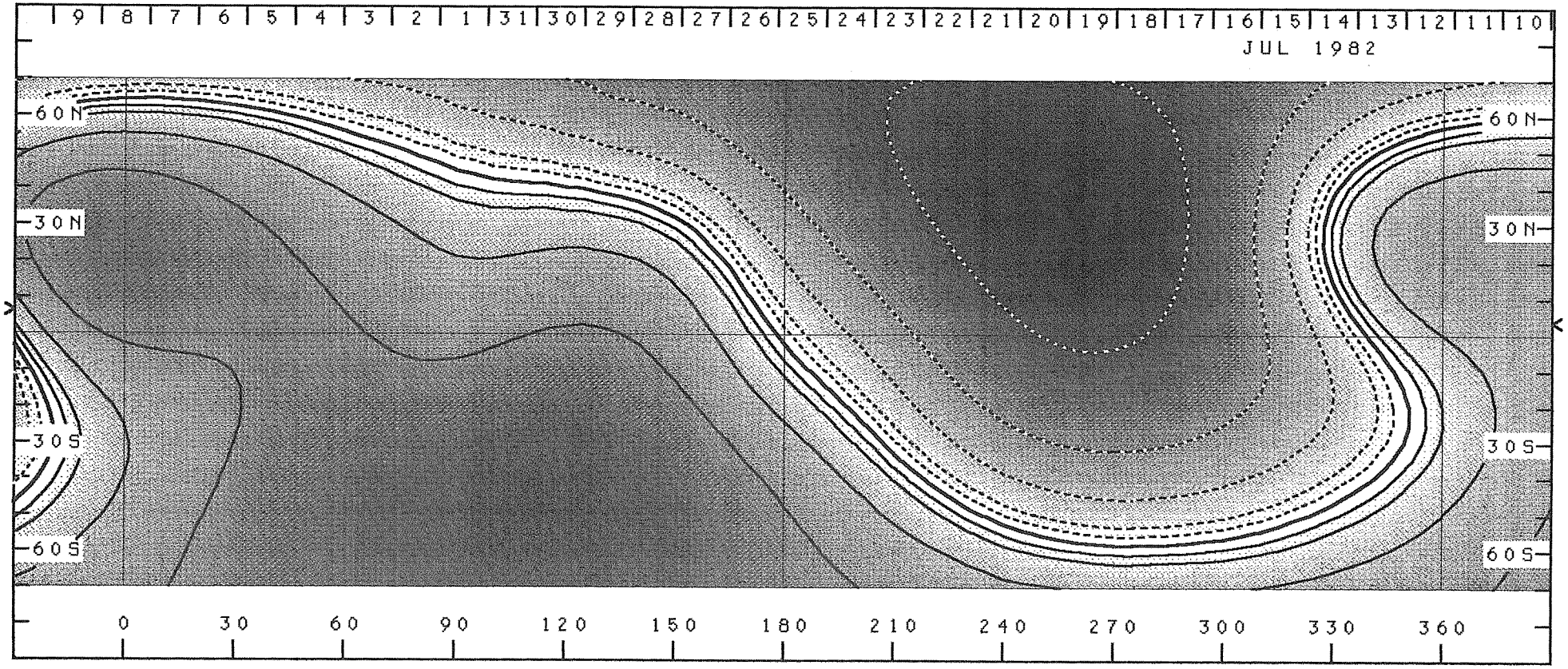
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

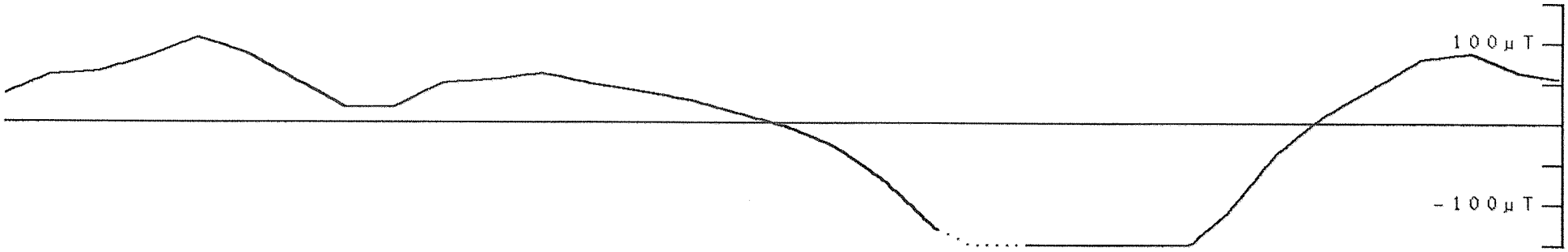
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



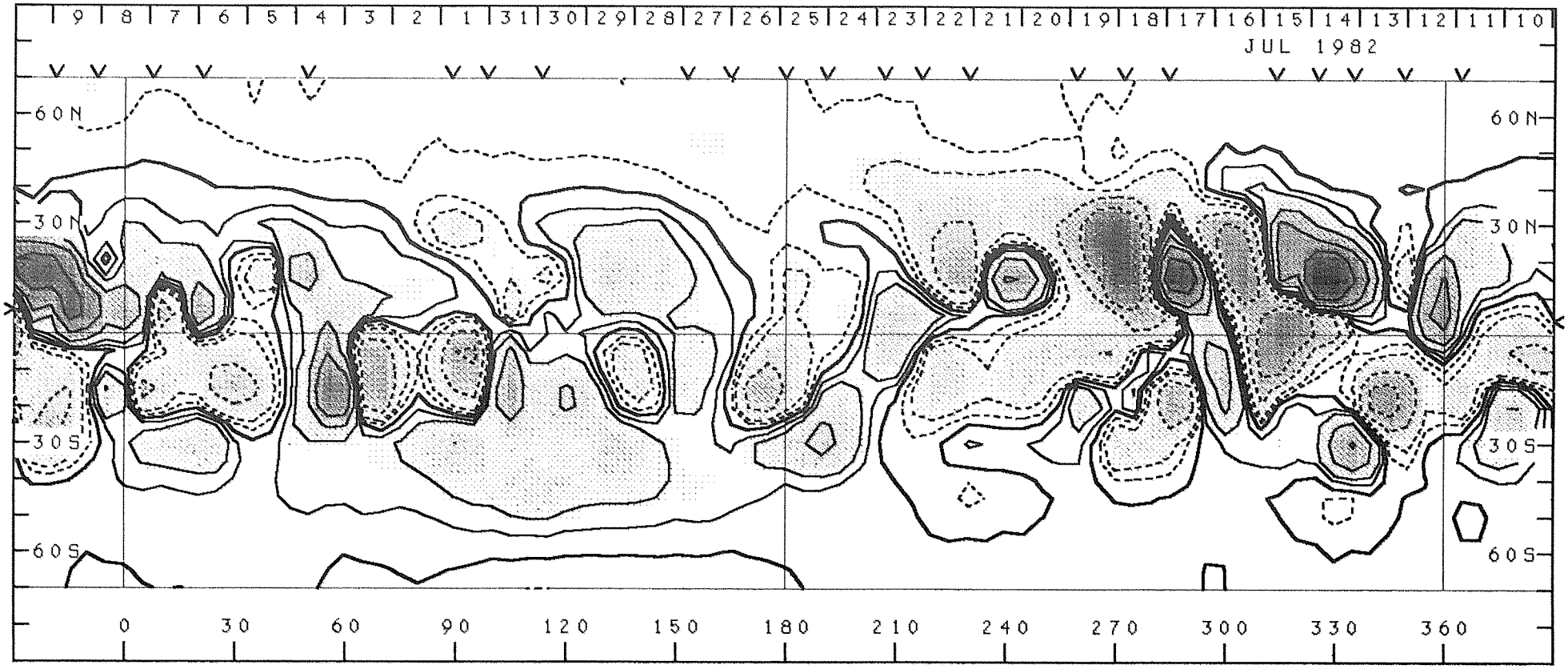
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

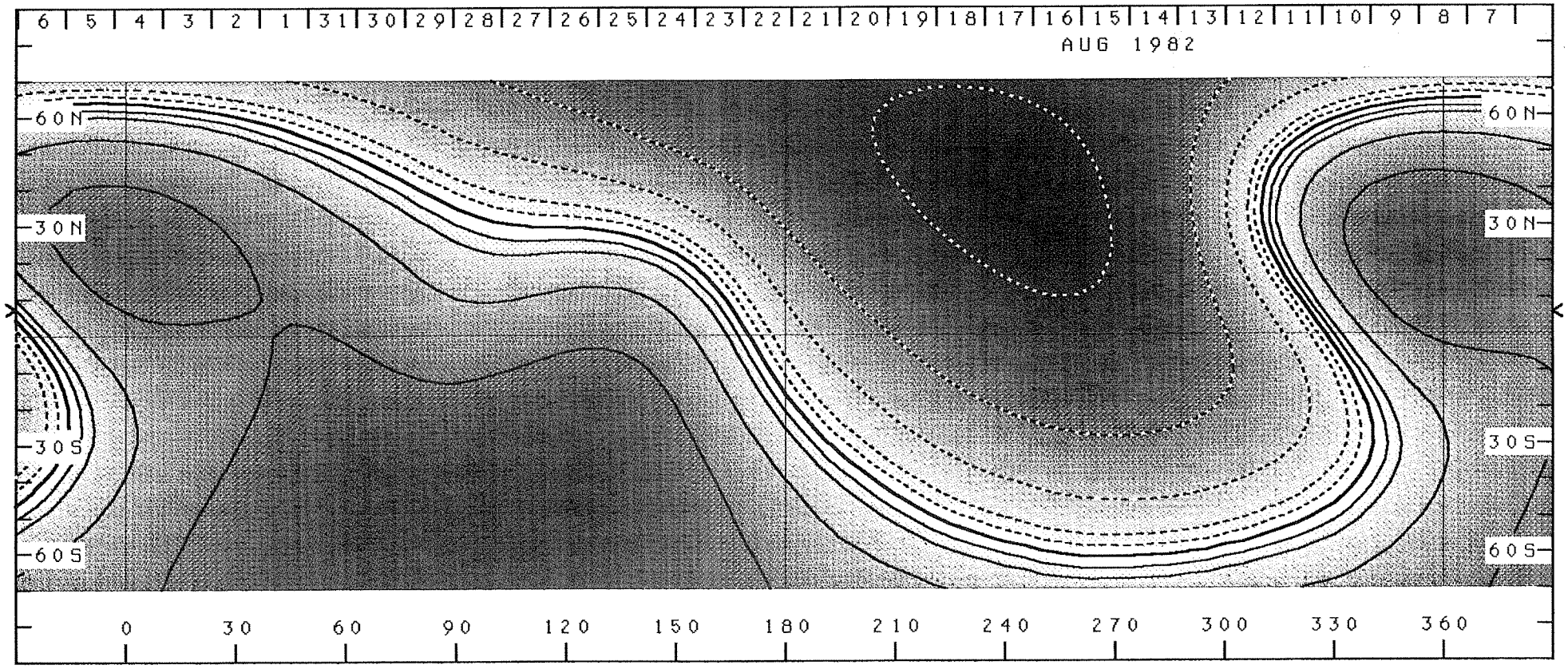
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

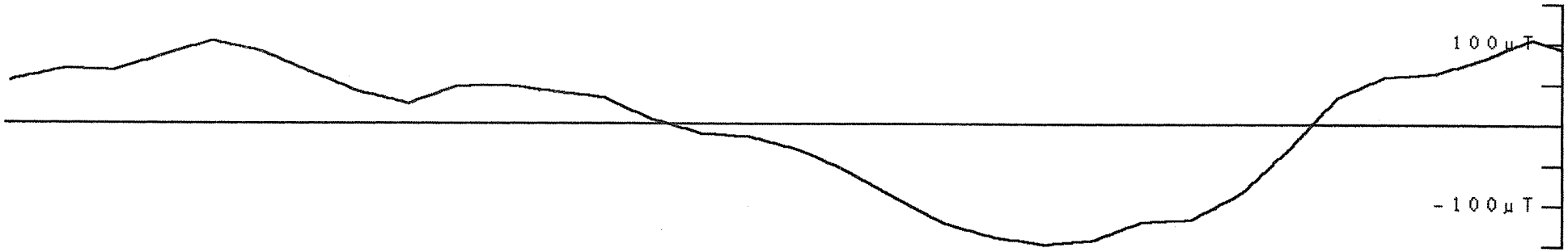
0, ±1, 2, 5, 10, 20 MICROTESLA



1725

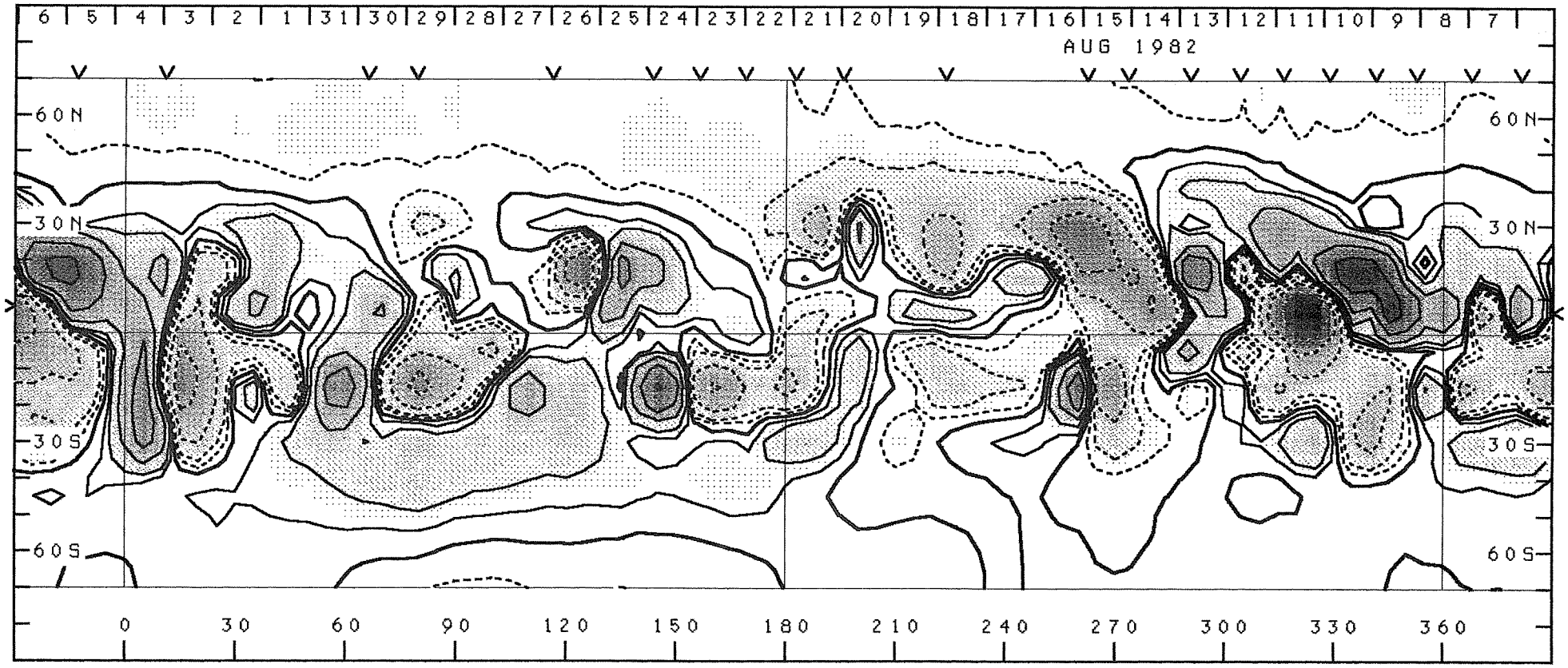
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

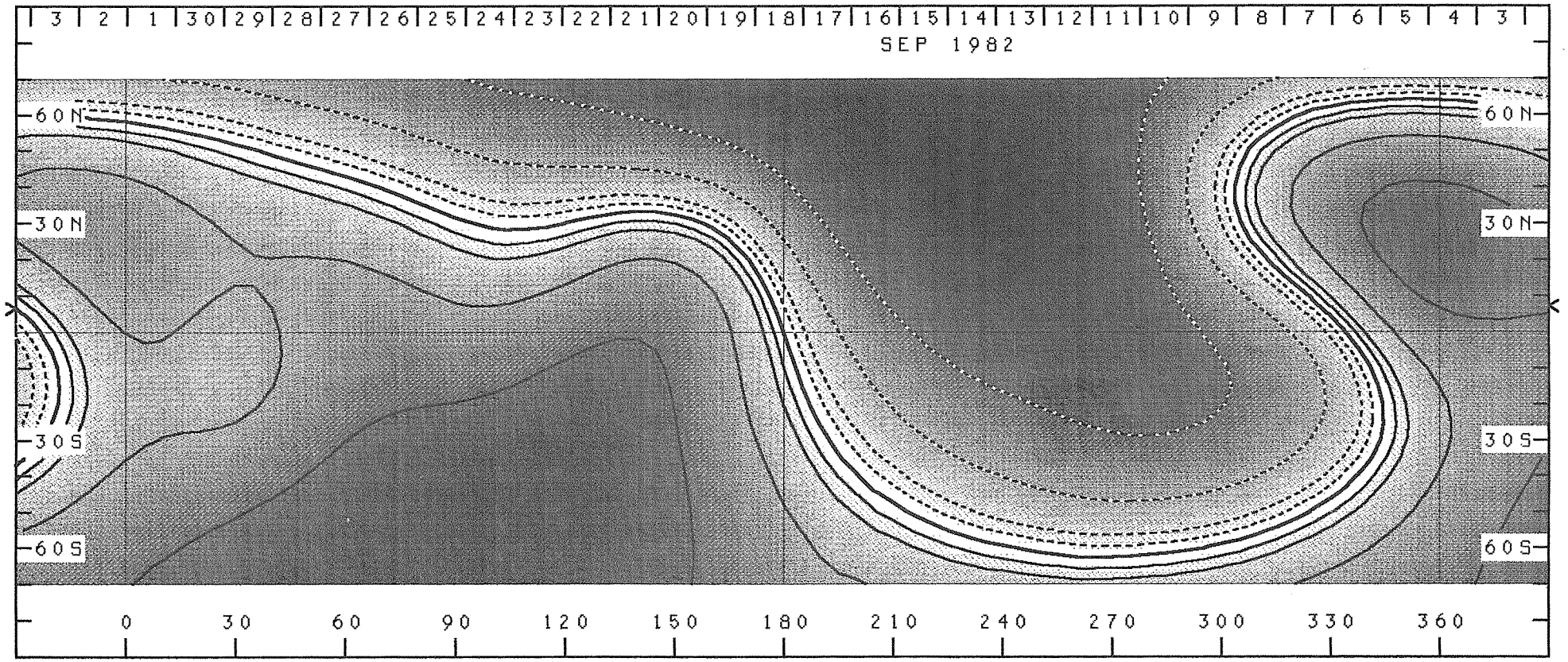
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

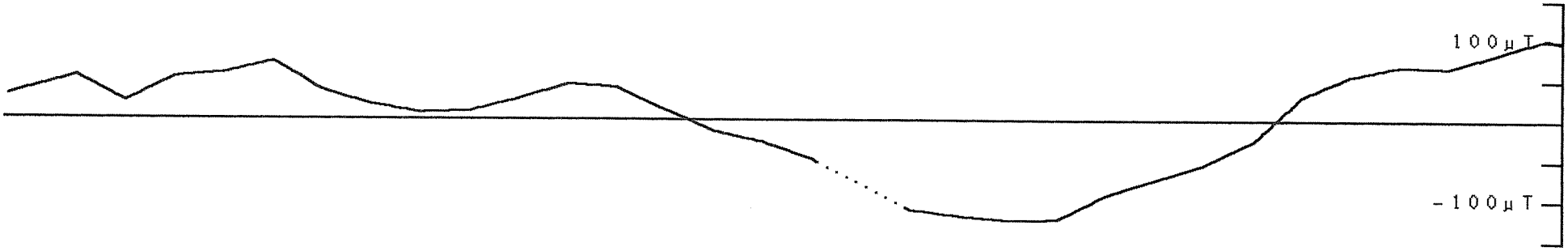
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



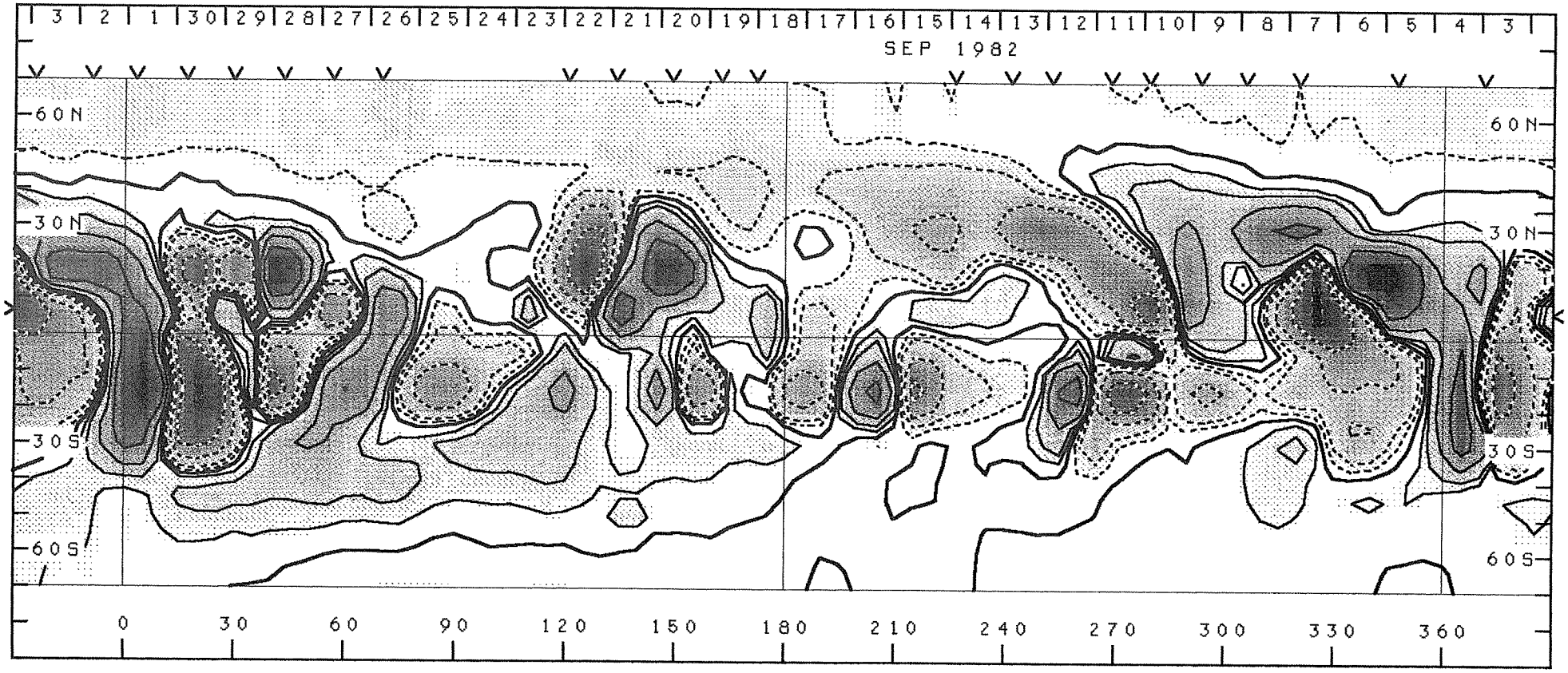
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

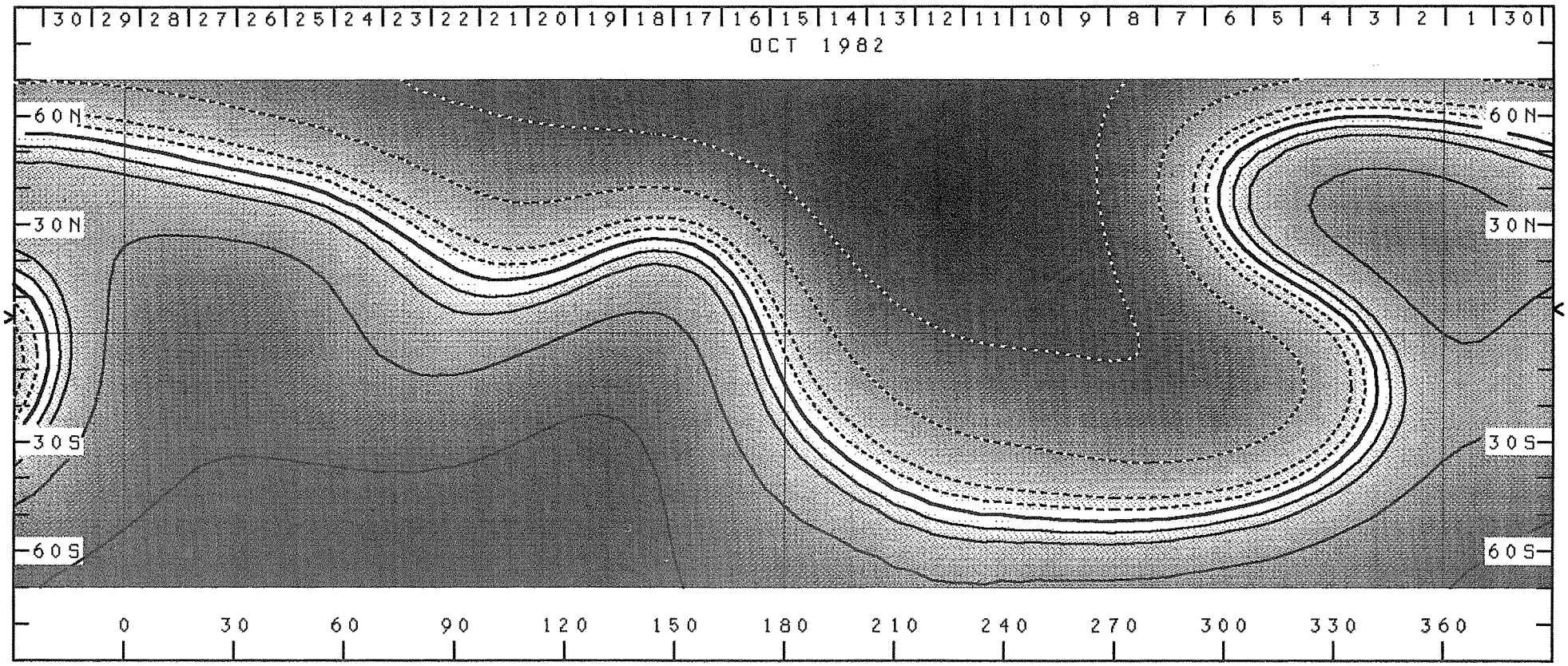
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

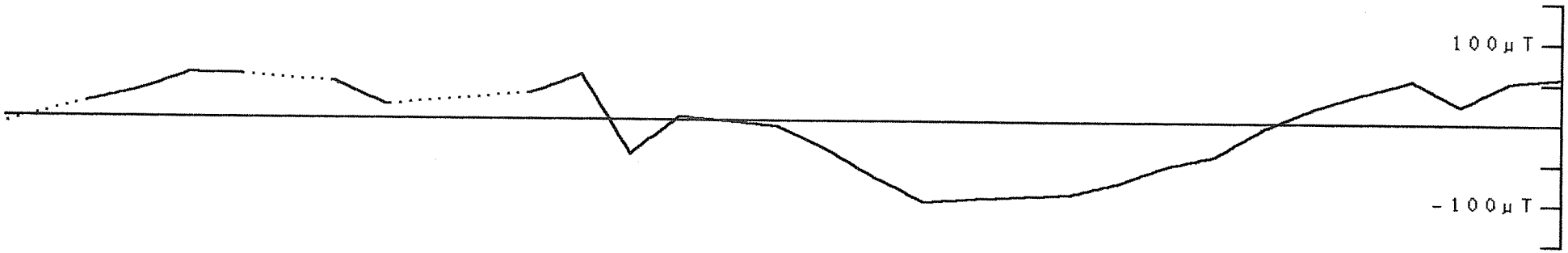
0, ±1, 2, 5, 10, 20 MICROTESLA



1727

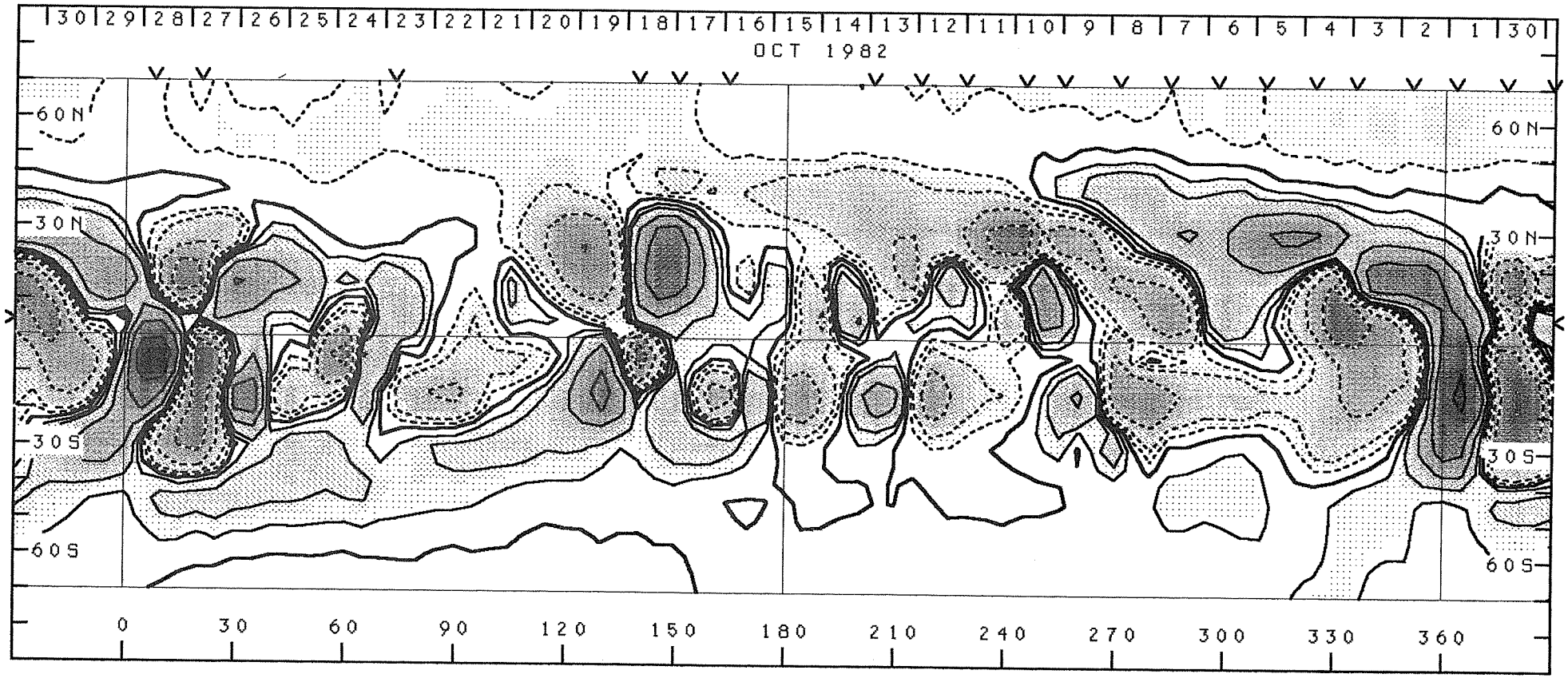
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

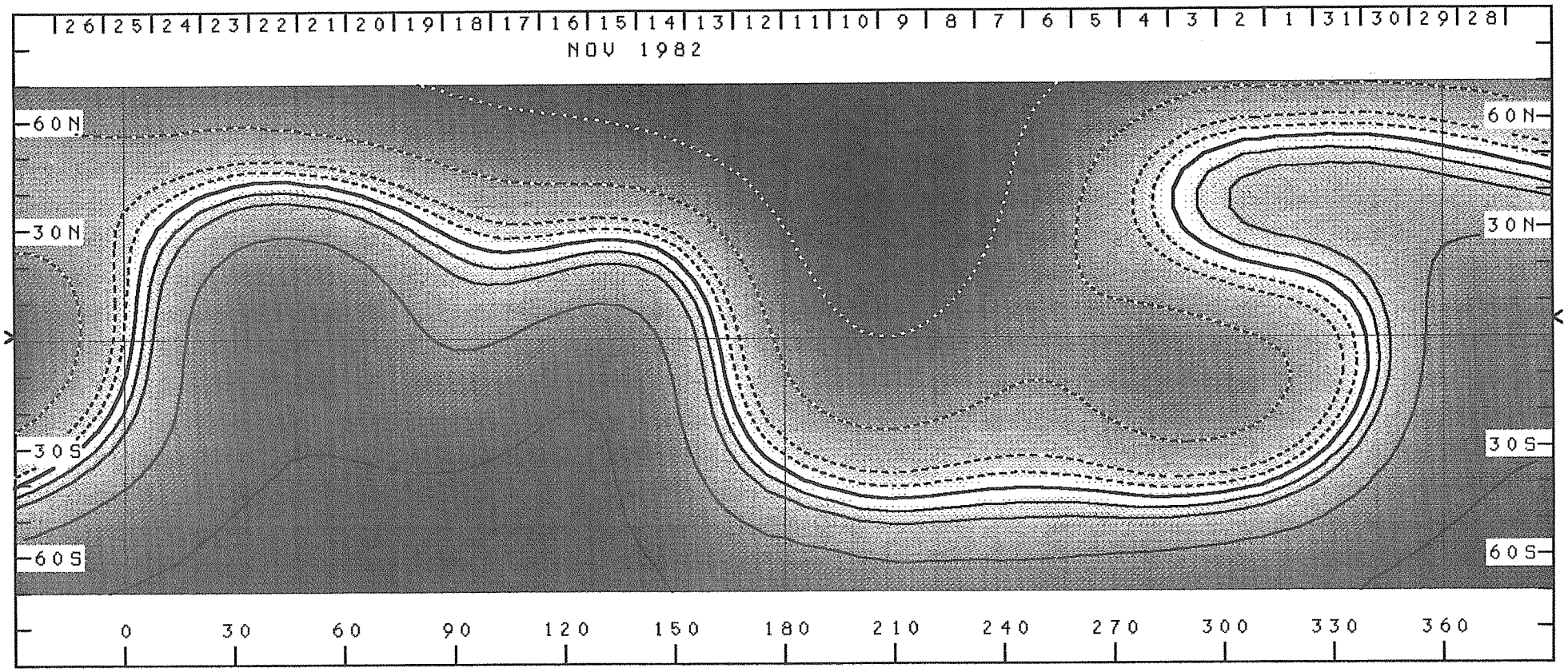
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

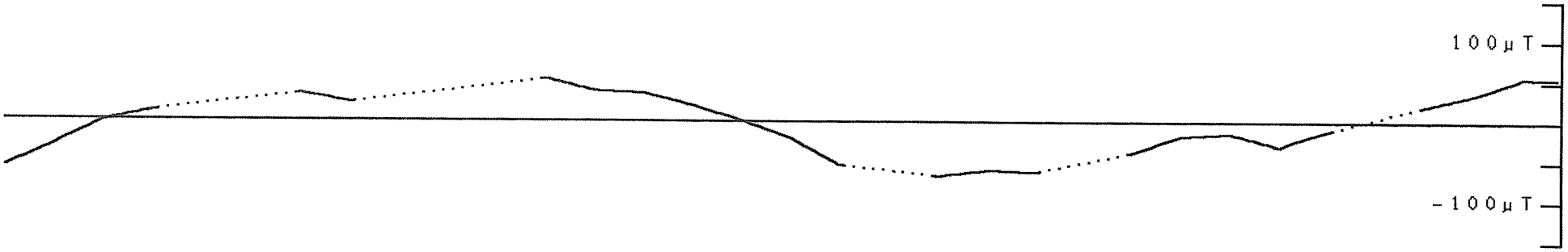
0, ±1, 2, 5, 10, 20 MICROTESLA



1728

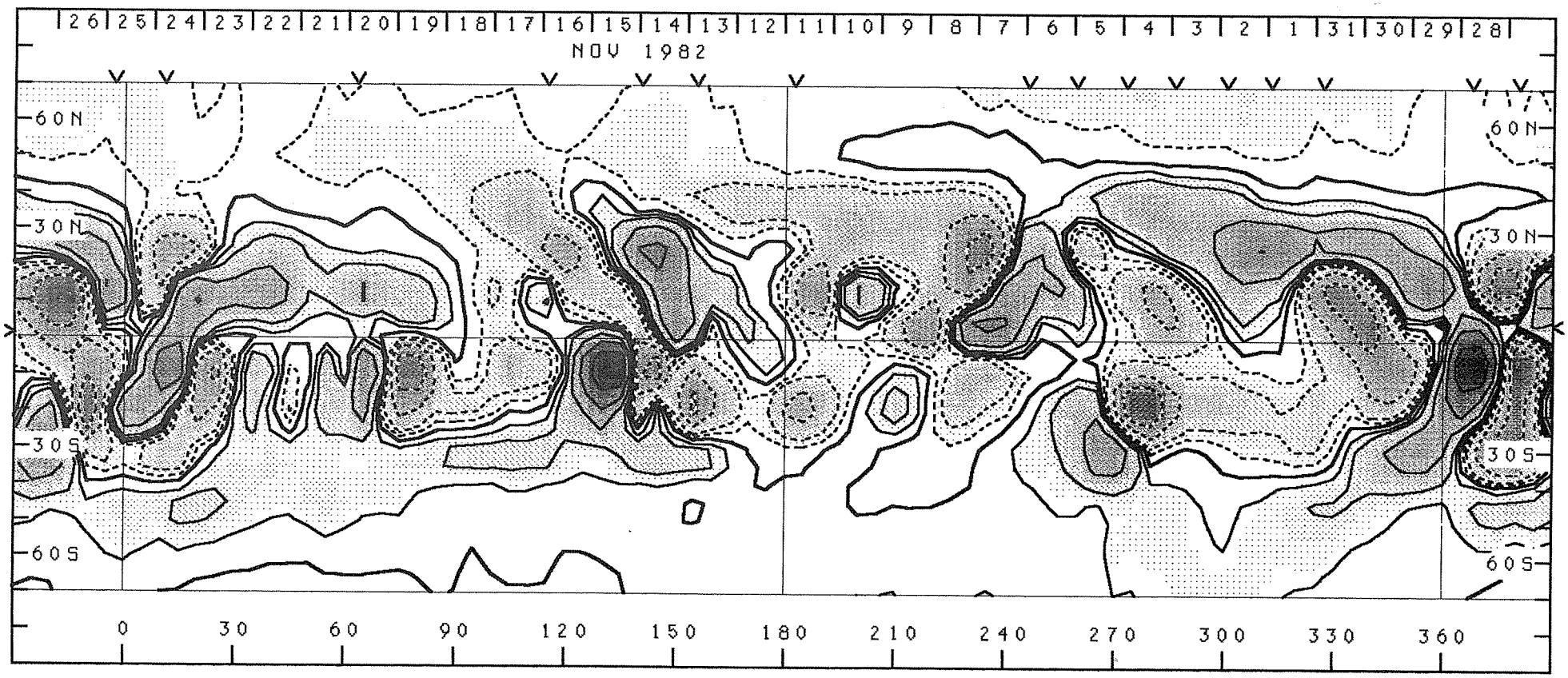
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

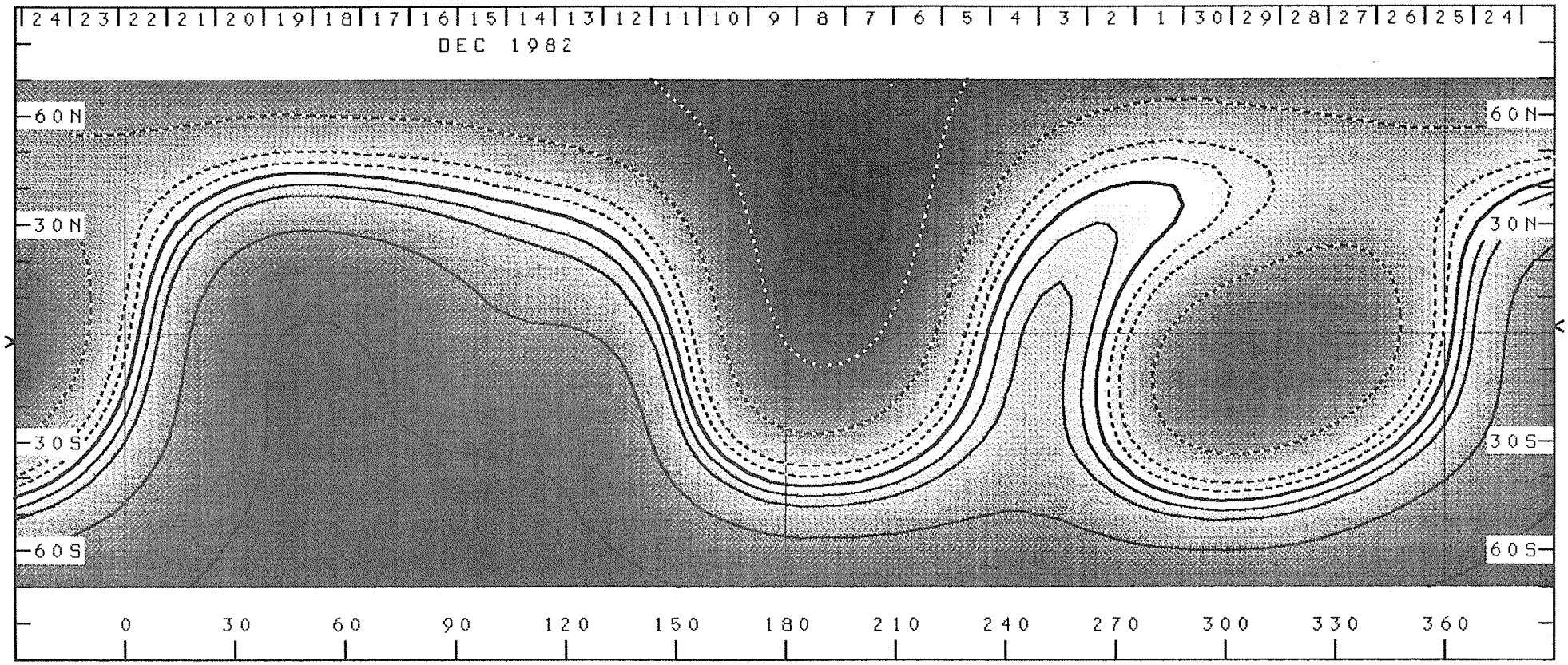


1728

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

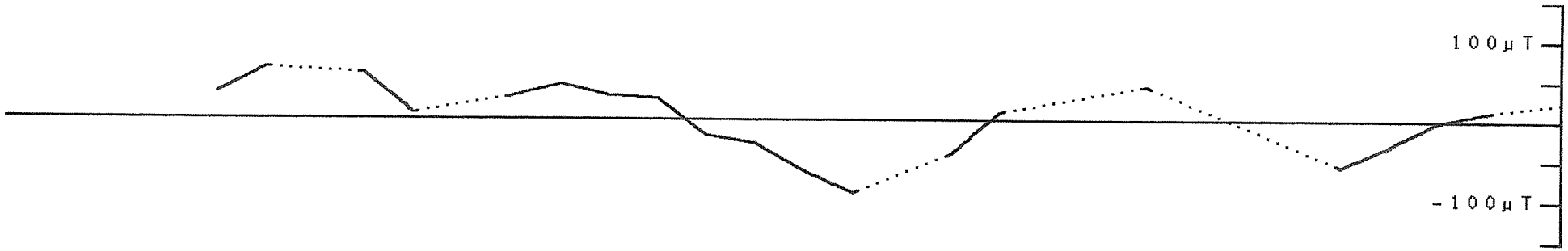
0, ±1, 2, 5, 10, 20 MICROTESLA



1729

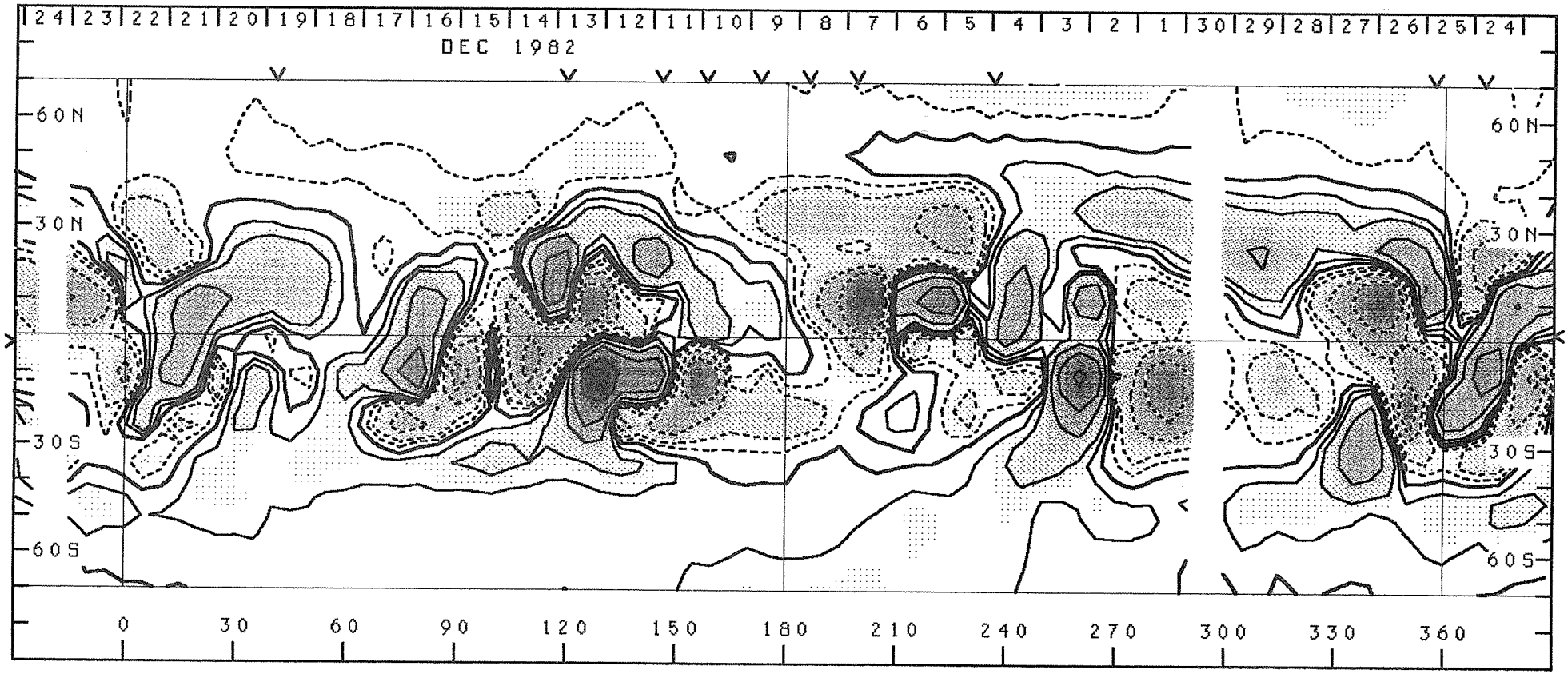
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

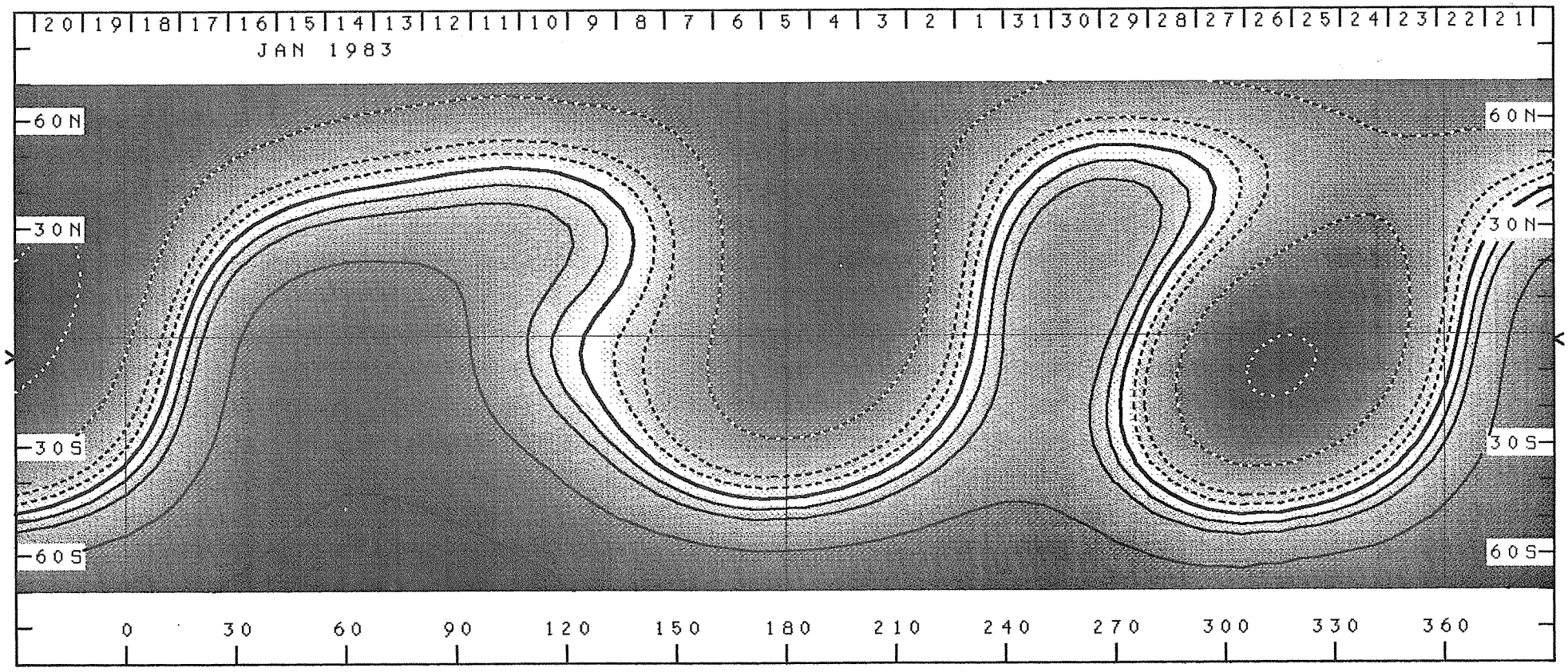
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

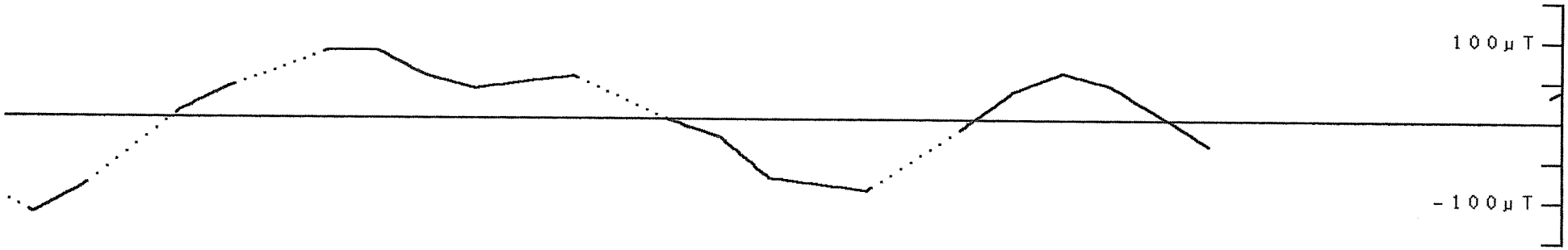
0, ±1, 2, 5, 10, 20 MICROTESLA



1730

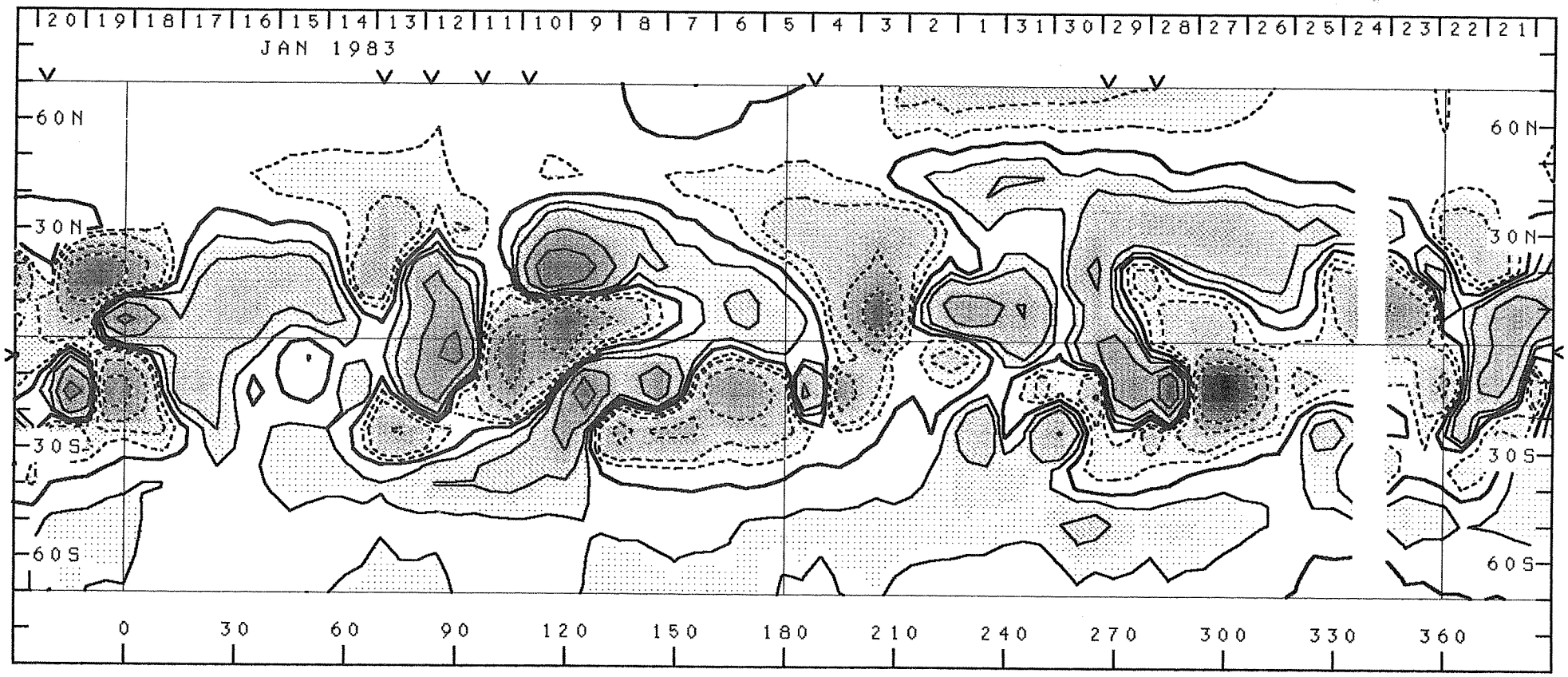
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

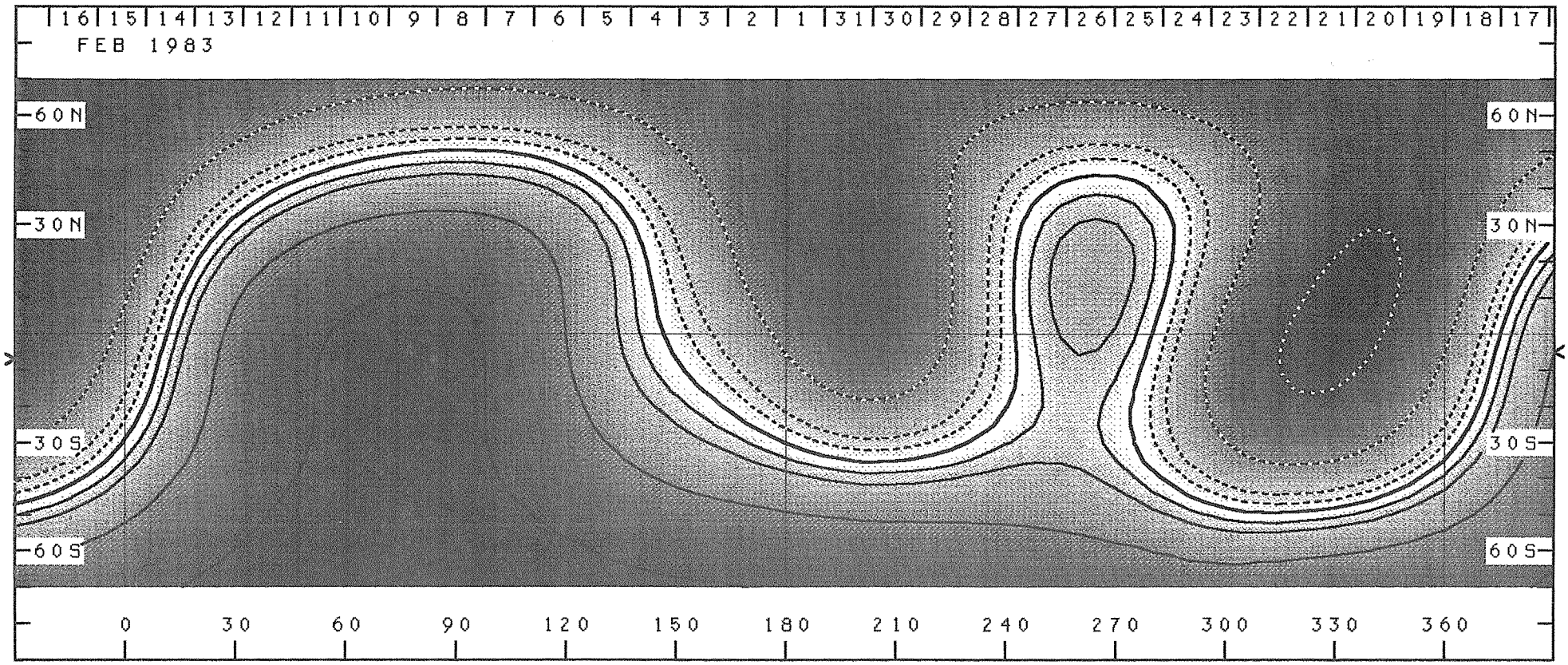


1730

WILCOX SOLAR OBSERVATORY

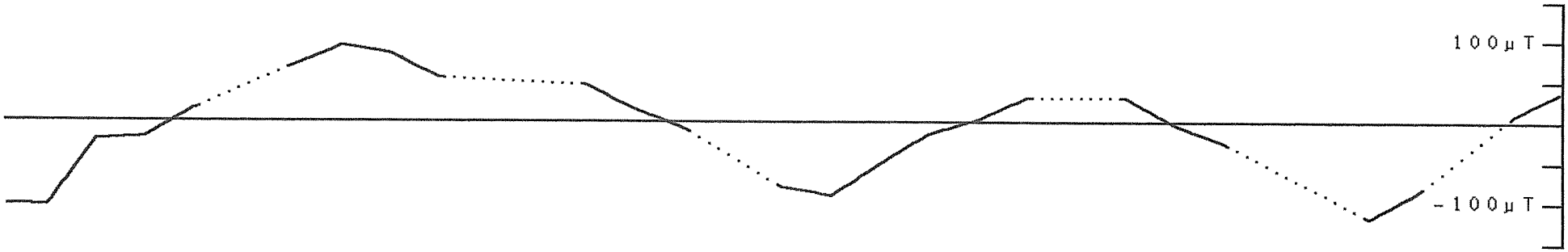
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



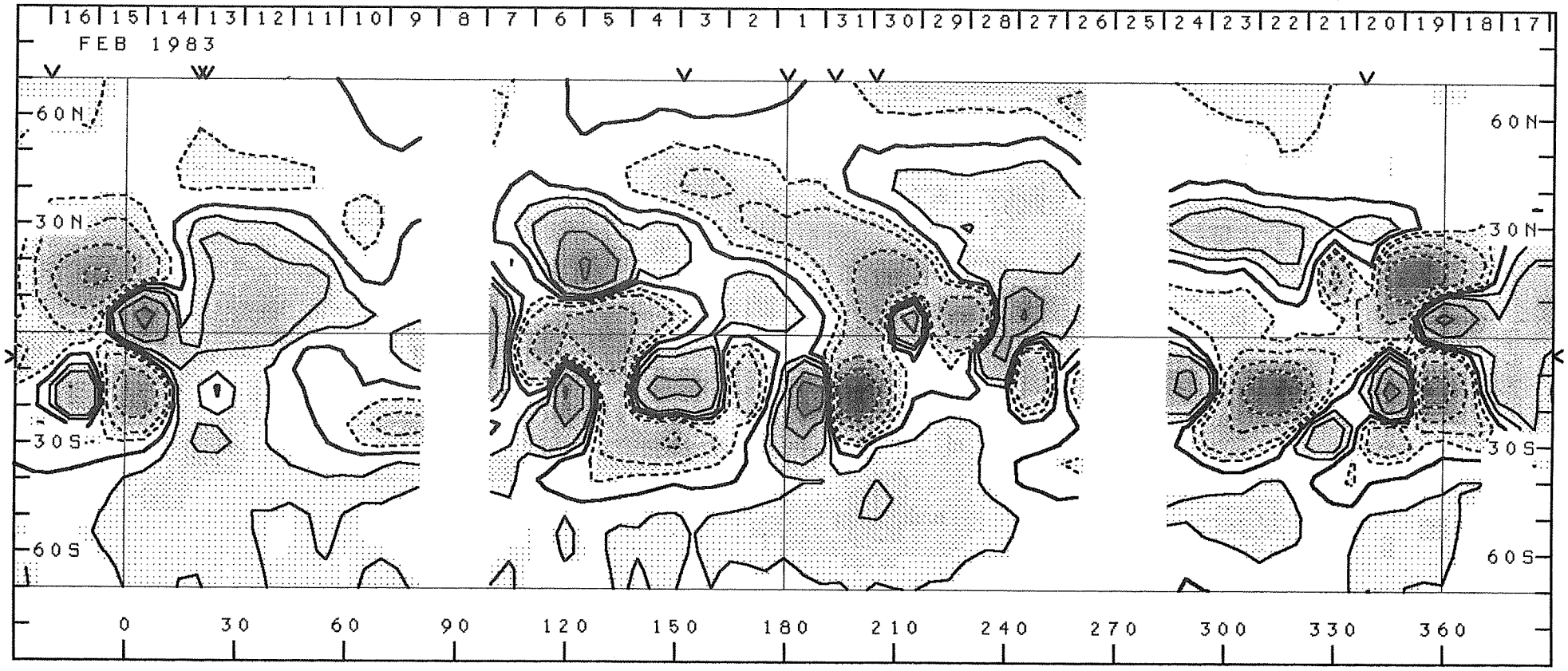
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

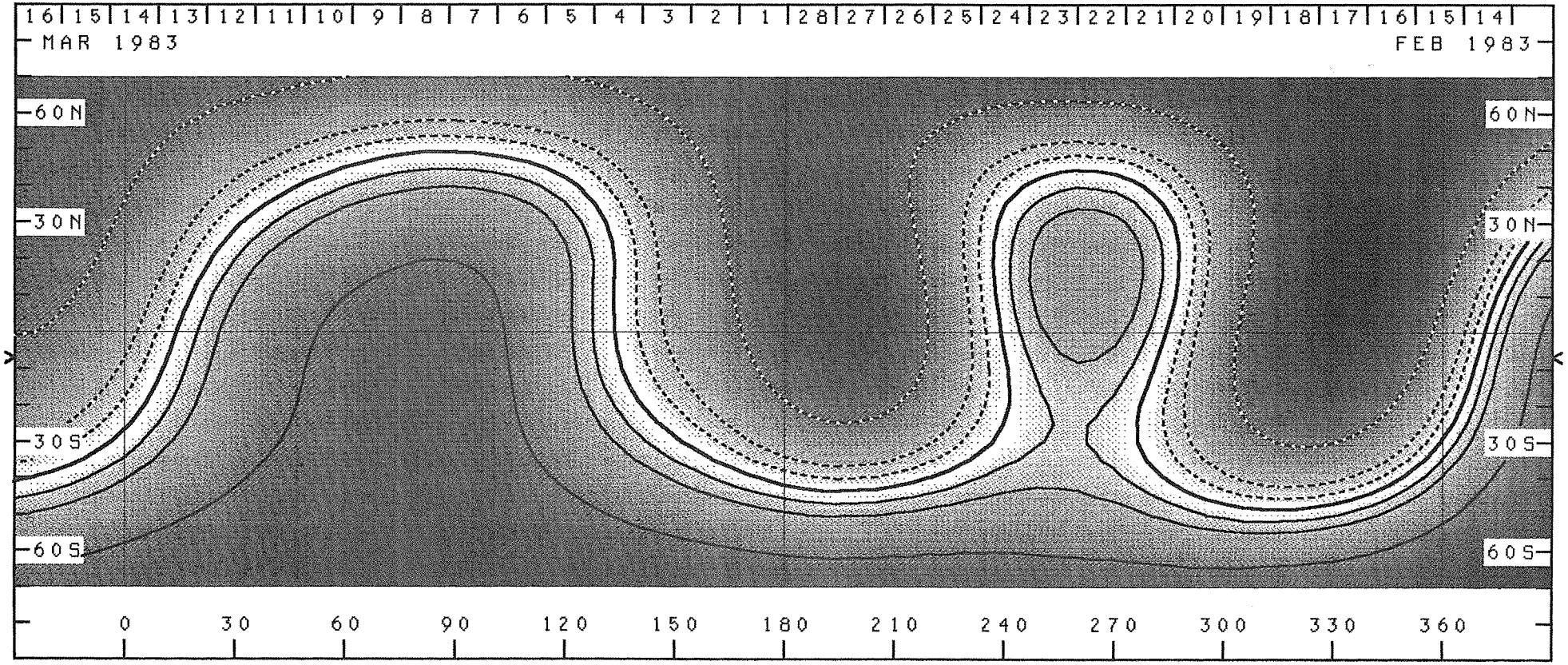
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

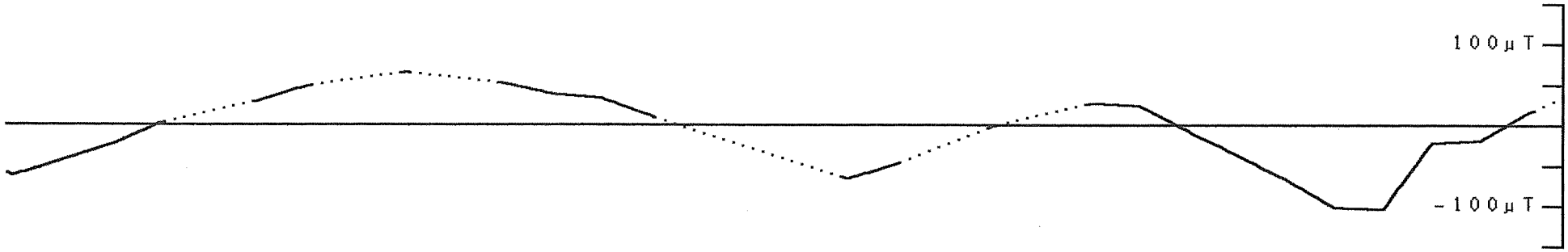
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



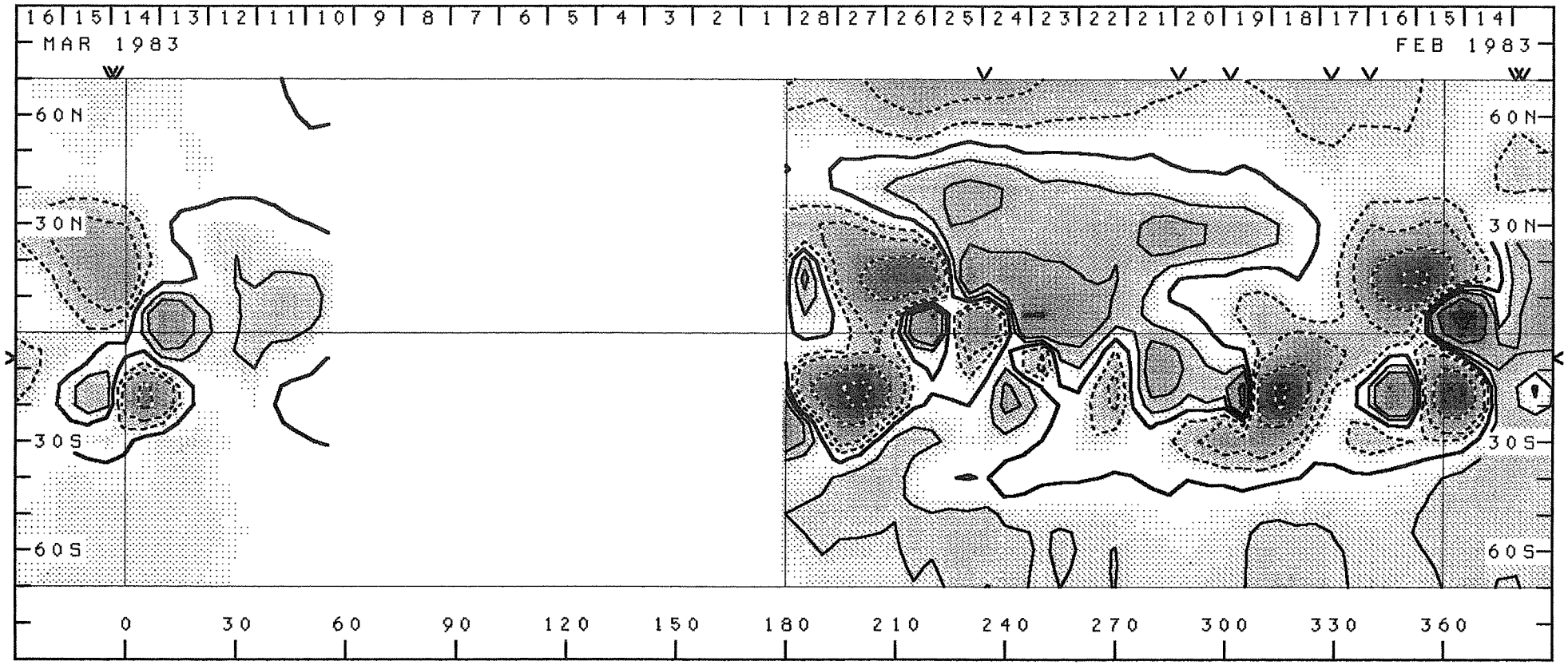
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

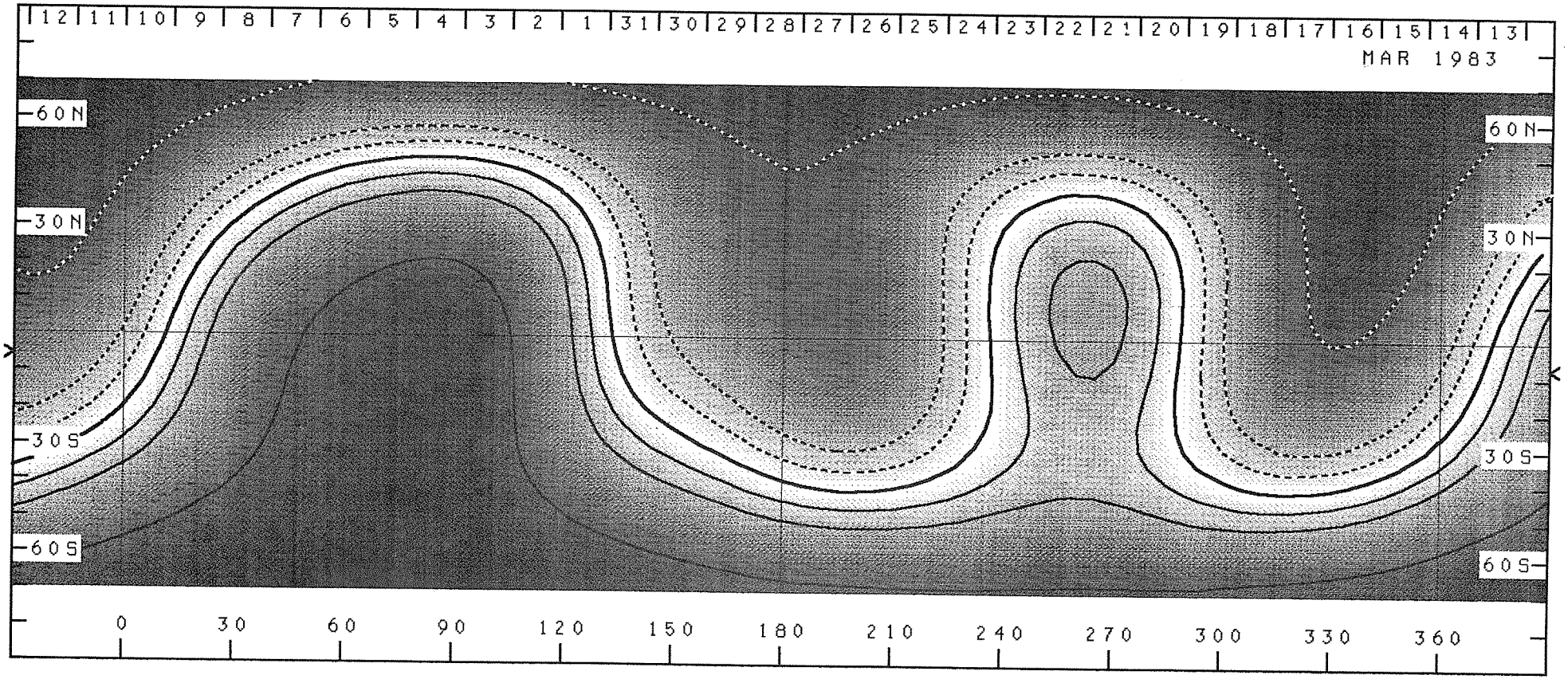
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

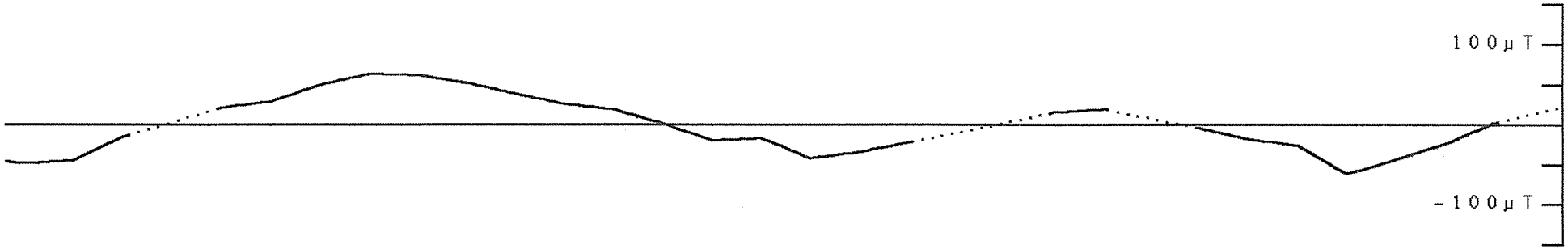
0, ±1, 2, 5, 10, 20 MICROTESLA



1733

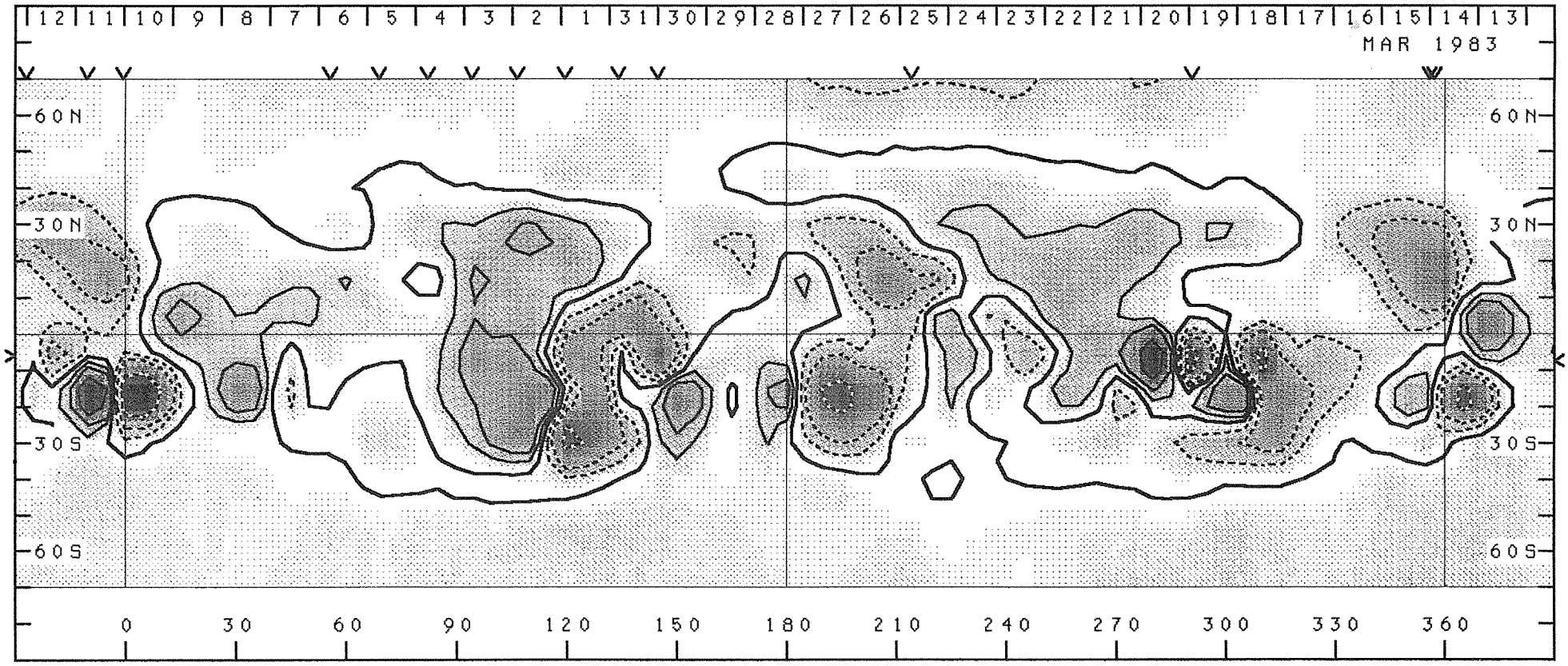
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

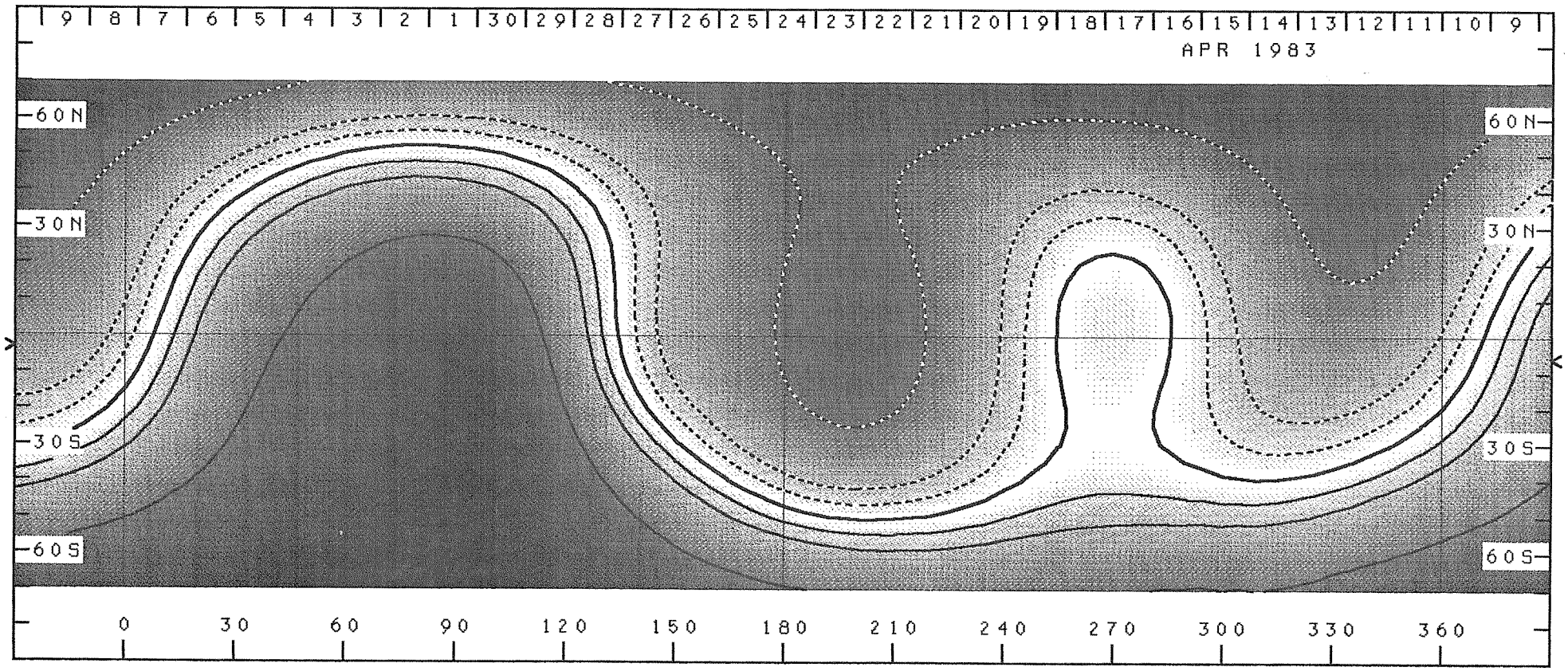
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

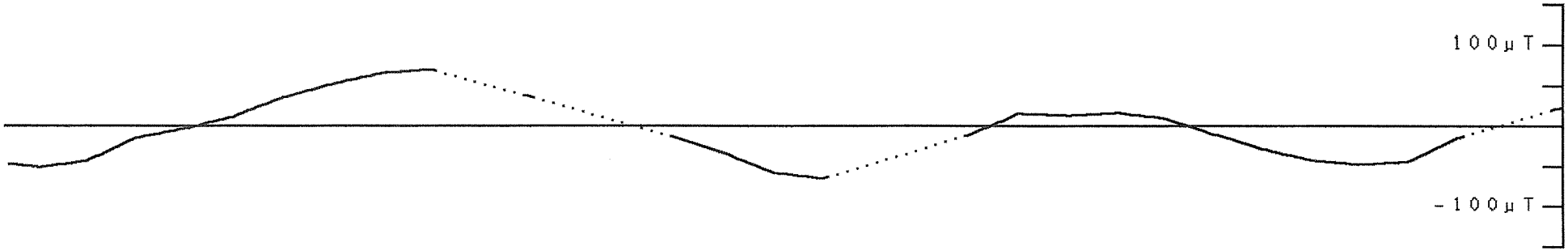
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



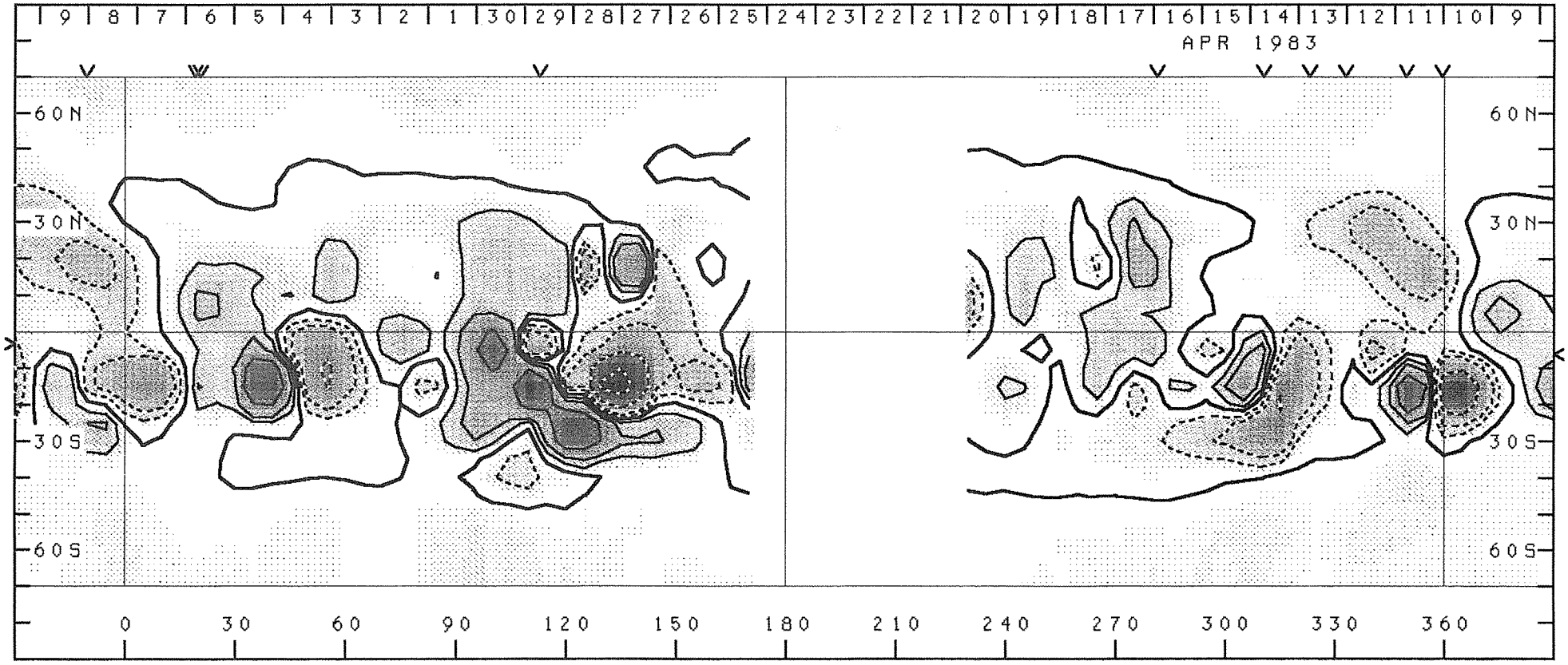
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

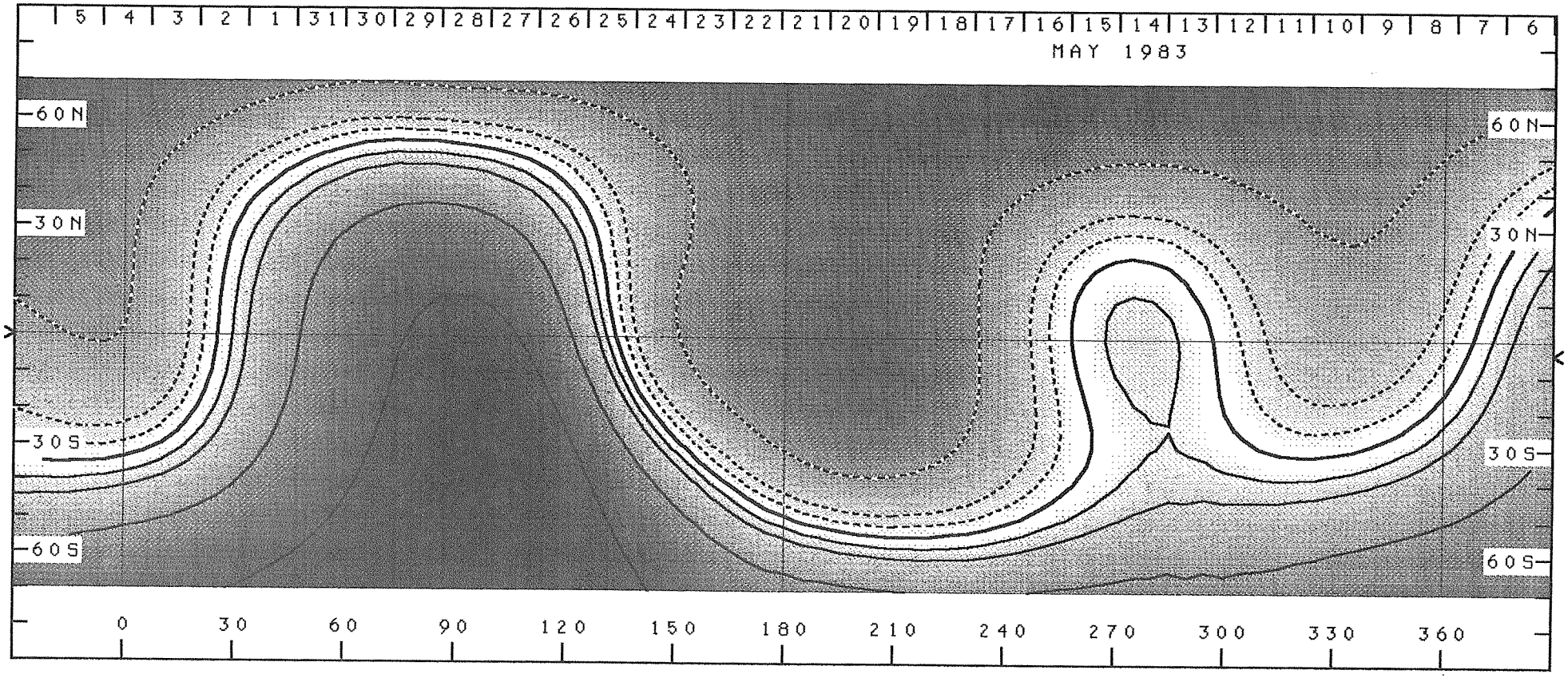
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

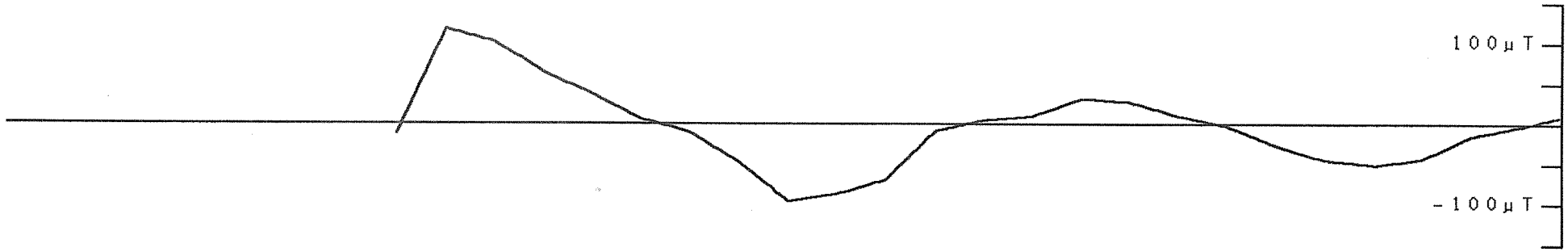
0, ±1, 2, 5, 10, 20 MICROTESLA



1735

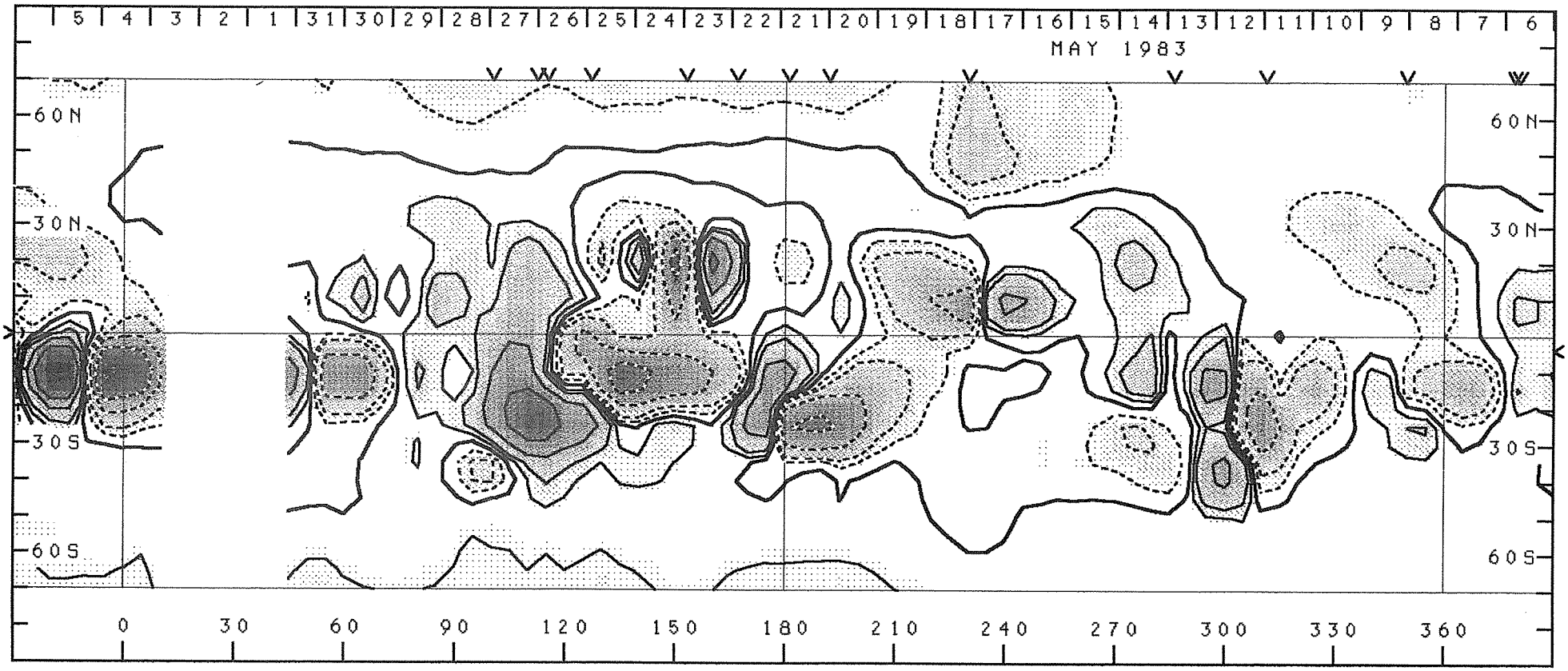
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

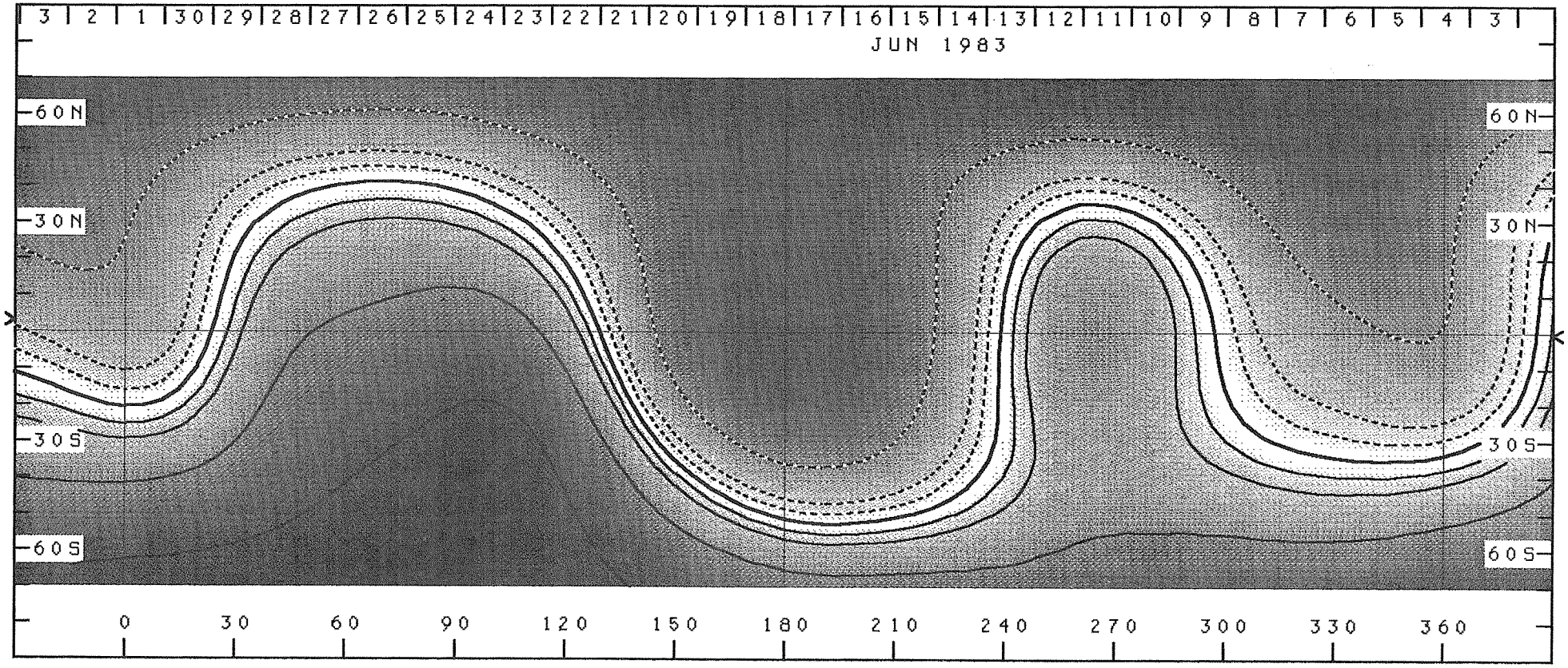
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

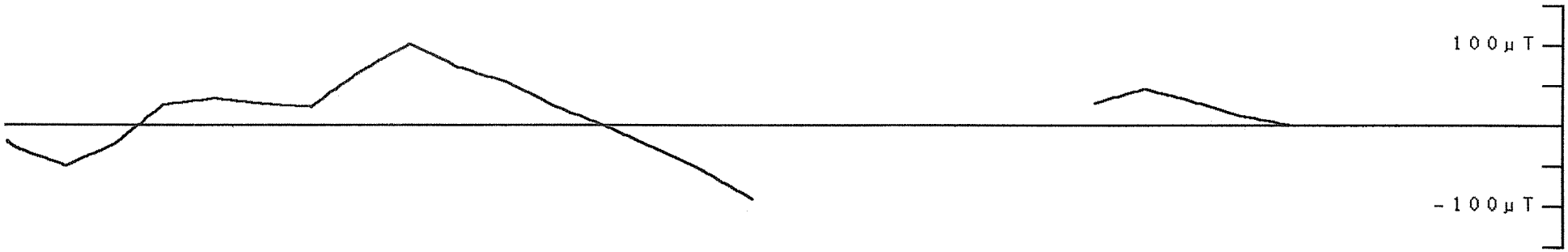
0, ±1, 2, 5, 10, 20 MICROTESLA



1736

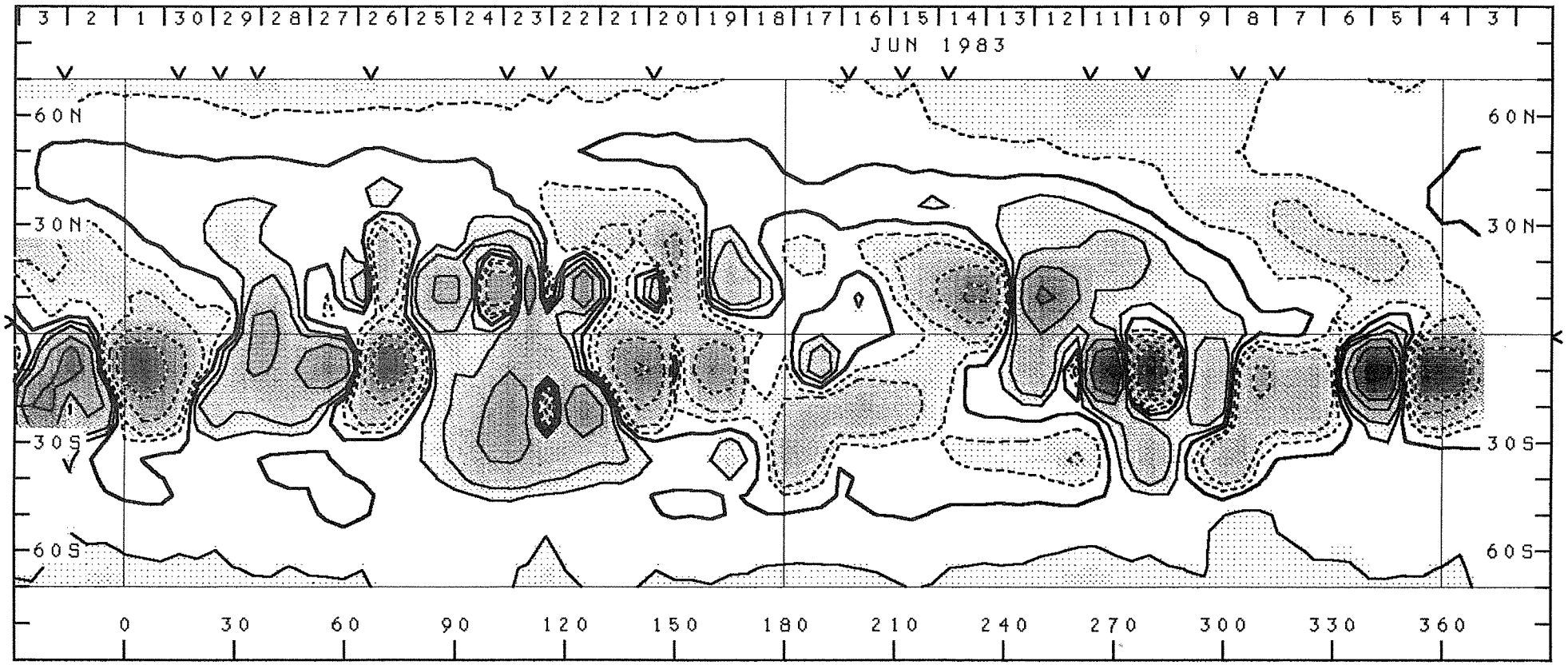
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

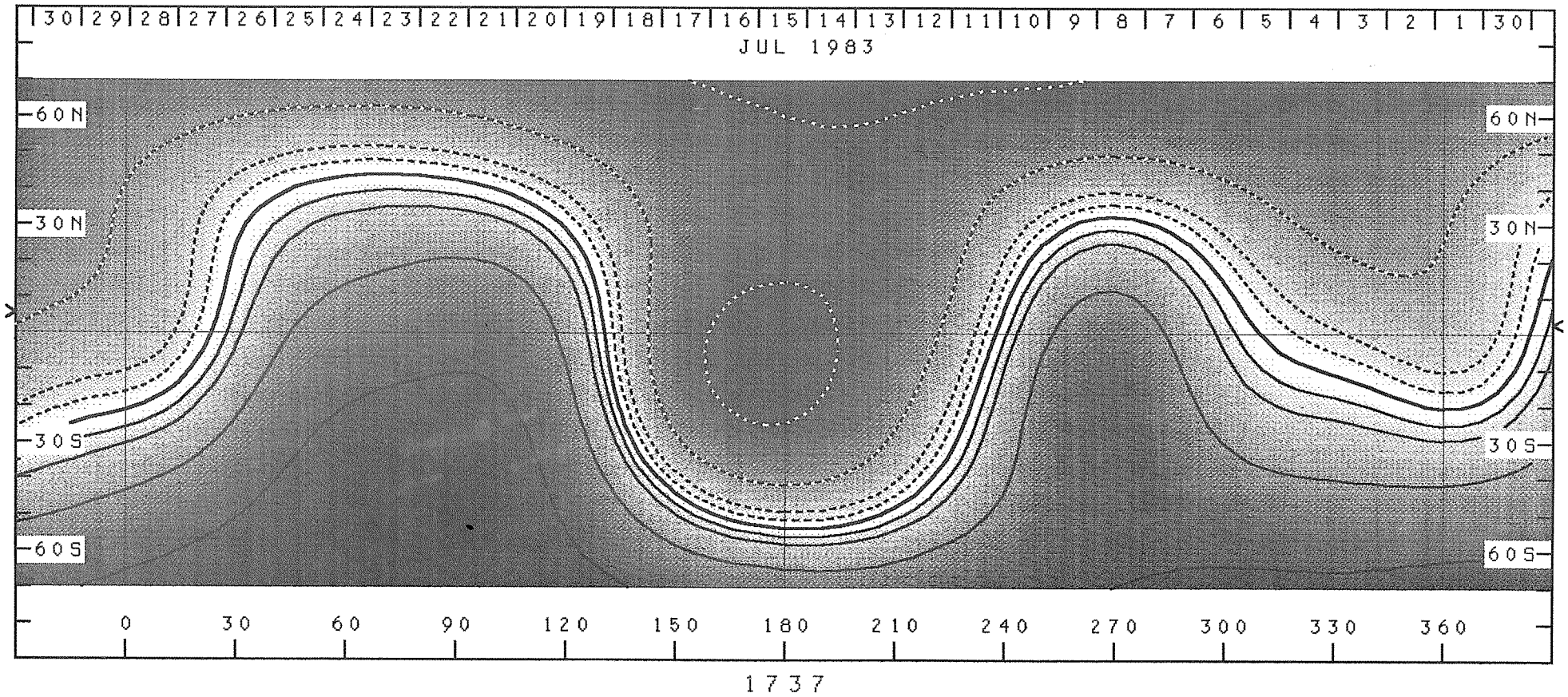
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

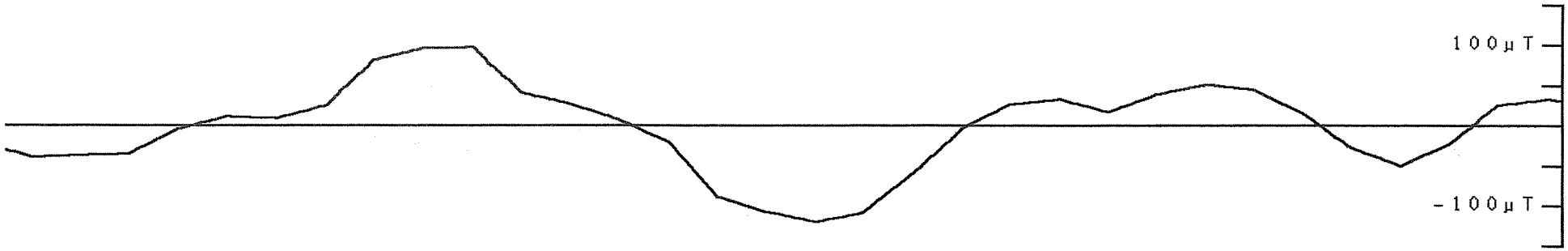
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



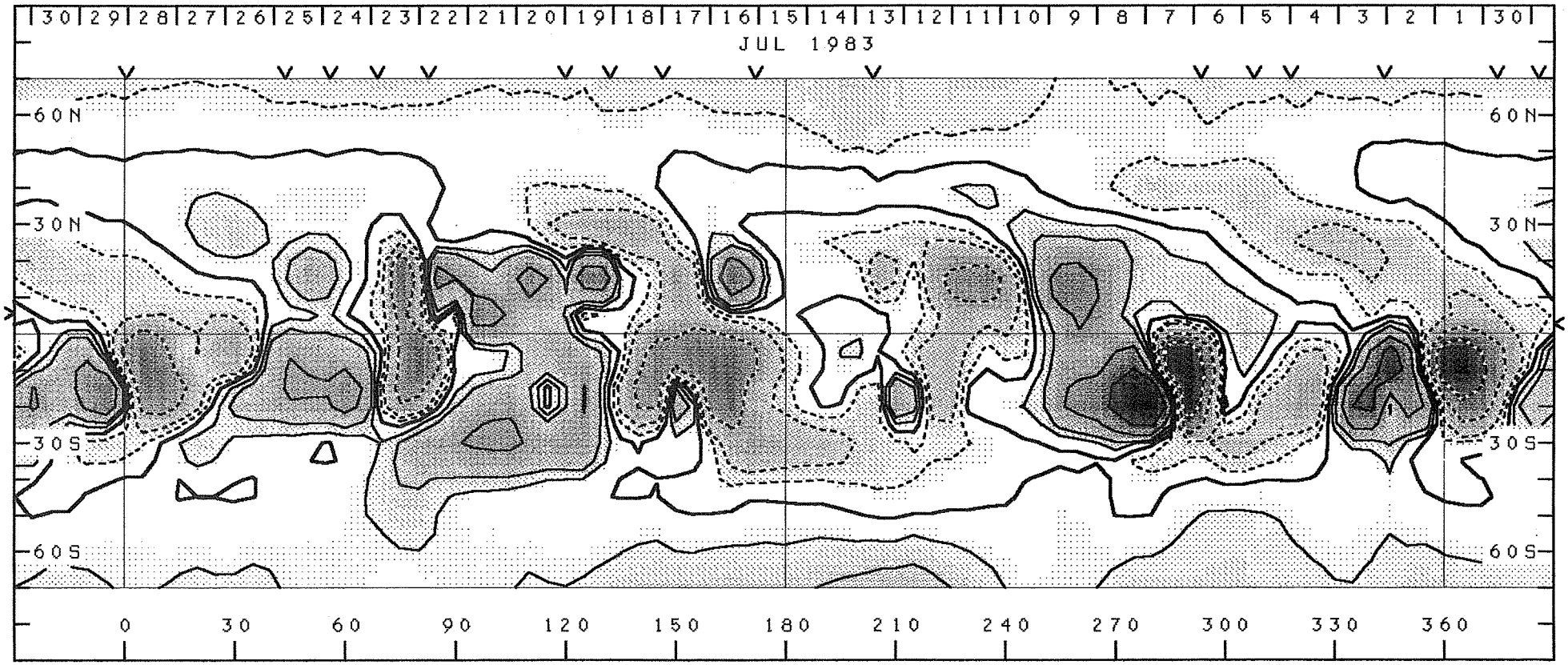
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

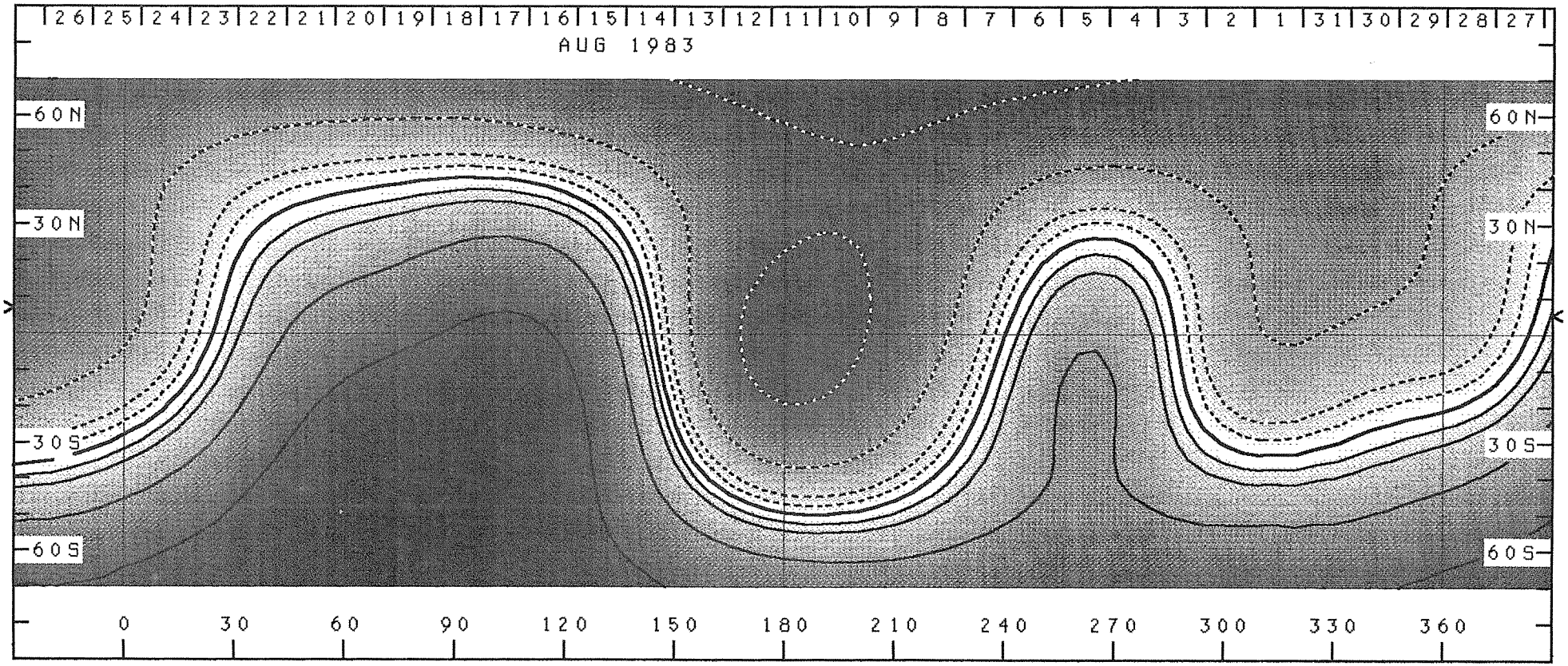


1737

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

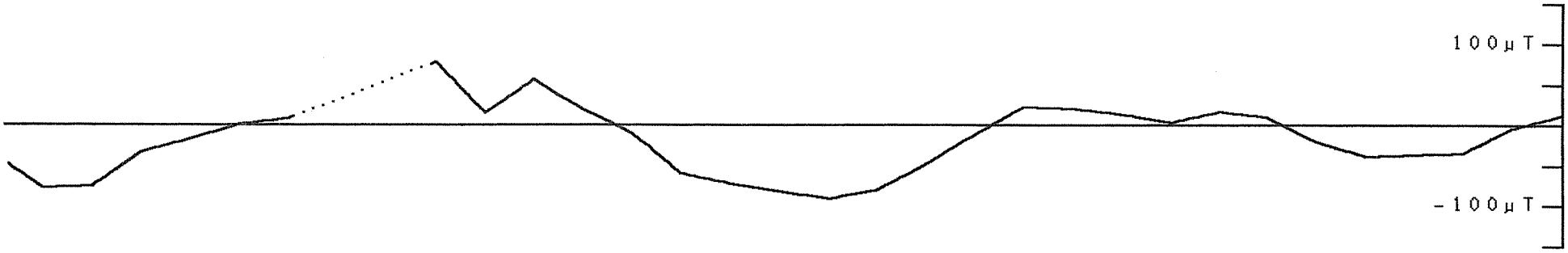
0, ±1, 2, 5, 10, 20 MICROTESLA



1738

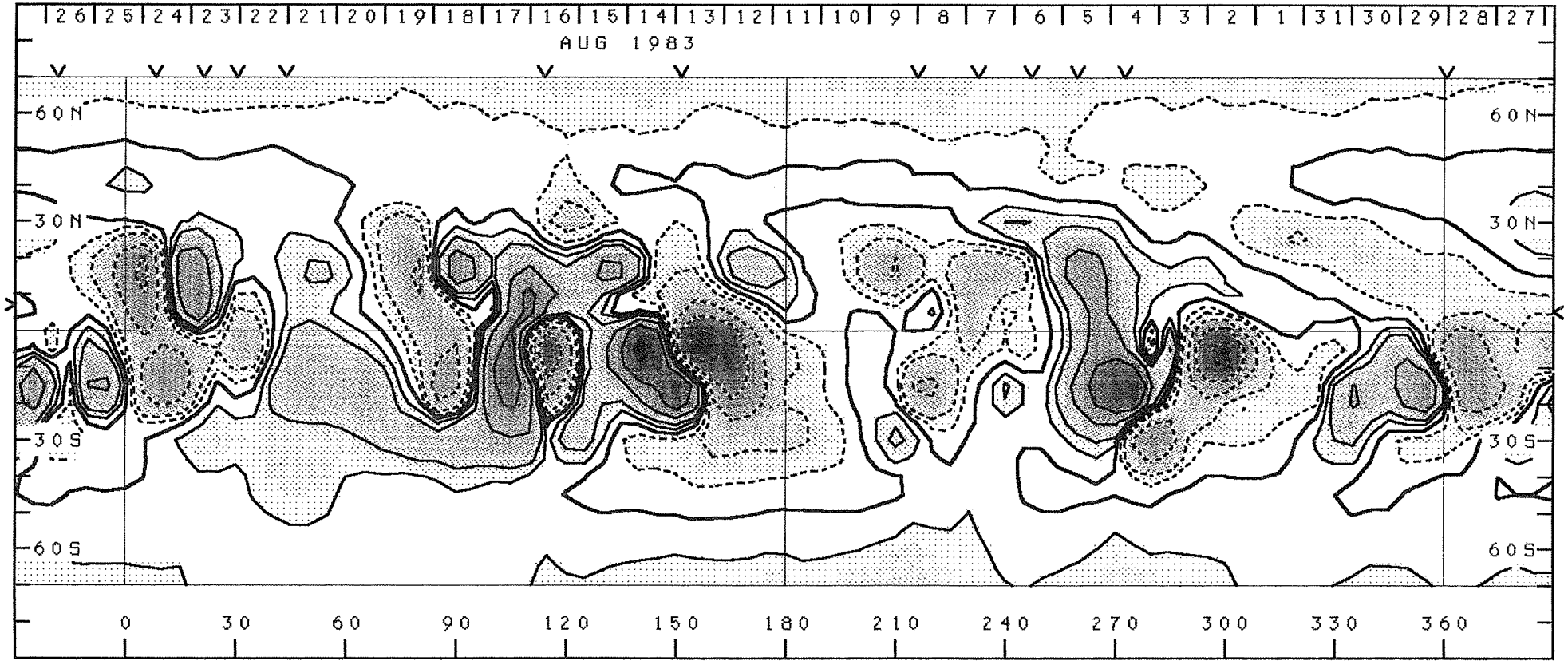
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

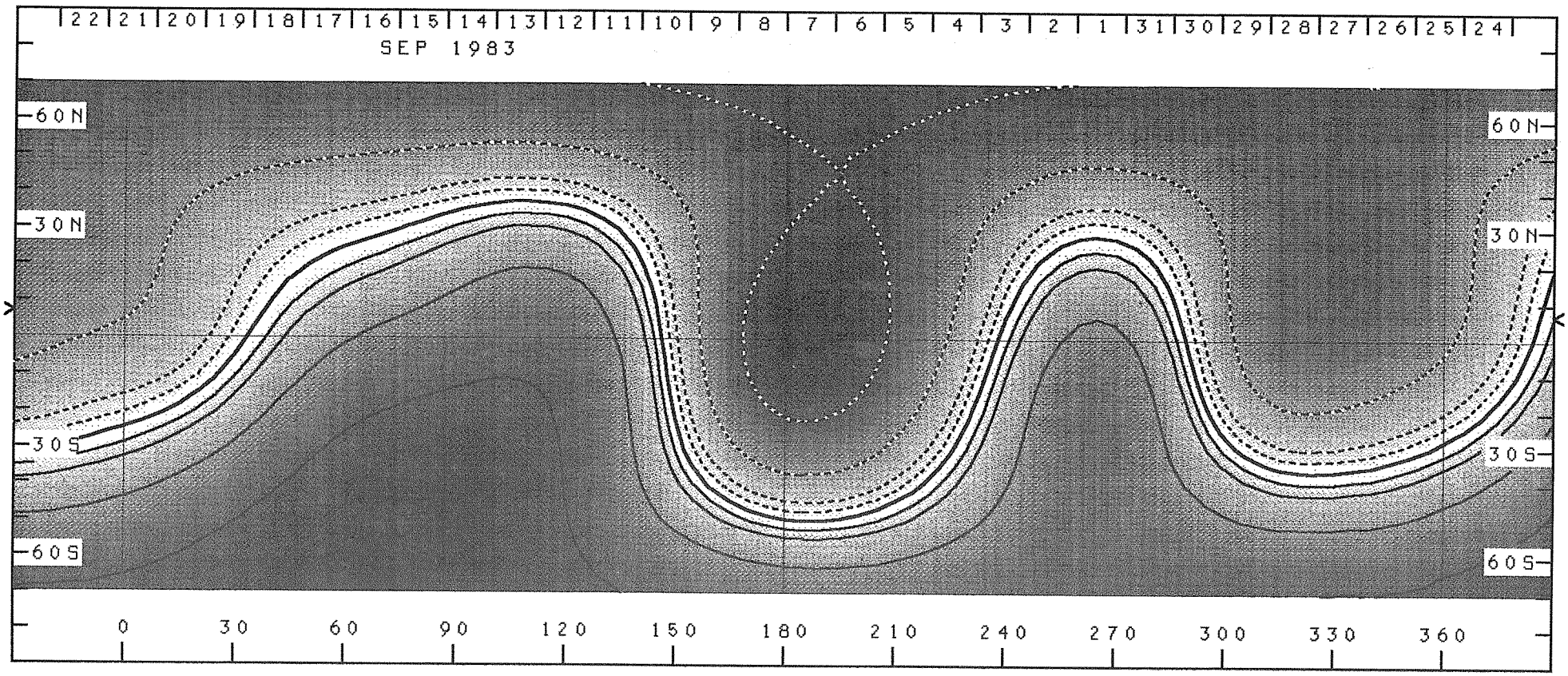
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

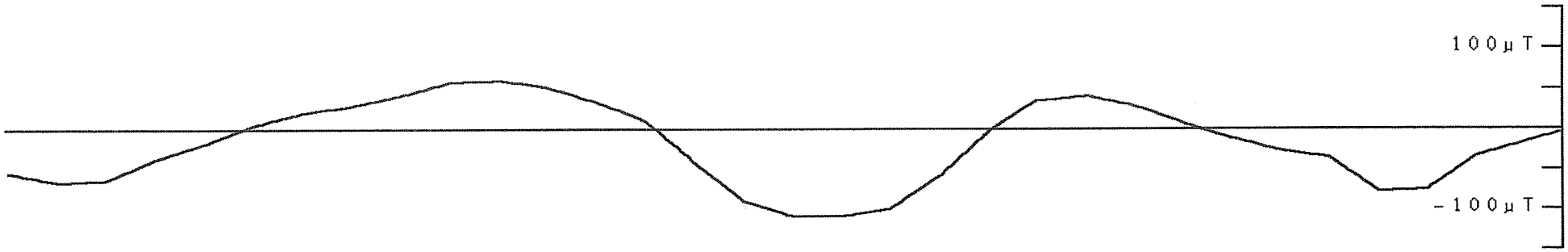
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



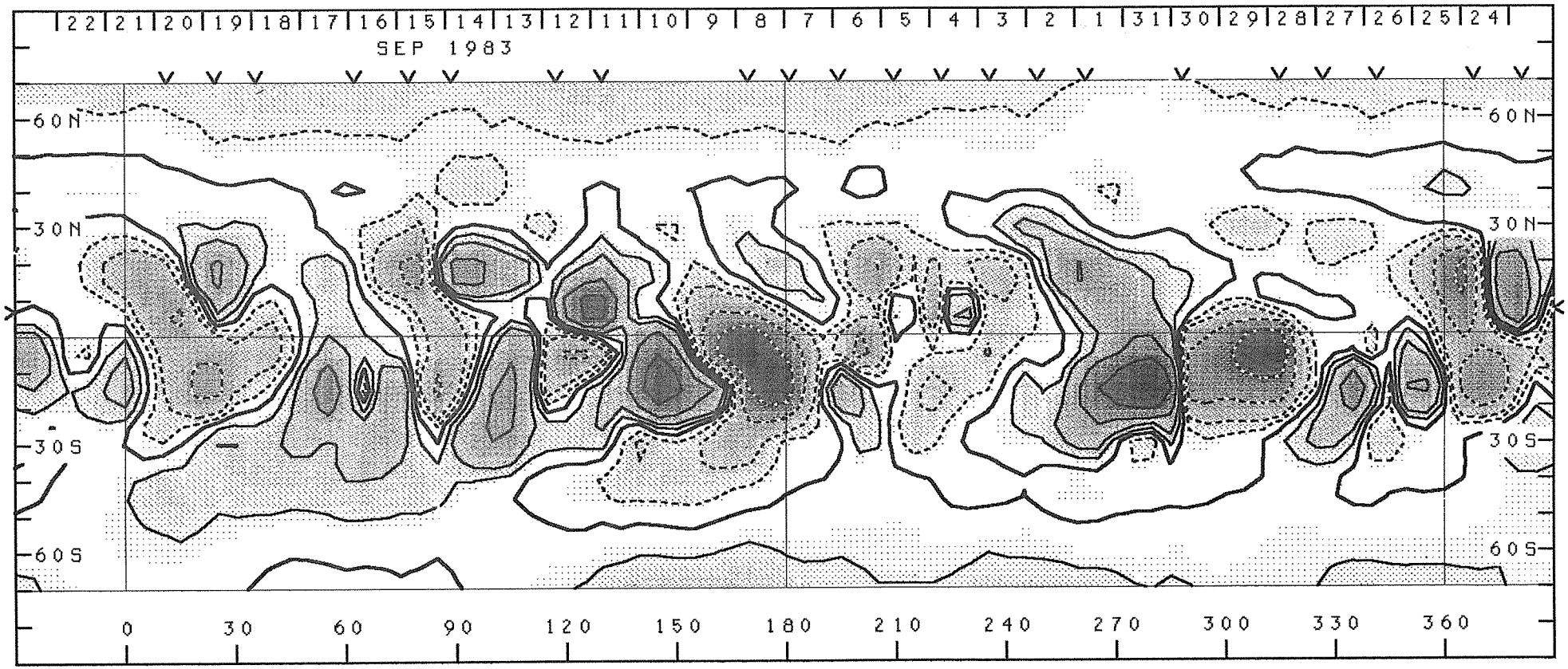
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

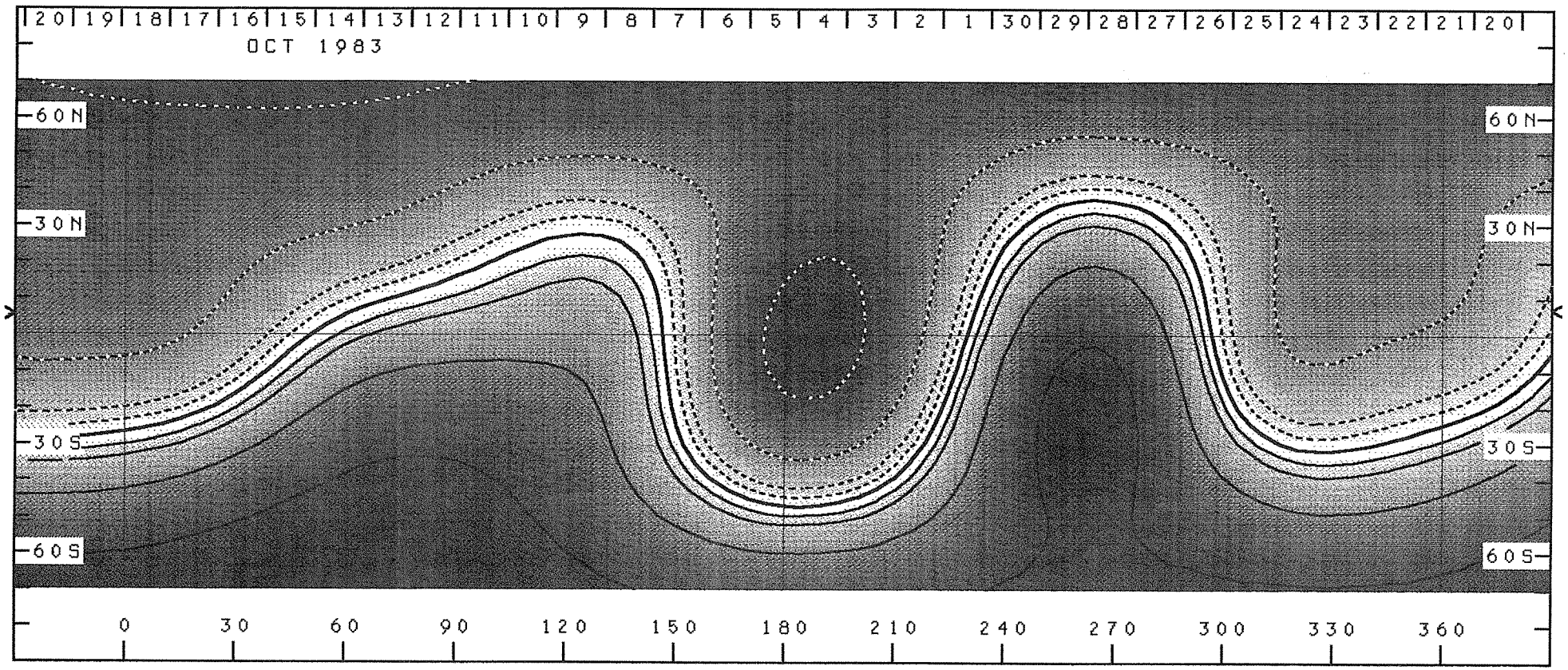
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

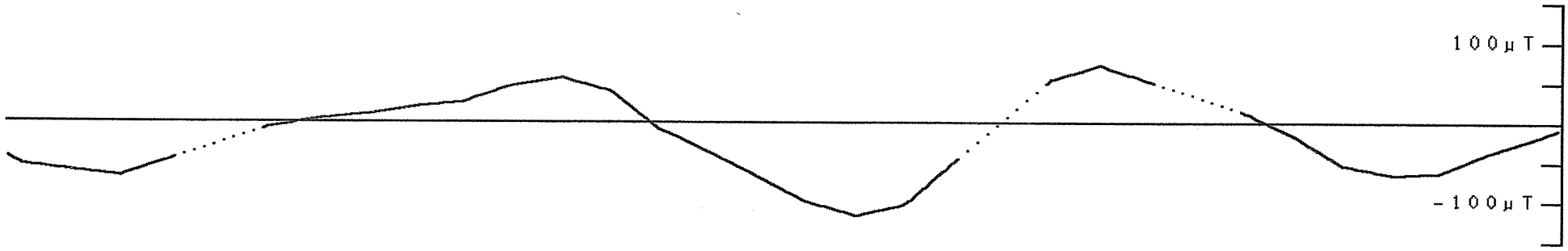
0, ±1, 2, 5, 10, 20 MICROTESLA



1740

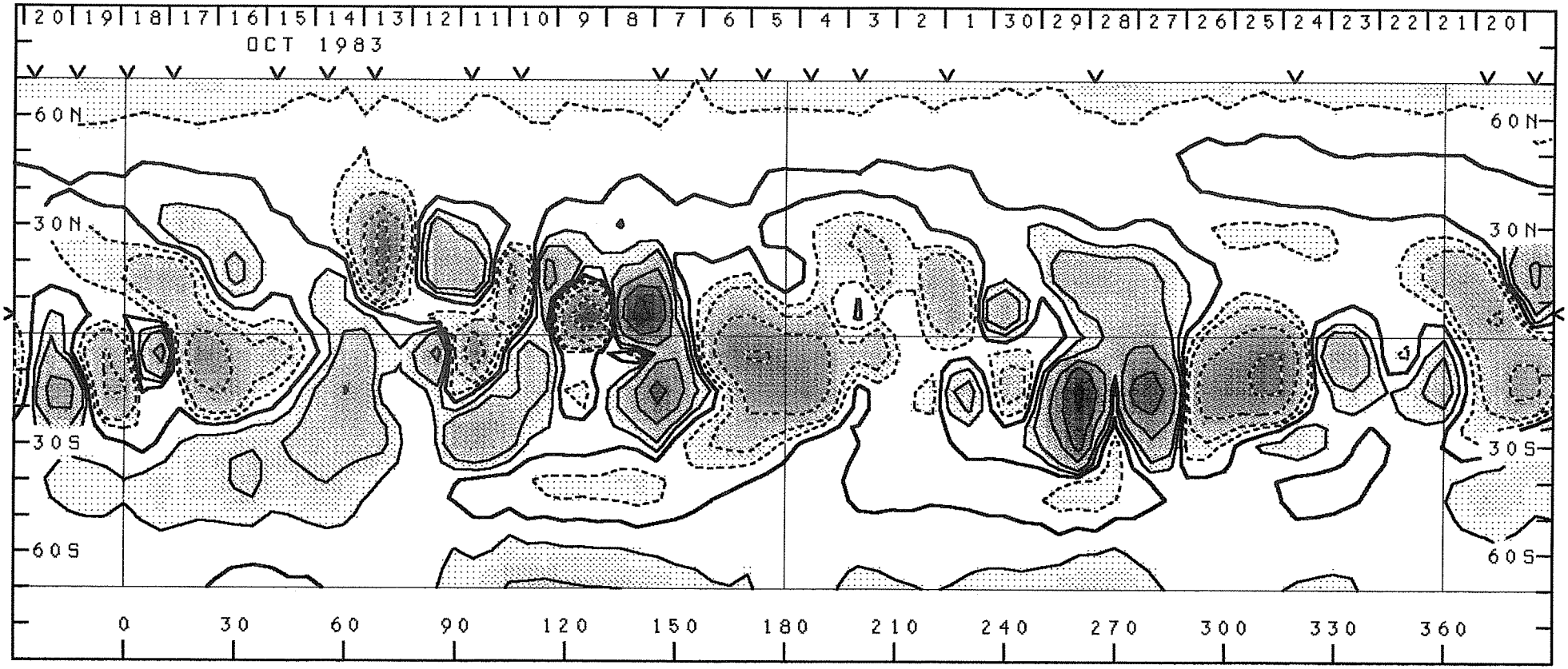
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

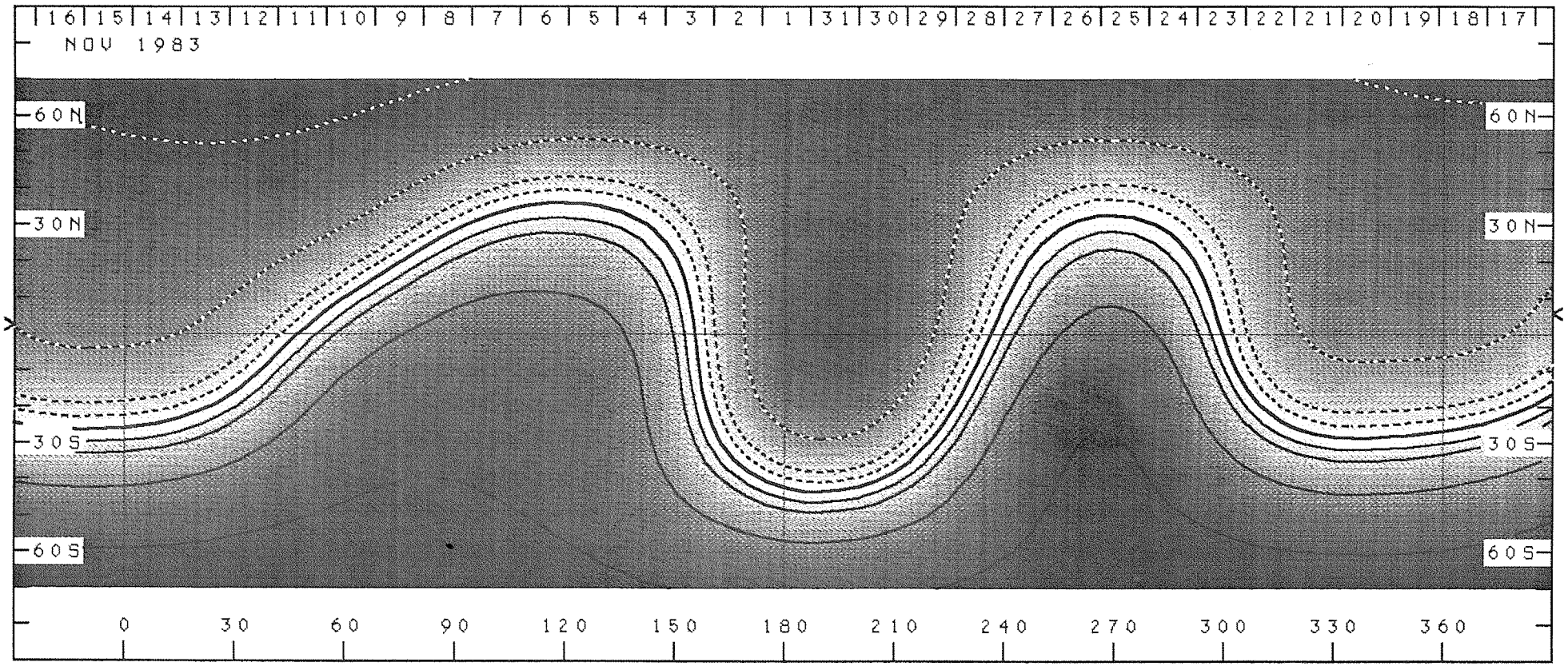


1740

WILCOX SOLAR OBSERVATORY

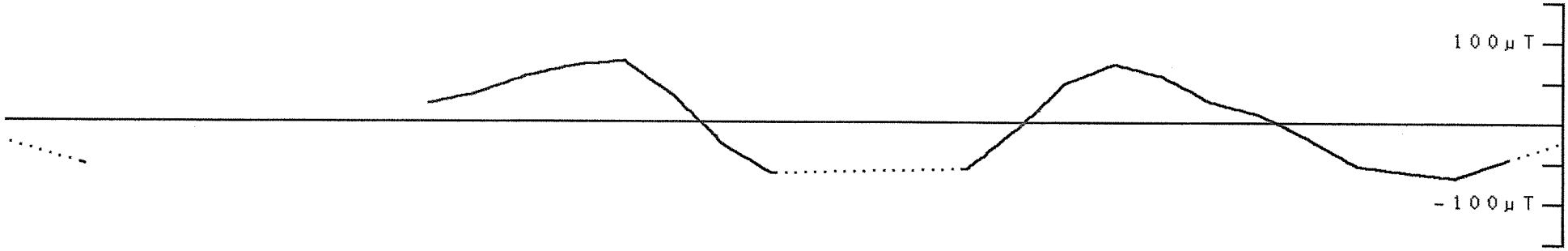
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



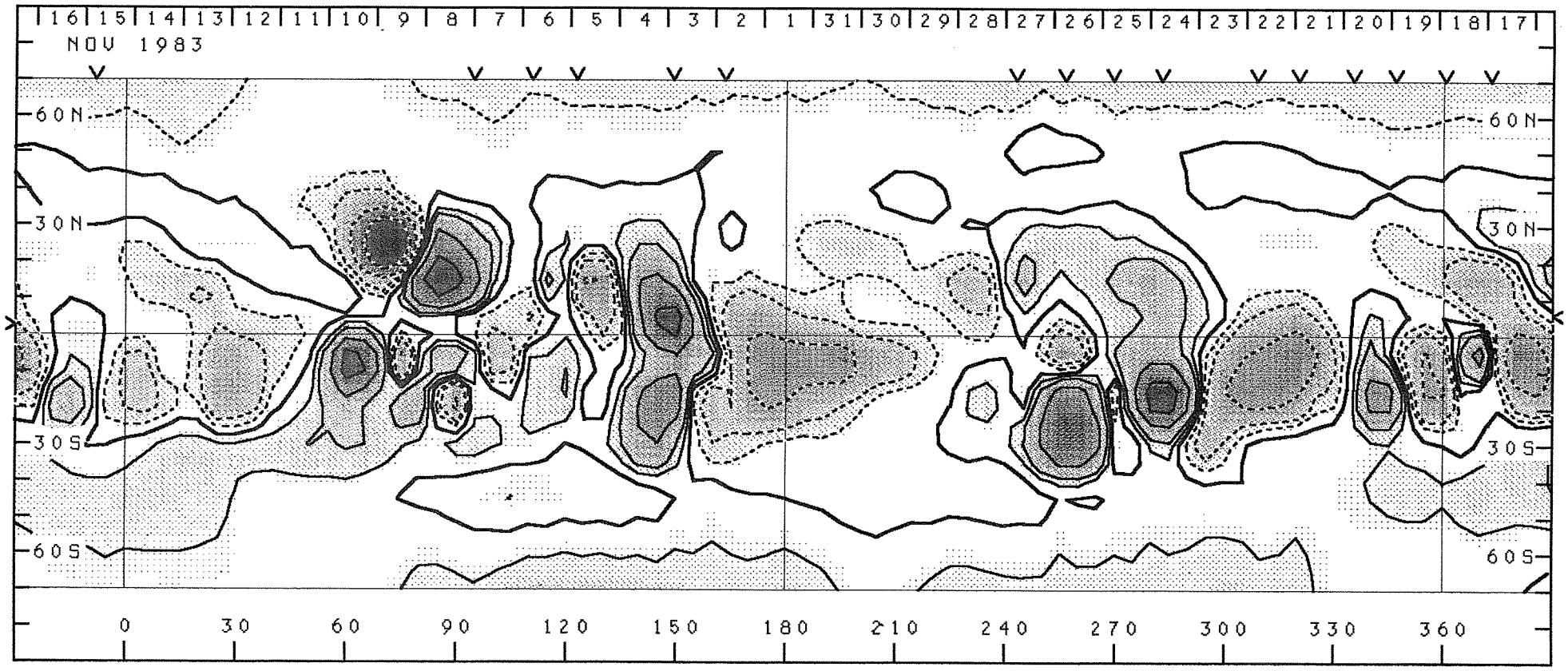
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

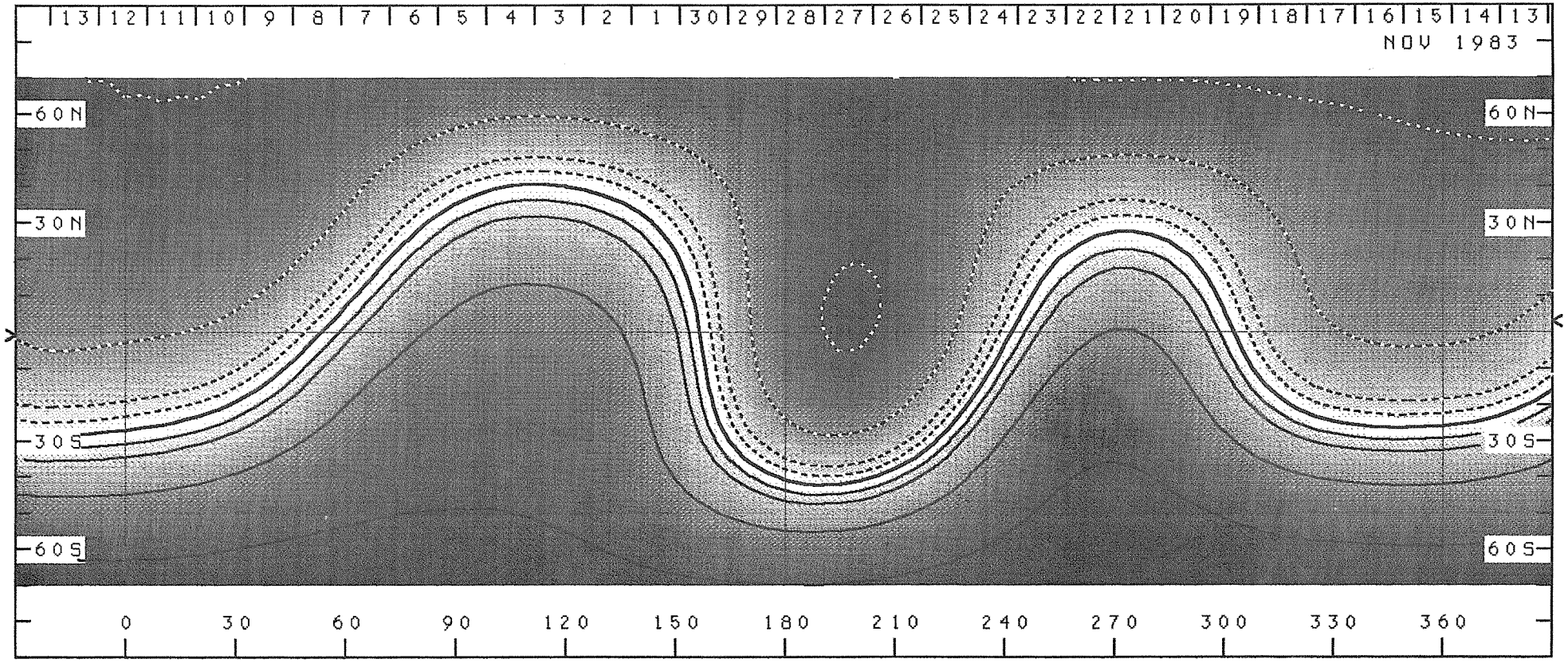
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

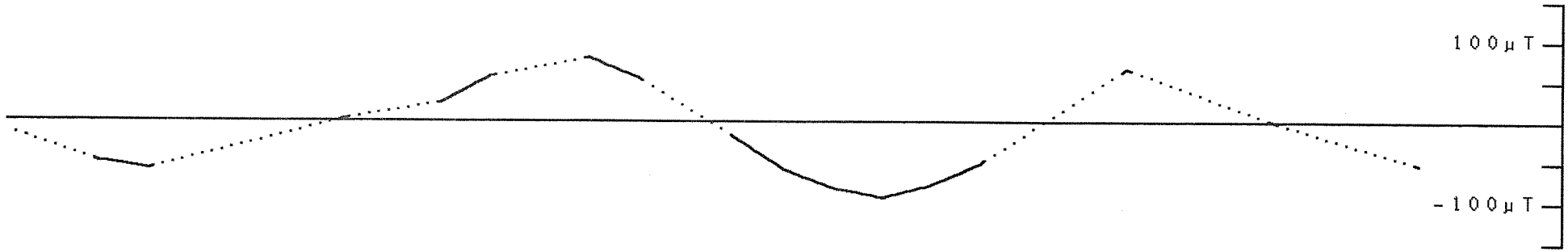
0, ±1, 2, 5, 10, 20 MICROTESLA



1742

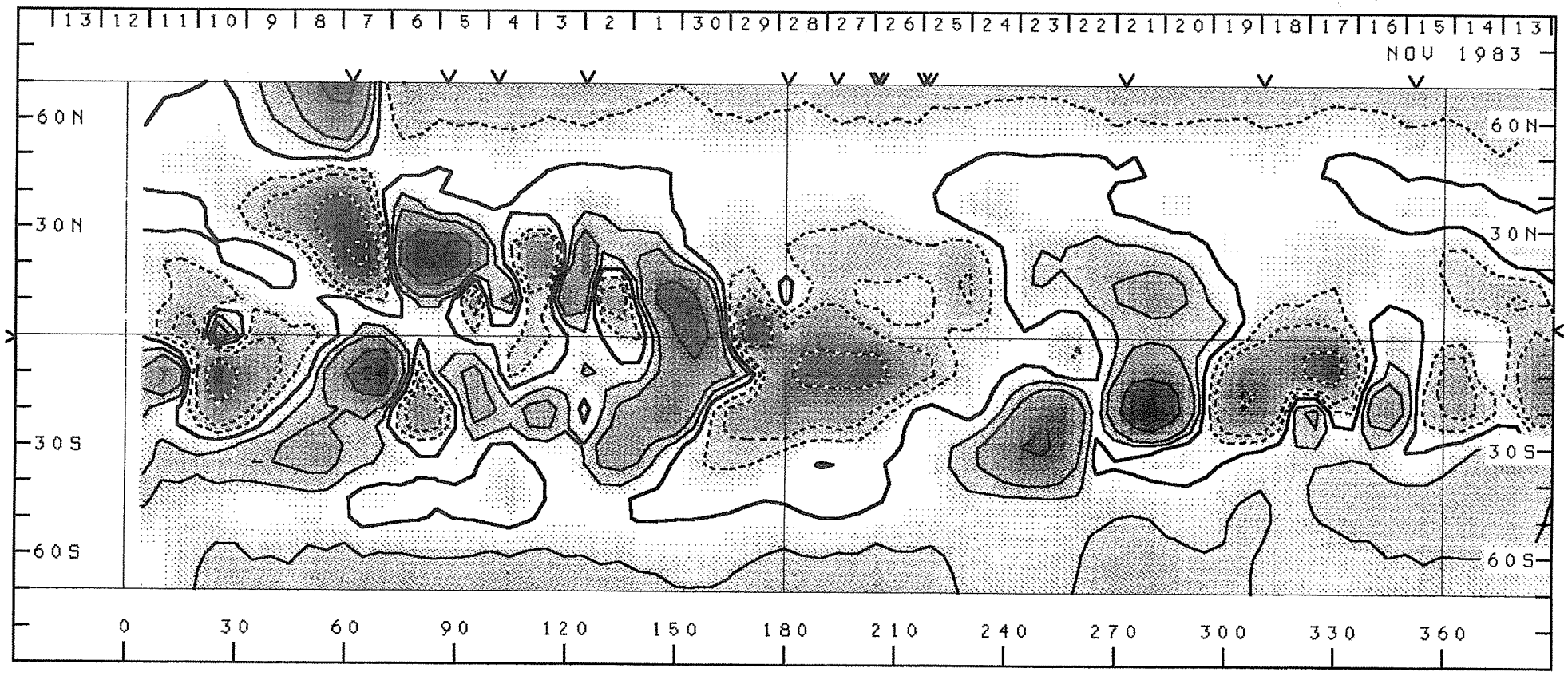
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

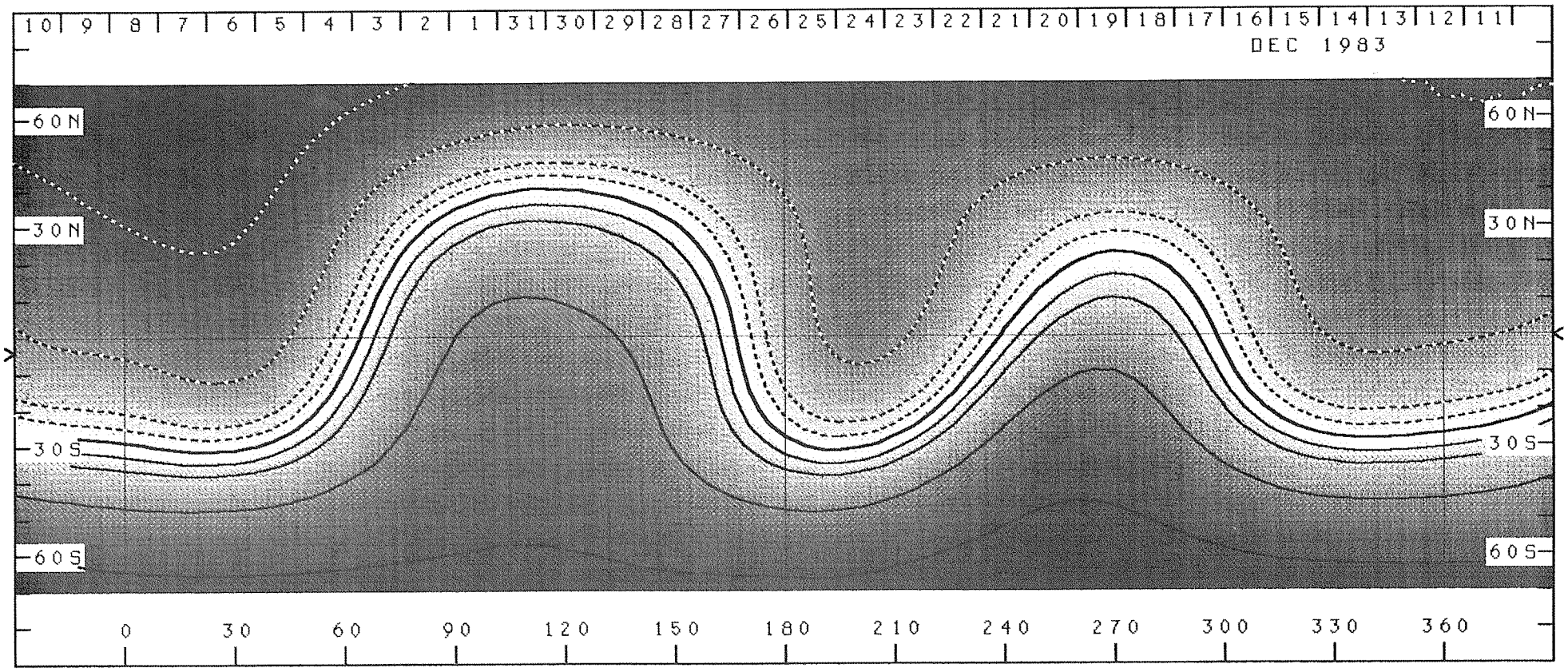
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

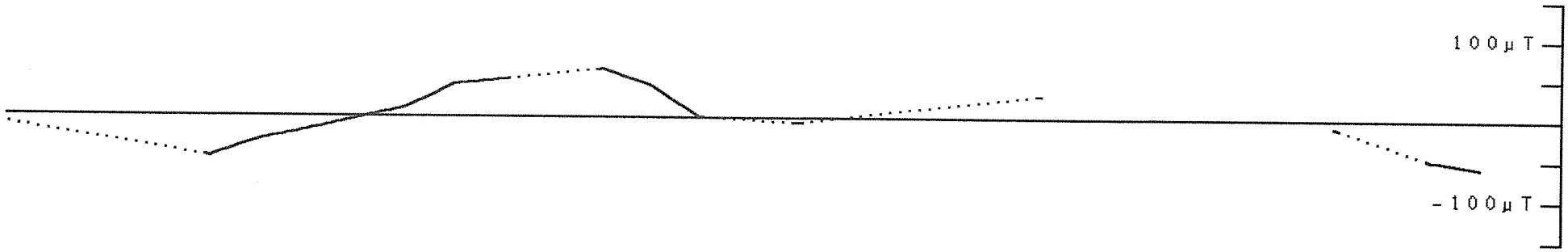
0, ±1, 2, 5, 10, 20 MICROTESLA



1743

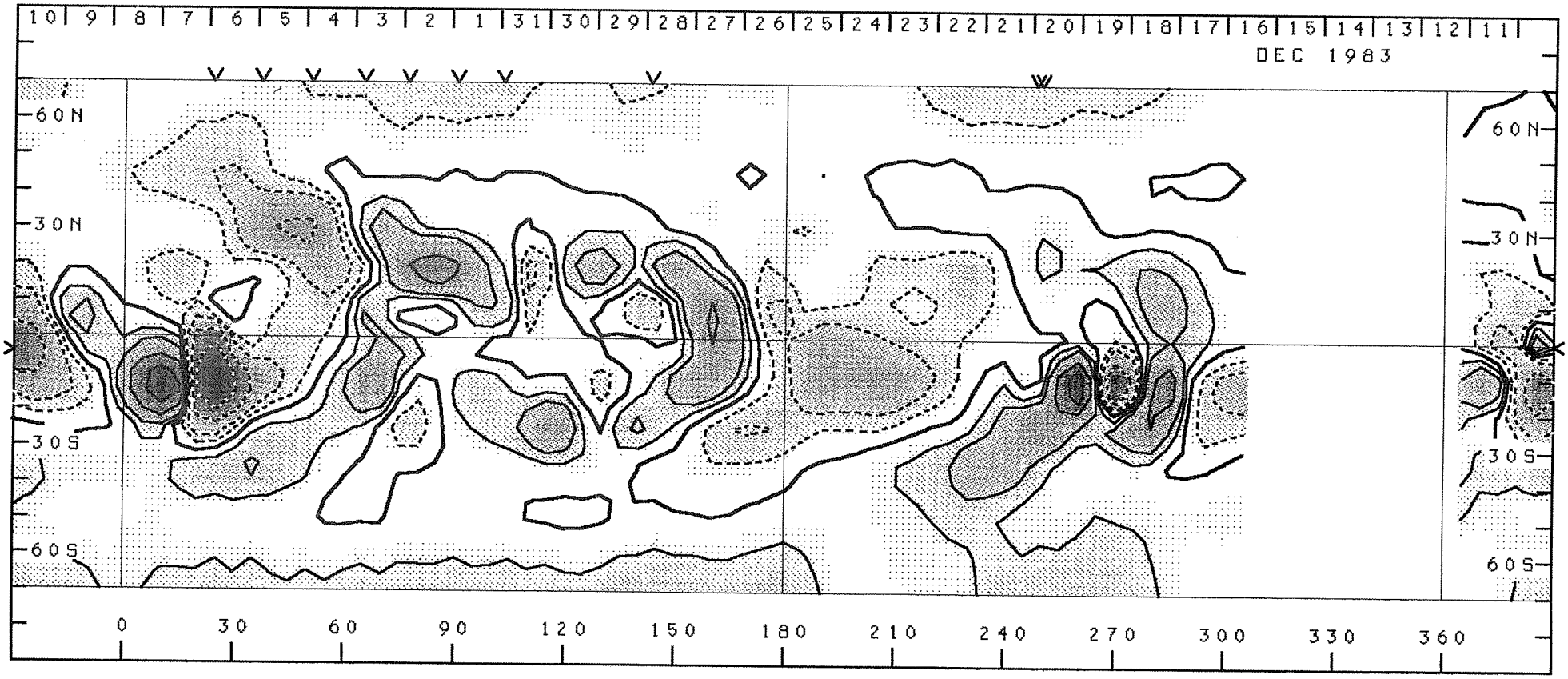
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

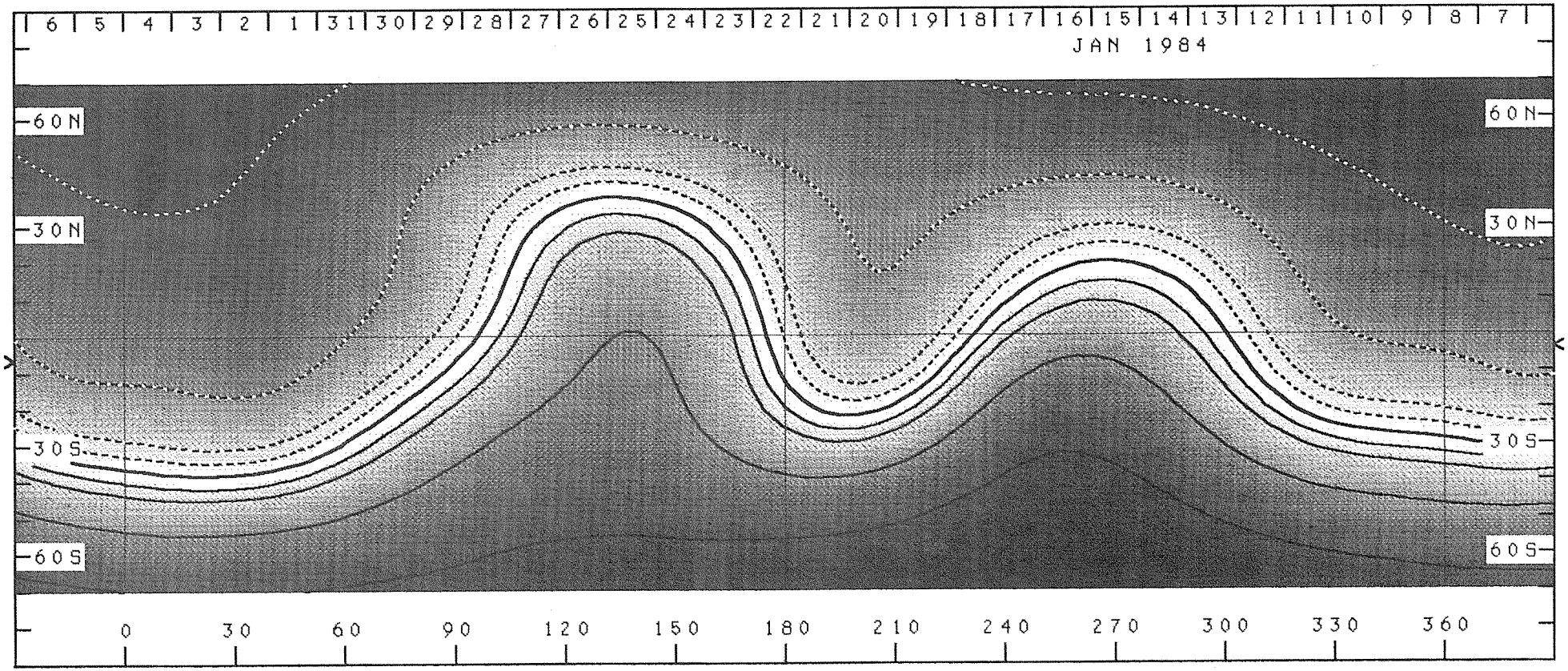
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

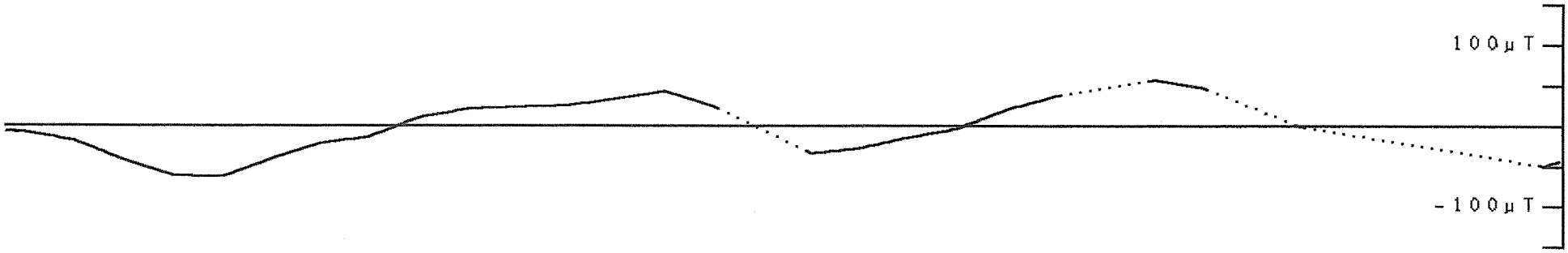
0, ±1, 2, 5, 10, 20 MICROTESLA



1744

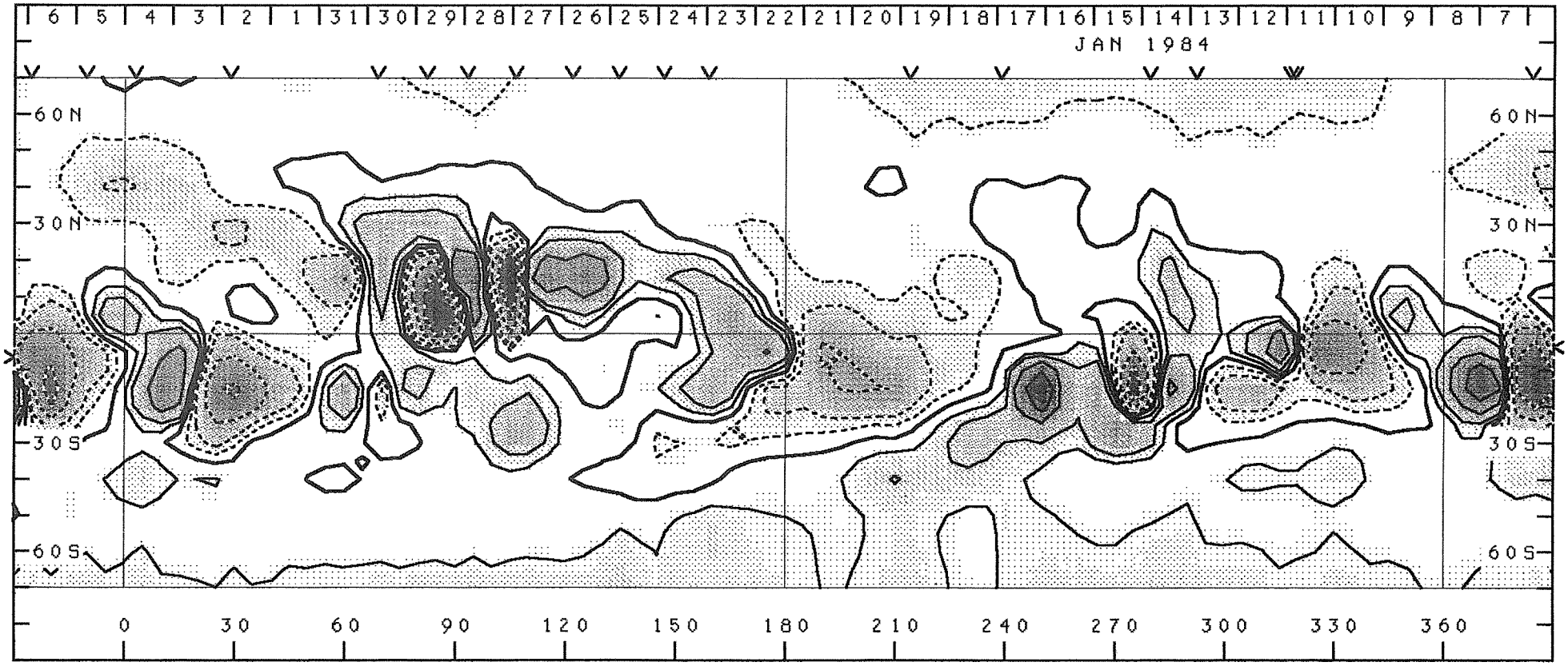
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

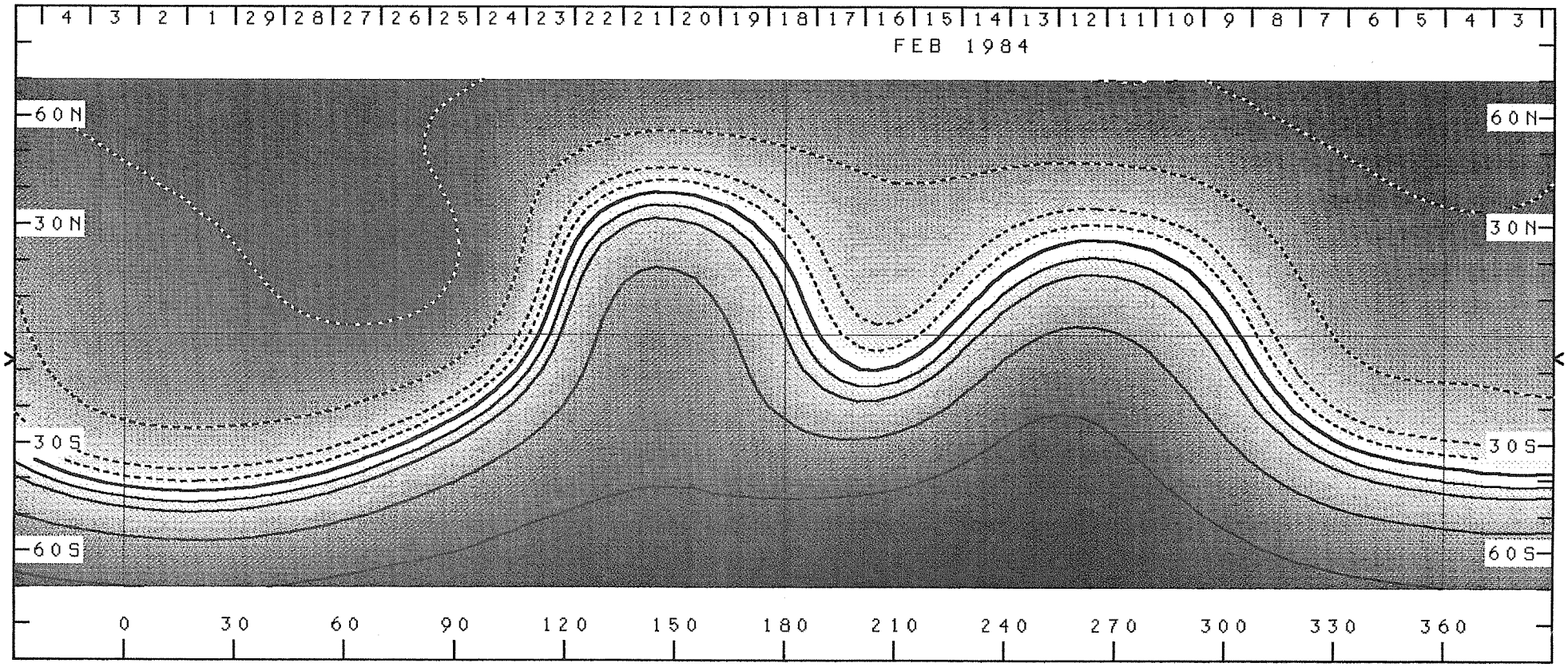
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

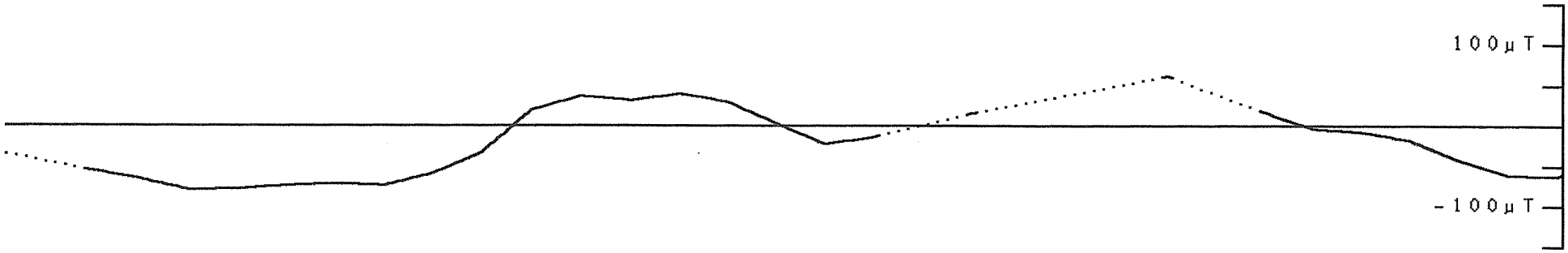
0, ±1, 2, 5, 10, 20 MICROTESLA



1745

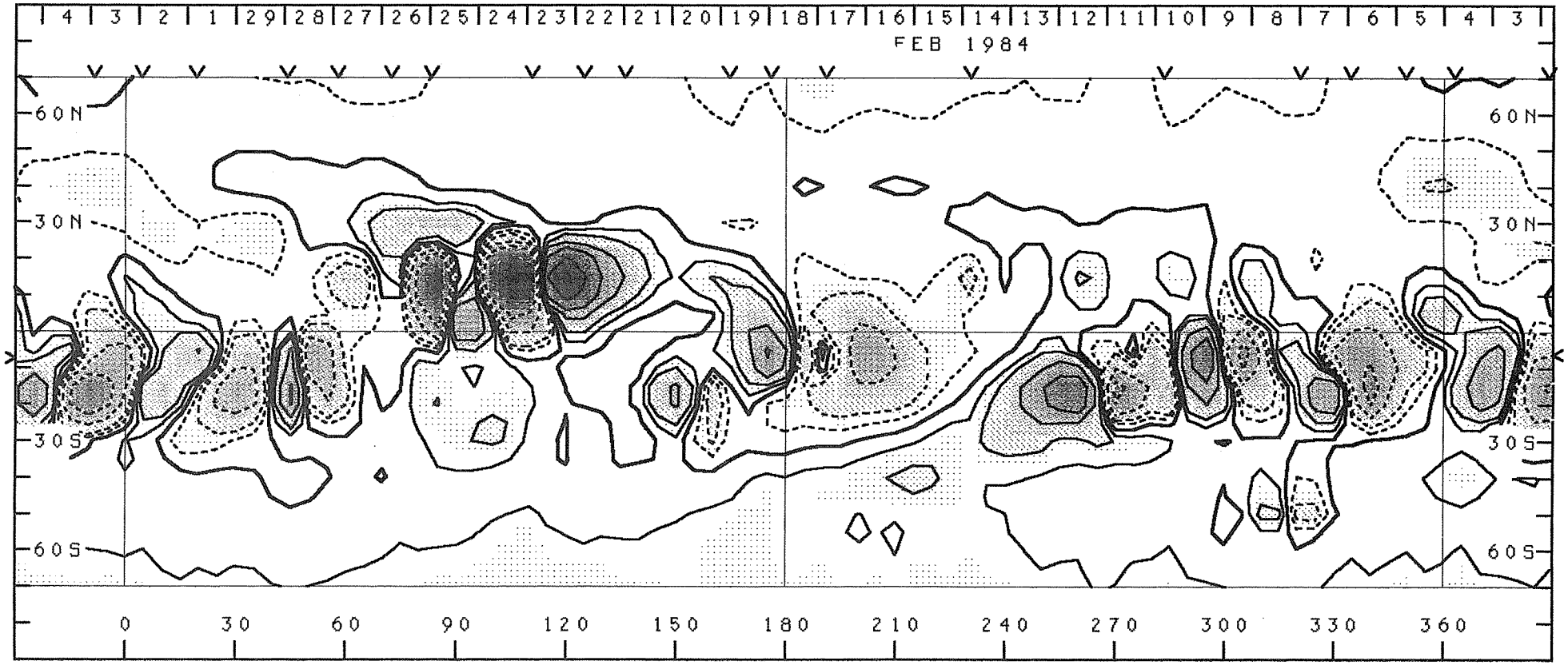
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

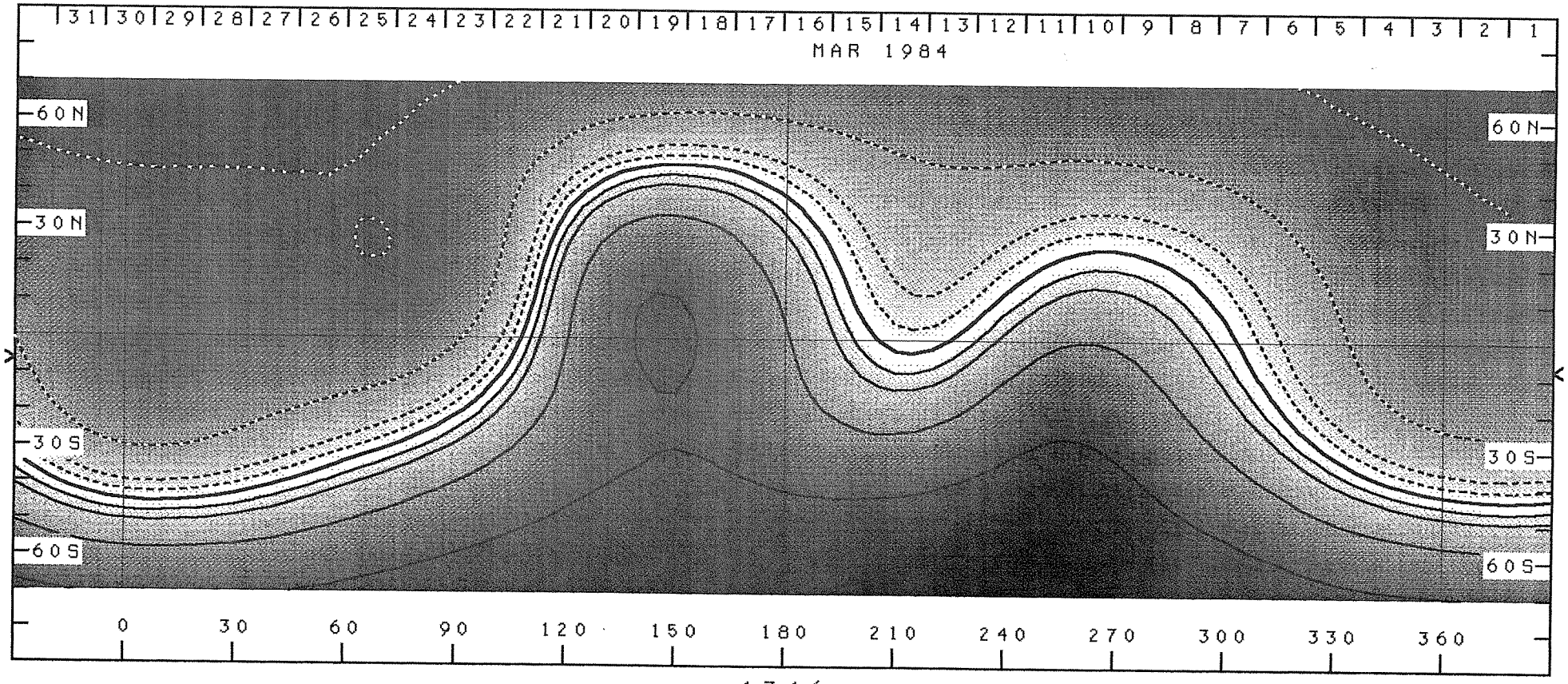


1745

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

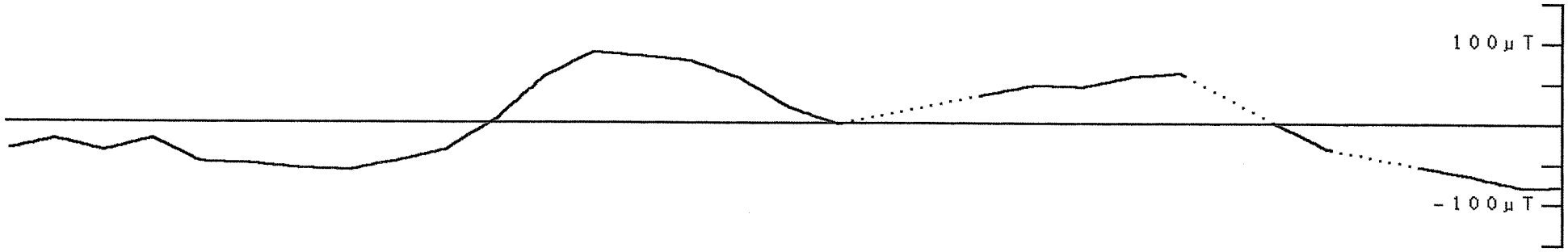
0, ±1, 2, 5, 10, 20 MICROTESLA



1746

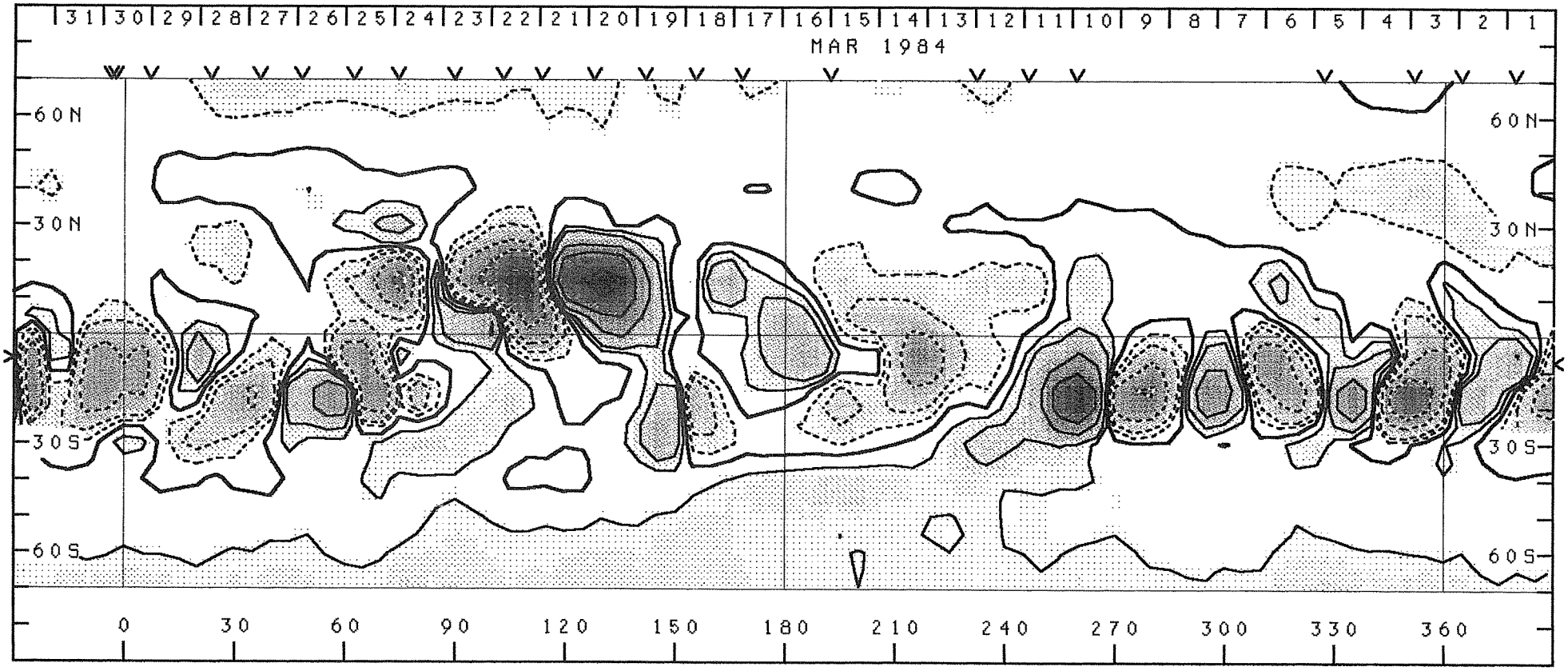
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

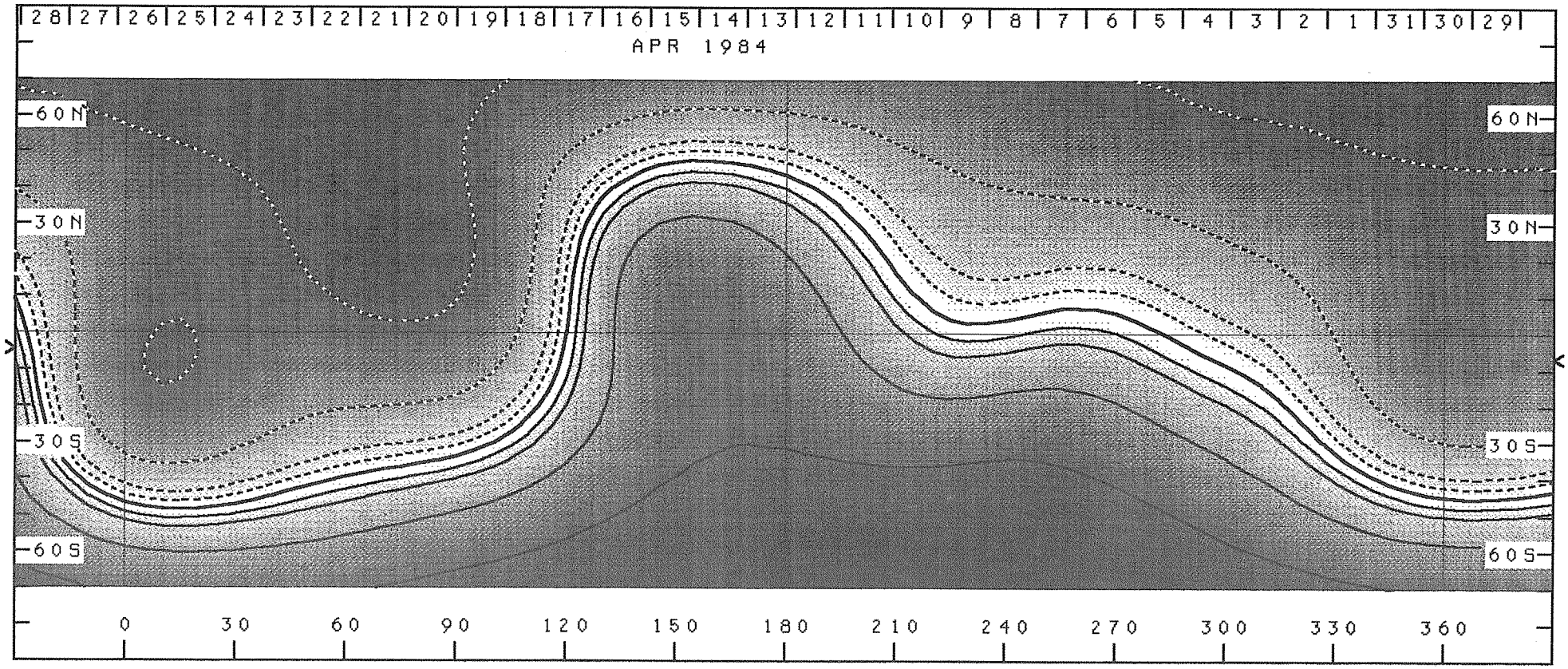
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

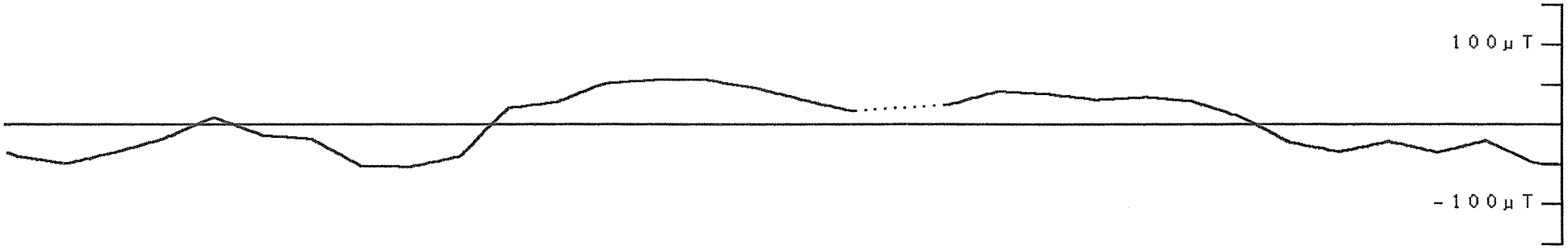
0, ±1, 2, 5, 10, 20 MICROTESLA



1747

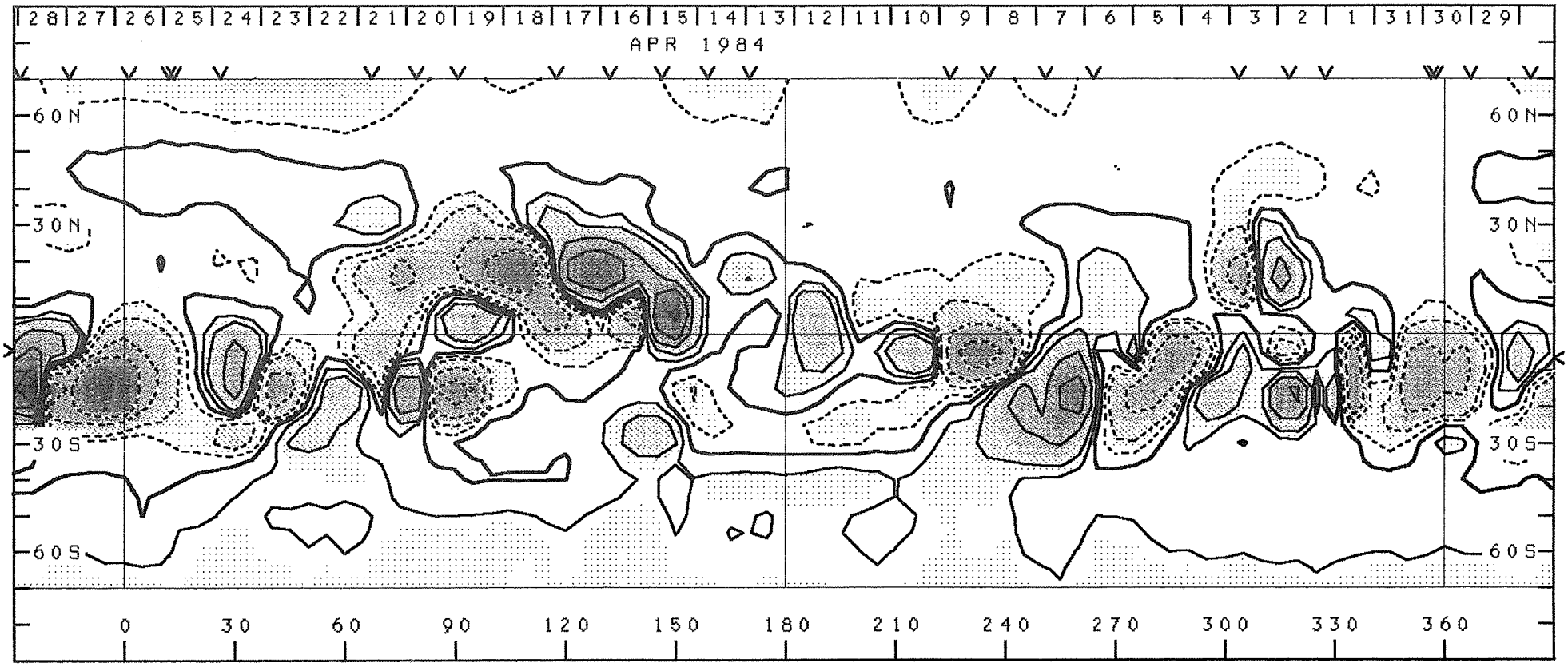
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

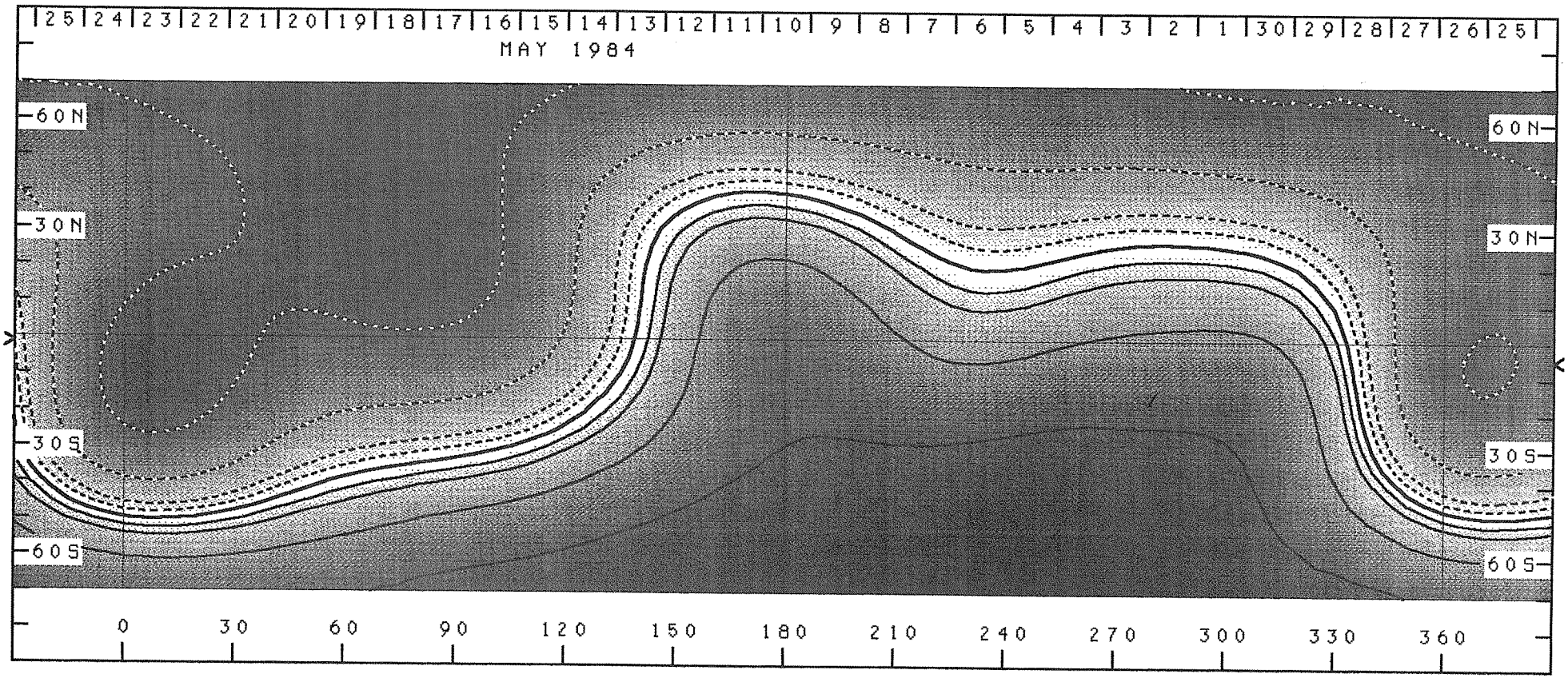
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

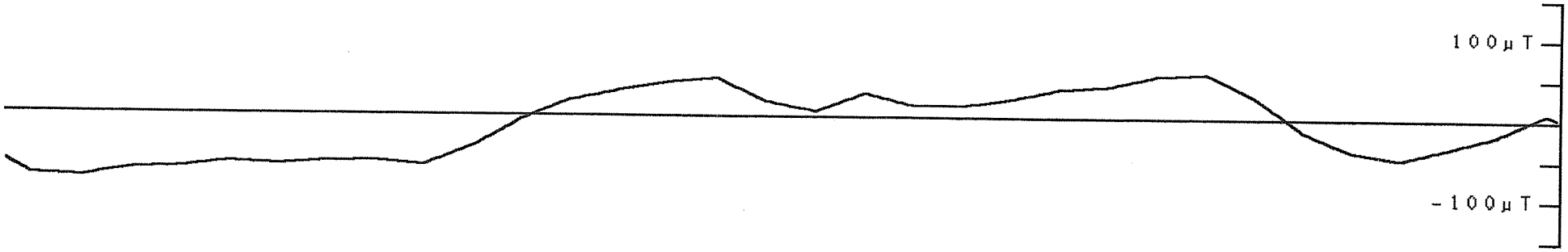
0, ±1, 2, 5, 10, 20 MICROTESLA



1748

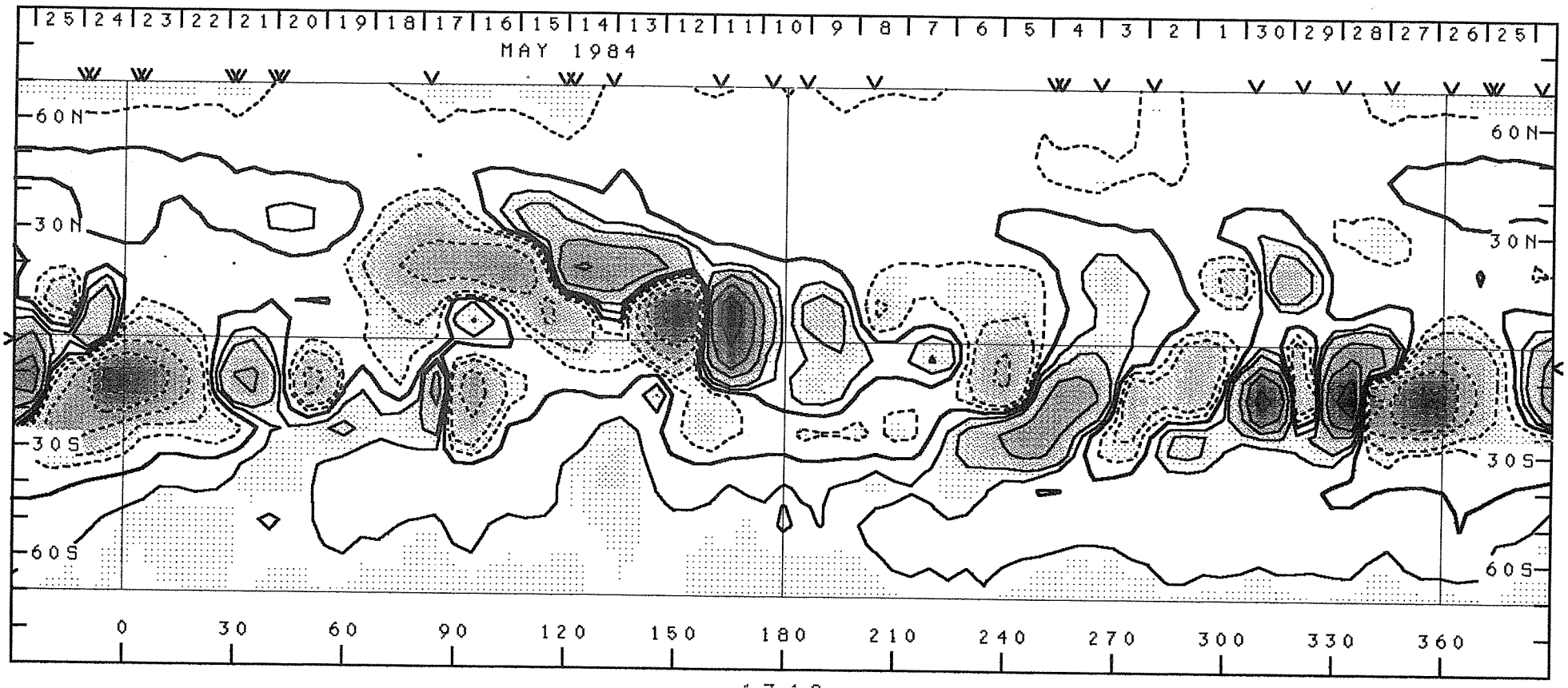
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

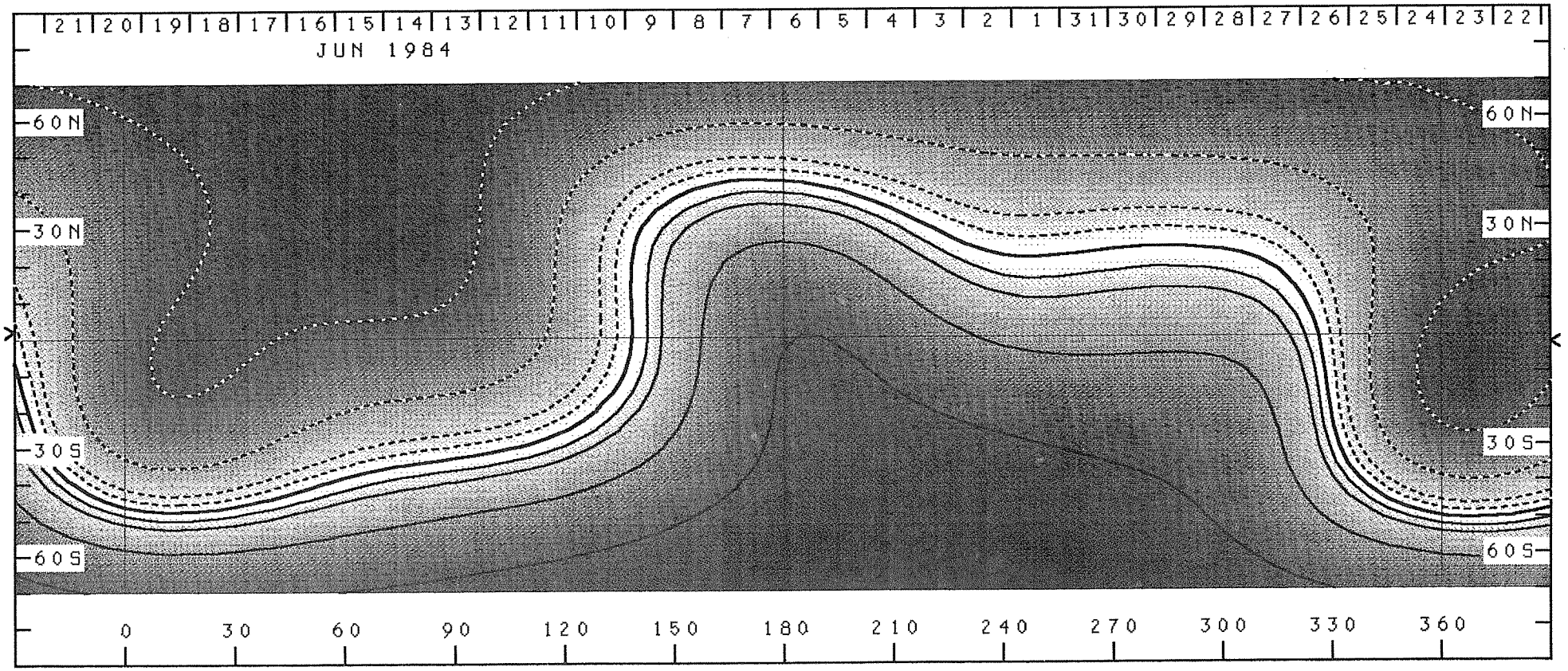
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

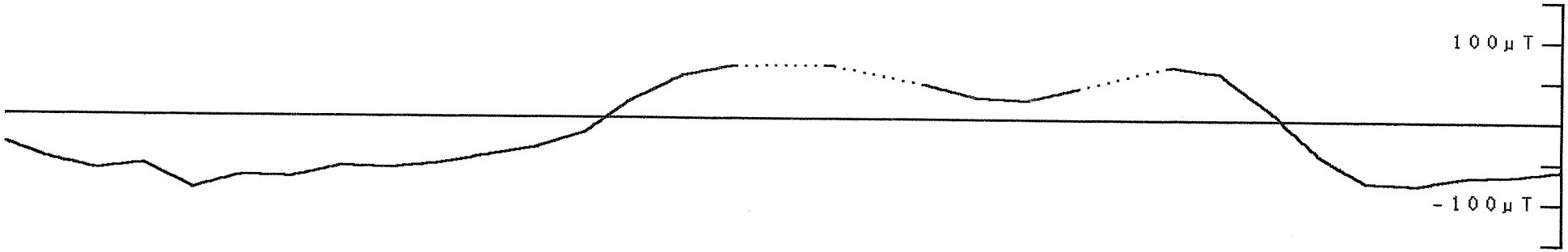
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



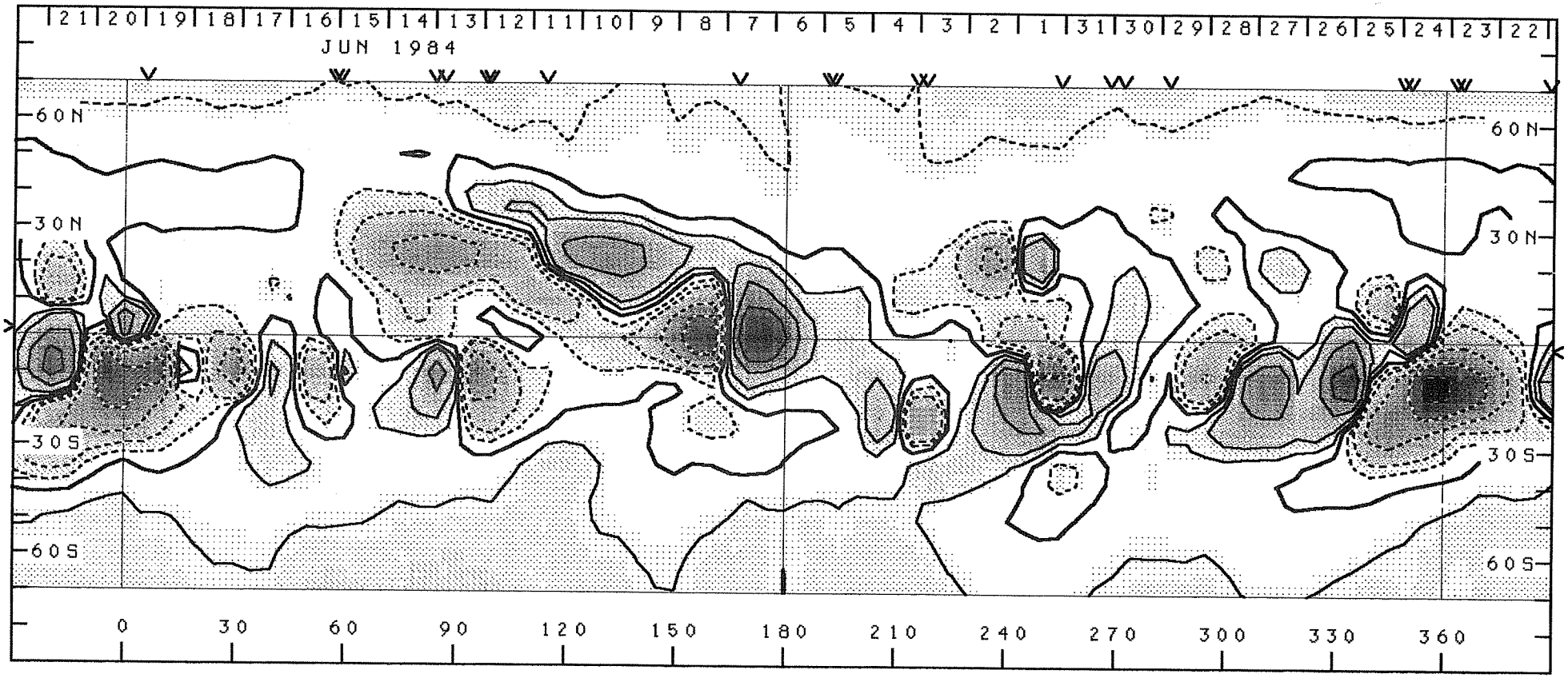
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

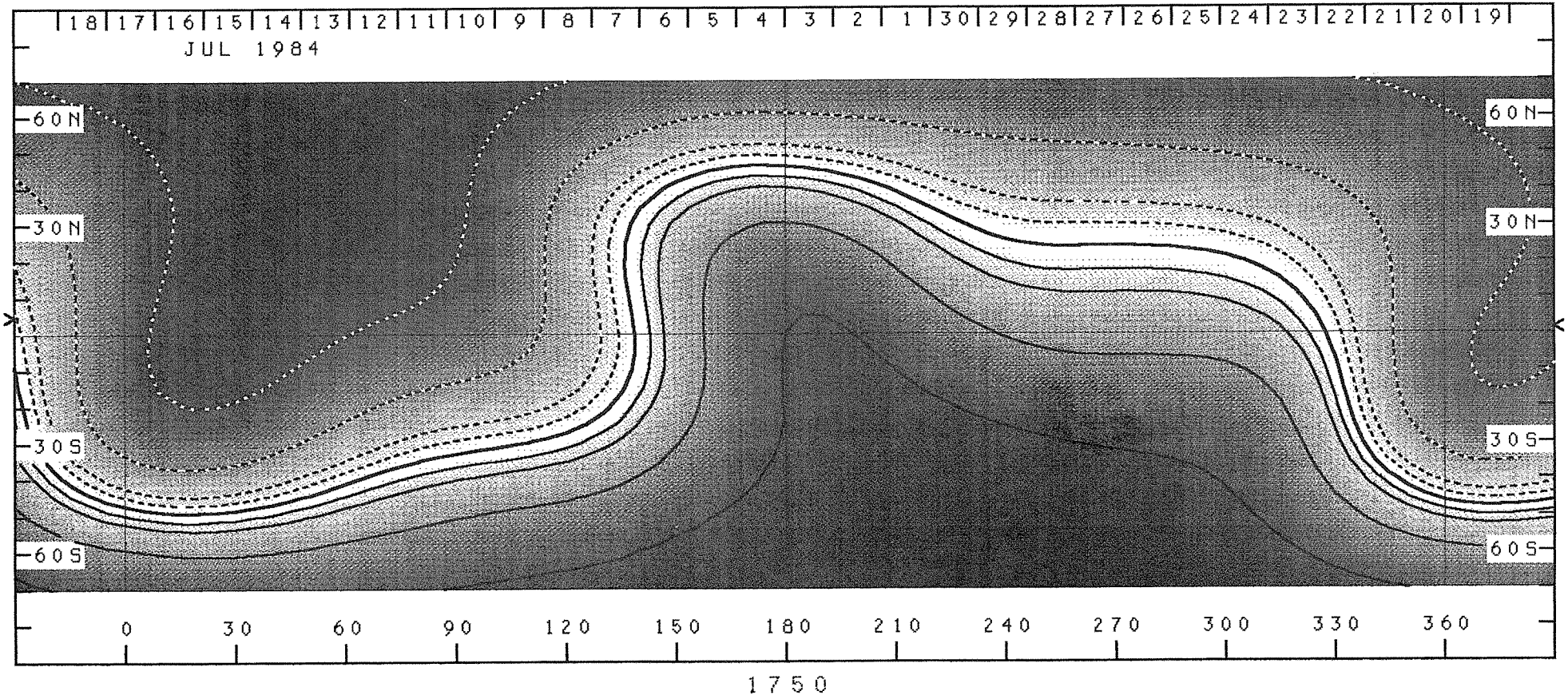
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

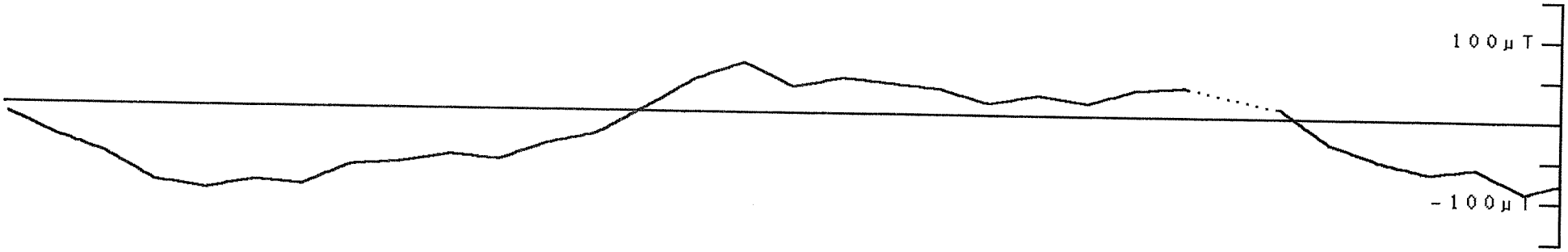
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



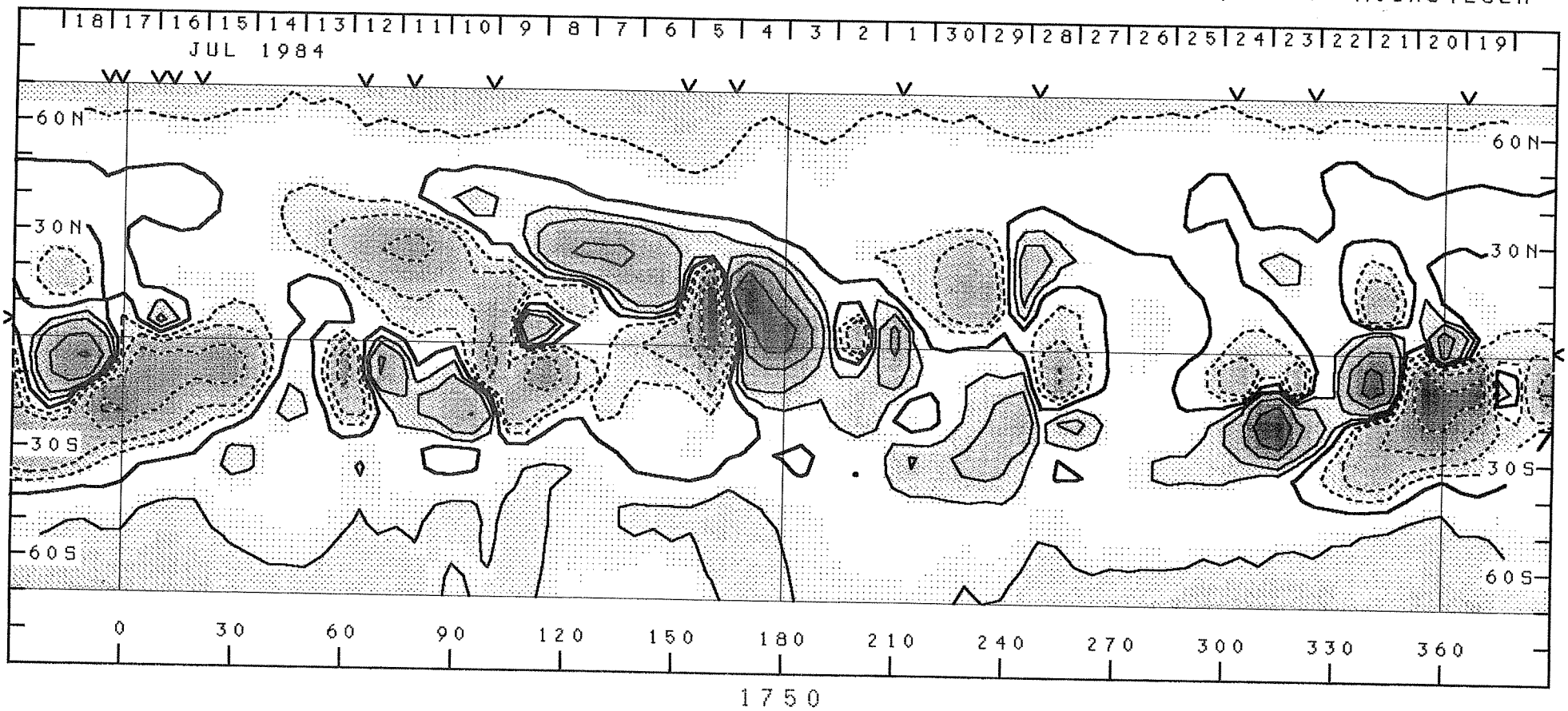
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

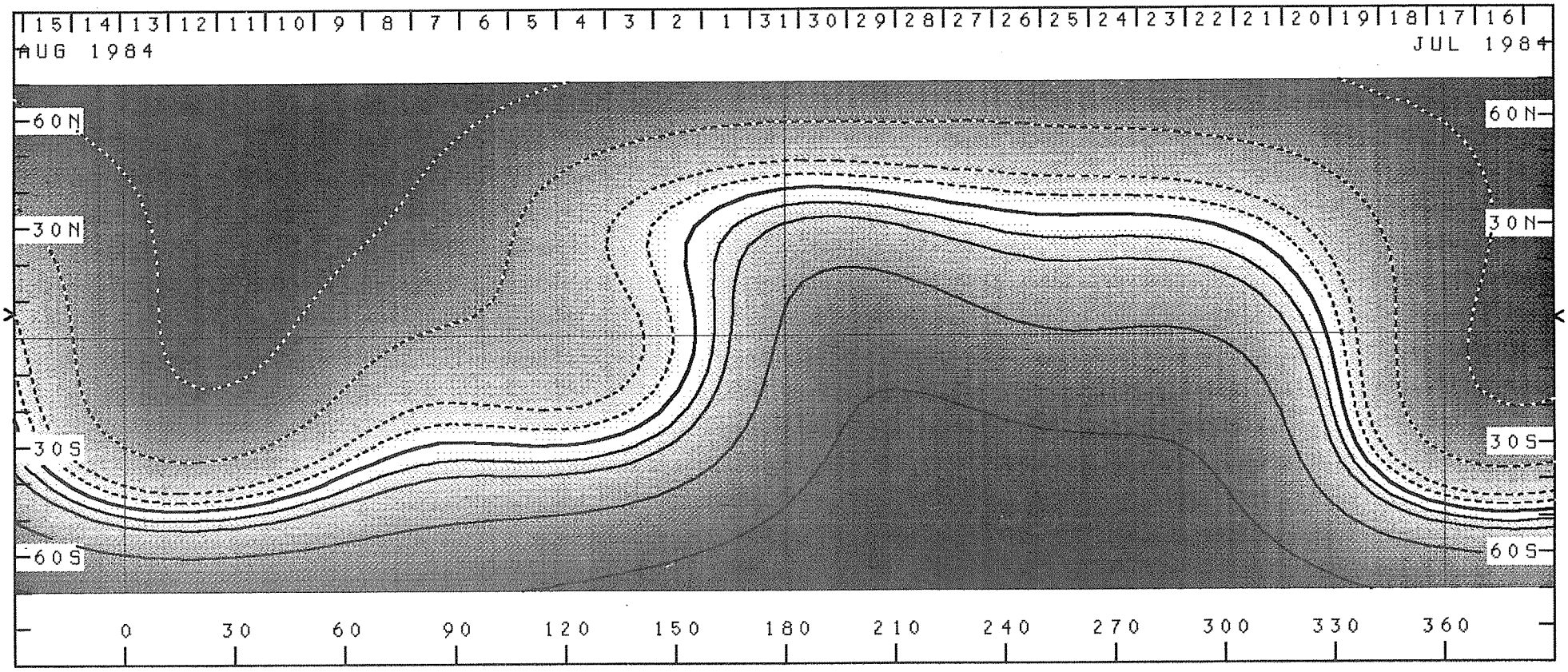
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

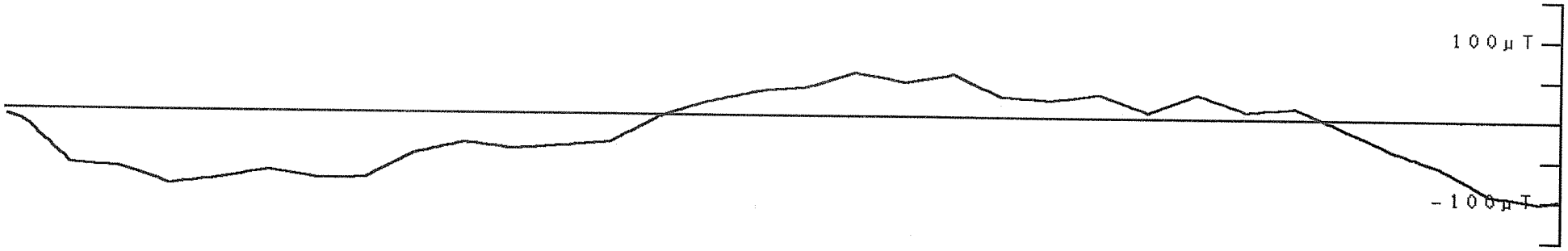
0, ±1, 2, 5, 10, 20 MICROTESLA



1751

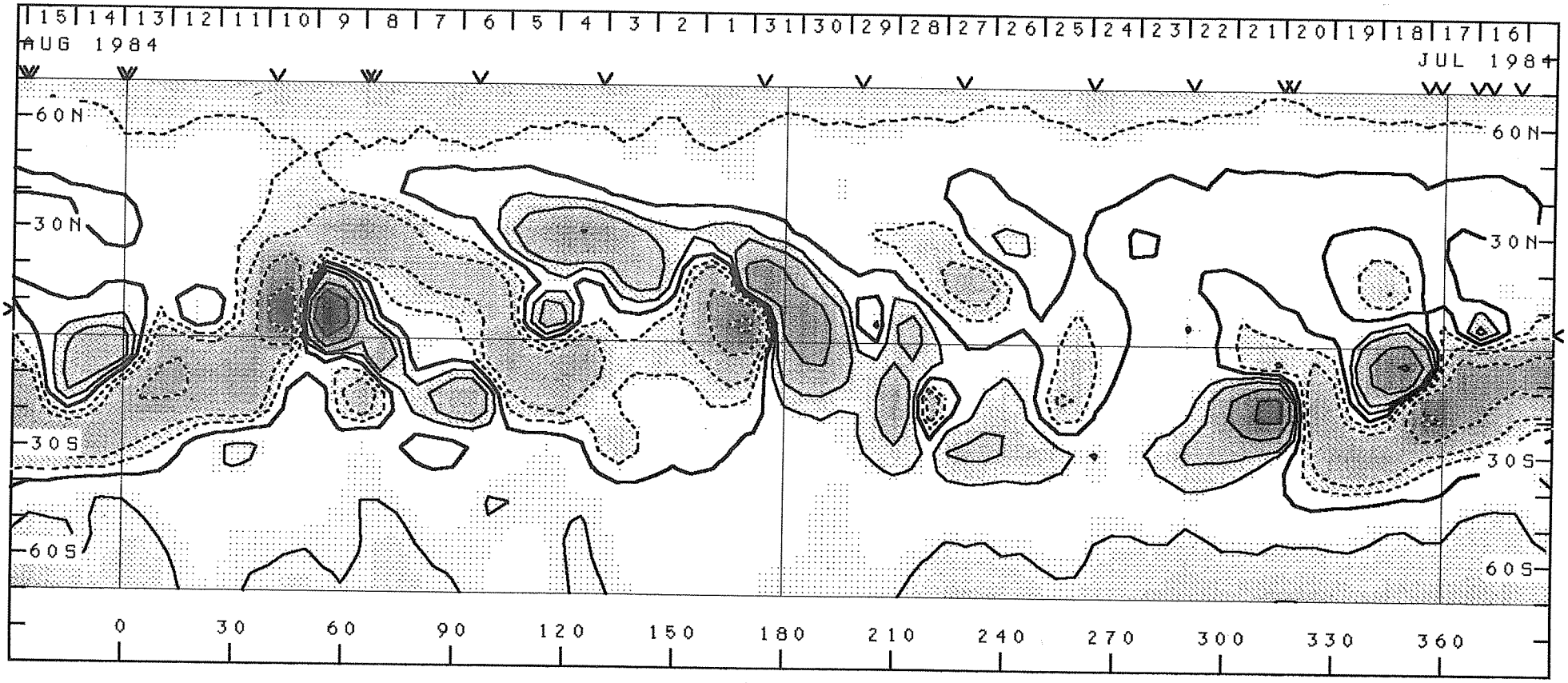
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

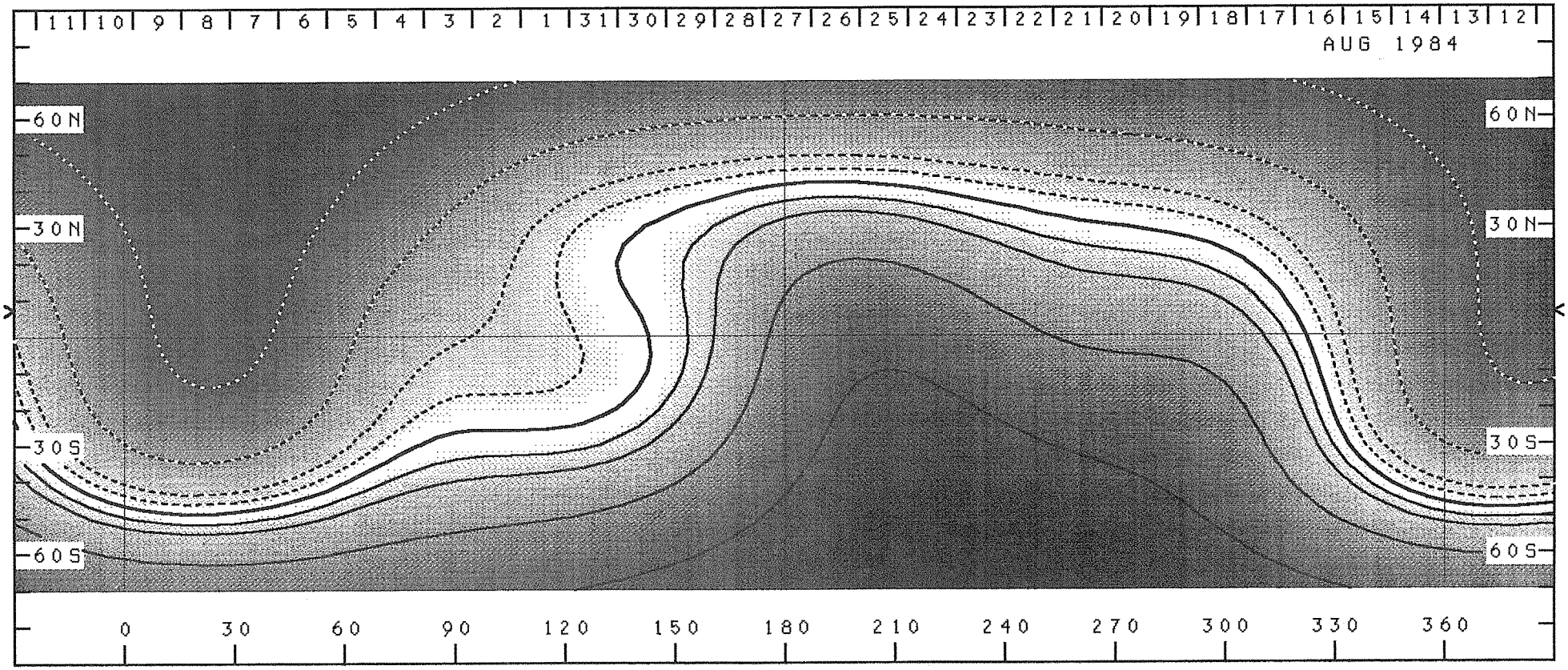
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

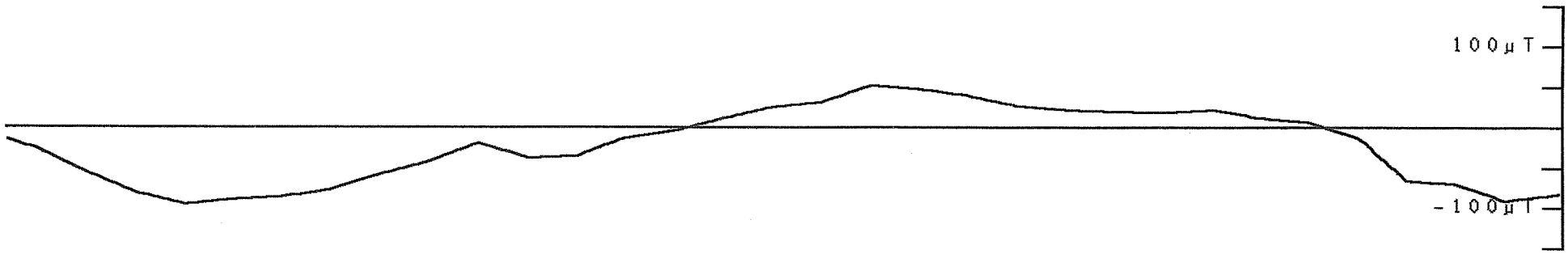
0, ±1, 2, 5, 10, 20 MICROTESLA



1752

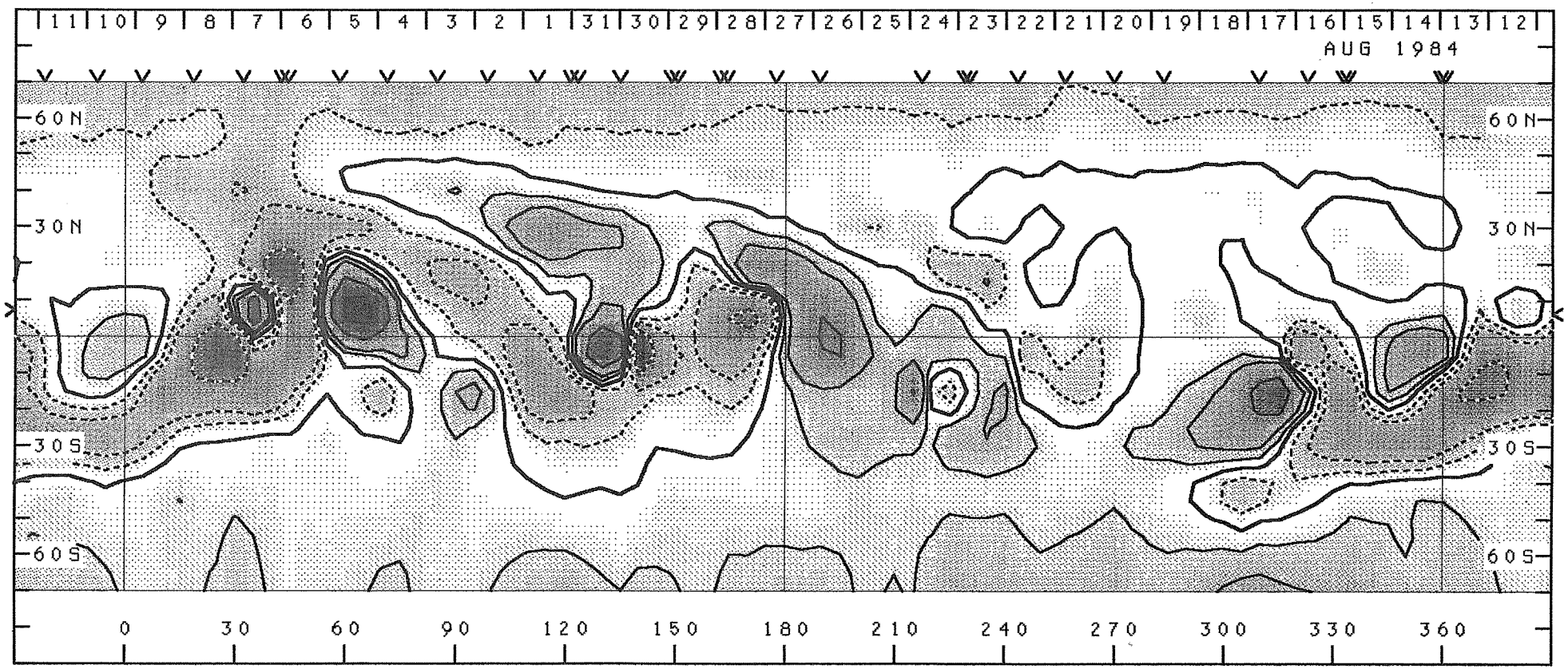
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

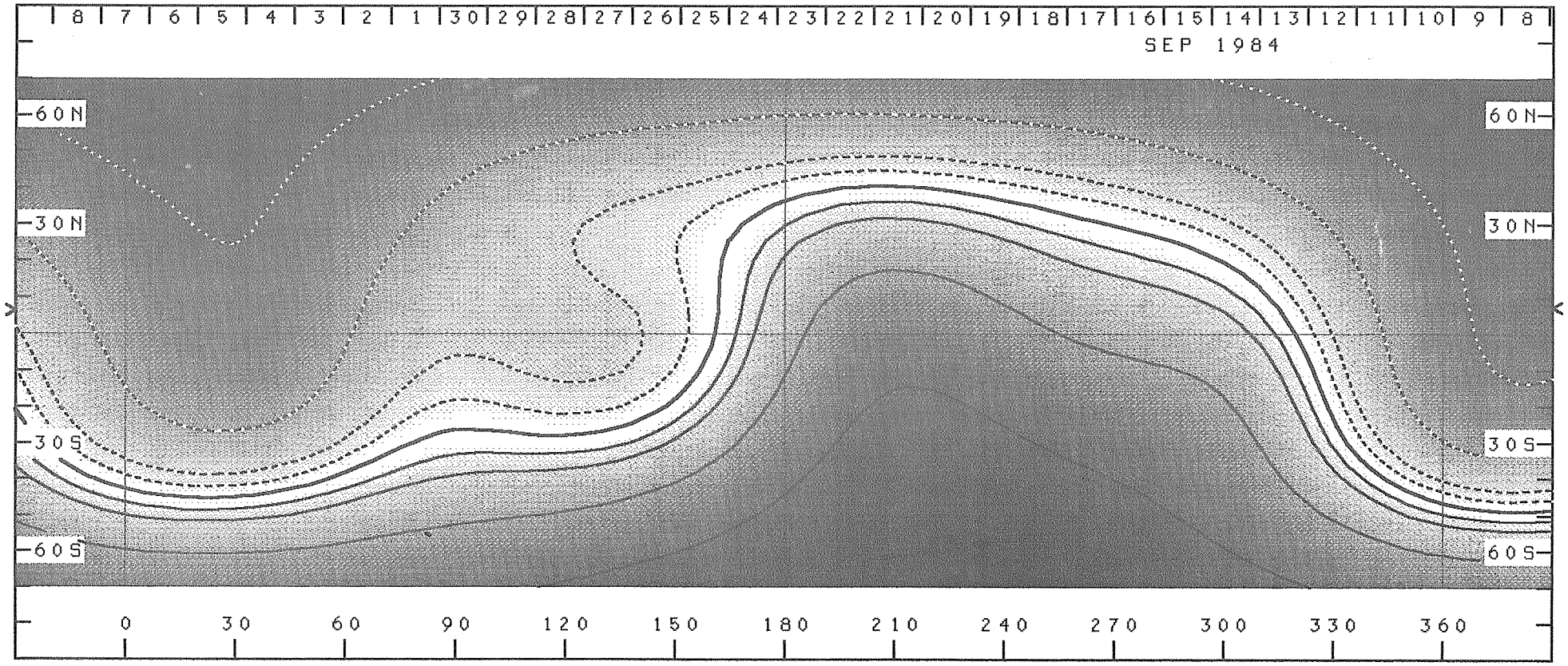


1752

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

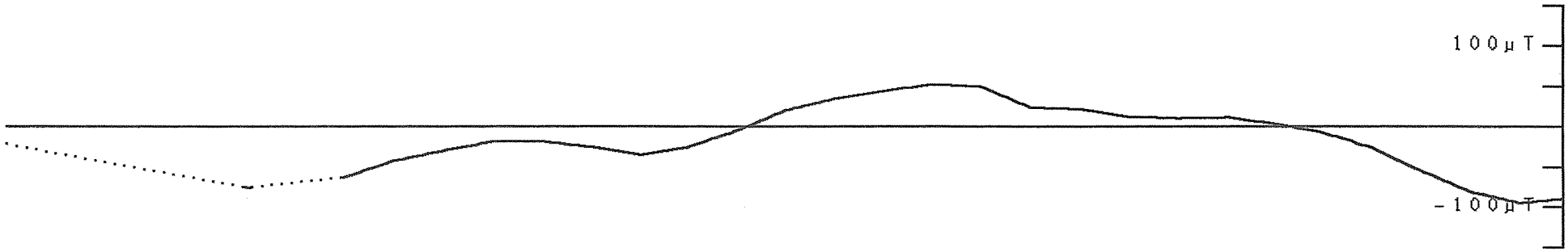
0, ±1, 2, 5, 10, 20 MICROTESLA



1753

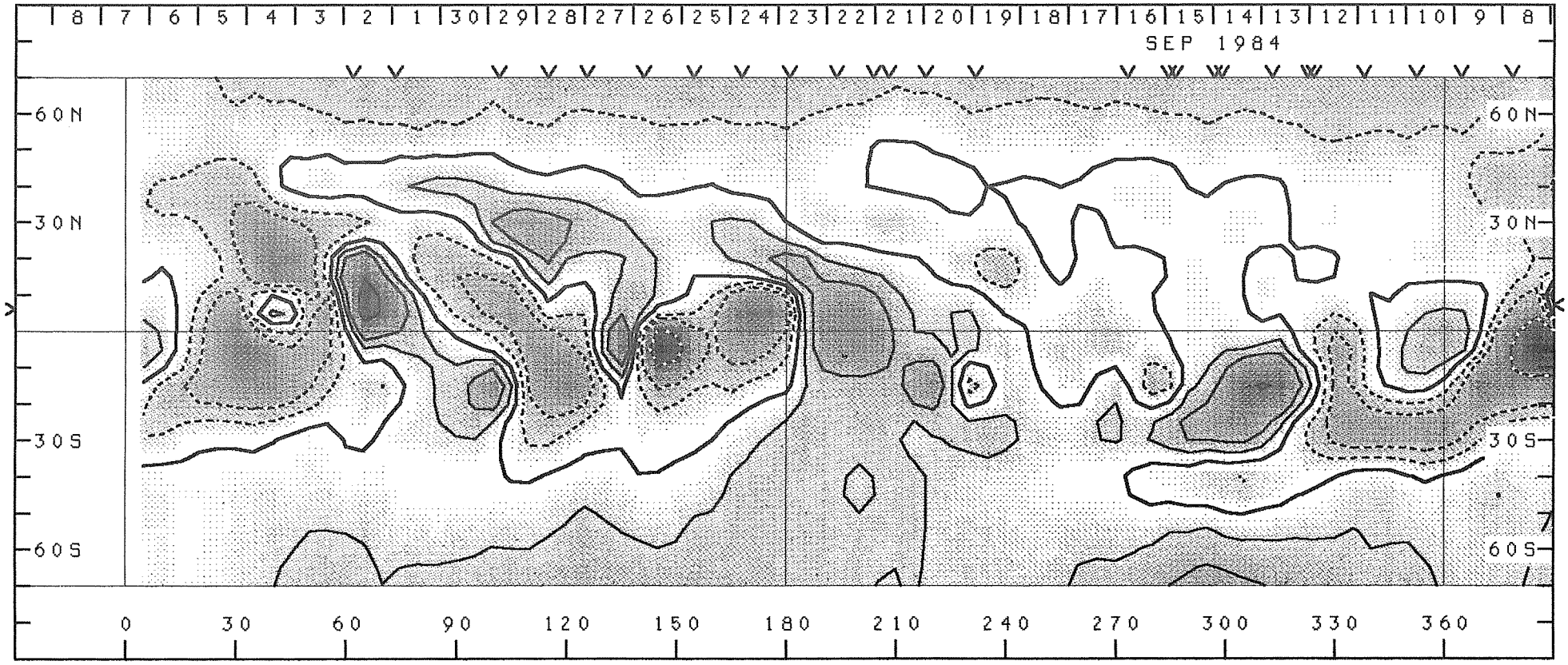
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

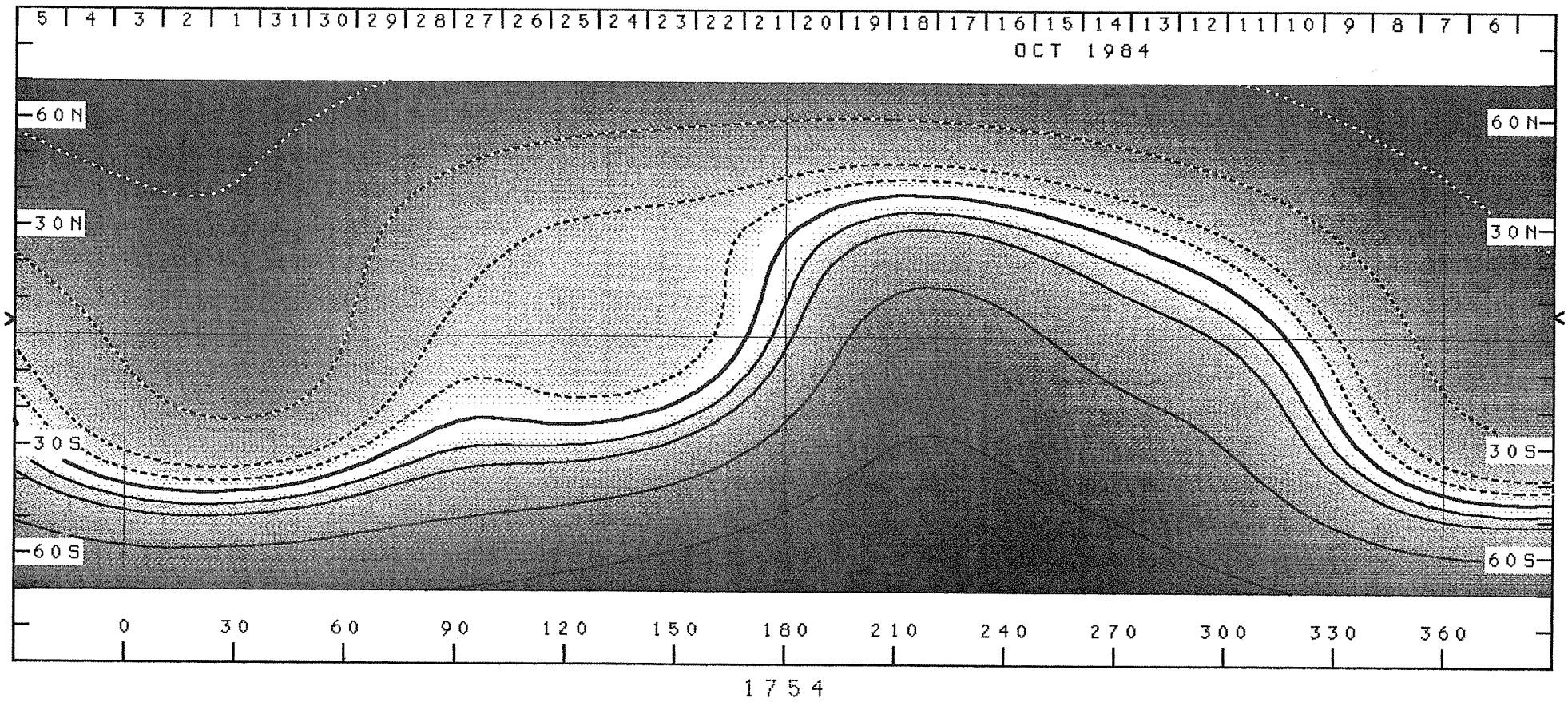
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

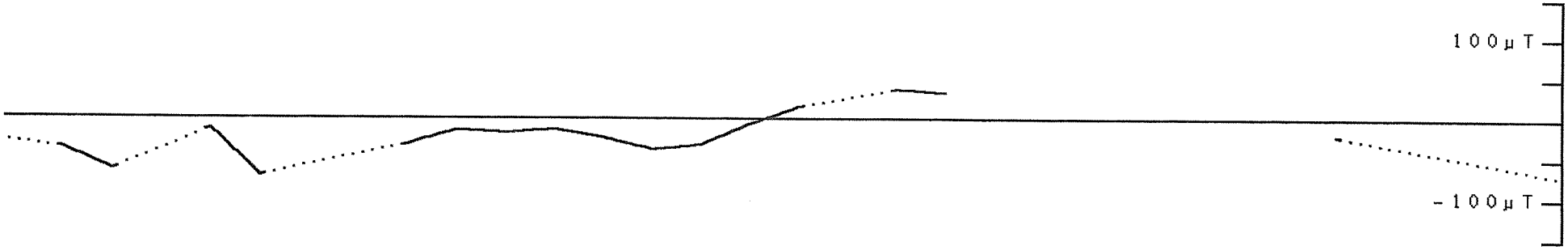
0, ±1, 2, 5, 10, 20 MICROTESLA



1754

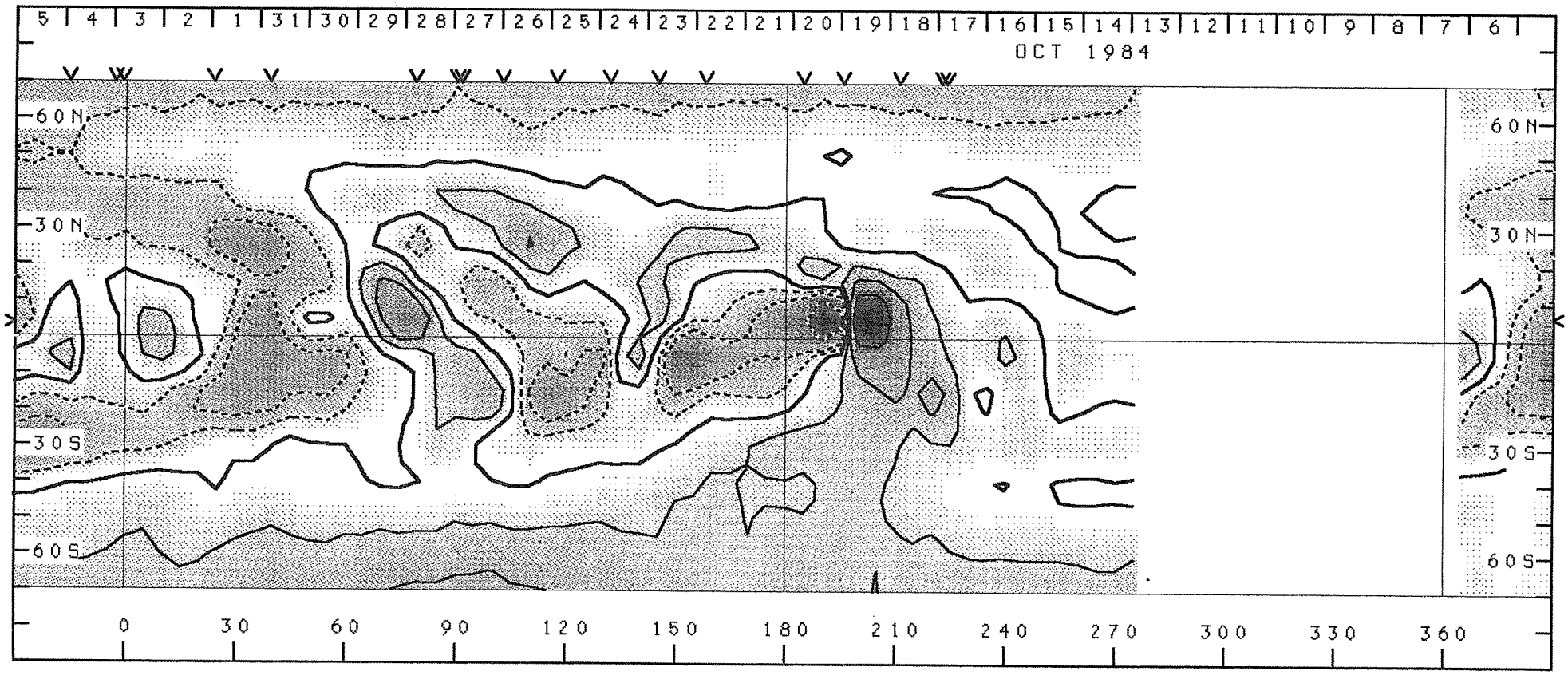
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

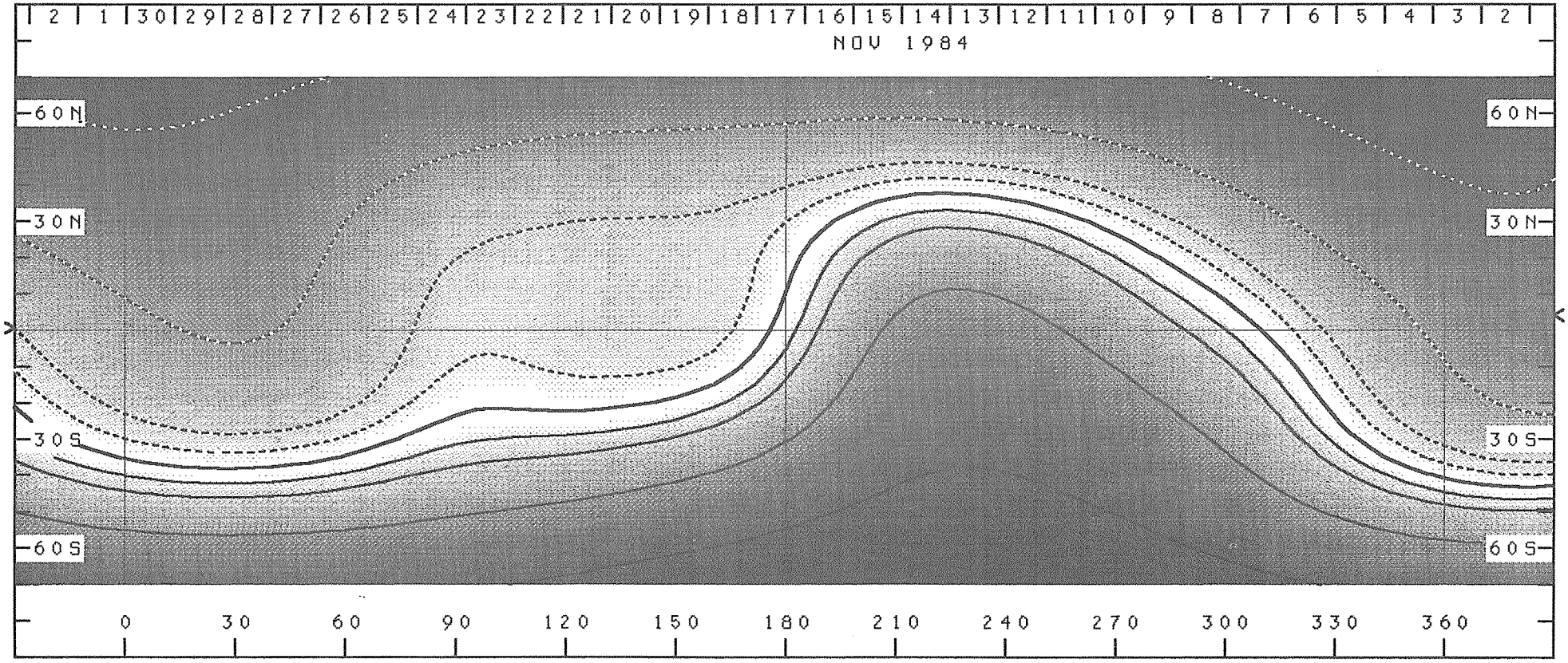
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

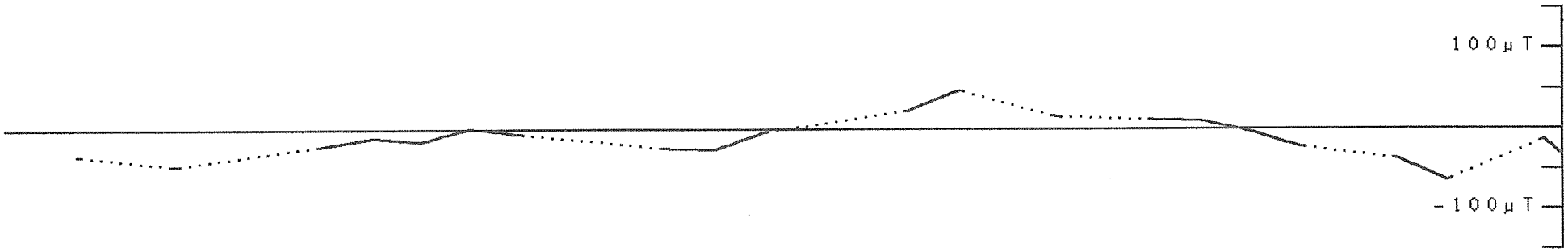
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



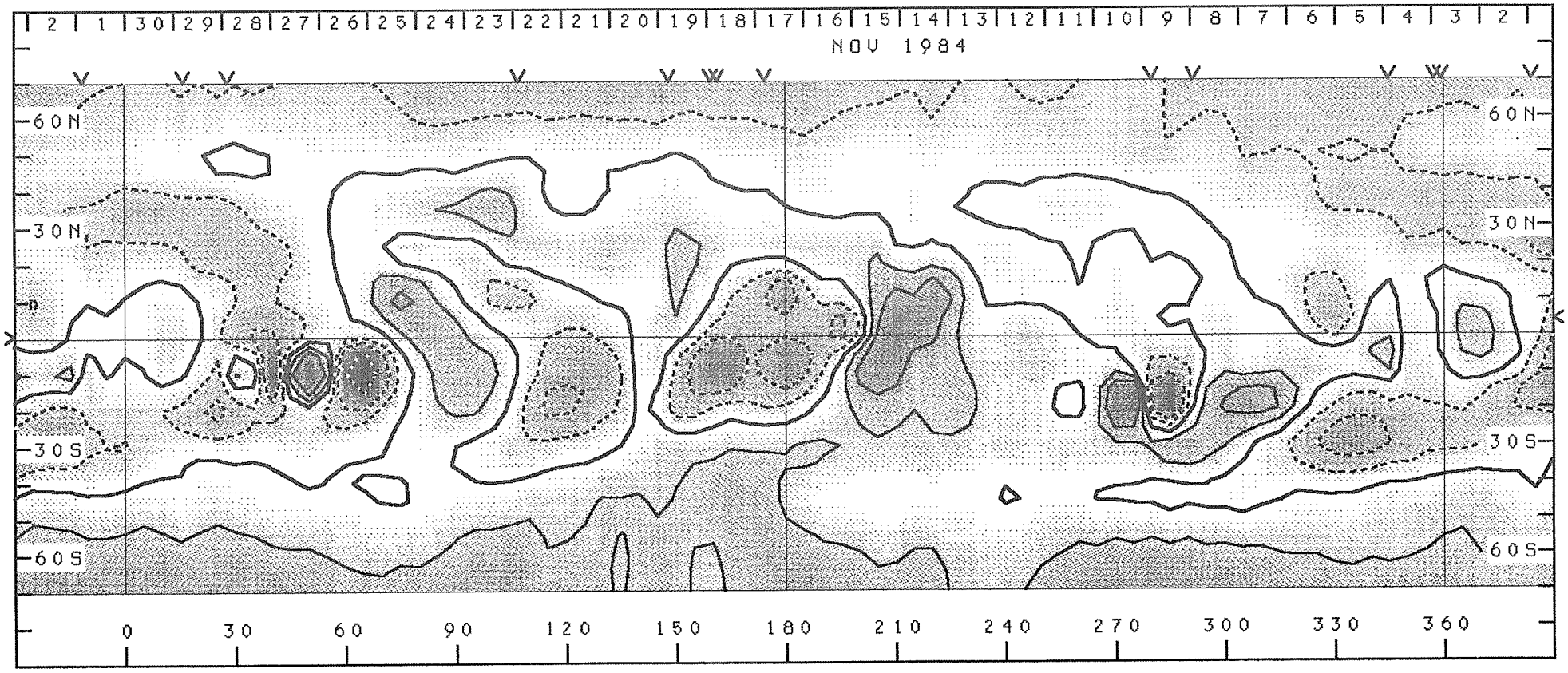
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

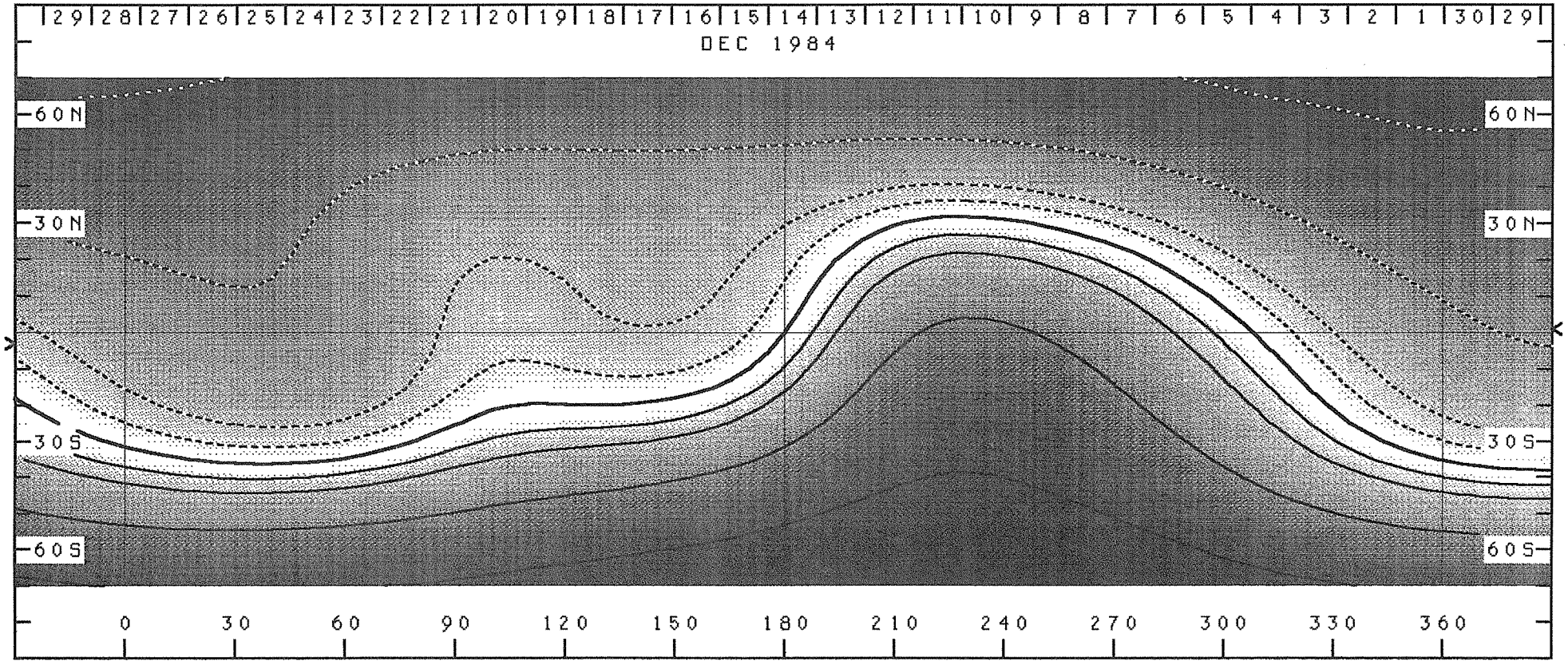


1755

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

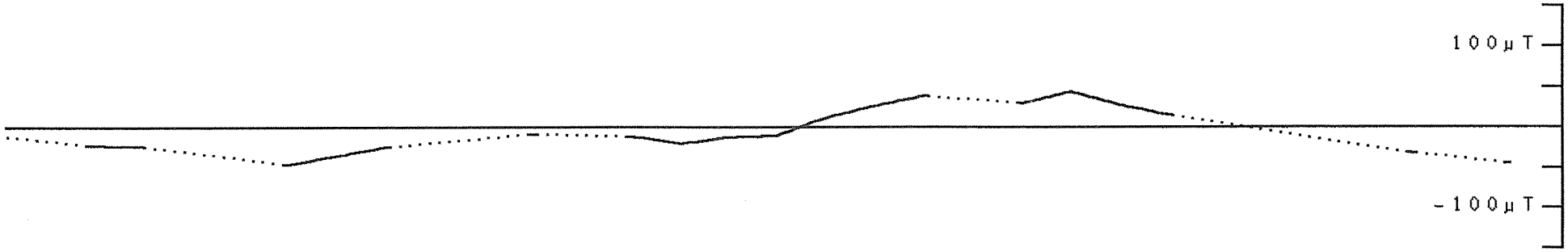
0, ±1, 2, 5, 10, 20 MICROTESLA



1756

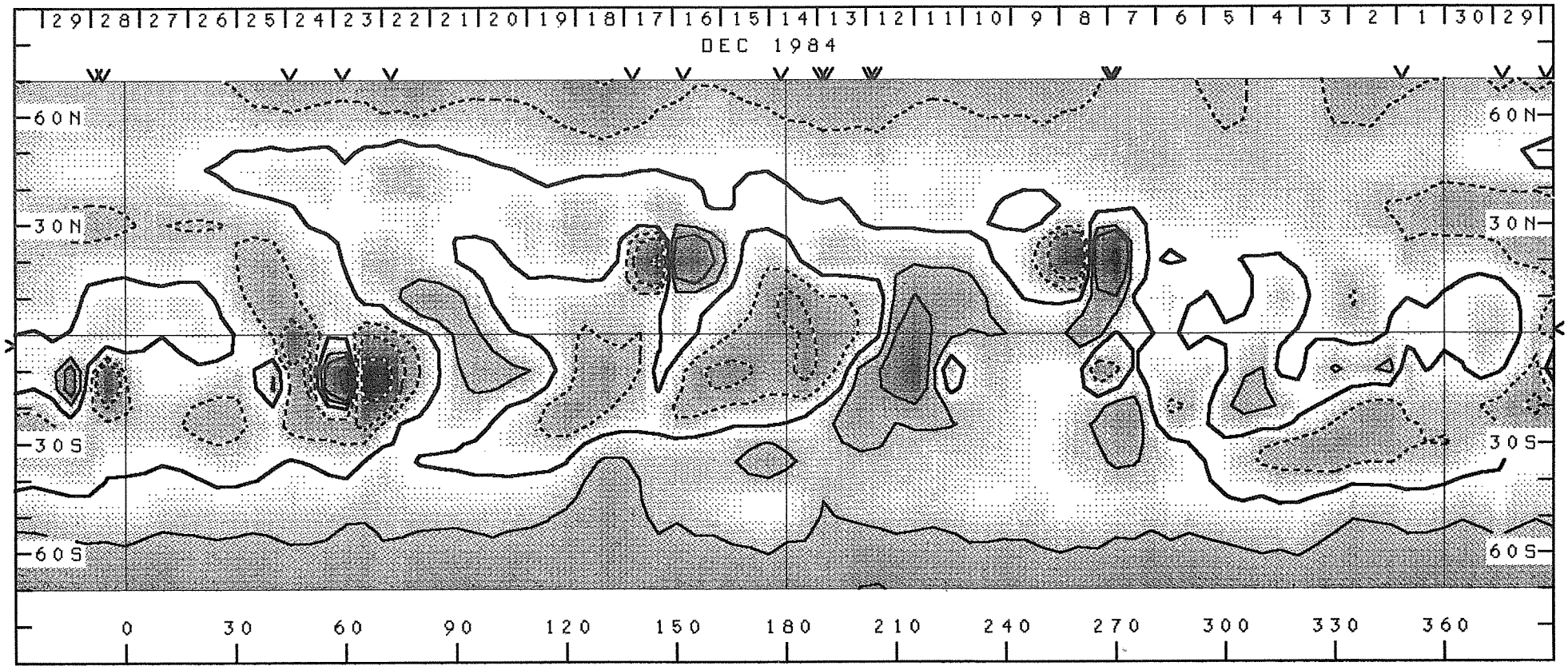
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

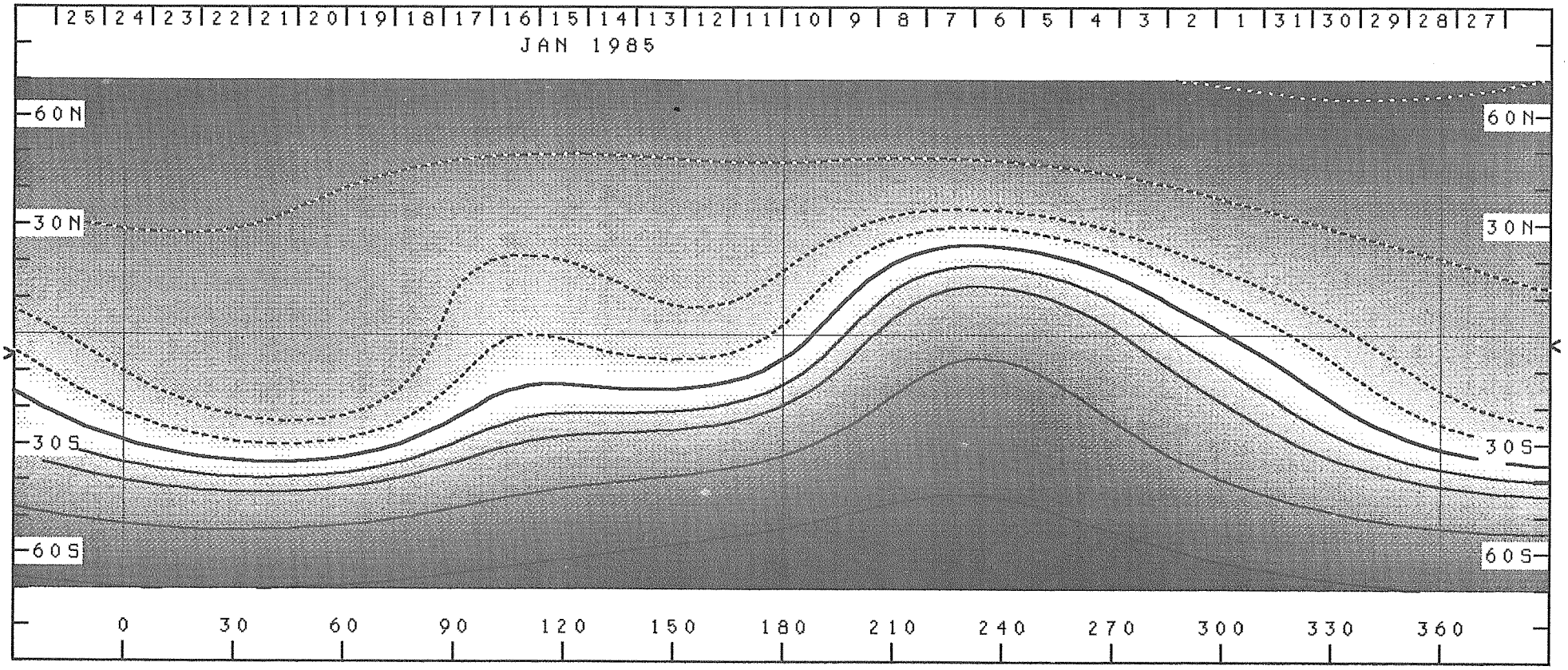
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

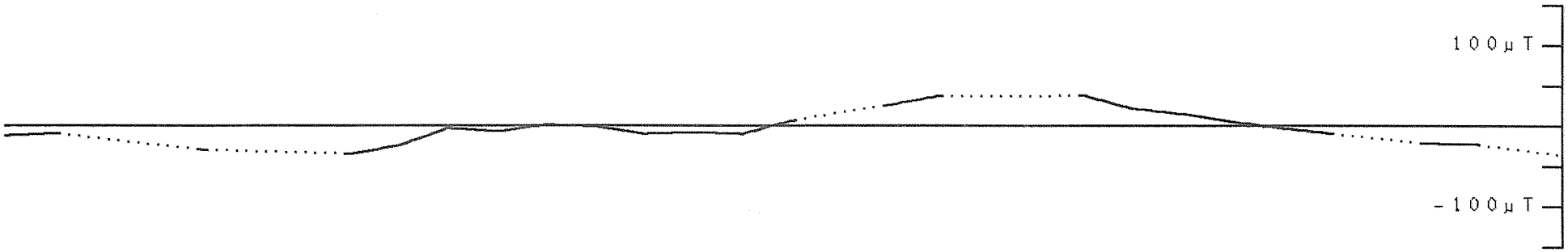
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



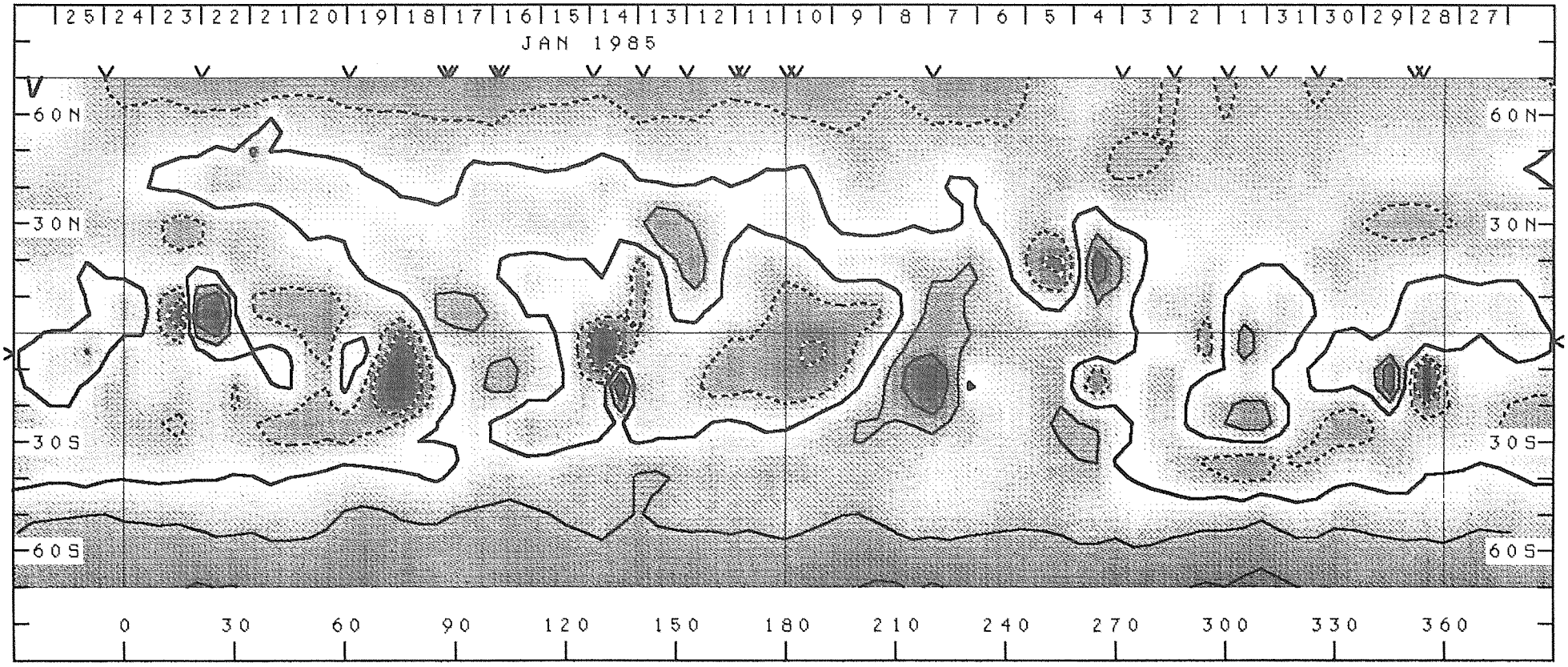
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

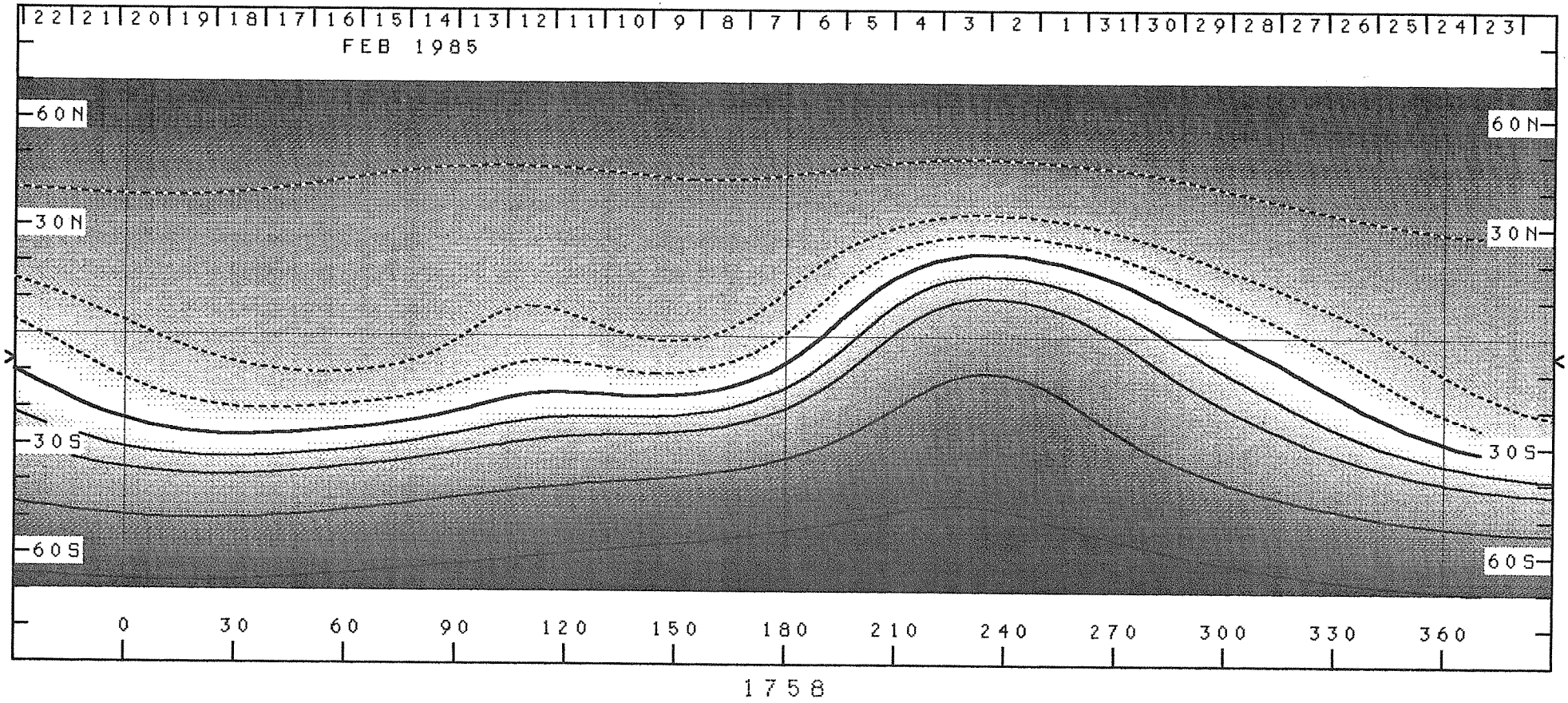


1757

WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

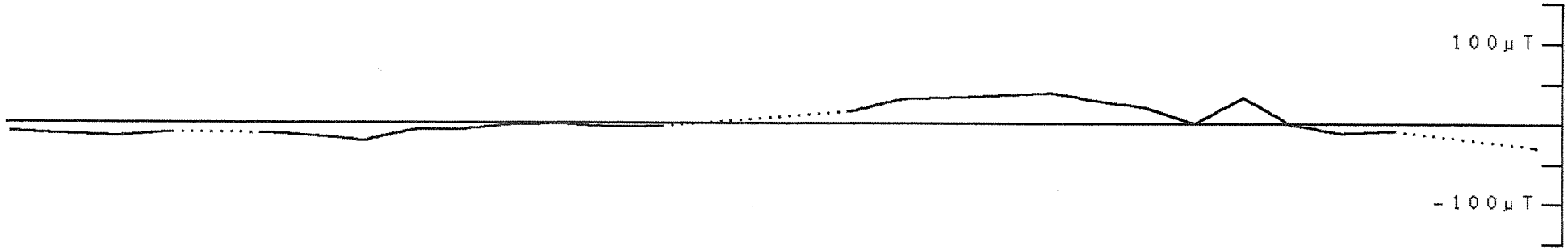
0, ±1, 2, 5, 10, 20 MICROTESLA



1758

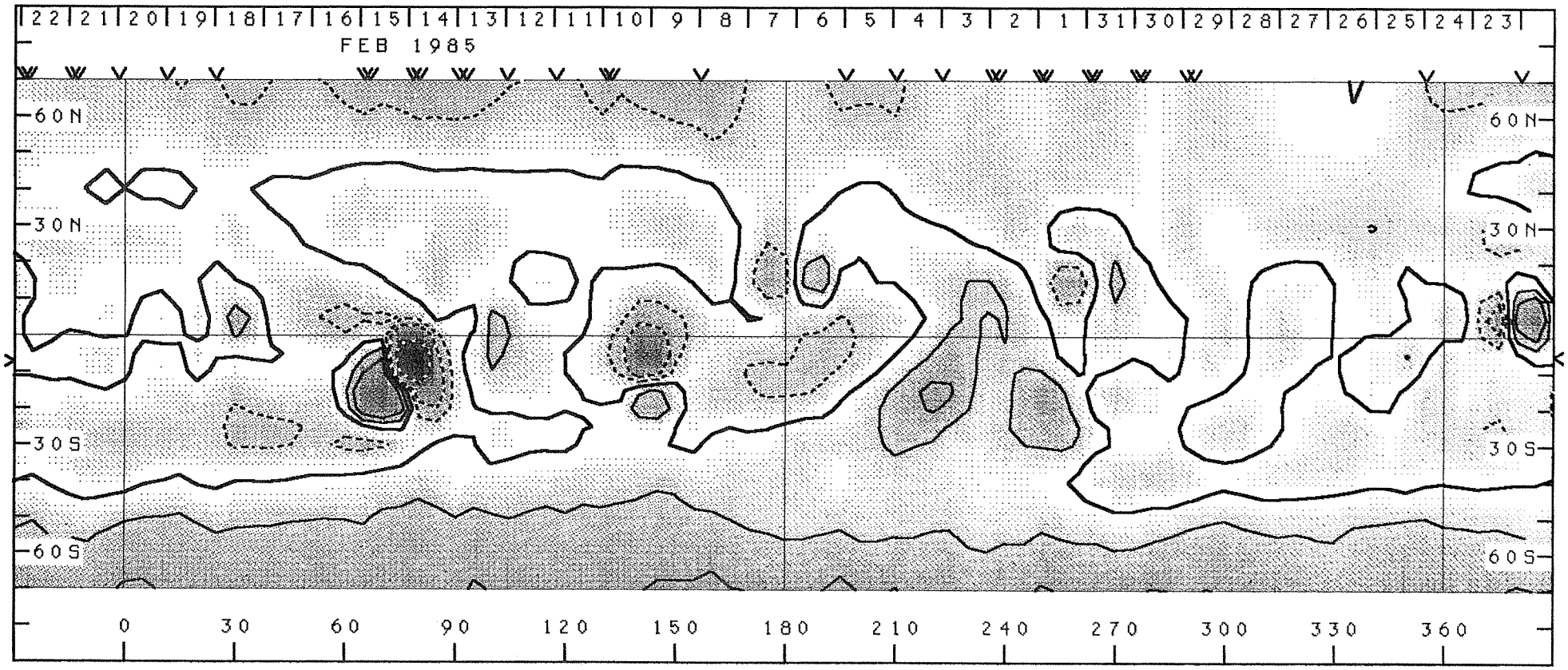
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

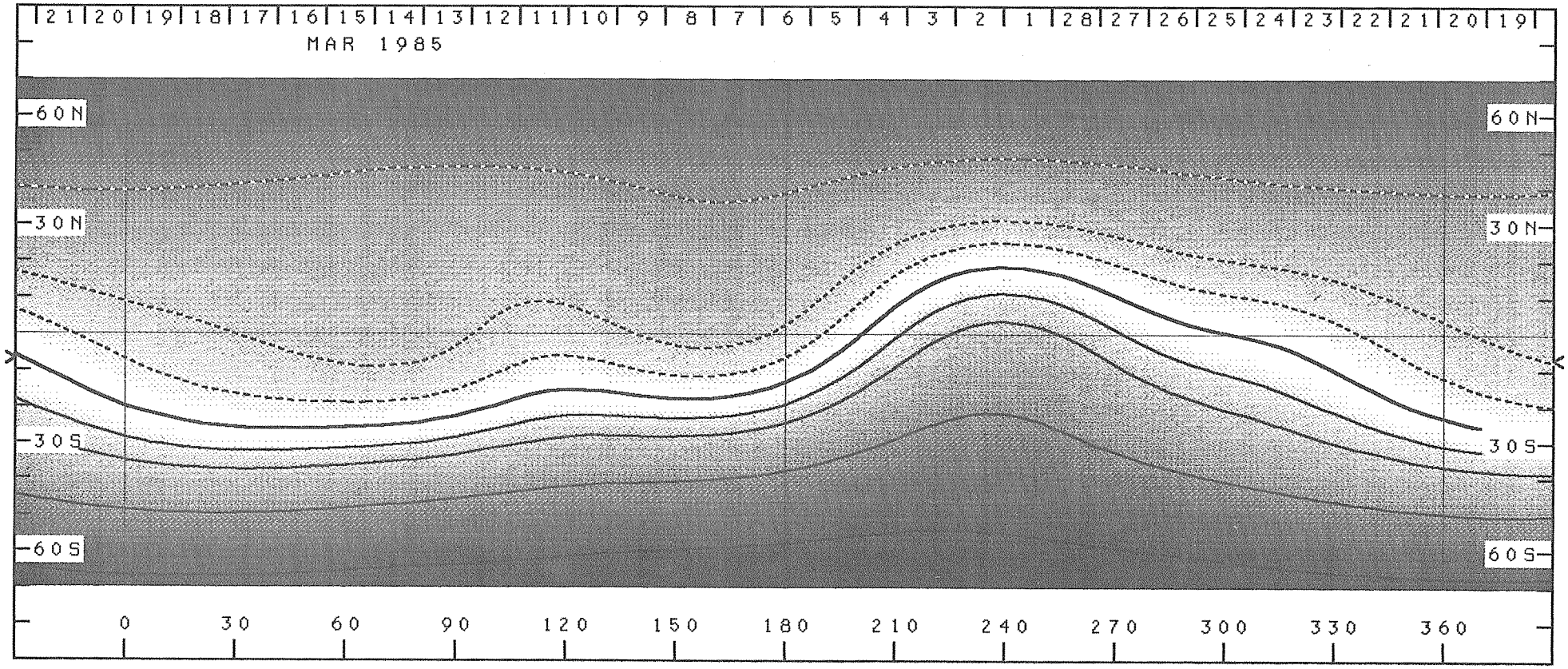
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

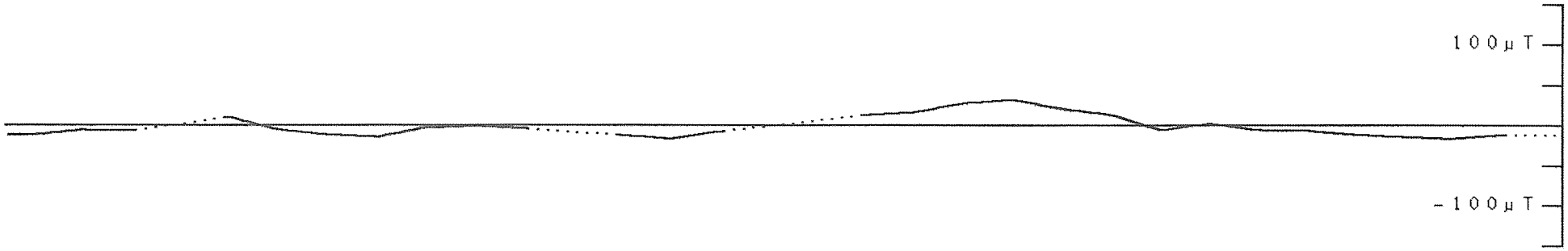
0, ±1, 2, 5, 10, 20 MICROTESLA



1759

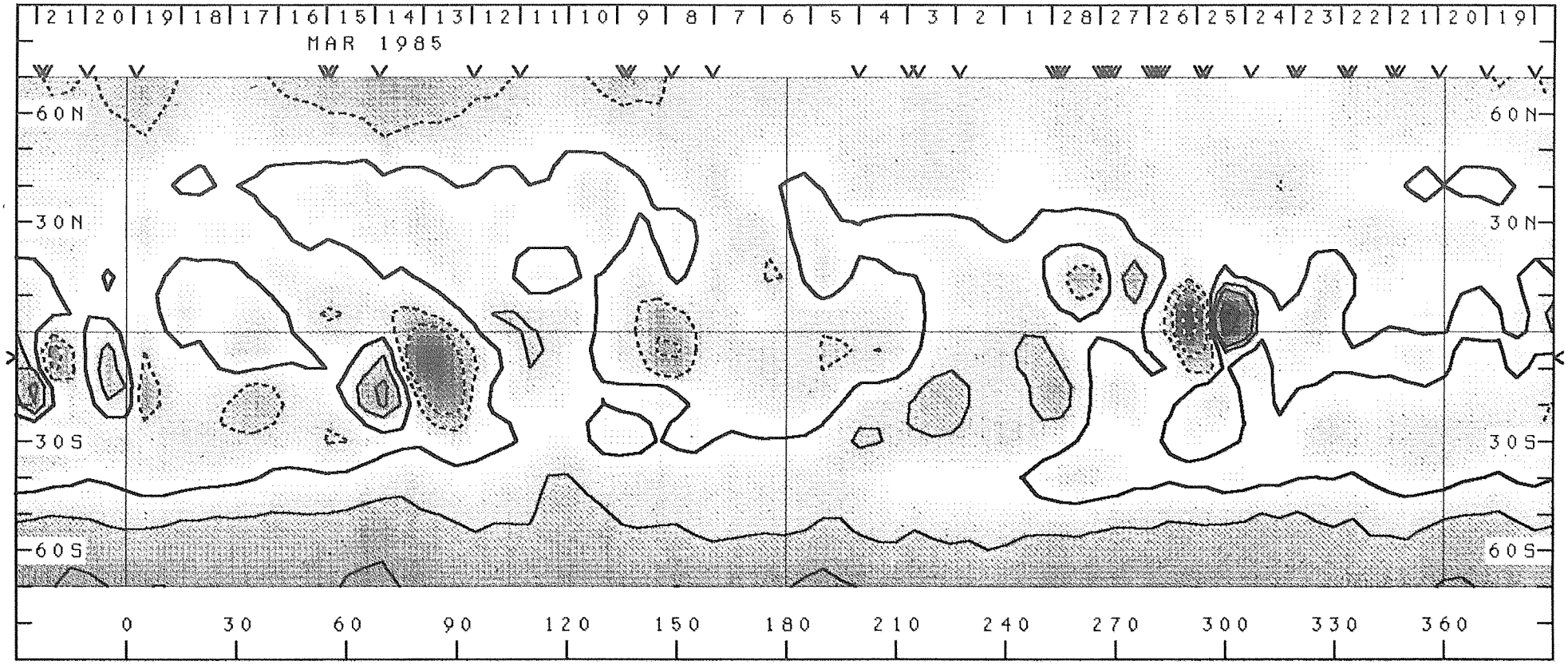
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

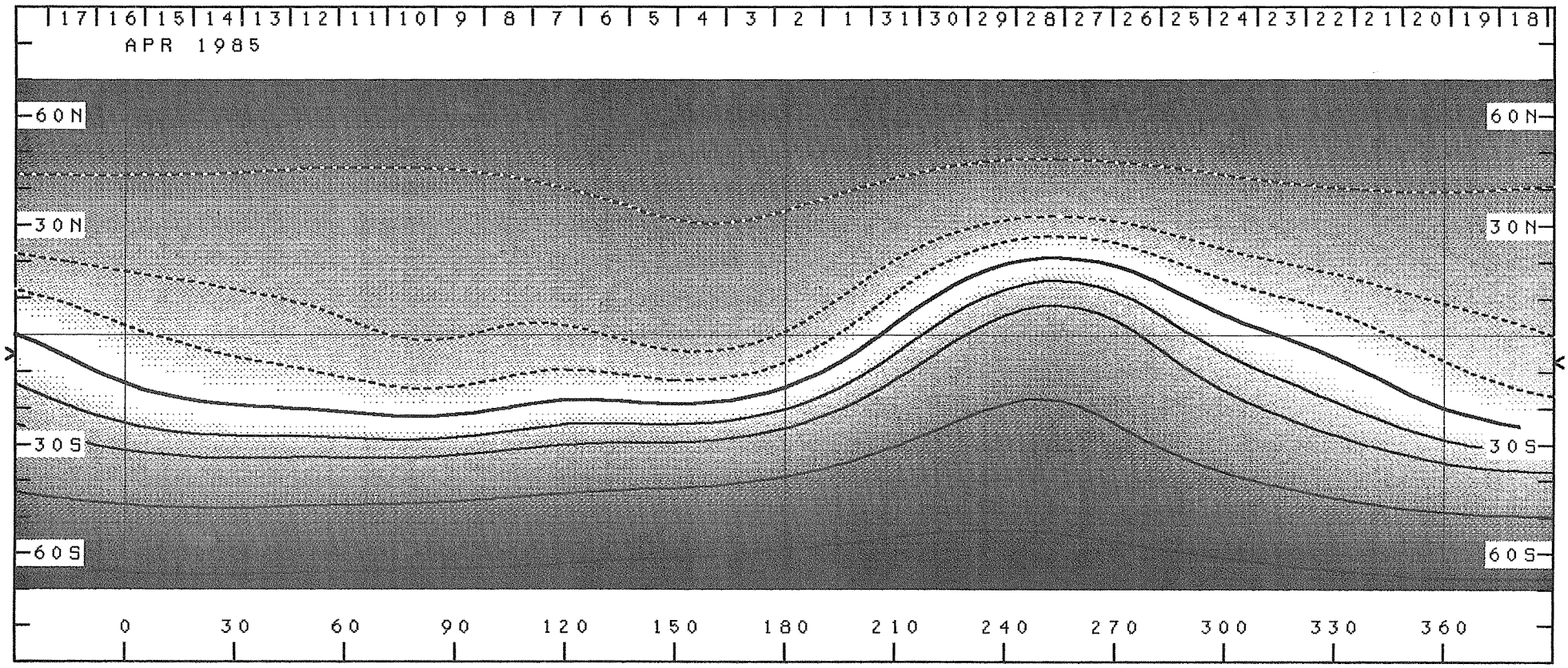


1759

WILCOX SOLAR OBSERVATORY

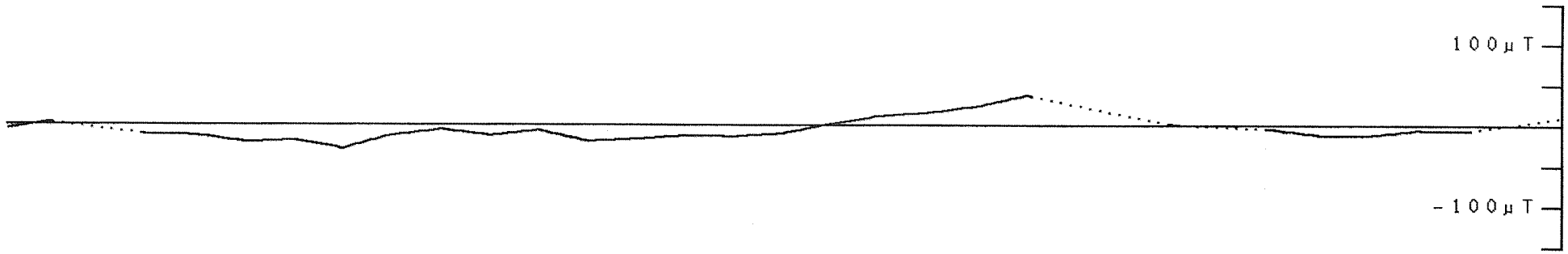
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



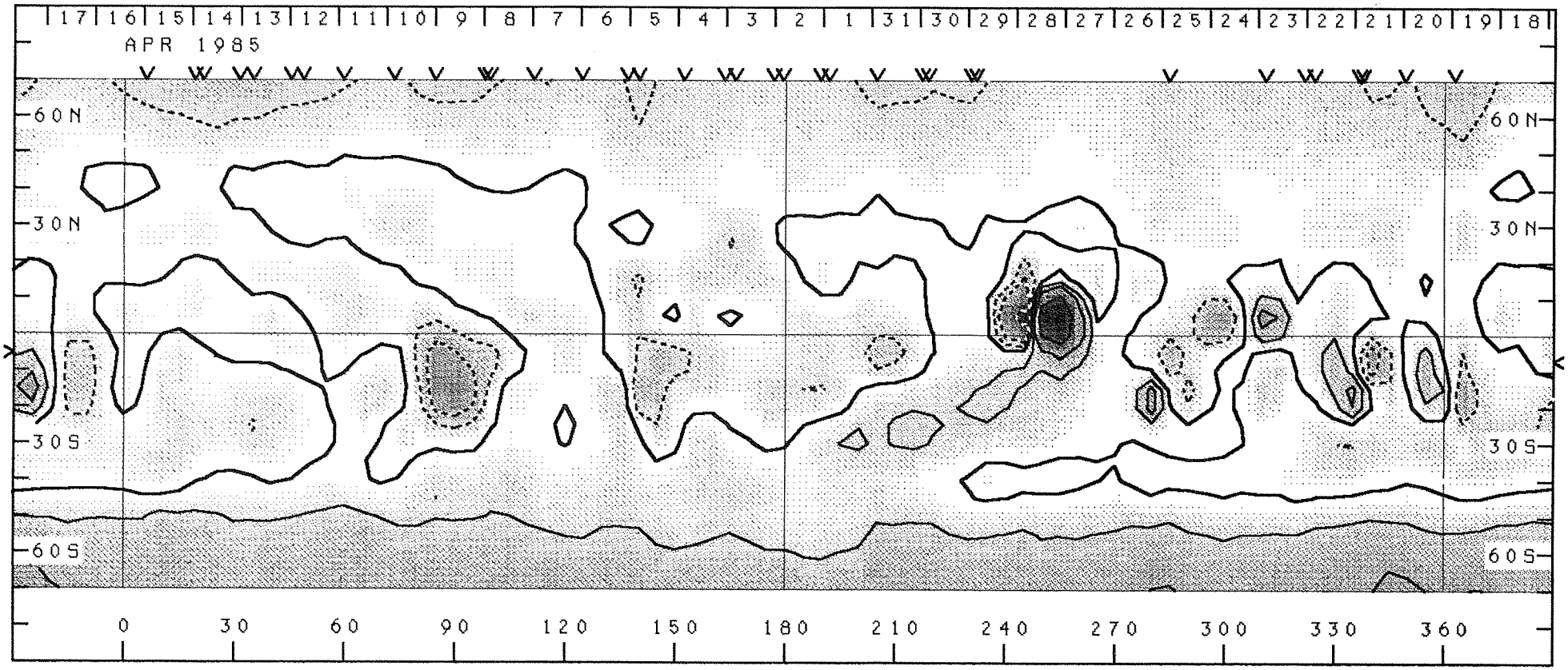
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA

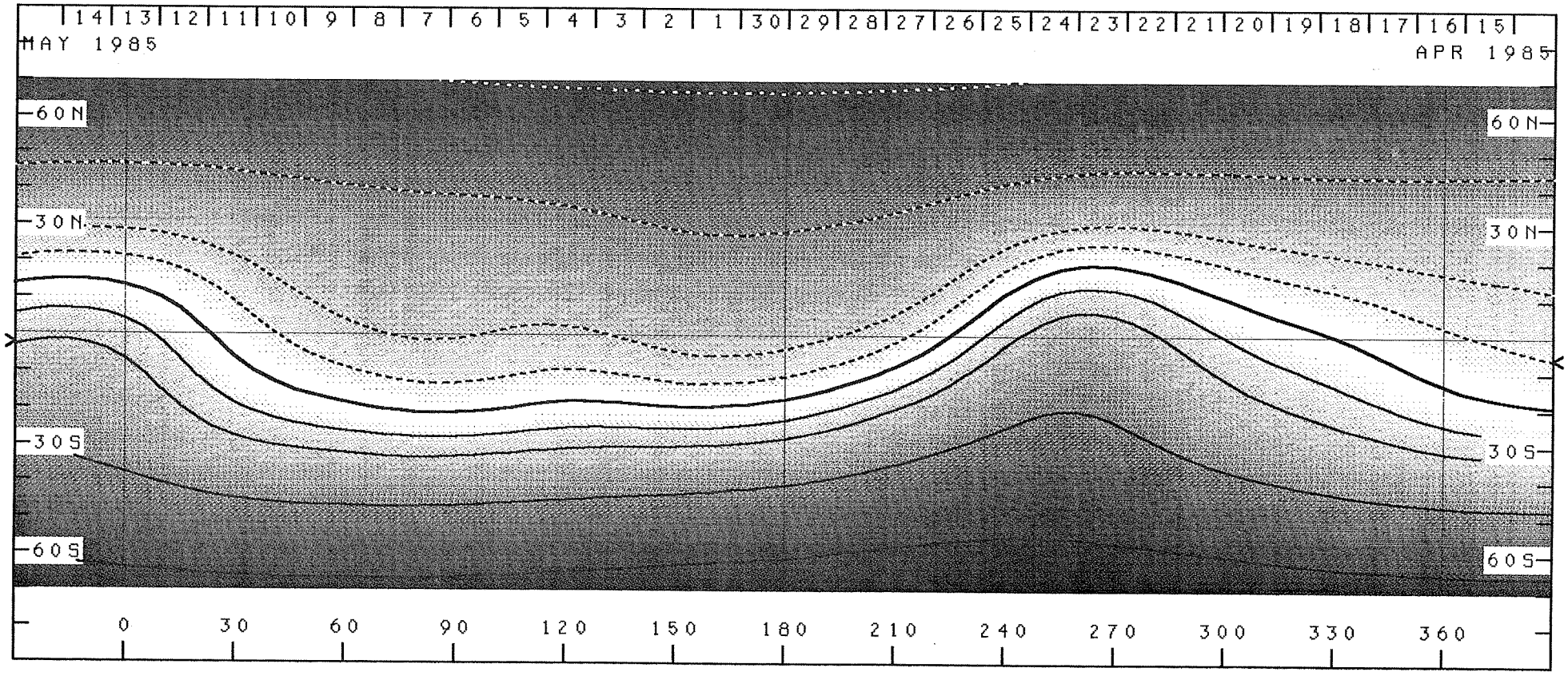


1760

WILCOX SOLAR OBSERVATORY

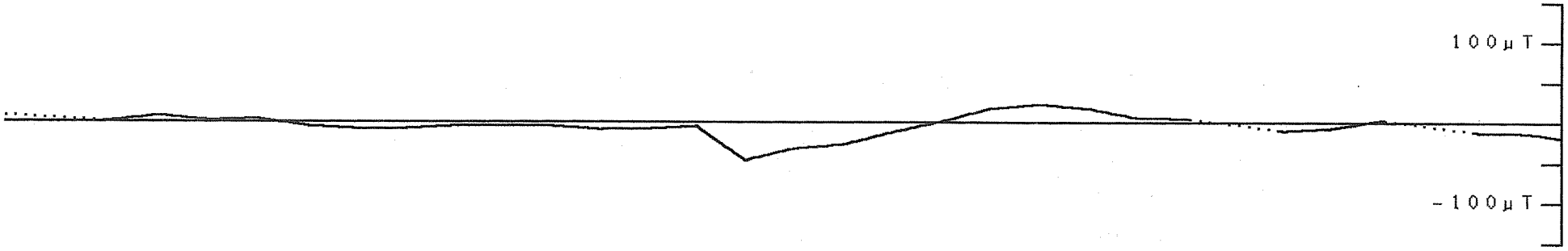
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



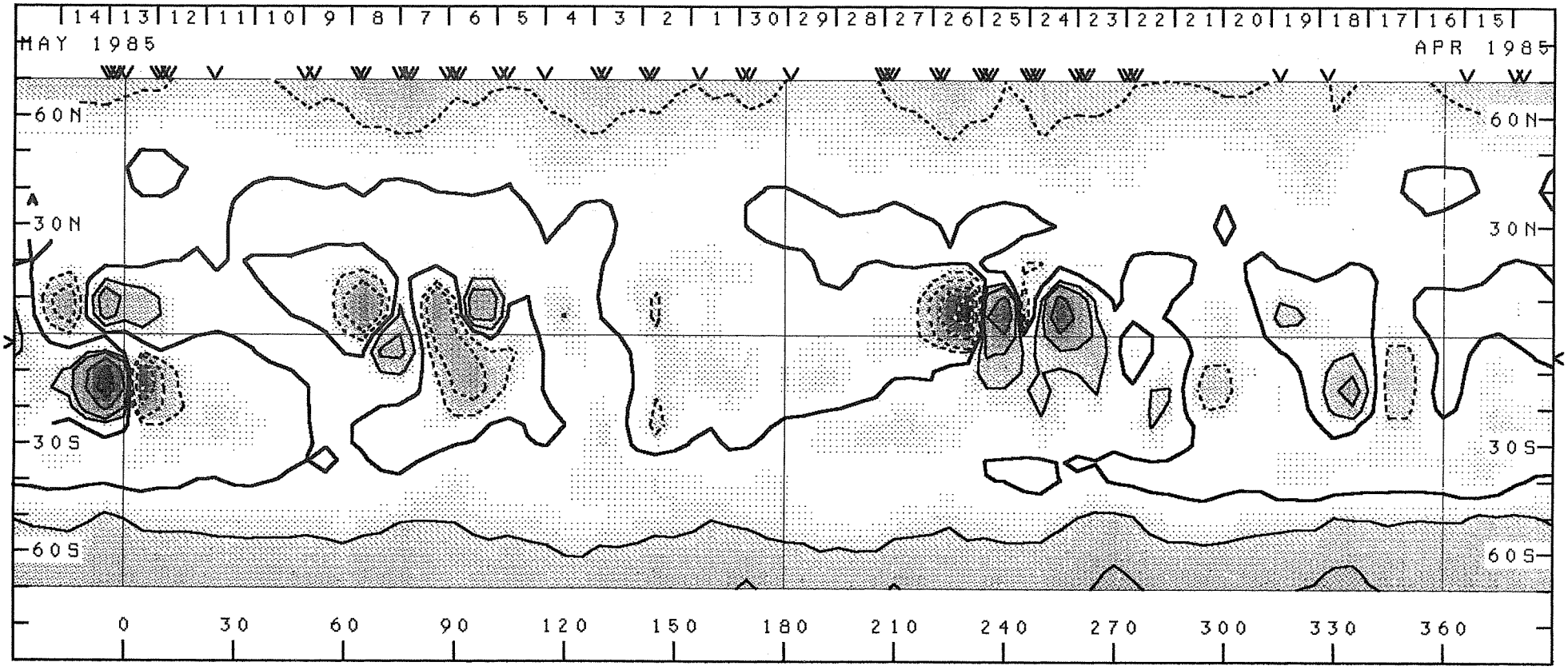
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

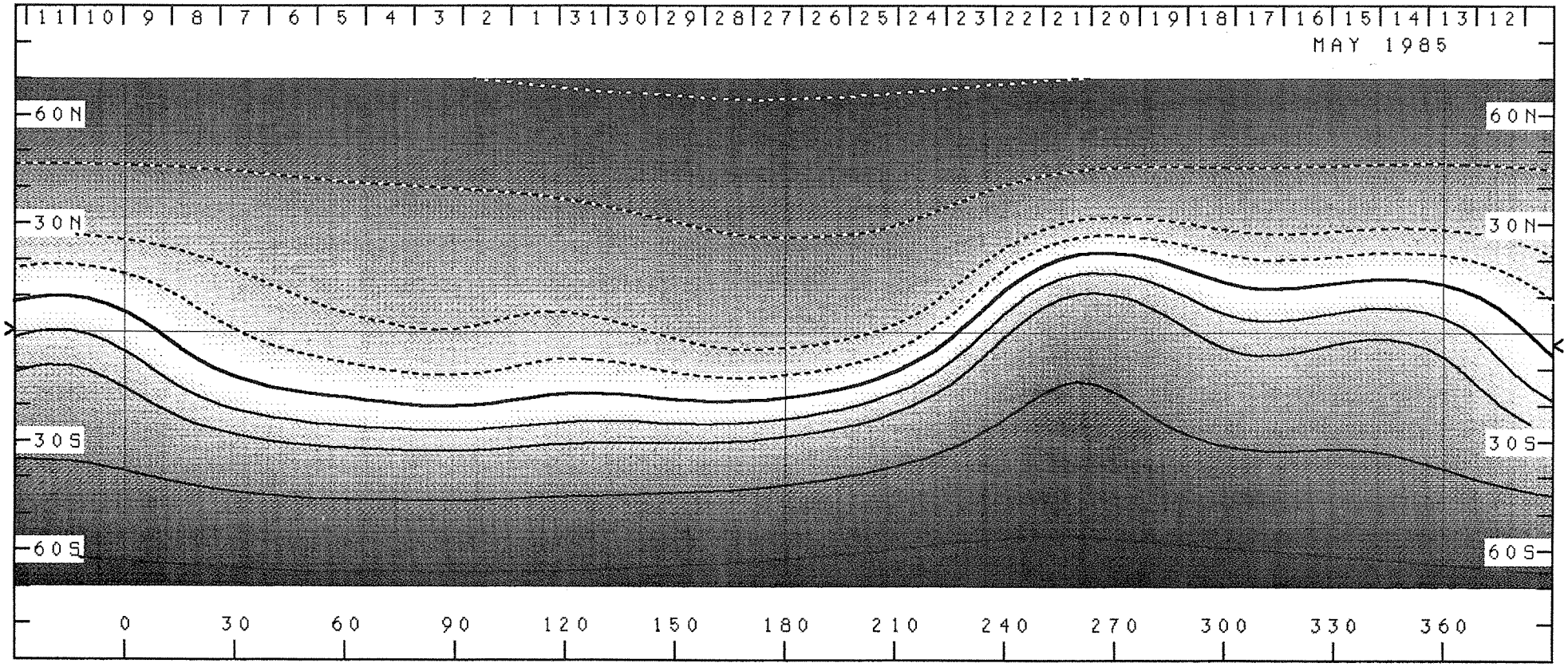
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

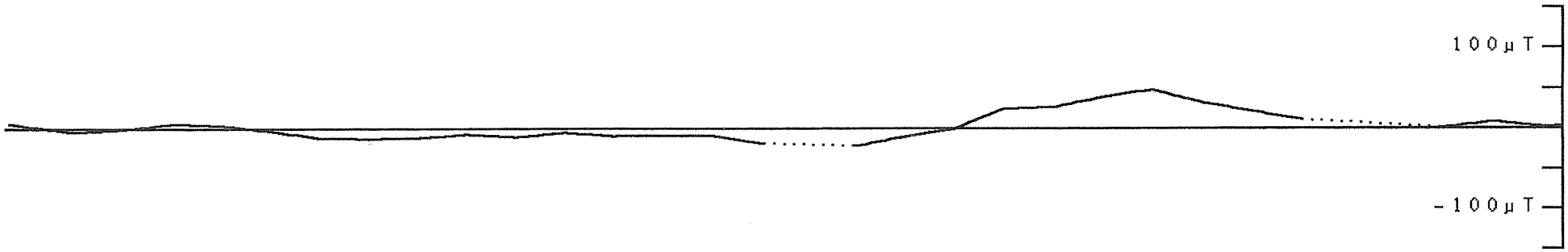
0, ±1, 2, 5, 10, 20 MICROTESLA



1762

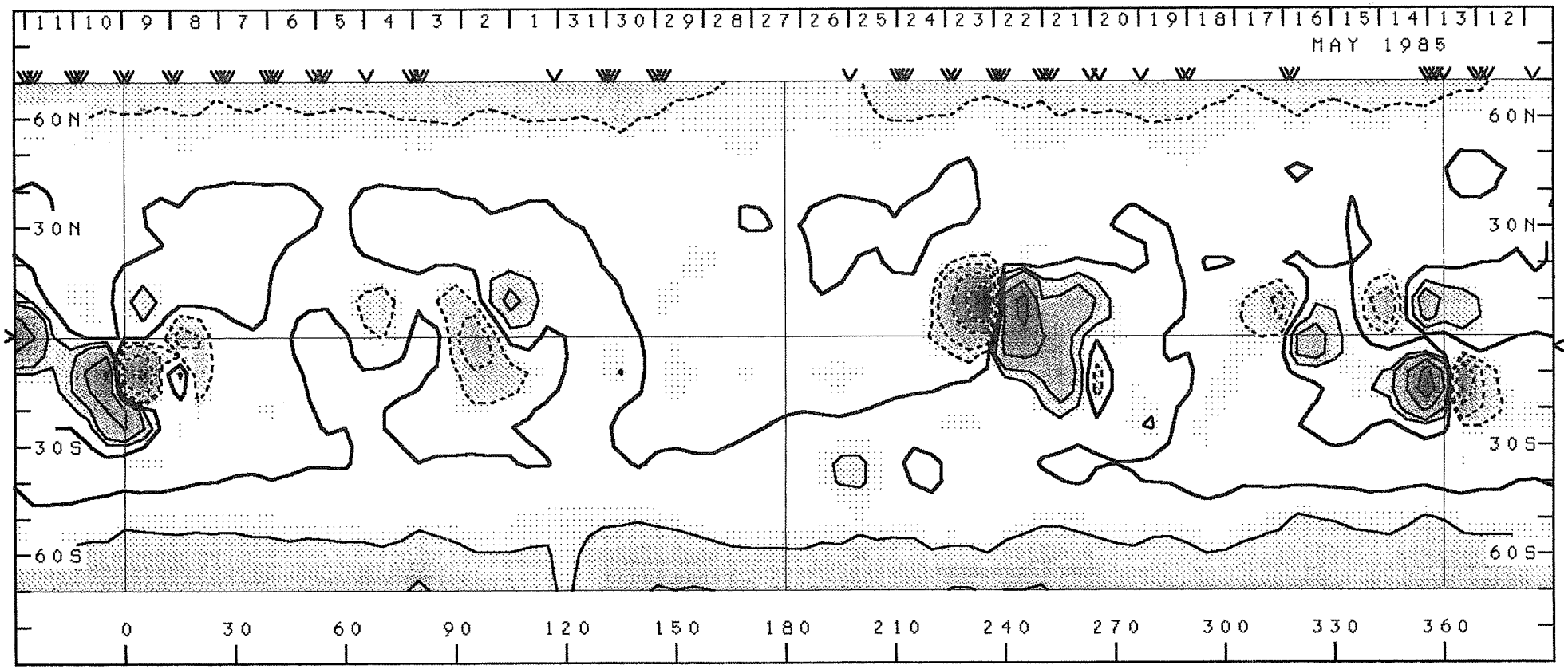
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

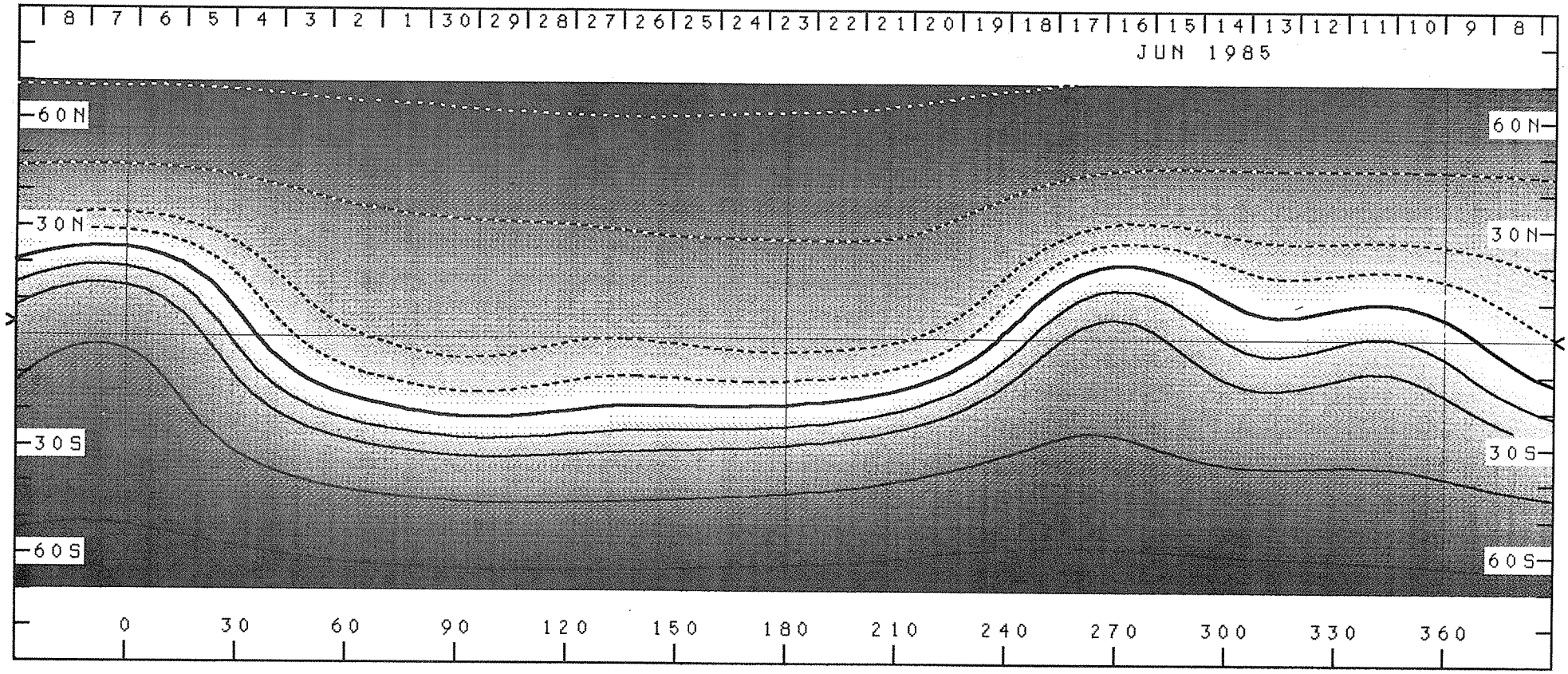
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

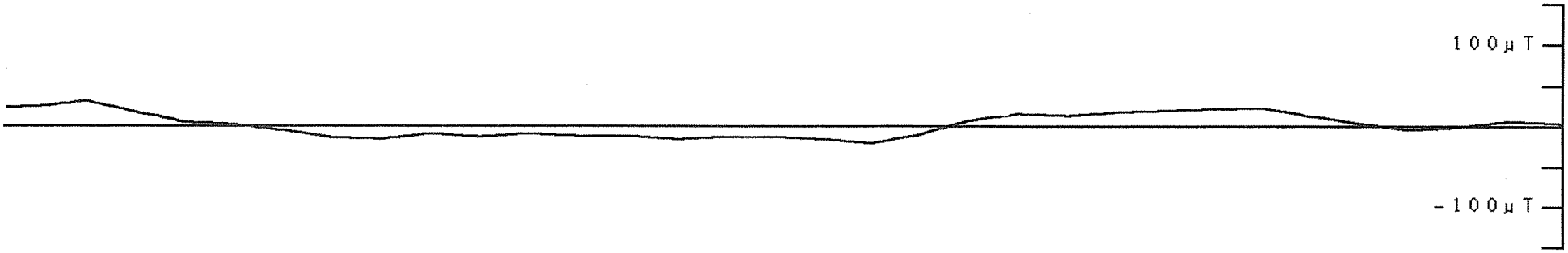
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



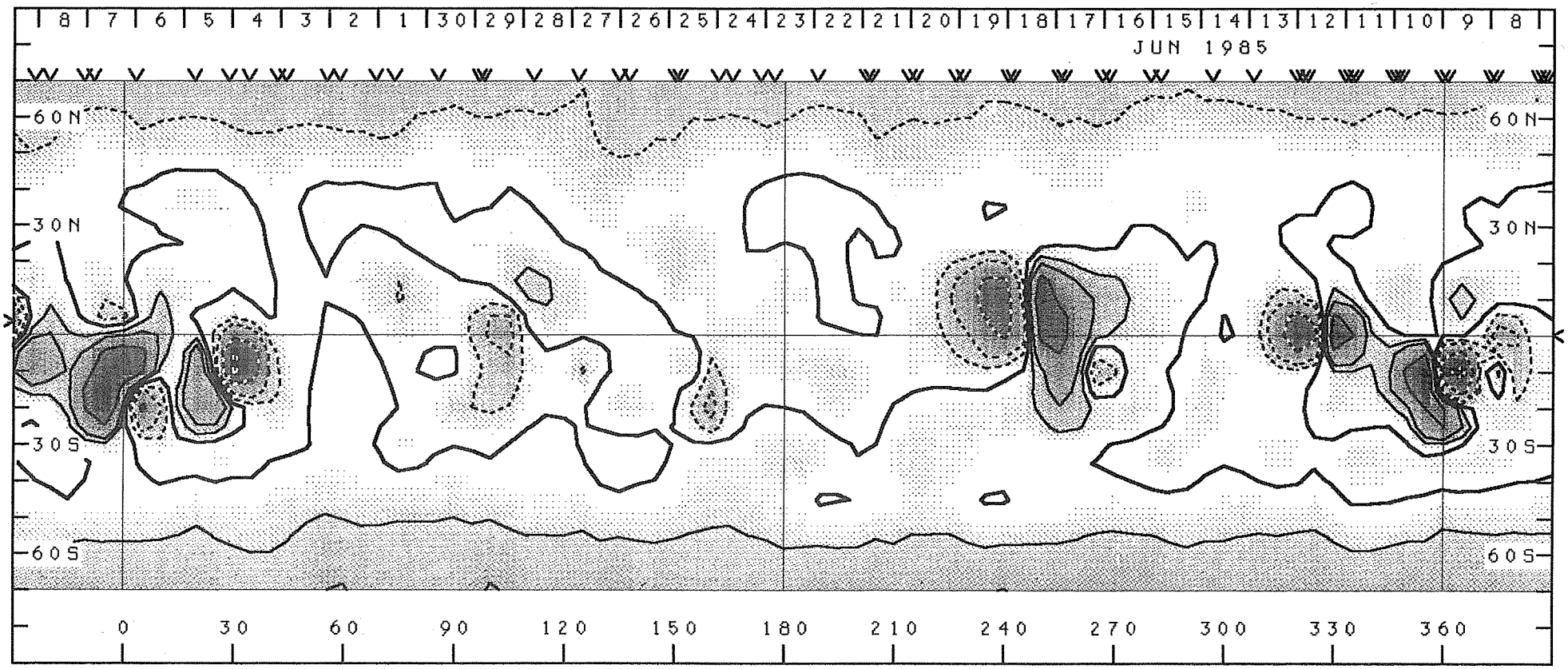
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

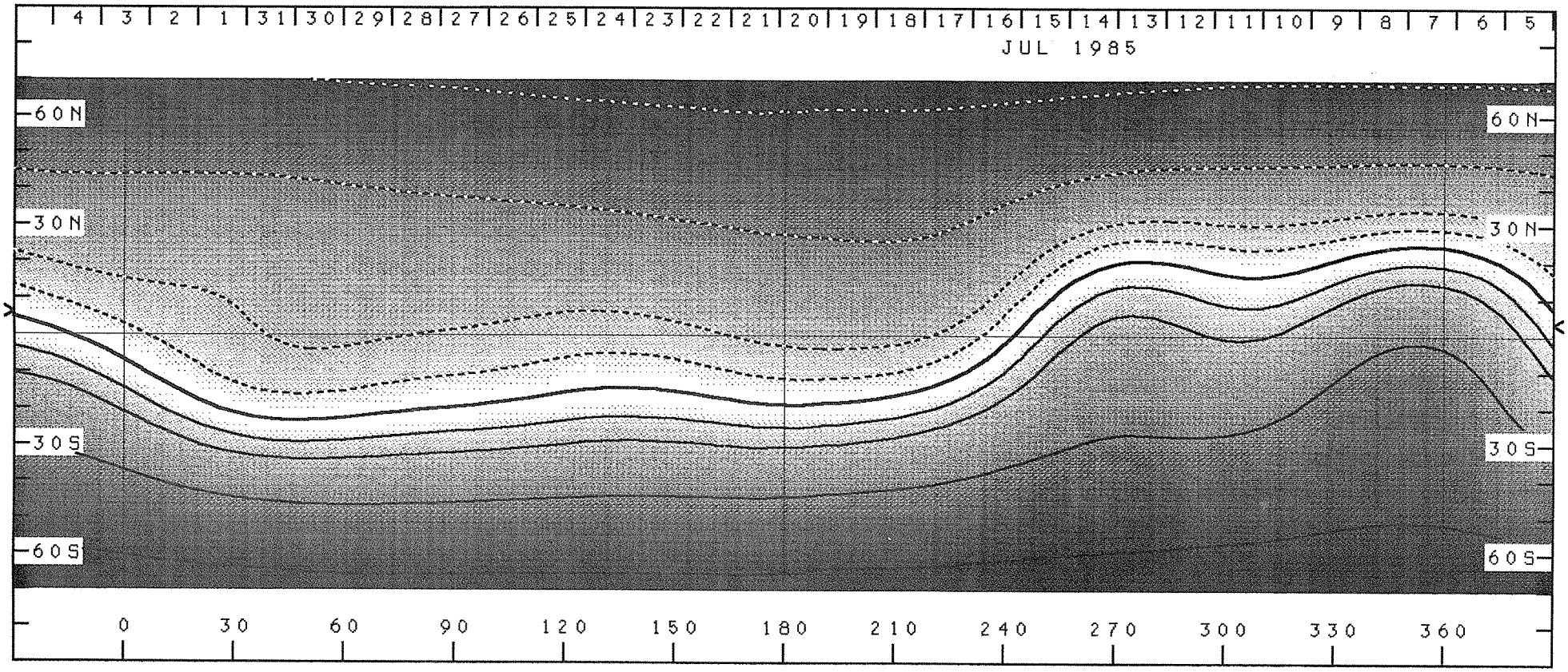
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

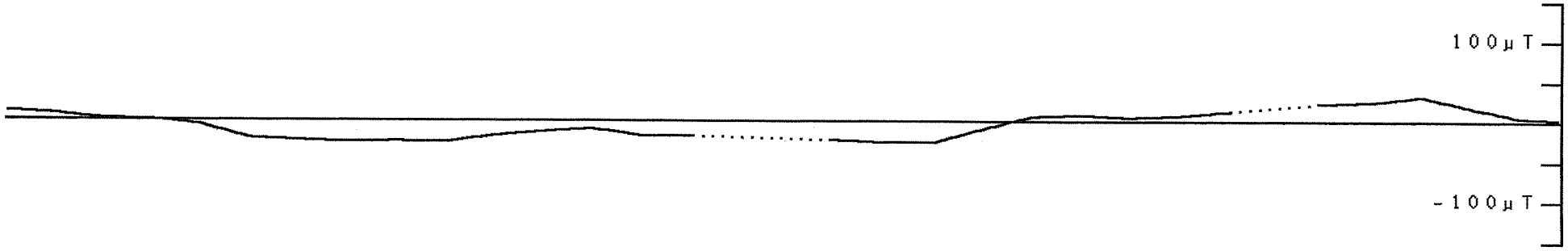
0, ±1, 2, 5, 10, 20 MICROTESLA



1764

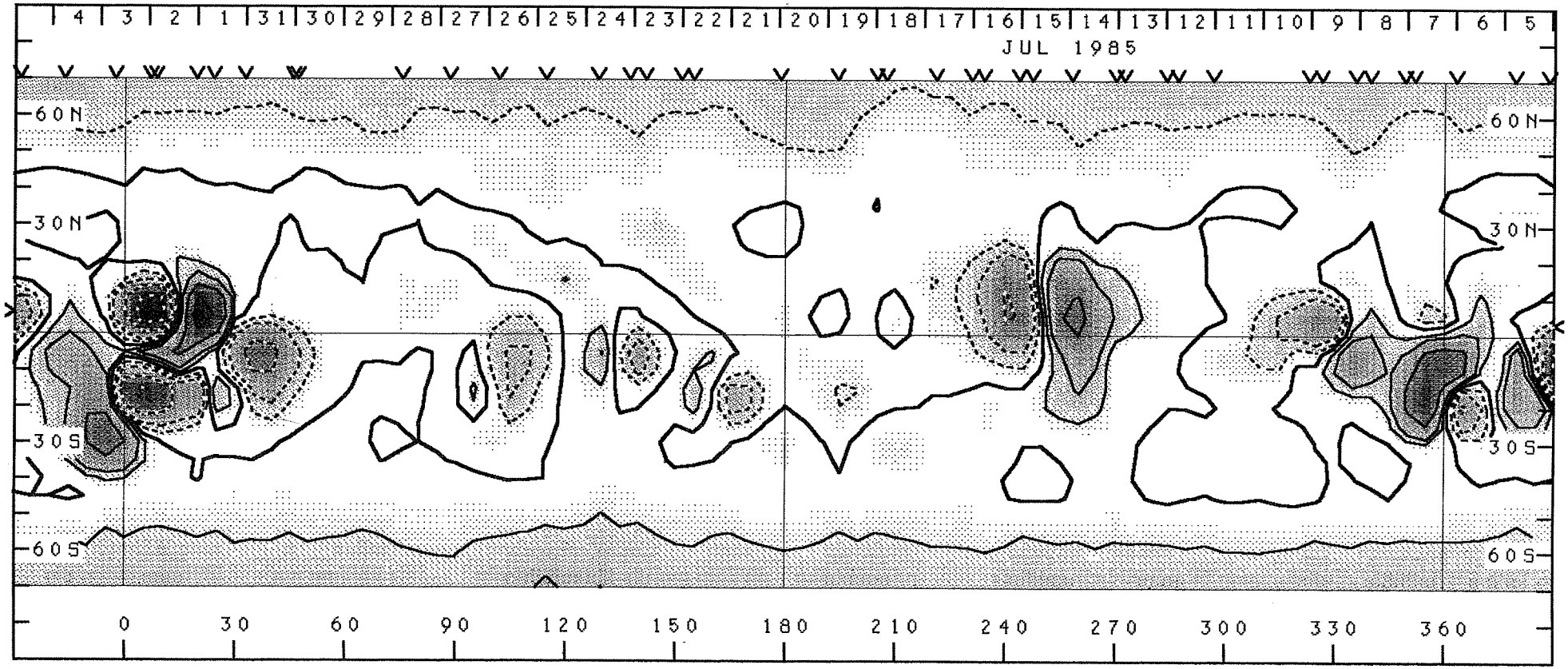
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

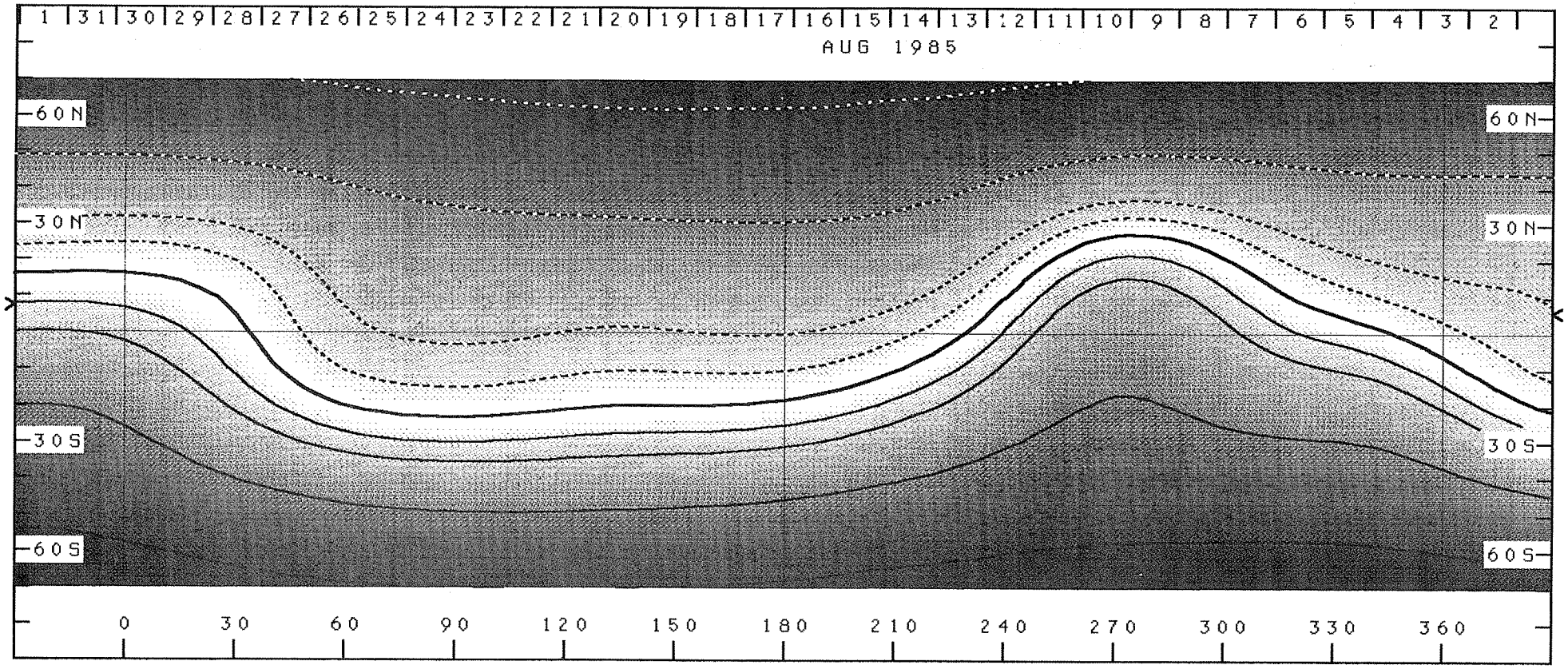
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

SOURCE SURFACE MAGNETIC FIELD

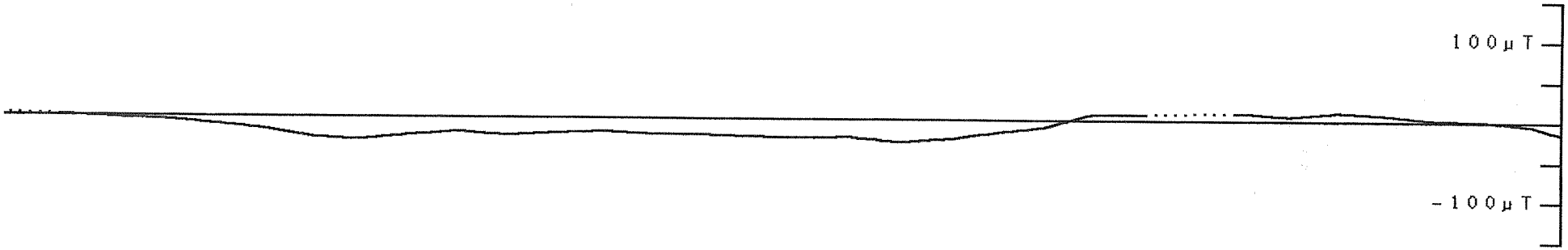
0, ±1, 2, 5, 10, 20 MICROTESLA



1765

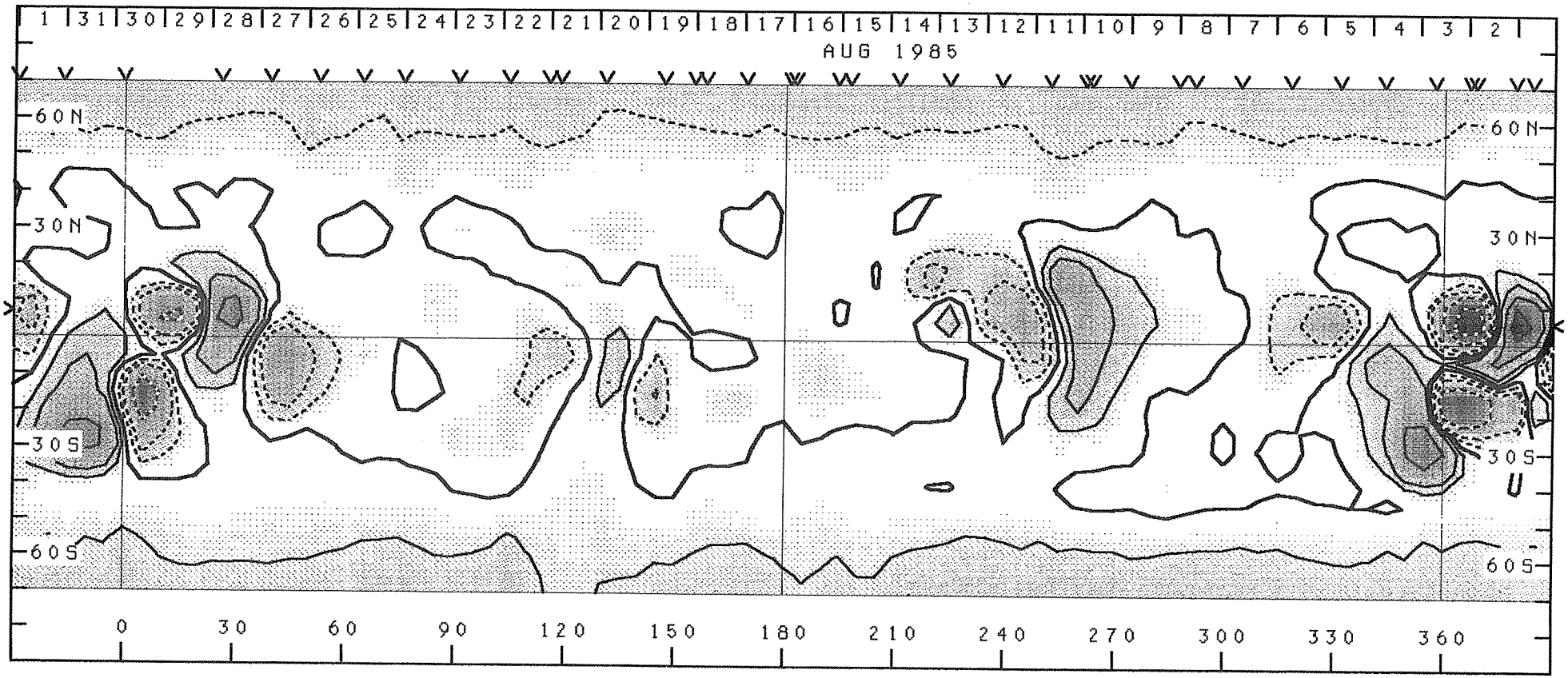
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

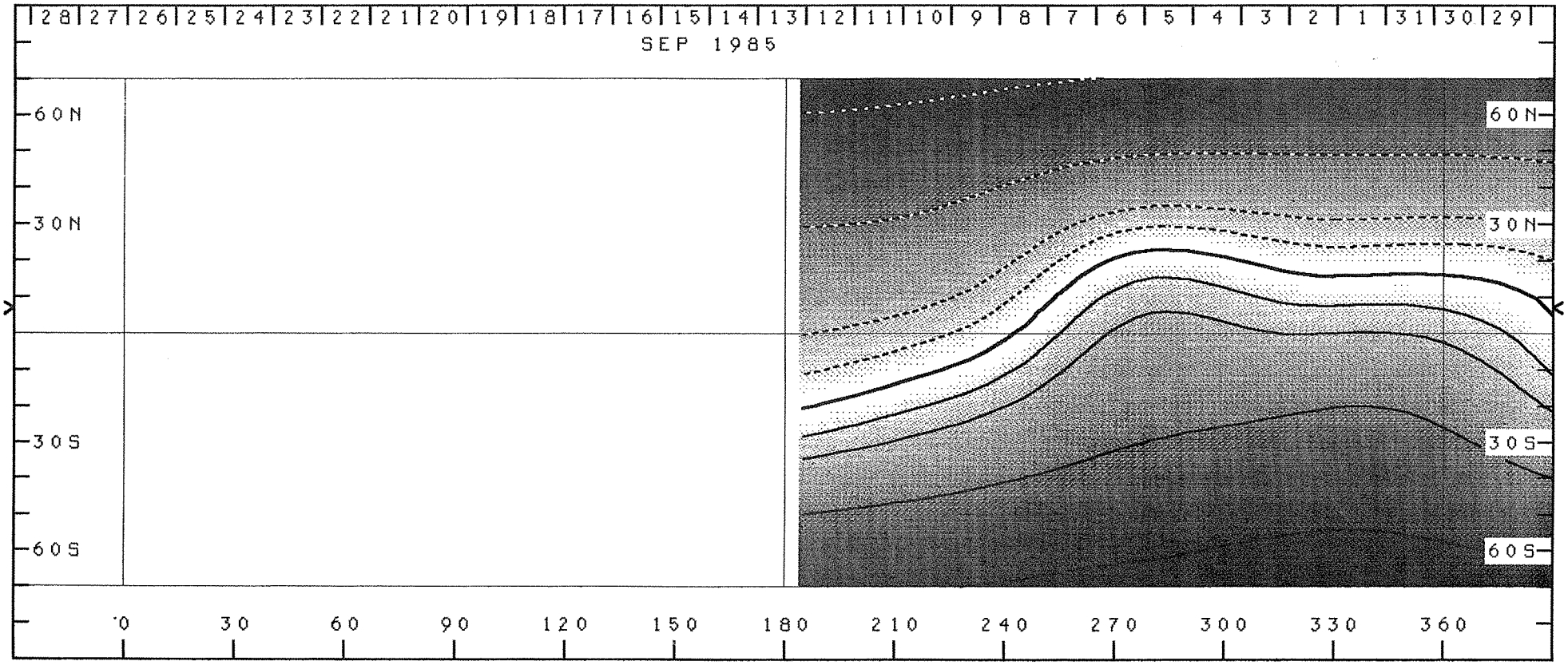
0, ±100, 200, 500, 1000, 2000 MICROTESLA



WILCOX SOLAR OBSERVATORY

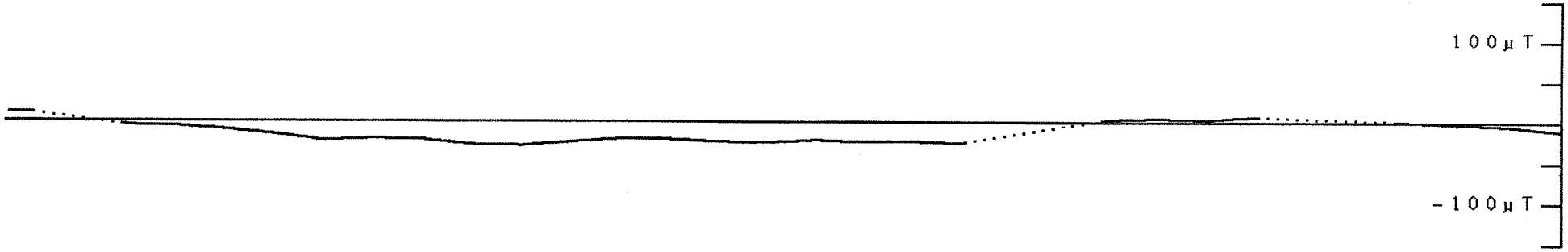
SOURCE SURFACE MAGNETIC FIELD

0, ±1, 2, 5, 10, 20 MICROTESLA



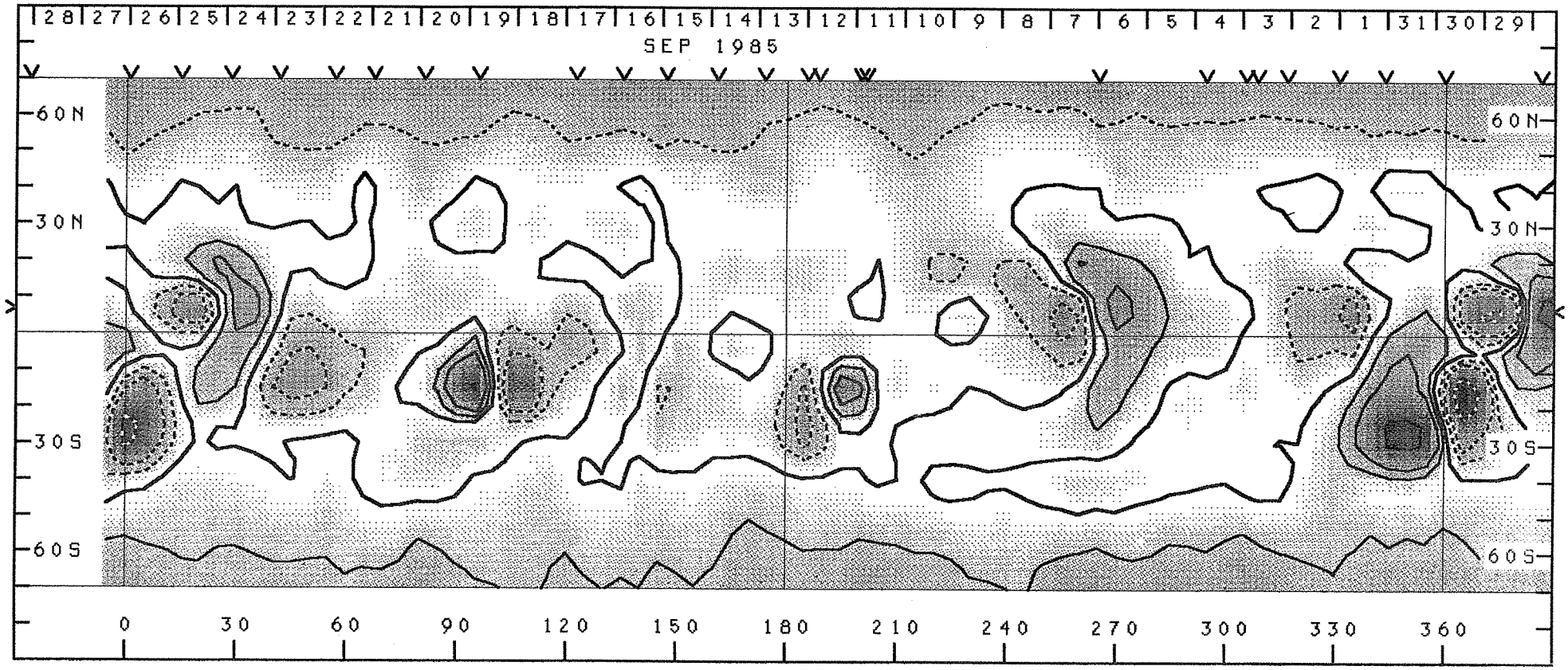
WILCOX SOLAR OBSERVATORY

MEAN FIELD



PHOTOSPHERIC MAGNETIC FIELD

0, ±100, 200, 500, 1000, 2000 MICROTESLA



HARMONIC COEFFICIENTS

Carrington Rotation 1641:180

	0	1	2	3	4	5	6	7	8	9
0	-0.640									
1	58.965	-0.986								
2	-2.004	-7.368	-12.930							
3	42.091	2.121	-4.249	1.035						
4	-3.401	-0.485	1.923	0.566	-0.357					
5	26.982	-3.675	-3.109	2.488	2.110	2.090				
6	-0.122	-0.173	-1.794	-0.364	1.358	4.158	10.297			
7	9.549	0.534	0.130	1.414	-2.917	-1.921	-0.917	-0.526		
8	1.006	-0.700	-2.442	-0.554	-1.729	-0.404	-1.247	1.689	-6.928	
9	4.808	-1.722	-2.754	-1.129	-0.364	1.138	1.360	-0.042	3.049	-4.899

g's

0	0.000									
1	0.000	8.643								
2	0.000	2.296	-2.936							
3	0.000	2.685	2.553	10.275						
4	0.000	1.589	3.841	-0.416	7.762					
5	0.000	0.281	-1.210	-0.961	4.612	11.328				
6	0.000	-2.077	-1.203	-0.626	-0.831	0.154	3.485			
7	0.000	3.403	2.261	-1.388	-2.490	-3.208	-3.343	-3.827		
8	0.000	-0.771	0.016	-1.244	1.386	-1.951	-0.783	4.775	0.996	
9	0.000	-1.074	-0.503	2.448	0.778	1.141	-0.324	-2.428	-1.307	2.065

h's

Carrington Rotation 1642

0	3.010									
1	57.641	-0.178								
2	-2.863	7.166	-10.083							
3	42.317	-2.044	-1.523	0.735						
4	-3.437	1.247	-1.065	0.471	-1.931					
5	26.352	3.393	-3.309	-1.640	2.012	-1.005				
6	0.460	0.946	0.001	0.852	0.626	-2.540	5.150			
7	9.909	-2.150	0.871	-0.821	-3.322	0.434	-1.314	-2.528		
8	0.570	1.296	-2.477	1.116	-0.754	1.184	1.362	-1.639	-1.865	
9	5.155	1.321	-1.605	-0.101	-1.586	-2.133	2.133	1.999	2.128	8.805

g's

0	0.000									
1	0.000	-6.639								
2	0.000	-4.684	-4.934							
3	0.000	-1.506	1.465	-6.153						
4	0.000	-1.445	3.608	2.159	8.196					
5	0.000	-1.445	-1.171	-1.025	4.336	-9.210				
6	0.000	0.814	-1.174	0.765	0.378	0.539	5.657			
7	0.000	-2.772	2.506	2.165	-2.520	0.757	-1.781	-2.782		
8	0.000	0.032	-0.773	1.979	2.639	1.337	-2.621	-4.553	-2.859	
9	0.000	-0.094	0.009	-1.970	0.850	1.594	0.852	4.626	0.510	-1.922

h's

Carrington Rotation 1642:180

0	3.817									
1	58.809	-0.396								
2	-0.245	-4.532	-9.771							
3	43.968	2.338	0.776	-1.102						
4	-3.298	-0.255	-0.834	-1.299	-4.079					
5	26.326	-1.686	-0.803	1.555	2.768	-1.836				
6	0.369	-1.623	1.589	-1.640	2.067	3.989	2.509			
7	9.635	1.976	2.355	-1.249	-1.405	-0.865	-2.144	0.485		
8	1.133	-1.604	-1.251	-0.420	-0.830	-0.504	4.333	1.399	-2.229	
9	5.040	-0.803	0.126	0.064	-0.969	1.596	0.225	-3.624	2.621	-6.100

g's

0	0.000									
1	0.000	6.765								
2	0.000	3.885	-4.737							
3	0.000	3.257	3.691	7.650						
4	0.000	1.991	3.704	-1.213	9.548					
5	0.000	1.747	0.528	0.242	3.496	8.942				
6	0.000	-0.561	1.197	0.617	0.591	0.615	4.184			
7	0.000	2.571	2.181	-0.606	-2.776	-1.292	-0.633	-0.078		
8	0.000	-0.424	-0.895	-0.700	1.634	1.923	-2.311	3.885	-7.046	
9	0.000	0.679	0.307	2.487	1.736	-1.031	1.746	-1.435	0.772	-1.607

h's

Carrington Rotation 1643

	0	1	2	3	4	5	6	7	8	9
0	4.375									
1	57.038	0.935								
2	0.328	4.547	-7.453							
3	44.257	-4.957	-0.807	-2.457						
4	-2.660	-0.656	-1.307	2.583	-4.399					
5	25.773	-0.029	-0.850	-1.475	2.167	3.158				
6	-0.321	-0.043	1.081	0.058	3.654	-4.261	1.262			
7	10.312	-1.282	2.005	-0.585	-0.372	1.878	-1.645	4.360		
8	1.502	0.983	-1.078	0.018	-0.441	-0.619	3.577	-0.245	0.838	
9	4.271	-0.519	0.459	0.011	0.111	-0.168	-0.739	0.175	2.742	2.351

g's

0	0.000									
1	0.000	-7.545								
2	0.000	-4.810	-2.343							
3	0.000	-2.658	3.316	-5.813						
4	0.000	-2.344	1.982	-0.168	6.320					
5	0.000	-0.589	1.267	-1.405	4.614	-8.193				
6	0.000	-0.293	0.086	-1.369	0.119	-2.039	2.382			
7	0.000	-2.871	0.878	0.155	-3.001	2.486	-0.985	-1.830		
8	0.000	0.659	-0.504	-0.584	-1.360	-0.937	-0.003	-4.237	-1.237	
9	0.000	-0.068	-0.052	-2.217	0.805	0.084	1.026	0.747	1.780	5.984

h's

Carrington Rotation 1643:180

	0	1	2	3	4	5	6	7	8	9
0	1.119									
1	56.575	-2.524								
2	0.475	-4.208	-8.358							
3	42.960	7.191	-2.420	0.173						
4	-3.503	-0.285	0.663	-2.830	-5.950					
5	24.777	-0.622	-2.033	2.201	0.541	-4.658				
6	-0.116	-1.363	-0.362	0.694	5.033	4.206	-0.326			
7	10.874	2.888	0.352	0.216	-0.801	-1.535	-1.640	-3.765		
8	1.165	-0.589	-2.173	-0.450	-1.472	-0.162	2.888	-0.228	1.110	
9	3.895	0.465	-0.377	0.448	-0.041	-0.750	0.188	0.903	2.770	-1.783

g's

0	0.000									
1	0.000	5.708								
2	0.000	5.834	-2.187							
3	0.000	1.617	3.943	5.763						
4	0.000	2.032	3.343	0.183	5.159					
5	0.000	0.634	0.552	2.304	4.790	7.650				
6	0.000	-0.428	0.012	0.661	1.066	0.687	0.295			
7	0.000	2.979	-0.275	-0.313	-1.984	-0.539	-0.618	0.110		
8	0.000	-0.426	0.612	-0.924	-1.107	-0.152	0.493	3.719	-1.730	
9	0.000	-0.342	-0.281	1.239	-0.045	-0.622	0.764	-0.553	1.523	-6.356

h's

Carrington Rotation 1644

	0	1	2	3	4	5	6	7	8	9
0	-0.223									
1	54.050	1.519								
2	3.265	2.743	-3.146							
3	45.332	-6.280	3.642	-5.698						
4	0.074	-1.674	0.587	-2.932	-6.428					
5	21.354	-1.271	-3.760	-2.584	2.196	10.227				
6	-1.947	0.729	-1.325	0.771	3.133	0.922	-4.635			
7	10.269	-1.271	0.328	2.778	0.983	1.927	-5.070	3.214		
8	2.632	0.582	-0.155	1.549	-2.433	-0.008	0.233	-0.132	0.116	
9	4.186	-0.702	-1.324	-0.966	-0.814	-0.123	-0.118	-1.002	6.988	-2.065

g's

0	0.000									
1	0.000	-9.367								
2	0.000	-11.135	-0.788							
3	0.000	-0.233	5.405	-1.177						
4	0.000	1.502	4.229	2.682	-2.218					
5	0.000	3.681	-2.098	-1.343	-2.361	-3.590				
6	0.000	-1.601	-3.249	-1.599	0.935	3.084	2.768			
7	0.000	-4.273	-1.767	1.016	-1.599	-0.230	1.602	-0.913		
8	0.000	-0.685	2.009	1.392	0.573	1.763	1.112	-6.864	-0.787	
9	0.000	2.307	-0.330	0.929	-0.161	-0.505	0.925	-5.128	2.289	7.529

h's

	0	1	2	3	4	5	6	7	8	9
0	-2.985					**Carrington Rotation 1644:180**				
1	53.369	-5.285								
2	3.725	-1.012	-3.797							**g's**
3	44.270	4.725	5.353	6.868						
4	0.398	3.594	0.278	1.944	-3.484					
5	20.342	-0.891	-3.175	2.498	0.055	-10.458				
6	-1.200	1.697	-0.563	1.328	2.882	0.231	-8.013			
7	9.685	-0.509	1.373	-2.506	3.257	-0.209	-1.398	-2.316		
8	2.897	0.659	0.544	-1.035	-1.377	-0.648	-0.391	0.901	6.218	
9	4.277	-0.110	-1.737	0.454	-1.586	2.386	-1.784	0.196	3.972	6.798
0	0.000									**h's**
1	0.000	7.062								
2	0.000	10.063	-4.410							
3	0.000	-0.119	6.507	-1.517						
4	0.000	-2.519	3.015	-0.920	-2.778					
5	0.000	-4.591	-2.153	1.018	-3.821	6.118				
6	0.000	0.354	-5.079	0.850	-0.373	-6.218	0.993			
7	0.000	4.391	-0.264	-1.770	0.227	0.180	1.648	-4.458		
8	0.000	-0.226	0.843	-0.238	-0.871	0.663	2.458	10.215	-3.160	
9	0.000	-2.155	0.463	-0.971	-0.060	0.300	0.976	4.443	3.383	-3.155

0	5.645					**Carrington Rotation 1645**				
1	52.797	4.397								
2	3.364	-3.471	-0.931							**g's**
3	43.512	-0.508	2.563	-3.949						
4	0.200	-0.622	2.229	-1.703	-3.461					
5	22.215	-0.287	-0.824	-1.099	-2.901	9.377				
6	0.652	-1.203	-2.447	-3.393	1.824	-0.487	-6.657			
7	7.623	1.265	2.033	-1.294	2.891	0.188	4.249	-0.707		
8	1.094	-1.388	-0.443	1.519	0.271	2.052	-1.701	-3.691	5.795	
9	4.661	1.409	-0.625	1.275	-2.848	-2.642	-2.368	-2.389	2.980	-6.569
0	0.000									**h's**
1	0.000	-1.918								
2	0.000	-9.405	-6.524							
3	0.000	1.305	2.591	4.520						
4	0.000	-0.027	6.199	-0.627	0.167					
5	0.000	5.581	0.377	2.484	-4.700	-5.984				
6	0.000	1.338	-3.680	0.163	2.518	-0.213	2.918			
7	0.000	-1.415	0.664	-0.544	-2.043	1.778	1.879	5.559		
8	0.000	-1.706	-0.076	1.973	-3.458	-0.911	5.078	-7.773	-4.554	
9	0.000	0.960	0.620	1.634	1.211	0.491	0.641	-2.646	-1.020	1.449

0	5.582					**Carrington Rotation 1645:180**				
1	51.124	-6.072								
2	2.499	3.098	-1.618							**g's**
3	42.958	0.682	1.810	4.153						
4	0.950	1.530	1.111	-0.513	-2.481					
5	21.613	0.443	0.494	0.710	-3.693	-9.681				
6	0.704	0.135	-2.533	3.791	0.111	1.788	-3.584			
7	8.747	-2.027	2.339	1.429	1.123	-1.913	6.056	5.983		
8	1.980	1.150	-0.788	-2.243	-0.402	-5.430	-1.918	2.039	7.849	
9	4.158	-0.958	-0.517	0.515	-1.613	1.828	-3.394	3.632	1.982	3.486
0	0.000									**h's**
1	0.000	2.146								
2	0.000	8.430	-8.142							
3	0.000	-1.605	3.440	-5.984						
4	0.000	-1.327	6.590	0.095	-0.643					
5	0.000	-5.371	1.548	-2.546	-6.843	4.574				
6	0.000	-2.837	-3.658	1.562	3.101	-1.446	-0.263			
7	0.000	1.420	0.734	0.658	0.452	-3.309	3.025	-4.114		
8	0.000	2.308	-1.596	-2.948	-3.038	0.389	3.189	9.352	0.300	
9	0.000	0.059	1.283	-1.858	1.153	-1.417	-2.043	1.168	-2.953	2.604

Carrington Rotation 1646

g's

	0	1	2	3	4	5	6	7	8	9
0	5.360									
1	51.937	3.516								
2	2.304	-2.440	-3.914							
3	41.568	-0.833	3.673	-2.920						
4	0.633	-1.480	1.408	2.042	-0.599					
5	21.248	2.349	-1.606	0.344	-6.216	9.844				
6	0.785	0.349	-0.326	-3.348	-0.110	-1.963	-0.923			
7	8.479	0.581	-0.316	-0.616	1.417	0.873	4.979	-4.633		
8	1.888	0.380	-0.645	2.824	-0.169	3.653	1.590	-4.765	5.569	
9	3.949	1.514	-0.564	-1.056	1.104	-1.418	-3.938	-2.500	-1.502	-1.914

h's

0	0.000									
1	0.000	-1.596								
2	0.000	-7.511	-11.016							
3	0.000	1.003	3.470	2.854						
4	0.000	1.653	5.278	3.857	-0.919					
5	0.000	4.142	1.599	2.096	-4.816	-5.250				
6	0.000	3.159	-1.387	-2.998	3.514	2.024	-1.264			
7	0.000	-1.472	0.508	0.982	2.087	0.975	5.357	7.153		
8	0.000	-2.734	-1.948	-0.720	-1.348	-0.039	1.273	-7.751	0.389	
9	0.000	-0.388	2.585	1.618	1.934	2.941	-2.076	1.417	-3.805	-3.882

Carrington Rotation 1646:180

g's

0	6.437									
1	50.916	-5.612								
2	3.781	1.157	-2.967							
3	42.218	-1.662	5.784	3.241						
4	1.182	0.473	1.021	-3.890	-1.158					
5	21.918	-2.746	-1.610	-1.713	-10.545	-10.045				
6	0.493	-0.506	0.364	2.300	-0.691	3.025	-0.623			
7	7.956	-2.133	-0.396	0.611	-0.726	-0.989	1.123	4.760		
8	2.130	-0.548	0.648	-1.259	1.638	-2.238	-4.038	-0.030	4.202	
9	4.232	-1.884	0.422	-0.076	2.909	1.999	-2.763	1.563	0.895	-3.340

h's

0	0.000									
1	0.000	1.932								
2	0.000	6.102	-11.971							
3	0.000	0.578	3.798	-1.400						
4	0.000	-1.626	4.168	0.509	-0.127					
5	0.000	-3.710	0.627	-1.064	-6.045	5.588				
6	0.000	-2.568	-1.930	3.605	2.432	-2.296	-0.292			
7	0.000	1.435	-0.910	-1.449	-0.066	1.945	8.422	-5.685		
8	0.000	2.229	-2.697	-0.214	-1.914	-2.440	1.788	3.440	3.791	
9	0.000	0.898	2.428	0.274	1.892	-1.112	-1.011	-5.573	-7.821	3.289

Carrington Rotation 1647

g's

0	3.423									
1	54.490	4.310								
2	-0.557	-1.519	-2.434							
3	43.024	0.591	6.197	-1.726						
4	0.327	0.182	0.472	8.145	-1.645					
5	23.188	2.186	0.991	2.047	-14.018	10.330				
6	-0.780	0.315	0.462	-2.788	-1.739	-1.885	-1.895			
7	9.255	1.936	-0.069	0.072	-3.065	3.088	4.011	-4.814		
8	1.547	0.501	0.636	-0.162	2.656	2.419	-3.556	-0.553	5.227	
9	4.246	0.429	1.096	0.814	3.115	-2.604	-1.610	0.276	-2.035	4.299

h's

0	0.000									
1	0.000	-3.464								
2	0.000	-3.289	-14.004							
3	0.000	-4.253	0.907	2.137						
4	0.000	1.818	2.775	2.191	0.092					
5	0.000	1.551	1.676	0.244	-4.079	-5.156				
6	0.000	4.073	-2.688	-0.383	0.849	-0.752	-0.388			
7	0.000	-3.538	-0.478	0.101	-0.103	-3.416	10.132	4.148		
8	0.000	-0.295	-2.978	0.799	-1.320	0.908	2.023	-0.064	2.857	
9	0.000	-3.116	1.968	-0.731	0.200	0.920	-0.848	5.525	-8.084	-3.523

	0	1	2	3	4	5	6	7	8	9
0	5.846									
1	55.942	1.202								
2	0.521	7.886	4.722							
3	40.575	0.336	8.257	3.297						
4	-1.555	-1.606	2.169	-3.186	-1.254					
5	23.746	-3.753	-0.040	0.019	-7.856	-5.981				
6	-1.053	-0.455	-2.874	1.379	0.877	1.592	3.807			
7	9.337	0.415	-2.625	-1.718	-2.957	-1.447	3.970	3.216		
8	0.558	1.425	-0.039	-2.583	0.876	-1.985	-0.292	4.191	1.198	
9	3.498	-0.262	1.802	-0.476	1.842	2.194	0.701	0.552	0.165	-3.061

Carrington Rotation 1647:180

g's

0	0.000									
1	0.000	1.205								
2	0.000	3.796	-11.812							
3	0.000	6.019	3.382	1.488						
4	0.000	-2.491	3.032	-3.645	-0.501					
5	0.000	-0.417	2.891	0.592	0.675	3.503				
6	0.000	-3.330	-3.179	0.194	2.104	5.465	3.796			
7	0.000	3.203	0.249	-0.831	0.012	4.653	9.788	1.902		
8	0.000	-0.124	-2.159	-2.558	-2.313	-0.872	3.495	0.757	2.197	
9	0.000	2.416	3.153	-0.794	-1.259	-1.750	0.386	-2.209	-4.776	-0.047

h's

0	2.494									
1	53.123	1.338								
2	-0.430	-5.929	5.145							
3	39.229	-0.244	5.097	-4.665						
4	-1.402	3.255	-0.747	6.890	1.038					
5	23.164	5.244	-2.107	3.160	-7.485	5.723				
6	0.384	0.410	-2.273	3.906	-4.597	-2.424	1.767			
7	8.852	-1.683	0.058	0.980	-5.569	4.889	0.883	1.403		
8	-1.960	-1.136	0.863	0.710	0.547	1.876	-1.960	1.787	-1.215	
9	1.963	1.642	1.195	-0.818	2.929	-0.733	0.549	-1.270	-2.577	4.966

Carrington Rotation 1648

g's

0	0.000									
1	0.000	-3.619								
2	0.000	-4.151	-9.688							
3	0.000	-5.915	2.079	-2.229						
4	0.000	1.259	1.013	1.706	-1.640					
5	0.000	-1.233	2.070	-0.001	2.774	-0.276				
6	0.000	0.825	-0.997	-1.449	2.342	-3.737	0.723			
7	0.000	-1.558	1.518	-0.035	4.663	-8.662	6.637	-1.326		
8	0.000	0.054	-2.726	3.293	-2.433	-2.240	6.961	-1.844	4.701	
9	0.000	-3.317	1.712	2.255	-2.330	0.332	1.804	-1.793	0.134	-2.072

h's

0	1.317									
1	55.637	-2.089								
2	-2.517	2.345	4.839							
3	41.618	0.357	5.632	5.415						
4	-1.636	-3.447	1.491	-2.088	0.076					
5	25.131	0.080	1.710	0.629	-6.291	-4.194				
6	-0.088	-2.103	-0.578	1.504	-5.541	0.835	2.247			
7	8.598	2.071	0.286	0.110	-3.933	-5.833	-1.395	-4.129		
8	-4.200	-1.537	-1.335	-1.057	0.037	-3.772	-1.105	-3.216	-1.971	
9	3.180	0.157	2.028	-0.398	2.170	-0.187	0.001	0.051	1.298	-1.334

Carrington Rotation 1648:180

g's

0	0.000									
1	0.000	3.217								
2	0.000	4.863	-11.099							
3	0.000	2.973	-3.509	2.344						
4	0.000	-0.883	-1.955	-2.287	-2.159					
5	0.000	0.215	-0.777	1.216	5.651	-0.785				
6	0.000	2.338	2.898	3.529	4.544	5.012	2.887			
7	0.000	2.180	0.956	1.546	8.843	7.434	6.332	1.600		
8	0.000	0.272	-1.215	-1.090	0.183	4.053	6.789	-1.779	1.405	
9	0.000	-0.776	-2.049	-3.756	-3.162	-1.133	-0.402	1.840	-2.044	0.935

h's

Carrington Rotation 1649

	0	1	2	3	4	5	6	7	8	9
0	0.257									
1	57.002	-0.369								
2	-2.334	-4.811	4.554							
3	41.590	-1.940	6.412	-3.570						
4	-1.978	1.582	2.889	-1.445	2.940					
5	25.562	-1.038	2.168	-2.016	-4.157	4.526				
6	-0.162	1.809	-0.729	-4.639	-1.046	-6.642	7.099			
7	9.044	-3.301	-0.496	-0.114	1.340	1.531	-3.532	4.379		
8	-2.947	0.379	-1.368	-0.010	-0.107	1.276	5.240	-3.411	2.740	
9	4.134	-1.754	2.898	1.535	1.916	-3.694	2.305	0.456	-0.906	2.189

g's

0	0.000									
1	0.000	-5.222								
2	0.000	-4.304	-13.855							
3	0.000	-4.133	-1.061	-6.622						
4	0.000	0.510	-1.667	2.209	-1.812					
5	0.000	-0.193	-0.968	-3.954	8.816	-2.321				
6	0.000	-1.381	2.333	-6.378	5.865	-1.554	2.689			
7	0.000	-3.478	1.034	-0.586	7.206	-8.789	7.492	-1.883		
8	0.000	-0.519	-2.988	1.157	2.305	-1.793	2.960	2.916	0.601	
9	0.000	1.046	-1.274	2.033	-5.202	2.714	-2.449	0.261	-4.031	1.656

h's

Carrington Rotation 1649:180

0	-1.365									
1	51.985	-1.651								
2	-4.255	2.409	3.305							
3	42.847	-1.105	0.478	1.637						
4	-2.531	-1.552	0.249	-0.856	4.370					
5	22.723	1.085	-2.704	0.742	-4.928	-4.556				
6	-0.869	0.400	0.560	0.398	0.299	8.757	6.798			
7	8.771	1.591	-0.705	1.424	2.977	-1.493	-5.071	-5.097		
8	-1.996	0.800	2.015	0.322	0.158	2.817	7.765	3.476	3.044	
9	4.271	0.156	-0.915	-1.513	1.802	5.097	1.713	-0.609	-4.592	-2.824

g's

0	0.000									
1	0.000	4.849								
2	0.000	2.979	-13.672							
3	0.000	3.125	-1.999	4.870						
4	0.000	1.566	-3.700	-6.339	-2.888					
5	0.000	-1.742	0.043	0.458	5.291	3.085				
6	0.000	-1.069	1.373	1.653	3.993	0.727	2.993			
7	0.000	0.947	2.096	0.830	1.755	7.534	7.689	1.644		
8	0.000	0.718	-3.639	-1.691	2.071	1.616	2.442	-3.192	0.565	
9	0.000	0.624	0.707	0.523	-4.880	-1.592	0.987	2.248	-4.901	-1.342

h's

Carrington Rotation 1650

0	2.955									
1	50.516	1.993								
2	-2.123	-1.716	4.925							
3	37.279	-0.113	4.216	-2.129						
4	-3.400	0.639	1.891	0.577	3.605					
5	20.428	0.926	-2.621	-2.928	0.400	0.988				
6	0.498	-1.268	-0.626	-1.323	1.903	-5.454	3.394			
7	8.972	-0.245	-2.171	-1.127	2.988	0.399	-3.827	2.497		
8	-1.956	-1.270	1.127	0.766	-0.339	-1.819	2.231	1.380	1.090	
9	2.956	1.158	-0.619	-0.094	-0.209	-3.076	0.364	0.717	-1.333	0.092

g's

0	0.000									
1	0.000	-2.189								
2	0.000	-4.823	-11.884							
3	0.000	-0.529	-2.120	-1.640						
4	0.000	-4.910	-3.938	5.996	0.179					
5	0.000	2.571	0.080	2.201	2.234	-0.100				
6	0.000	-2.224	1.863	-0.612	2.510	2.630	3.105			
7	0.000	1.258	0.698	-1.239	0.616	-1.129	6.448	-1.889		
8	0.000	-2.473	-1.612	0.281	0.891	0.725	1.130	3.633	0.131	
9	0.000	0.731	-0.565	0.303	-3.729	0.540	0.889	-1.813	-2.138	0.683

h's

	0	1	2	3	4	5	6	7	8	9
0	0.798					**Carrington Rotation 1650:180**				
1	45.115	2.669								
2	-2.241	5.330	2.682							**g's**
3	36.418	2.399	2.147	2.220						
4	-1.866	-0.047	-1.387	1.242	5.026					
5	20.590	-0.960	-1.988	2.972	-1.215	0.088				
6	0.124	1.668	-0.706	1.793	2.884	3.122	1.410			
7	7.016	-0.256	1.061	-0.187	0.967	1.570	-6.645	-1.466		
8	-1.204	2.391	0.411	0.704	-0.249	1.224	1.640	-1.455	2.984	
9	2.406	-0.646	1.381	-0.365	0.327	2.150	-1.057	1.800	-2.926	0.428
0	0.000									**h's**
1	0.000	1.656								
2	0.000	1.492	-9.158							
3	0.000	0.689	0.092	-0.653						
4	0.000	1.720	-2.024	-6.870	0.041					
5	0.000	-1.756	0.489	-5.804	6.110	1.549				
6	0.000	0.084	3.472	0.461	1.777	-2.467	3.343			
7	0.000	-1.297	0.160	1.018	1.428	0.509	6.576	-0.212		
8	0.000	-0.258	-1.981	0.756	1.350	-2.376	1.039	-5.177	0.830	
9	0.000	-0.245	0.261	-0.997	-2.732	-1.164	0.566	-0.596	-0.117	1.021

0	3.796					**Carrington Rotation 1651**				
1	48.121	-5.509								
2	-2.551	-5.405	3.815							**g's**
3	38.850	-4.756	1.871	1.411						
4	-5.288	0.278	-1.091	-2.406	3.447					
5	23.667	1.388	-1.735	-1.758	3.690	-0.665				
6	-1.518	-3.336	-1.599	-2.070	0.007	-1.143	-1.485			
7	6.768	1.196	-0.268	2.843	6.369	3.171	-1.797	1.907		
8	0.050	-3.553	-0.234	-0.940	-3.140	-4.620	-3.399	1.282	4.741	
9	2.177	0.650	0.583	0.299	0.302	4.460	4.411	4.328	-3.666	1.982
0	0.000									**h's**
1	0.000	0.789								
2	0.000	-0.617	-13.650							
3	0.000	1.389	0.526	3.505						
4	0.000	-0.171	-6.445	2.593	1.570					
5	0.000	0.405	1.764	9.506	4.203	-0.435				
6	0.000	4.753	1.589	-3.819	-2.973	2.117	2.532			
7	0.000	-1.217	-0.863	0.308	3.968	1.242	7.761	-2.618		
8	0.000	2.164	-0.262	-0.217	-1.007	2.374	-0.956	9.129	-0.275	
9	0.000	0.781	-1.829	-1.149	-2.031	1.290	0.123	-3.202	0.817	-0.189

0	1.924					**Carrington Rotation 1651:180**				
1	51.212	0.906								
2	-5.519	7.441	2.805							**g's**
3	40.262	2.827	2.092	-6.732						
4	-5.547	-0.385	-2.769	0.465	1.462					
5	24.212	-0.093	0.148	-3.529	6.276	-3.561				
6	-1.395	1.921	0.646	0.691	0.586	-0.205	-5.105			
7	7.215	-2.251	-0.474	-2.818	10.323	-6.012	-1.831	-4.825		
8	-0.853	3.033	0.530	-1.092	-2.728	4.112	-4.267	-4.338	5.092	
9	2.673	-1.593	0.156	-0.301	-2.194	-5.371	7.803	-10.166	-2.655	-2.516
0	0.000									**h's**
1	0.000	-0.844								
2	0.000	2.165	-12.461							
3	0.000	-3.921	4.058	-2.719						
4	0.000	1.245	-5.257	-4.307	0.642					
5	0.000	-2.843	3.454	-12.298	5.187	0.616				
6	0.000	-2.752	1.992	3.562	-5.106	-1.255	0.152			
7	0.000	0.808	-0.899	0.272	4.820	-1.960	8.884	-1.306		
8	0.000	-1.196	-0.681	2.849	-0.802	-0.558	-1.384	-10.259	-4.029	
9	0.000	-2.224	-2.611	2.334	-2.849	-1.359	2.653	1.114	-1.512	-2.751

Carrington Rotation 1652

	0	1	2	3	4	5	6	7	8	9
0	-1.308									
1	49.789	0.332								
2	-6.913	-9.293	2.473							
3	42.337	-0.667	1.420	3.919						
4	-5.068	-0.352	-7.415	-3.009	4.640					
5	24.112	0.775	2.558	-0.082	-0.973	2.333				
6	-2.903	0.702	-1.130	-0.168	10.774	5.422	-6.255			
7	7.158	0.942	2.049	2.744	-0.598	-3.973	-7.123	5.533		
8	-1.734	0.067	4.363	2.264	1.629	6.746	-1.840	11.453	1.703	
9	3.770	1.475	-0.577	0.567	-6.112	-4.453	1.554	7.392	-3.773	1.080

g's

0	0.000									
1	0.000	-1.562								
2	0.000	-2.397	-9.335							
3	0.000	2.833	2.195	0.389						
4	0.000	-0.574	0.086	9.065	0.252					
5	0.000	2.675	0.286	2.172	-1.950	2.187				
6	0.000	1.873	3.516	4.722	-0.416	0.029	-0.925			
7	0.000	-3.941	0.202	-5.247	-2.527	6.396	6.551	2.653		
8	0.000	1.270	-1.984	0.631	4.670	-2.862	-6.742	6.032	-2.947	
9	0.000	0.017	2.009	-0.341	-3.451	0.419	6.492	4.524	2.551	-0.878

h's

Carrington Rotation 1652:180

0	0.994									
1	50.598	-2.700								
2	-4.839	3.771	1.273							
3	41.402	-1.704	2.974	-4.817						
4	-5.744	-1.064	-5.167	2.026	7.136					
5	24.825	-0.833	3.823	1.019	4.926	-2.483				
6	-2.473	-1.126	-0.913	0.750	13.413	-5.605	-9.359			
7	7.546	-2.124	0.584	-1.694	1.481	4.291	-9.167	-5.761		
8	-1.782	-1.607	2.562	-1.136	1.166	-6.618	-7.417	-10.158	2.815	
9	3.610	-2.604	-1.607	0.658	-6.590	6.187	-1.335	-9.167	0.129	1.127

g's

0	0.000									
1	0.000	3.411								
2	0.000	2.039	-10.473							
3	0.000	-1.270	-1.893	-1.863						
4	0.000	-0.282	-2.860	-11.064	-0.792					
5	0.000	-2.028	-2.246	-0.279	-4.633	1.259				
6	0.000	-0.778	2.440	-4.073	-1.144	5.067	-1.560			
7	0.000	5.575	-0.913	6.421	-3.966	-0.072	3.806	-4.439		
8	0.000	-0.580	-3.258	-1.285	3.756	6.761	-6.735	-7.830	-4.442	
9	0.000	0.604	0.057	-0.474	-3.605	-0.017	4.225	-6.906	0.123	2.167

h's

Carrington Rotation 1653

0	2.528									
1	49.770	7.218								
2	-4.016	-10.217	4.870							
3	43.173	7.979	-5.207	8.473						
4	-8.446	1.229	2.540	-8.418	8.380					
5	24.780	-2.741	-1.303	3.612	-0.047	11.400				
6	0.782	5.748	-1.396	-0.462	11.383	-5.217	-5.729			
7	4.857	1.872	2.113	-2.556	4.974	9.237	-15.372	10.312		
8	-0.955	-5.122	2.384	4.501	-4.811	0.708	-6.136	4.667	5.471	
9	5.653	4.578	-4.673	-0.193	1.026	-1.709	-0.893	9.502	-0.174	-2.596

g's

0	0.000									
1	0.000	-4.714								
2	0.000	1.169	-11.899							
3	0.000	0.343	-1.753	2.737						
4	0.000	2.320	0.005	8.466	-4.232					
5	0.000	0.183	-4.425	8.641	-3.415	-2.247				
6	0.000	1.249	3.204	-3.563	-1.859	-7.352	2.632			
7	0.000	-4.342	2.993	-3.690	-3.530	1.567	-2.760	6.204		
8	0.000	-0.307	-5.408	0.087	-0.004	-8.662	7.201	0.512	2.196	
9	0.000	0.961	-3.924	-1.242	3.496	-2.481	-3.638	9.390	-8.091	1.434

h's

	0	1	2	3	4	5	6	7	8	9
0	4.209									
1	50.033	-5.244								
2	-3.215	8.047	3.252							
3	42.904	-5.841	-7.779	-8.595						
4	-8.415	-0.442	1.669	7.137	8.072					
5	25.170	4.943	-3.395	-2.845	-1.227	-9.515				
6	1.660	-4.405	-2.647	0.470	10.527	8.281	-4.076			
7	4.304	2.104	2.142	1.803	1.772	-4.739	-14.378	-8.509		
8	-0.093	4.211	2.399	-3.698	-5.942	2.258	-4.937	-5.561	4.039	
9	5.296	-2.012	-5.336	-0.809	0.865	1.883	-0.977	-9.165	-2.703	3.478

Carrington Rotation 1653:180

g's

0	0.000									
1	0.000	6.714								
2	0.000	0.713	-11.260							
3	0.000	1.113	-3.310	-3.464						
4	0.000	-1.713	0.612	-8.947	-5.733					
5	0.000	0.307	-4.642	-8.295	-6.578	1.104				
6	0.000	-1.050	5.085	3.451	-3.247	6.390	2.560			
7	0.000	4.714	4.516	3.262	-5.518	-2.271	-0.637	-4.461		
8	0.000	0.415	-2.025	-0.204	0.177	5.783	10.902	1.652	3.213	
9	0.000	0.326	-2.641	0.613	4.925	1.795	-1.668	-6.991	-7.409	-2.478

h's

Carrington Rotation 1654

0	-2.073									
1	52.158	0.442								
2	-3.074	-2.267	3.179							
3	38.984	1.688	-0.532	6.725						
4	-3.495	1.479	2.552	-6.640	4.452					
5	24.148	-2.874	0.201	2.413	-4.454	9.692				
6	0.792	3.749	0.310	-2.627	4.461	-4.888	-1.715			
7	6.842	-4.370	1.513	-2.263	-1.521	6.757	-15.394	7.346		
8	-0.019	-0.766	-0.341	1.525	-5.266	1.117	0.531	-5.001	7.071	
9	3.188	-0.943	-1.743	0.737	1.004	-2.847	-4.737	9.235	-4.318	-0.085

g's

0	0.000									
1	0.000	-11.894								
2	0.000	-0.406	-13.979							
3	0.000	-4.340	1.858	3.011						
4	0.000	-1.549	-3.825	18.173	-8.777					
5	0.000	2.476	-2.053	8.544	-3.661	-6.954				
6	0.000	-1.405	7.289	1.800	-7.548	-3.772	0.977			
7	0.000	-3.065	3.959	0.114	-6.704	-8.980	11.026	1.837		
8	0.000	0.279	-3.029	-2.519	1.223	-3.827	8.707	1.794	-1.407	
9	0.000	-0.070	0.282	-2.385	0.204	0.756	6.728	-0.654	-8.511	2.570

h's

Carrington Rotation 1654:180

0	-1.200									
1	50.705	-5.065								
2	-2.851	6.683	8.928							
3	41.877	-4.881	-2.476	-9.806						
4	-4.463	-1.436	6.233	8.009	2.689					
5	26.180	2.150	1.514	-3.384	-14.634	-10.808				
6	1.623	-3.121	0.066	4.316	0.010	6.157	4.066			
7	7.819	1.409	4.548	5.226	-5.250	-9.749	-12.692	-5.517		
8	-0.082	3.033	2.159	-0.563	-7.479	-2.921	10.315	10.513	6.960	
9	3.921	-0.247	-0.791	0.316	3.324	0.294	1.258	-6.280	-9.007	-2.706

g's

0	0.000									
1	0.000	9.296								
2	0.000	-0.058	-14.898							
3	0.000	3.711	3.844	0.476						
4	0.000	1.335	-5.922	-14.384	-10.726					
5	0.000	-3.094	-2.075	-4.206	-3.532	2.956				
6	0.000	1.892	5.336	-0.806	-7.835	-4.482	-1.110			
7	0.000	2.390	3.760	0.514	-4.013	1.599	9.209	1.616		
8	0.000	1.400	-5.389	3.516	4.064	-2.472	4.714	0.184	0.979	
9	0.000	0.480	1.465	4.163	2.389	-3.998	5.188	7.822	-3.868	-2.408

h's

Carrington Rotation 1655

g's

	0	1	2	3	4	5	6	7	8	9
0	-3.461									
1	51.485	2.174								
2	-2.317	-5.201	5.076							
3	41.340	3.321	0.959	9.790						
4	-2.465	-0.839	4.166	4.804	-3.293					
5	27.179	-0.810	1.790	7.131	-10.821	4.240				
6	1.445	1.962	3.508	-0.344	-4.833	-7.027	6.417			
7	8.284	-1.889	4.884	0.603	-6.640	-1.839	-6.157	4.546		
8	1.054	-2.829	0.185	-1.416	-4.350	-3.315	14.369	-9.234	3.694	
9	3.392	1.866	0.110	-2.827	-0.222	-1.745	7.228	7.897	-10.706	1.687

h's

0	0.000									
1	0.000	-8.355								
2	0.000	-1.370	-15.469							
3	0.000	-3.792	-1.999	0.605						
4	0.000	-1.454	-8.740	13.730	-6.620					
5	0.000	2.923	-3.802	3.862	5.153	-7.876				
6	0.000	-1.499	3.319	2.046	0.028	3.917	-4.421			
7	0.000	-0.749	3.627	0.126	2.639	-7.835	9.476	1.289		
8	0.000	-1.067	-3.914	-1.987	8.496	0.043	-3.684	5.711	-0.121	
9	0.000	0.257	0.638	-3.110	1.825	4.546	-0.090	-2.785	-6.426	3.019

Carrington Rotation 1655:180

g's

0	1.429									
1	47.279	-4.786								
2	0.268	8.381	5.352							
3	43.422	-3.177	-9.249	-12.439						
4	-5.408	1.242	5.441	-9.914	0.199					
5	26.793	-0.477	0.270	-9.292	-17.759	-4.516				
6	1.192	-3.171	1.513	-0.027	0.130	2.621	9.324			
7	7.585	1.121	2.764	-0.617	-3.264	0.271	-11.032	-2.408		
8	0.665	3.246	-0.266	0.438	-0.087	2.408	11.490	11.138	7.708	
9	3.163	-0.654	-2.592	0.786	2.980	1.395	1.003	-5.255	-5.910	-0.776

h's

0	0.000									
1	0.000	10.734								
2	0.000	2.448	-15.696							
3	0.000	7.179	3.426	-2.863						
4	0.000	1.833	-7.235	-18.121	-8.822					
5	0.000	-2.959	-2.716	-3.996	4.020	8.015				
6	0.000	2.518	2.524	-5.722	-0.593	-10.235	-6.417			
7	0.000	0.354	3.231	-2.770	3.209	13.337	3.291	-0.577		
8	0.000	1.533	-4.197	-0.299	8.742	2.976	-6.295	-16.386	0.922	
9	0.000	-1.034	1.413	0.805	0.152	2.084	-0.925	-1.269	-9.591	1.782

Carrington Rotation 1656

g's

0	-1.852									
1	50.061	-1.086								
2	-1.280	-4.321	3.267							
3	45.065	-1.691	-12.276	4.474						
4	-1.153	-2.245	-1.141	6.724	8.625					
5	25.440	0.375	-5.678	7.551	-7.188	1.266				
6	0.220	0.133	-0.171	4.472	11.822	-4.338	1.783			
7	9.145	0.847	1.953	1.999	5.329	-3.905	-13.718	4.231		
8	-0.358	0.376	0.396	0.324	3.624	0.572	-0.702	2.057	0.854	
9	3.688	-1.106	-2.473	-2.251	3.947	1.262	-0.875	2.003	-6.634	4.560

h's

0	0.000									
1	0.000	-12.097								
2	0.000	0.062	-14.306							
3	0.000	-8.201	7.190	-1.672						
4	0.000	2.779	-10.447	10.315	-13.113					
5	0.000	5.826	-4.966	-6.707	0.760	3.100				
6	0.000	-3.166	-0.022	-1.916	-1.103	17.649	-11.784			
7	0.000	-0.104	-0.205	-0.692	5.559	0.052	-7.337	1.518		
8	0.000	-0.452	-1.571	-0.555	7.044	2.859	-8.557	15.972	-1.193	
9	0.000	0.732	3.418	0.278	-0.852	0.866	3.231	-2.979	-4.477	-7.608

Carrington Rotation 1656:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-2.155									
1	52.601	1.241								
2	2.994	3.971	1.970							
3	43.681	3.782	-8.194	-1.035						
4	-3.200	0.771	0.725	-13.849	9.283					
5	27.675	-2.330	-6.471	-6.761	-8.317	5.714				
6	-0.129	1.659	-2.054	-8.931	10.575	-2.571	4.620			
7	6.237	-1.111	6.346	-4.656	1.833	10.240	-12.484	-0.144		
8	2.375	-2.260	-1.851	2.751	0.852	-1.622	0.589	-8.108	-1.844	
9	4.443	1.530	-2.972	3.687	4.621	-2.380	-0.675	2.704	-7.436	-4.265

h's

0	0.000									
1	0.000	11.794								
2	0.000	0.721	-18.384							
3	0.000	12.184	13.163	0.074						
4	0.000	-3.303	-9.383	-6.079	-16.769					
5	0.000	-4.881	-5.358	10.947	2.550	-3.924				
6	0.000	4.074	0.738	2.355	-3.808	-17.578	-9.997			
7	0.000	-0.318	-0.386	1.872	0.986	1.271	-7.736	2.687		
8	0.000	-0.537	-3.371	4.261	6.551	-6.382	-6.486	-14.215	2.285	
9	0.000	1.340	3.000	-2.127	1.060	-2.350	0.239	8.839	-6.698	8.986

Carrington Rotation 1657

g's

0	2.869									
1	50.233	-2.010								
2	1.700	-4.025	1.551							
3	44.370	-2.380	-8.892	-2.057						
4	-2.718	1.656	-4.239	6.504	7.786					
5	29.691	4.059	-7.096	-1.272	-16.394	-2.731				
6	-0.304	-6.483	-2.266	1.871	9.083	11.421	5.211			
7	2.469	2.713	6.492	2.125	1.869	-7.390	-13.989	0.058		
8	1.377	2.881	-0.181	-1.103	-4.038	1.897	5.125	7.061	0.235	
9	5.629	-0.826	-1.205	-0.819	0.203	4.062	-0.481	0.436	2.608	2.007

h's

0	0.000									
1	0.000	-7.037								
2	0.000	-1.902	-17.432							
3	0.000	-10.075	16.116	1.720						
4	0.000	2.679	-4.991	9.602	-20.422					
5	0.000	5.321	0.899	-13.660	-7.360	2.986				
6	0.000	-1.466	2.259	-3.677	-11.285	11.645	-8.228			
7	0.000	0.183	-5.108	-0.304	-2.981	-4.984	-2.638	-3.309		
8	0.000	-3.196	-3.240	-1.373	3.124	5.632	-8.093	6.197	3.920	
9	0.000	-1.668	3.200	4.739	1.089	-3.777	-0.683	-3.695	-4.765	-7.320

Carrington Rotation 1657:180

g's

0	1.623									
1	53.733	4.076								
2	0.788	6.312	1.422							
3	40.594	3.201	3.709	0.953						
4	2.284	0.323	-7.382	-8.278	6.545					
5	30.216	-1.558	-5.819	0.593	-3.985	3.098				
6	-1.102	3.018	-1.390	0.353	5.178	-9.772	-0.237			
7	4.151	-1.393	1.679	0.878	4.687	5.717	-13.476	0.478		
8	-1.041	-2.422	1.110	3.147	-5.529	-5.285	-0.754	-3.216	-5.018	
9	4.696	-0.062	1.312	0.924	-3.354	-1.992	0.088	5.250	-7.721	0.914

h's

0	0.000									
1	0.000	7.083								
2	0.000	-0.490	-15.830							
3	0.000	9.113	18.315	0.583						
4	0.000	-3.967	-5.201	-5.506	-21.472					
5	0.000	-2.402	2.443	12.909	-9.426	0.615				
6	0.000	2.526	2.493	5.453	-13.067	2.391	-8.924			
7	0.000	1.172	-8.446	0.577	1.311	4.293	-3.429	2.483		
8	0.000	2.724	-0.892	-1.433	4.224	-0.324	-14.991	6.392	2.638	
9	0.000	0.207	4.121	-2.236	0.969	-0.613	-2.707	-0.095	-1.141	1.199

Carrington Rotation 1658

g's

	0	1	2	3	4	5	6	7	8	9
0	6.603									
1	51.755	0.123								
2	1.115	-1.168	1.584							
3	42.385	-1.224	3.071	-2.116						
4	-0.508	4.659	-5.047	11.613	5.402					
5	29.196	0.124	-4.355	-3.306	-12.499	-0.503				
6	-0.440	-1.422	-0.133	1.355	2.813	10.388	-1.646			
7	4.967	-0.049	-0.049	-1.695	-0.107	-2.312	-10.371	-1.730		
8	-1.413	1.279	1.741	-6.053	-5.622	4.036	-3.760	7.167	-3.632	
9	4.079	0.062	-0.480	-0.932	1.395	-1.726	-0.158	-6.654	-11.858	-4.487

h's

0	0.000									
1	0.000	-3.192								
2	0.000	-0.536	-12.284							
3	0.000	-7.847	21.236	1.209						
4	0.000	4.702	-1.576	9.191	-22.417					
5	0.000	0.149	6.901	-8.780	-6.870	-0.269				
6	0.000	-2.646	2.831	-1.863	-15.243	-9.723	-5.723			
7	0.000	-1.216	-4.115	0.198	5.241	-3.443	-3.876	-4.129		
8	0.000	-1.131	-2.228	-2.205	5.872	-2.745	-11.089	-4.250	4.472	
9	0.000	-0.879	2.143	2.273	1.558	1.637	-2.867	-3.252	3.323	-0.239

Carrington Rotation 1658:180

g's

0	7.092									
1	51.364	9.969								
2	-4.029	-0.838	2.206							
3	41.108	3.806	7.531	10.216						
4	4.784	-2.922	-10.886	-9.163	9.560					
5	29.577	5.257	-2.262	3.399	-9.138	6.059				
6	-3.601	2.320	4.816	-3.190	0.011	-0.872	-2.151			
7	4.766	-5.337	-2.333	4.880	-0.233	1.739	-10.633	-3.810		
8	0.348	-1.878	-0.556	4.885	-1.547	-0.799	-11.973	-8.289	-0.456	
9	4.575	4.280	-0.661	-0.822	1.392	0.378	-4.257	-1.986	-3.465	1.907

h's

0	0.000									
1	0.000	3.777								
2	0.000	-2.111	-10.175							
3	0.000	4.472	18.500	-2.684						
4	0.000	-5.951	1.138	-8.916	-17.290					
5	0.000	0.559	9.592	4.120	-11.184	3.183				
6	0.000	3.461	7.121	4.624	-12.615	11.111	4.235			
7	0.000	0.144	-2.182	1.270	3.485	2.067	2.955	2.528		
8	0.000	0.505	-5.189	0.239	11.556	6.165	-5.092	-0.878	4.421	
9	0.000	0.169	2.027	-4.139	2.665	2.311	-0.058	-7.853	4.472	-0.117

Carrington Rotation 1659

g's

0	10.333									
1	50.653	-10.780								
2	-2.306	-6.115	7.855							
3	40.893	-4.256	14.304	-13.209						
4	3.552	1.912	-4.559	18.084	10.333					
5	31.496	-6.103	4.635	-5.033	-7.634	-4.630				
6	-3.503	-2.834	5.043	3.374	-2.550	-9.824	-1.038			
7	3.600	5.892	-3.165	-3.721	-2.171	3.917	-4.855	-0.441		
8	1.067	-0.453	-0.361	-7.294	-0.761	0.048	-13.385	10.791	0.232	
9	5.527	-3.526	-0.955	0.818	4.807	-0.154	-1.458	-3.793	-7.605	-0.194

h's

0	0.000									
1	0.000	-4.768								
2	0.000	-2.498	-8.923							
3	0.000	-4.193	9.858	5.902						
4	0.000	2.954	1.071	10.945	-19.587					
5	0.000	-0.474	8.161	3.076	-0.498	-2.274				
6	0.000	-0.720	5.663	1.138	-16.506	-12.672	6.853			
7	0.000	-0.230	-1.875	-0.955	3.302	-0.838	-3.718	-1.392		
8	0.000	-1.100	-5.016	-0.616	12.005	-7.598	1.213	6.587	0.680	
9	0.000	0.437	-1.871	3.633	-0.959	-0.912	-1.425	7.287	7.208	1.235

	0	1	2	3	4	5	6	7	8	9
0	3.576					**Carrington Rotation 1659:180**				
1	49.327	11.202								
2	-1.189	-3.472	4.045							**g's**
3	44.670	3.888	18.323	17.417						
4	1.410	-0.391	-7.724	-14.667	12.900					
5	28.387	5.337	11.077	6.526	-13.043	4.259				
6	-3.140	0.558	9.302	-4.747	-6.288	17.742	6.540			
7	6.346	-7.279	-5.829	-0.099	-3.934	-5.696	7.560	1.124		
8	4.126	3.269	-0.951	9.081	0.766	2.291	-3.802	-13.345	1.827	
9	4.810	2.459	1.004	-1.360	7.465	2.156	-3.660	-1.636	6.333	-3.747
0	0.000									**h's**
1	0.000	0.800								
2	0.000	-1.909	-10.196							
3	0.000	5.173	-0.618	-11.975						
4	0.000	-1.302	0.924	-8.910	-15.247					
5	0.000	-3.876	9.196	-5.268	-4.962	-1.085				
6	0.000	-0.310	7.126	6.416	-13.510	0.306	9.389			
7	0.000	-0.783	-5.663	2.998	1.665	-8.885	2.508	7.426		
8	0.000	2.253	-6.347	-2.583	8.593	9.716	3.421	-5.753	6.520	
9	0.000	3.075	-0.609	-5.764	-0.789	4.117	2.632	-4.011	6.281	7.278

0	7.507					**Carrington Rotation 1660**				
1	44.800	-10.385								
2	0.015	-1.600	6.411							**g's**
3	44.830	-1.730	18.634	-18.180						
4	0.643	0.303	-9.061	12.326	14.036					
5	31.960	-8.635	9.066	-4.484	-1.210	-5.494				
6	-4.065	-0.818	8.241	7.885	-8.510	-22.211	9.619			
7	5.385	7.750	-3.915	2.749	0.510	3.000	7.427	1.368		
8	4.252	0.506	-0.365	-7.650	-0.845	-5.799	5.667	11.871	-3.946	
9	5.984	-0.970	-0.817	1.302	4.154	-0.555	-2.852	1.904	7.344	4.781
0	0.000									**h's**
1	0.000	0.819								
2	0.000	-3.466	-9.641							
3	0.000	-2.275	-2.803	13.472						
4	0.000	-0.486	2.247	1.635	-15.879					
5	0.000	4.853	6.854	5.457	-5.255	1.777				
6	0.000	1.844	3.412	-11.522	-9.935	7.973	6.179			
7	0.000	0.067	-7.648	-2.766	5.363	2.960	-1.514	-1.160		
8	0.000	-2.621	-6.705	5.979	9.382	-8.389	1.990	9.312	6.318	
9	0.000	-2.719	4.465	6.530	-2.364	-6.409	2.215	13.902	0.777	-9.709

0	2.337					**Carrington Rotation 1660:180**				
1	43.629	9.225								
2	-4.802	-10.594	12.207							**g's**
3	45.271	0.697	18.396	18.698						
4	4.199	-1.812	-4.898	-6.266	14.654					
5	31.802	5.819	7.607	3.103	2.319	2.852				
6	-6.180	2.507	8.958	-4.464	-5.439	16.940	3.727			
7	4.057	-7.200	-2.844	-4.605	-5.626	-2.729	4.486	-6.705		
8	2.715	0.031	-0.746	5.206	-5.951	4.711	8.164	-9.473	-10.766	
9	7.165	0.354	-1.443	0.697	3.948	-1.069	3.212	2.106	-0.791	-3.291
0	0.000									**h's**
1	0.000	-6.596								
2	0.000	2.644	-9.982							
3	0.000	-5.606	-15.320	-9.231						
4	0.000	1.306	2.323	-2.658	-13.505					
5	0.000	-2.683	2.109	-6.133	-1.923	4.144				
6	0.000	-2.443	1.683	12.874	-11.642	-2.214	7.169			
7	0.000	-1.387	-6.074	6.660	6.290	-1.795	-7.443	1.888		
8	0.000	1.050	-8.128	-5.114	7.603	0.442	-0.861	-5.077	1.003	
9	0.000	0.083	3.675	-6.377	-5.242	2.613	-0.815	-9.926	-1.751	5.198

	0	1	2	3	4	5	6	7	8	9
0	-0.670									
1	43.633	-8.283								
2	-3.534	2.129	13.602							
3	44.766	-3.006	13.119	-15.122						
4	4.206	0.456	-0.451	-3.693	15.115					
5	31.041	-2.355	5.798	-1.082	11.762	-6.842				
6	-6.213	1.791	5.094	3.441	-4.221	-11.256	3.601			
7	6.539	5.759	-4.520	4.552	-2.615	-3.785	2.316	9.984		
8	2.015	-3.822	-1.531	-1.978	-4.847	-4.004	2.518	14.623	-8.765	
9	4.252	-2.626	0.379	-1.525	0.445	-2.312	-2.096	6.620	-0.520	0.146

Carrington Rotation 1661

g's

0	0.000									
1	0.000	3.070								
2	0.000	-0.809	-10.535							
3	0.000	4.659	-17.512	8.785						
4	0.000	-0.866	-0.459	-5.966	-8.484					
5	0.000	4.599	-1.318	9.977	-14.633	-4.476				
6	0.000	1.098	4.893	-14.396	-8.384	8.547	4.391			
7	0.000	1.161	-3.720	-9.357	2.005	7.223	-9.524	-3.523		
8	0.000	0.420	-7.599	3.649	9.987	5.476	-9.623	4.655	5.194	
9	0.000	-1.367	1.660	3.770	-0.122	-0.648	-5.015	5.917	1.864	-4.683

h's

0	0.619									
1	45.442	11.714								
2	-5.343	-5.193	14.556							
3	45.904	-1.121	2.344	19.533						
4	6.410	-2.043	1.025	3.952	18.205					
5	31.173	2.554	0.284	8.962	9.089	4.728				
6	-5.145	2.516	3.422	-0.063	6.952	0.881	-0.234			
7	6.883	-5.292	-0.468	-4.602	0.566	10.097	-7.905	-9.538		
8	2.570	-0.654	-2.119	1.979	-8.418	3.648	7.822	-25.180	-5.311	
9	4.491	2.179	-0.498	3.280	0.656	-2.932	-2.607	2.146	-11.017	1.056

Carrington Rotation 1661:180

g's

0	0.000									
1	0.000	-3.212								
2	0.000	7.937	-10.878							
3	0.000	-8.046	-17.701	-10.506						
4	0.000	2.695	-8.517	2.781	-4.674					
5	0.000	-2.042	-6.125	-16.358	-6.757	7.005				
6	0.000	-2.350	5.516	6.964	-8.135	-4.868	2.560			
7	0.000	-0.564	1.299	11.407	1.913	-3.120	-9.254	-2.450		
8	0.000	1.007	-8.891	-0.888	13.246	-6.240	-7.903	-7.627	3.005	
9	0.000	3.101	-0.071	-6.496	2.543	0.901	-7.863	-3.484	-3.402	1.367

h's

0	8.734									
1	42.016	-12.520								
2	-7.586	8.562	10.078							
3	44.790	-1.209	-1.365	-20.206						
4	-0.272	2.278	1.677	-14.045	13.070					
5	33.243	0.823	4.036	-7.510	2.333	-10.319				
6	-4.738	-1.253	6.855	-0.919	6.039	13.633	8.858			
7	4.944	7.039	-0.008	3.309	0.840	-11.960	-16.429	10.369		
8	2.075	0.992	-4.236	-2.108	-5.455	3.248	16.684	32.123	0.185	
9	5.036	-3.203	0.738	-6.189	0.182	8.441	-9.211	-5.208	-5.268	1.529

Carrington Rotation 1662

g's

0	0.000									
1	0.000	12.002								
2	0.000	-8.295	-10.000							
3	0.000	8.999	-12.228	9.984						
4	0.000	-7.309	-11.540	-1.099	-1.807					
5	0.000	-3.978	-5.582	16.642	-22.726	-17.104				
6	0.000	3.691	7.948	-5.283	-6.870	3.458	-1.781			
7	0.000	0.434	3.252	-9.838	-1.863	-2.925	-5.691	4.335		
8	0.000	-3.103	-5.268	1.694	10.382	10.120	-8.070	-3.889	1.228	
9	0.000	-4.960	1.157	5.327	5.709	5.004	-2.533	6.244	4.818	6.291

h's

Carrington Rotation 1662:180

	0	1	2	3	4	5	6	7	8	9
0	-0.033									
1	42.449	-0.521								
2	-6.877	1.067	3.055							
3	42.931	-3.232	-0.938	13.180						
4	0.212	-1.713	-0.944	21.990	12.957					
5	33.771	1.719	-1.172	3.310	12.898	8.345				
6	-8.258	1.246	6.435	-0.624	8.049	-7.515	3.941			
7	4.562	-6.618	1.349	-4.063	0.191	12.558	-14.839	-11.263		
8	1.333	-1.683	-4.055	0.071	-4.836	-2.156	11.144	-27.239	-0.972	
9	4.822	3.186	2.485	5.237	-2.837	-6.985	-5.655	-1.227	-4.797	0.083

g's

0	0.000									
1	0.000	-14.794								
2	0.000	8.075	-14.191							
3	0.000	-9.345	-10.390	-14.718						
4	0.000	8.284	-14.179	-4.648	-6.992					
5	0.000	4.647	-1.910	-19.558	-19.918	18.629				
6	0.000	-4.880	8.834	1.895	-11.245	2.402	-4.665			
7	0.000	-3.103	4.603	8.672	-0.971	7.142	-2.459	-7.473		
8	0.000	2.142	-3.670	-0.350	8.155	-12.875	-5.870	6.088	-1.144	
9	0.000	2.591	-0.247	-4.681	5.361	-7.511	0.520	-6.484	8.751	-8.407

h's

Carrington Rotation 1663

0	-3.962									
1	43.380	-4.873								
2	-9.258	-0.076	4.733							
3	41.086	2.297	1.250	-17.549						
4	3.434	-4.478	-5.371	-15.088	20.435					
5	32.121	-4.783	-5.456	-7.918	9.127	-7.524				
6	-7.594	-2.916	4.334	-3.138	14.906	18.194	-0.657			
7	6.725	3.636	-1.633	4.762	-2.808	-15.838	-4.439	9.629		
8	0.958	0.715	-2.909	0.895	-6.728	4.542	4.256	15.579	-7.725	
9	3.765	-2.109	2.904	-4.565	-1.053	6.716	0.562	7.446	0.048	-0.127

g's

0	0.000									
1	0.000	11.352								
2	0.000	-7.670	-15.600							
3	0.000	7.429	-12.974	12.976						
4	0.000	-6.626	-12.666	6.654	-11.468					
5	0.000	-3.285	-4.206	13.345	-18.564	-8.794				
6	0.000	3.115	6.051	-3.310	-14.360	-11.729	-5.093			
7	0.000	3.467	1.345	-11.006	-5.344	2.164	13.786	11.010		
8	0.000	-0.873	-6.904	-4.389	7.275	6.733	-14.046	-3.122	-3.556	
9	0.000	-2.118	-2.220	6.094	5.083	2.071	2.756	9.710	3.886	4.201

h's

Carrington Rotation 1663:180

0	-7.109									
1	43.268	-4.658								
2	-6.965	4.879	-2.460							
3	41.616	-9.648	-2.544	17.939						
4	3.574	6.765	-6.088	19.418	19.261					
5	32.552	6.297	-7.214	6.338	16.259	9.319				
6	-7.877	2.870	4.627	-1.320	15.885	-16.269	-3.179			
7	5.761	-4.156	-0.464	-6.240	0.362	18.516	-3.013	-10.996		
8	0.304	0.145	-2.658	-2.403	-7.916	-3.495	-0.048	-19.110	-5.496	
9	4.050	-0.872	3.180	7.133	-3.338	-5.802	1.925	-13.150	3.786	3.436

g's

0	0.000									
1	0.000	-10.359								
2	0.000	8.216	-22.436							
3	0.000	-6.040	-11.352	-17.353						
4	0.000	7.375	-18.806	-14.264	-13.964					
5	0.000	3.668	0.576	-13.496	-14.306	7.518				
6	0.000	-2.832	6.063	0.312	-18.824	13.718	-4.328			
7	0.000	-3.229	1.497	11.647	-7.530	1.553	19.906	-15.055		
8	0.000	0.113	-8.015	6.634	4.065	-5.363	-10.904	2.378	-6.420	
9	0.000	0.756	-3.124	-4.549	3.219	-4.395	4.070	-9.785	5.261	-3.575

h's

Carrington Rotation 1664

	0	1	2	3	4	5	6	7	8	9
0	-13.687									
1	28.970	-5.626								
2	-3.293	-4.636	-11.595							
3	51.548	7.336	-6.561	-22.954						
4	5.722	3.432	-2.823	-25.298	14.852					
5	31.547	-1.299	-3.764	3.137	24.128	2.615				
6	-16.009	-3.212	4.799	11.991	6.682	-6.409	-16.809			
7	0.501	6.475	-4.731	7.020	-1.127	0.460	3.317	26.449		
8	3.444	0.268	-6.351	-3.964	-12.188	-12.685	-25.586	30.135	1.079	
9	6.865	3.226	7.464	-11.212	-9.960	8.115	7.577	26.874	14.057	10.390

g's

0	0.000									
1	0.000	10.402								
2	0.000	-22.807	-31.553							
3	0.000	7.283	-7.604	14.474						
4	0.000	-3.929	-29.802	0.480	-31.265					
5	0.000	1.419	5.244	23.526	-9.127	-5.967				
6	0.000	5.865	10.357	3.722	-26.036	-17.288	-10.614			
7	0.000	-2.135	6.317	-6.513	12.119	5.733	-6.889	-1.156		
8	0.000	-7.991	-5.110	-6.038	7.342	3.766	-3.531	-4.623	-2.215	
9	0.000	-1.650	-3.175	-0.625	-2.332	5.306	-0.771	-13.971	-5.525	-1.459

h's

Carrington Rotation 1664:180

0	-4.626									
1	22.452	7.713								
2	-6.846	7.051	-18.000							
3	50.107	-5.101	-11.475	23.019						
4	7.897	-1.786	-8.138	17.939	9.575					
5	36.161	3.289	3.732	0.154	25.537	0.043				
6	-11.095	0.925	4.017	-11.674	-4.246	0.747	-14.129			
7	1.669	-6.472	-6.640	-8.502	-3.425	3.514	12.525	-15.401		
8	-0.482	-2.211	-9.467	5.712	-14.416	12.054	-22.174	-23.367	8.928	
9	5.762	-4.816	3.752	10.881	-13.505	-8.991	15.934	-15.621	25.679	-7.208

g's

0	0.000									
1	0.000	1.217								
2	0.000	18.316	-32.324							
3	0.000	-6.341	-1.406	-13.734						
4	0.000	-3.574	-30.446	-8.627	-35.504					
5	0.000	-1.453	6.696	-21.912	-11.144	0.194				
6	0.000	-2.282	14.285	0.801	-26.788	9.084	-16.704			
7	0.000	9.379	4.968	5.037	12.836	-16.247	-15.665	-1.692		
8	0.000	10.237	-4.370	7.980	9.440	-8.438	-6.068	3.878	3.391	
9	0.000	1.672	-4.364	-1.585	-0.695	-9.011	-1.382	12.656	-2.717	10.330

h's

Carrington Rotation 1665

0	-4.007									
1	25.922	-6.818								
2	-5.577	-14.564	-27.022							
3	45.991	7.666	-15.979	-4.176						
4	4.230	1.016	-15.249	-6.360	11.494					
5	35.866	-5.263	12.685	11.776	26.338	-8.341				
6	-8.973	1.610	5.158	2.282	-2.177	-2.509	-16.299			
7	3.200	5.189	-4.026	4.940	3.845	-13.730	-21.107	-0.148		
8	-0.483	-0.471	-5.144	-3.122	-13.038	-10.019	-15.879	14.349	26.656	
9	3.959	2.416	-0.273	-7.795	-10.155	9.975	2.216	-7.381	33.221	7.127

g's

0	0.000									
1	0.000	2.496								
2	0.000	-11.970	-40.389							
3	0.000	10.335	-12.518	4.538						
4	0.000	-3.475	-31.875	9.604	-15.534					
5	0.000	-3.030	9.128	13.894	-2.607	-3.883				
6	0.000	1.466	15.105	1.547	-9.181	8.252	-8.909			
7	0.000	-9.959	4.362	-7.052	3.777	9.325	-10.339	-12.483		
8	0.000	-6.960	-6.099	-6.079	5.490	21.126	1.604	-32.921	-6.894	
9	0.000	-0.181	-5.308	4.787	-2.398	5.082	-1.994	-19.864	-11.198	-0.596

h's

Carrington Rotation 1665:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	-10.064									
1	21.814	26.638								
2	0.078	16.888	-45.953							
3	45.071	-6.422	-8.251	3.994						
4	1.499	-6.269	-20.848	-9.001	12.861					
5	36.227	4.348	18.169	-10.745	25.853	-6.992				
6	-13.517	2.892	9.040	-11.796	0.548	0.642	-1.636			
7	5.204	2.078	-7.539	1.183	5.200	-10.096	-24.638	-7.629		
8	1.488	-4.210	-2.083	8.977	-12.635	12.780	-0.099	-13.842	40.549	
9	1.118	-1.862	5.143	4.678	-2.281	-6.426	-18.438	-4.455	58.060	-14.345
h's										
0	0.000									
1	0.000	-1.239								
2	0.000	4.373	-21.280							
3	0.000	-5.164	-0.547	-25.339						
4	0.000	0.184	-27.533	-6.779	1.635					
5	0.000	1.932	6.832	-22.608	-9.143	-14.222				
6	0.000	-2.670	8.671	5.175	7.368	-10.691	-9.007			
7	0.000	4.315	5.757	12.426	-10.001	-21.560	-11.564	7.494		
8	0.000	6.903	2.384	-3.389	4.600	-5.468	-7.428	13.448	-7.966	
9	0.000	0.441	-7.290	-3.076	5.697	1.426	-11.984	18.371	-3.181	4.022

Carrington Rotation 1666

	0	1	2	3	4	5	6	7	8	9
g's										
0	-13.846									
1	34.469	2.526								
2	-3.313	-13.162	-60.406							
3	38.378	13.378	-6.511	0.271						
4	5.199	-5.831	-36.438	4.306	15.811					
5	41.387	-9.971	16.185	2.145	28.812	0.616				
6	-11.186	0.824	12.221	7.772	0.235	16.279	5.751			
7	4.023	3.375	-5.017	-3.111	-6.611	3.438	-20.338	7.609		
8	-1.022	7.219	-0.775	-1.442	-8.748	-0.230	14.028	19.950	46.321	
9	1.460	-0.894	3.218	-0.624	0.949	3.681	-14.298	2.717	53.144	3.910
h's										
0	0.000									
1	0.000	5.600								
2	0.000	7.598	-0.840							
3	0.000	5.680	4.296	12.604						
4	0.000	-1.933	-13.333	10.640	15.794					
5	0.000	-3.949	-3.223	7.431	-19.690	8.210				
6	0.000	5.362	4.409	-0.808	9.982	14.134	-7.089			
7	0.000	-1.422	2.980	-13.564	-24.524	8.174	-0.519	-6.235		
8	0.000	-5.000	4.601	3.546	1.876	-4.326	-9.568	-4.913	-0.933	
9	0.000	-0.686	-1.823	5.531	12.321	3.797	-10.466	-13.299	14.791	3.865

Carrington Rotation 1666:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	-8.080									
1	36.151	-3.493								
2	-6.541	13.896	-53.401							
3	36.798	-7.795	-0.472	-4.343						
4	4.668	1.744	-38.511	10.640	3.433					
5	42.228	6.266	13.495	-15.499	0.572	-7.512				
6	-12.668	-2.993	8.512	-2.242	0.502	-22.093	5.747			
7	1.721	-6.228	-5.458	-1.893	-8.764	0.616	-19.454	-6.935		
8	-1.186	-1.011	0.196	1.431	3.876	3.089	-0.512	-20.873	30.626	
9	2.105	-0.605	3.324	5.865	-1.802	3.869	-6.193	-0.276	18.405	-4.841
h's										
0	0.000									
1	0.000	-1.296								
2	0.000	-4.472	2.147							
3	0.000	-5.568	-3.094	3.352						
4	0.000	1.130	-2.165	14.174	17.570					
5	0.000	4.358	-8.144	-7.187	-7.756	-10.038				
6	0.000	-3.251	3.654	-3.496	-0.394	-24.023	-12.148			
7	0.000	0.715	-0.824	3.773	-21.159	0.493	-4.364	15.531		
8	0.000	3.258	0.384	-1.811	-7.585	-5.298	-10.198	23.867	-1.212	
9	0.000	-0.084	3.825	0.288	8.080	4.682	-2.312	7.518	1.591	-15.034

	0	1	2	3	4	5	6	7	8	9
0	-18.902					**Carrington Rotation 1667**				
1	30.917	1.380								
2	-4.269	-12.596	-45.720							**g's**
3	38.875	11.158	0.999	11.364						
4	11.520	1.908	-34.014	10.603	3.586					
5	41.173	-6.578	-2.237	8.011	-1.476	3.430				
6	-15.553	0.214	7.520	3.559	10.380	12.136	-3.610			
7	3.433	3.950	-7.687	-4.874	-9.720	-7.568	-23.652	11.992		
8	-0.146	-0.553	-1.201	-3.482	5.813	-4.065	-9.798	15.154	16.148	
9	0.001	1.237	8.043	0.290	-2.791	-4.449	-3.680	-0.688	17.040	-2.248
0	0.000									**h's**
1	0.000	-10.529								
2	0.000	0.351	-2.500							
3	0.000	0.937	-12.230	2.690						
4	0.000	5.257	6.341	-10.683	24.245					
5	0.000	2.544	-3.478	4.459	13.479	19.775				
6	0.000	0.531	6.077	-9.076	1.246	27.411	-15.257			
7	0.000	-0.691	-0.952	-4.029	-15.850	12.146	-2.521	-11.334		
8	0.000	-3.961	-5.239	-2.950	-12.982	-3.169	-12.958	-23.016	5.936	
9	0.000	-0.663	-0.330	3.168	9.623	-6.834	3.331	-6.947	1.573	6.622

0	-2.021					**Carrington Rotation 1667:180**				
1	32.895	7.596								
2	-6.423	15.638	-31.387							**g's**
3	35.462	-4.389	-0.807	-10.276						
4	8.724	-1.149	-25.267	7.225	-8.957					
5	46.468	5.339	-5.314	-9.920	-10.228	-4.258				
6	-10.786	-1.252	4.301	-2.529	-0.940	-26.069	5.634			
7	1.860	-5.140	-5.490	6.877	-2.835	6.298	-22.140	-5.593		
8	0.220	1.134	-1.515	1.048	6.853	0.496	-2.027	-20.257	13.708	
9	-0.469	2.971	5.301	-2.432	0.687	7.816	-7.929	10.606	27.220	7.808
0	0.000									**h's**
1	0.000	18.019								
2	0.000	3.749	1.740							
3	0.000	-1.011	-16.160	16.481						
4	0.000	-8.780	13.013	15.344	24.710					
5	0.000	-3.665	-1.626	9.432	37.460	-28.045				
6	0.000	2.758	6.147	1.444	0.540	-34.236	-20.484			
7	0.000	3.749	-1.364	0.496	-10.768	-20.103	-1.099	19.868		
8	0.000	5.525	-5.922	4.414	-10.249	8.159	-20.927	18.505	6.266	
9	0.000	1.560	-0.888	-3.761	4.593	6.846	5.326	13.926	3.815	-2.424

0	-2.280					**Carrington Rotation 1668**				
1	36.036	6.517								
2	-0.323	0.216	-44.050							**g's**
3	36.640	14.490	-17.144	16.491						
4	-1.141	7.711	-34.866	-12.604	-12.455					
5	41.305	-5.850	4.629	4.818	-17.689	3.564				
6	-4.559	-2.781	19.284	-10.647	2.764	40.362	12.188			
7	8.354	7.551	-1.306	-5.606	4.378	4.933	-21.760	10.464		
8	0.345	0.585	-12.386	2.887	1.016	14.623	7.835	23.609	9.731	
9	-5.615	-1.941	-8.122	1.514	-0.501	-8.687	-7.975	-9.579	25.149	-12.466
0	0.000									**h's**
1	0.000	-12.554								
2	0.000	6.110	7.567							
3	0.000	11.101	-3.362	-23.828						
4	0.000	6.406	23.739	-22.936	31.357					
5	0.000	-9.480	11.834	-18.169	28.785	19.956				
6	0.000	-6.605	6.823	2.155	-5.738	25.027	-20.356			
7	0.000	5.065	-4.771	12.734	-24.226	15.652	8.076	-14.750		
8	0.000	5.343	-3.341	2.263	-7.294	-0.900	-12.434	-20.873	13.894	
9	0.000	0.511	0.703	-4.144	11.280	-7.733	16.985	-4.129	14.440	2.320

Carrington Rotation 1668:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-2.909									
1	40.119	-5.448								
2	2.902	5.473	-41.917							
3	34.338	-9.144	-15.470	-17.470						
4	-2.807	-4.365	-24.348	15.428	-11.904					
5	38.724	3.436	1.284	2.877	-7.209	-3.820				
6	-2.318	2.063	21.655	15.201	2.836	-38.133	2.804			
7	14.323	-6.134	-2.488	6.762	4.642	-12.357	-26.960	-9.247		
8	-2.277	1.872	-11.770	-10.011	1.436	-21.018	-0.420	-21.007	8.449	
9	-5.905	3.261	-7.218	-2.885	-2.527	7.123	-3.846	9.966	27.021	9.209

h's

0	0.000									
1	0.000	10.611								
2	0.000	-3.506	8.058							
3	0.000	-12.413	-1.990	26.143						
4	0.000	-4.756	25.476	19.471	30.129					
5	0.000	8.384	15.047	27.655	28.634	-13.204				
6	0.000	2.455	5.425	-3.755	5.834	-15.168	-22.026			
7	0.000	-1.970	-2.239	-10.916	-13.823	-7.519	6.646	10.221		
8	0.000	-2.182	-2.303	-4.227	-5.425	-1.058	-14.350	17.851	14.781	
9	0.000	-1.295	-0.030	5.413	5.760	8.906	18.684	1.789	12.010	-2.893

Carrington Rotation 1669

g's

0	6.985									
1	37.170	8.193								
2	-2.624	-7.430	-32.916							
3	30.980	6.946	-20.658	-3.529						
4	-0.593	5.362	-15.833	-20.626	-11.166					
5	43.586	-5.275	13.283	-6.319	-18.823	3.848				
6	-0.594	-1.174	22.018	-0.284	-0.613	27.705	-5.450			
7	6.492	8.230	-3.377	0.837	-3.545	-1.273	11.957	-9.897		
8	-1.871	-1.390	-6.128	5.017	6.019	11.035	-14.280	32.857	-2.028	
9	2.939	-4.511	-5.259	0.707	2.202	-3.885	2.454	-1.639	28.640	10.678

h's

0	0.000									
1	0.000	-6.353								
2	0.000	2.555	22.784							
3	0.000	5.714	-0.904	-16.972						
4	0.000	-4.770	25.245	-23.959	18.305					
5	0.000	-8.131	8.461	-19.935	27.935	22.098				
6	0.000	3.415	-1.011	13.719	6.809	-18.246	-18.762			
7	0.000	2.344	1.456	7.329	1.117	11.930	-9.834	-10.458		
8	0.000	-6.736	1.567	5.189	-3.901	-7.812	-33.910	3.338	-13.645	
9	0.000	4.365	-1.543	0.702	0.773	-9.722	11.110	-20.026	14.017	-17.208

Carrington Rotation 1669:180

g's

0	10.133									
1	35.980	-16.551								
2	-3.233	-0.306	-29.031							
3	34.000	-15.500	-20.096	2.855						
4	2.273	-4.283	-9.765	18.541	-7.750					
5	40.345	5.280	19.078	9.046	-7.185	-7.112				
6	-0.159	-2.091	19.419	3.338	-0.744	-27.611	-8.400			
7	4.581	-7.424	-2.272	-2.852	-0.836	-0.159	10.770	7.538		
8	-2.305	1.509	-6.457	-8.654	7.114	-5.804	-18.087	-31.591	-9.718	
9	3.356	1.703	-3.520	-1.487	2.525	3.773	4.643	-4.901	7.668	-10.858

h's

0	0.000									
1	0.000	6.818								
2	0.000	-5.592	18.867							
3	0.000	-8.636	-6.938	19.424						
4	0.000	5.924	17.460	17.529	19.308					
5	0.000	11.565	6.992	25.175	22.693	-15.268				
6	0.000	-3.823	-1.898	-10.282	9.208	28.710	-19.914			
7	0.000	-1.040	0.966	-10.128	0.232	-7.120	-14.166	15.037		
8	0.000	4.524	2.164	-2.933	-6.499	10.235	-29.649	9.337	-16.134	
9	0.000	-4.900	-4.311	-1.935	-1.375	7.252	13.292	22.731	10.947	13.031

Carrington Rotation 1670

g's

	0	1	2	3	4	5	6	7	8	9
0	2.043									
1	29.400	14.738								
2	-4.418	-7.894	-16.893							
3	33.244	8.282	-26.960	-9.321						
4	5.346	0.017	-3.437	-32.602	-14.093					
5	41.641	-11.631	10.180	-11.935	-5.546	3.735				
6	-2.691	3.740	12.547	0.350	-13.826	2.117	0.052			
7	4.158	6.482	4.751	3.291	10.565	9.206	20.208	-13.374		
8	-0.574	-2.814	-5.838	4.306	4.897	0.111	-13.547	12.797	-0.440	
9	4.731	1.003	-7.034	1.772	0.993	-2.167	0.667	-5.706	5.090	6.515

h's

0	0.000									
1	0.000	-18.370								
2	0.000	2.816	23.374							
3	0.000	4.842	-0.228	-10.383						
4	0.000	-6.161	13.085	-26.617	18.895					
5	0.000	-7.024	-0.814	-12.582	29.932	7.216				
6	0.000	0.858	-8.554	-3.718	1.829	-36.849	-18.610			
7	0.000	-2.950	4.222	6.980	1.666	0.116	-23.838	-14.189		
8	0.000	-3.609	-1.107	8.501	-9.505	-3.174	-19.040	-6.595	-17.687	
9	0.000	5.915	-3.491	-1.654	-6.252	-6.193	5.461	-15.048	-9.894	-2.528

Carrington Rotation 1670:180

g's

0	3.052									
1	33.888	-11.581								
2	-3.533	1.918	-20.025							
3	26.940	-8.093	-23.198	20.625						
4	7.341	-6.828	-5.213	34.402	-7.537					
5	41.593	7.982	5.604	25.852	6.683	-1.748				
6	-1.467	-1.838	13.524	-2.129	-12.325	3.854	-1.368			
7	2.758	-2.624	3.187	-2.690	7.879	-13.066	16.121	12.183		
8	-0.742	1.382	-8.780	-0.725	-2.506	0.620	-13.380	1.385	9.943	
9	2.338	-0.297	-9.571	-0.917	-3.623	0.082	-3.760	10.458	19.299	-4.931

h's

0	0.000									
1	0.000	19.431								
2	0.000	0.835	17.822							
3	0.000	-3.611	-6.795	3.662						
4	0.000	6.397	7.048	24.433	24.606					
5	0.000	8.677	-6.663	10.968	24.535	-4.828				
6	0.000	-0.842	-11.935	3.742	13.626	47.545	-15.415			
7	0.000	5.525	2.536	-1.750	-3.145	0.712	-27.609	7.701		
8	0.000	3.506	-0.153	-8.638	-9.294	4.330	-21.037	-0.157	-18.877	
9	0.000	-5.129	-3.822	-1.470	-4.265	1.533	0.939	13.634	5.422	9.765

Carrington Rotation 1671

g's

0	13.946									
1	36.016	8.484								
2	-5.340	3.181	-1.202							
3	27.631	15.225	-22.276	-21.005						
4	8.796	7.295	5.376	-47.916	0.202					
5	39.416	-11.572	-4.703	-21.222	12.778	2.646				
6	2.360	-5.130	5.008	5.170	-12.358	-11.411	1.541			
7	-0.725	2.053	7.467	4.175	5.350	14.731	17.372	-12.138		
8	-3.027	5.983	-4.421	-0.312	-6.769	-4.614	-12.978	-18.639	3.952	
9	4.771	5.032	-10.645	-3.451	-3.277	-0.918	-6.363	-16.343	18.016	3.143

h's

0	0.000									
1	0.000	-21.051								
2	0.000	0.858	15.044							
3	0.000	1.068	7.308	6.188						
4	0.000	0.772	10.900	-26.756	22.877					
5	0.000	-4.378	-6.845	-0.008	24.965	14.217				
6	0.000	-1.273	-13.258	-9.099	18.856	-43.973	-15.092			
7	0.000	-4.037	-4.772	-2.851	2.577	6.099	-23.586	3.004		
8	0.000	-5.743	0.327	11.730	-6.458	-7.979	-14.259	2.323	-17.671	
9	0.000	5.210	0.403	2.389	-11.875	-5.949	3.417	-2.918	-8.894	-5.455

Carrington Rotation 1671:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	3.509									
1	35.119	-7.761								
2	-9.769	-0.850	-6.643							
3	25.811	-10.061	-36.111	23.738						
4	9.800	-4.851	-4.814	36.039	7.260					
5	42.975	14.553	-9.592	25.555	0.866	7.611				
6	1.219	8.084	2.131	-4.690	5.100	16.266	1.445			
7	-3.506	0.509	8.366	-5.933	2.745	1.586	8.933	12.173		
8	-1.949	-6.355	-3.340	-0.240	-2.822	4.453	-10.900	7.941	6.152	
9	6.150	-3.406	-9.586	-0.672	1.473	0.493	-13.439	12.774	15.556	-0.247
h's										
0	0.000									
1	0.000	15.224								
2	0.000	7.409	10.791							
3	0.000	-4.483	15.384	-16.832						
4	0.000	-2.684	10.765	26.798	16.887					
5	0.000	3.749	-5.838	-19.887	16.389	-13.450				
6	0.000	3.319	-7.880	4.416	13.756	39.676	-9.604			
7	0.000	0.516	-1.520	-0.925	3.581	-0.675	-16.457	-6.536		
8	0.000	4.528	4.285	-14.607	-3.663	6.726	-0.956	-9.816	-18.113	
9	0.000	-5.400	3.015	-1.091	-12.870	10.639	7.587	1.213	-17.999	-0.178

Carrington Rotation 1672

	0	1	2	3	4	5	6	7	8	9
g's										
0	-3.834									
1	31.593	-4.378								
2	-6.893	1.662	-3.881							
3	22.466	0.089	-27.871	-16.479						
4	11.900	5.449	0.223	-45.502	-1.498					
5	43.524	-10.362	-10.914	-27.199	-8.351	-6.176				
6	0.428	-5.724	-4.542	-5.135	-1.123	-25.829	0.743			
7	-0.601	2.709	2.101	-0.980	-10.128	-18.845	-6.272	-15.652		
8	-1.985	1.615	-5.505	3.091	-4.754	-18.557	-14.049	-21.486	3.680	
9	1.199	2.431	0.045	3.696	-1.334	-10.926	-19.331	-19.507	-0.899	-2.285
h's										
0	0.000									
1	0.000	-21.411								
2	0.000	-8.970	0.135							
3	0.000	4.356	25.040	22.930						
4	0.000	0.813	6.283	-7.534	21.045					
5	0.000	1.597	0.060	29.074	20.129	8.547				
6	0.000	-4.699	-4.823	3.807	23.267	-25.861	-4.178			
7	0.000	-0.614	-1.076	-0.788	4.252	1.786	-15.186	5.528		
8	0.000	-5.141	4.239	4.754	-5.917	-6.462	-6.472	16.461	-17.199	
9	0.000	4.989	2.405	-1.789	-12.004	-8.710	-2.410	1.798	-32.079	-2.651

Carrington Rotation 1672:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	-22.321									
1	17.365	-3.548								
2	-17.986	31.871	-19.297							
3	23.708	-8.880	-37.837	8.287						
4	25.448	-6.761	-30.744	51.537	-13.176					
5	48.090	13.503	-25.048	2.046	-19.851	1.106				
6	2.578	-0.025	-5.839	5.254	-32.558	39.720	-1.297			
7	-3.181	-1.369	5.291	-8.136	-31.289	8.871	-9.440	15.286		
8	-5.492	6.563	3.829	-12.386	-19.206	14.882	-22.017	20.193	2.423	
9	0.980	-8.182	2.770	3.754	-8.421	4.774	-25.837	13.748	-10.892	4.551
h's										
0	0.000									
1	0.000	20.820								
2	0.000	4.791	2.183							
3	0.000	-6.658	45.503	-24.324						
4	0.000	0.780	12.291	9.762	19.127					
5	0.000	-1.221	5.773	-38.164	22.916	-15.808				
6	0.000	3.794	-3.174	-5.540	8.867	23.018	-8.325			
7	0.000	-0.308	-1.682	-0.478	9.482	-28.388	-1.870	-8.591		
8	0.000	3.526	2.657	-3.759	-16.174	-9.365	-18.223	-11.865	-19.489	
9	0.000	-4.744	3.607	5.408	-16.174	-5.185	-8.923	-20.417	-30.358	0.143

Carrington Rotation 1673

g's

	0	1	2	3	4	5	6	7	8	9
0	-4.608									
1	20.865	4.414								
2	-14.624	-8.537	-4.136							
3	24.219	19.878	-25.534	-5.156						
4	21.066	8.772	-16.656	-34.838	-7.191					
5	42.898	-9.411	-11.203	18.915	1.189	3.184				
6	0.806	-4.211	-6.551	3.493	-8.680	-8.040	-0.253			
7	-2.720	-2.178	1.646	17.519	-20.109	8.675	-11.135	-0.257		
8	-2.718	-9.842	3.971	14.554	-16.012	0.002	-6.210	-8.358	9.300	
9	2.537	10.804	0.296	-11.237	-3.508	10.350	-21.559	-1.596	-16.538	-0.419

h's

0	0.000									
1	0.000	-17.931								
2	0.000	-10.787	-4.494							
3	0.000	6.647	46.629	30.471						
4	0.000	-1.744	4.995	-16.076	12.771					
5	0.000	3.813	7.040	35.131	15.330	20.259				
6	0.000	-2.792	0.381	10.983	10.517	-8.434	-16.766			
7	0.000	-2.542	-1.773	3.207	10.143	38.898	14.733	7.358		
8	0.000	-3.996	6.443	2.796	-11.273	16.302	-11.403	16.108	-11.885	
9	0.000	3.567	-0.898	-3.807	-8.312	10.362	-1.905	33.894	-14.674	6.186

Carrington Rotation 1673:180

g's

0	9.387									
1	19.029	0.320								
2	0.081	17.159	18.371							
3	29.820	-8.408	-9.188	-0.135						
4	8.652	-3.571	20.099	26.324	12.104					
5	35.385	4.417	9.677	-9.773	8.636	0.012				
6	-5.047	2.078	1.127	-2.295	26.518	3.969	9.156			
7	-4.417	-2.159	6.564	-13.986	15.561	-8.071	-17.471	9.937		
8	4.056	8.497	-1.508	-9.039	0.201	3.063	8.495	6.542	11.007	
9	10.065	-4.443	-5.906	8.458	7.021	-7.620	-3.035	3.901	-16.326	6.188

h's

0	0.000									
1	0.000	8.642								
2	0.000	-3.481	-0.291							
3	0.000	-5.711	60.056	-32.667						
4	0.000	-1.660	12.385	15.929	5.675					
5	0.000	-3.801	12.122	-25.647	17.514	-12.971				
6	0.000	2.157	-0.900	-16.837	23.513	12.766	-22.459			
7	0.000	-0.633	-3.868	3.567	14.146	-13.430	17.525	0.953		
8	0.000	1.000	1.375	5.792	-3.705	-0.923	-2.845	-24.698	-8.600	
9	0.000	-1.175	-0.719	3.144	-2.066	7.161	9.746	-11.499	-4.598	-2.435

Carrington Rotation 1674

g's

0	-17.124									
1	11.907	4.549								
2	-9.242	-39.336	-14.579							
3	30.944	6.528	9.821	-19.487						
4	16.665	5.946	-15.423	-29.526	30.265					
5	40.574	-1.849	13.415	14.786	-11.150	6.184				
6	-5.825	-1.890	9.863	-9.013	39.658	15.353	15.426			
7	-3.617	-0.297	-0.047	19.075	19.519	8.726	0.137	7.266		
8	4.609	-8.940	0.808	12.402	-4.077	2.615	0.433	2.554	-4.013	
9	7.915	-1.246	-2.566	-14.963	8.671	3.887	5.114	17.730	-4.938	-21.233

h's

0	0.000									
1	0.000	-12.190								
2	0.000	-10.342	12.431							
3	0.000	1.772	41.257	-2.455						
4	0.000	-1.011	7.182	4.256	-12.315					
5	0.000	-2.827	17.276	-13.651	-3.309	15.883				
6	0.000	4.399	1.462	17.179	23.221	-33.020	-30.821			
7	0.000	-2.218	-6.409	-1.487	4.086	14.163	20.378	11.352		
8	0.000	-0.256	4.285	-10.017	5.885	1.837	-12.826	31.314	9.806	
9	0.000	1.538	-0.255	-6.110	2.096	-14.231	17.623	3.829	-1.734	-11.148

	0	1	2	3	4	5	6	7	8	9
						Carrington Rotation 1674:180				
0	1.751									
1	16.757	-11.666								
2	-3.480	13.688	-8.860							**g's**
3	26.842	-20.983	14.001	11.578						
4	8.599	-12.191	-11.021	8.942	19.689					
5	38.244	-3.557	13.044	-27.661	-9.663	-8.110				
6	-4.021	6.604	4.142	-0.795	27.152	-17.976	21.172			
7	-2.479	1.255	-3.677	-13.541	12.593	-8.357	18.381	-12.304		
8	5.854	8.816	0.357	-2.157	-10.094	-2.580	10.948	-10.122	-3.276	
9	5.889	-4.596	-4.122	21.251	3.098	0.153	17.803	-11.043	-8.562	12.369
0	0.000									**h's**
1	0.000	24.269								
2	0.000	13.965	14.315							
3	0.000	9.223	33.806	14.878						
4	0.000	2.368	0.259	-2.576	-15.278					
5	0.000	2.720	9.587	27.843	-20.562	-23.286				
6	0.000	-4.911	-10.019	-11.638	6.559	25.903	-29.399			
7	0.000	2.550	-10.851	1.457	-11.760	-24.077	14.552	-7.671		
8	0.000	0.833	4.544	10.391	-0.004	-9.444	-25.063	-15.213	10.100	
9	0.000	0.183	3.617	5.873	4.912	9.632	7.834	4.461	-16.478	16.417

						Carrington Rotation 1675				
0	2.197									
1	26.287	9.033								
2	-3.548	-26.943	1.091							**g's**
3	24.643	11.989	19.895	-30.460						
4	10.933	1.139	-1.666	0.303	4.311					
5	34.631	2.849	12.820	-6.292	-14.474	11.480				
6	-5.169	2.235	2.885	6.440	15.996	6.709	29.483			
7	3.060	0.358	0.212	8.400	-1.061	12.729	10.321	-8.048		
8	2.438	-2.194	1.509	5.432	-2.157	-0.700	14.846	23.873	-2.838	
9	5.391	1.564	-3.534	-17.402	-1.516	-1.256	20.311	-2.517	14.373	-7.663
0	0.000									**h's**
1	0.000	-27.696								
2	0.000	-6.683	27.131							
3	0.000	-12.693	19.804	-0.602						
4	0.000	1.404	10.617	11.661	-24.269					
5	0.000	1.091	-6.400	-16.278	-12.469	10.194				
6	0.000	-0.471	-13.463	21.013	-19.500	-25.899	-17.599			
7	0.000	-0.503	-9.613	-4.521	-13.517	15.008	0.260	10.748		
8	0.000	3.647	3.933	-7.280	-9.449	0.432	-22.714	-4.623	-5.796	
9	0.000	-2.604	10.084	2.830	5.785	-1.790	-5.081	-7.265	-4.675	-15.246

						Carrington Rotation 1675:180				
0	-2.666									
1	22.766	-5.443								
2	-0.230	20.755	-13.269							**g's**
3	25.816	-9.149	30.764	32.694						
4	5.888	1.848	-2.792	-12.247	2.302					
5	31.769	7.520	12.236	15.369	-9.425	-7.673				
6	-3.427	-4.563	0.913	3.850	8.921	-14.476	33.057			
7	5.072	-1.199	0.676	-4.993	-15.376	-5.183	21.450	2.324		
8	1.811	1.917	-4.403	-7.493	-3.510	2.586	0.391	-9.847	6.693	
9	4.913	-1.250	-1.746	8.765	-5.594	-0.058	11.057	0.289	18.467	2.330
0	0.000									**h's**
1	0.000	31.182								
2	0.000	-1.313	27.163							
3	0.000	17.511	20.526	-8.699						
4	0.000	2.464	5.721	-8.438	-24.251					
5	0.000	-4.544	-9.706	23.522	-21.213	-16.914				
6	0.000	-3.693	-3.879	-10.212	-18.188	25.721	-11.359			
7	0.000	2.909	-8.847	2.649	-6.065	-9.380	-18.728	-13.787		
8	0.000	-3.492	9.589	6.512	-0.298	-2.988	-15.229	14.130	-7.121	
9	0.000	1.939	12.480	-10.602	2.949	2.792	2.320	-1.188	-4.263	26.252

Carrington Rotation 1676

g's

	0	1	2	3	4	5	6	7	8	9
0	16.574									
1	13.920	24.913								
2	-3.121	-34.990	4.368							
3	23.914	15.163	21.859	-26.278						
4	0.708	2.644	9.069	38.011	2.519					
5	34.089	-2.025	1.411	-21.353	-6.341	21.231				
6	-1.055	5.282	1.826	-4.201	-12.708	7.077	30.058			
7	1.807	-0.935	1.061	7.475	-15.337	13.949	34.206	-20.618		
8	5.471	-8.402	-8.845	4.888	-7.026	-8.561	-4.403	28.191	27.439	
9	5.168	6.904	-6.199	-7.556	0.535	-4.472	5.463	-26.280	12.377	9.294

h's

0	0.000									
1	0.000	-24.838								
2	0.000	-1.544	35.911							
3	0.000	-16.510	-4.931	22.622						
4	0.000	-2.845	14.296	-1.733	-22.270					
5	0.000	0.969	-5.861	0.928	-5.461	20.399				
6	0.000	3.249	0.438	0.310	-22.300	-32.379	9.546			
7	0.000	-1.288	-5.944	-0.526	-2.571	2.561	-28.751	2.020		
8	0.000	2.571	7.436	-11.556	5.847	1.802	3.758	-3.067	-22.187	
9	0.000	2.517	8.346	3.004	-1.884	-4.664	-3.719	-4.585	16.723	-10.920

Carrington Rotation 1676:180

g's

0	15.699									
1	14.586	-0.835								
2	-4.140	33.921	2.171							
3	17.346	-15.155	23.131	56.070						
4	-3.030	-4.803	12.481	-19.722	-22.476					
5	39.736	2.999	0.116	23.796	2.964	-7.723				
6	-3.222	0.191	0.091	4.272	-15.181	-20.988	24.617			
7	-2.486	0.077	-5.106	-6.365	-13.248	-4.427	46.495	20.847		
8	2.037	4.227	0.406	-1.392	7.379	9.869	-9.726	-38.300	29.487	
9	6.251	-5.682	-0.236	12.447	6.077	-1.896	-2.947	27.075	4.010	-20.433

h's

0	0.000									
1	0.000	27.852								
2	0.000	2.260	35.243							
3	0.000	14.652	-13.726	-10.274						
4	0.000	-2.011	14.501	-3.275	-3.436					
5	0.000	-3.785	-8.759	2.240	15.252	-37.161				
6	0.000	2.032	1.132	-1.673	-23.475	32.485	31.559			
7	0.000	-3.302	-1.939	-9.136	-5.557	-2.592	-30.569	-17.197		
8	0.000	-8.243	3.681	3.070	10.210	5.373	13.656	16.158	-3.088	
9	0.000	-7.415	6.303	9.192	5.091	13.742	-7.179	-4.393	0.521	-2.703

Carrington Rotation 1677

g's

0	22.008									
1	24.299	4.531								
2	-14.834	-16.839	13.562							
3	12.932	-0.897	28.526	-35.910						
4	3.306	0.322	12.292	31.552	-28.446					
5	36.733	-2.219	-14.117	-18.740	-0.714	24.047				
6	-5.895	6.270	6.949	-2.793	-22.137	20.949	21.142			
7	-6.069	3.760	7.802	11.156	-1.976	-0.802	27.012	-11.754		
8	-1.498	-3.393	-0.390	-2.898	10.647	-24.783	9.641	25.964	42.512	
9	11.105	0.990	-2.658	-10.009	5.686	-5.231	-20.660	-17.227	-4.211	12.608

h's

0	0.000									
1	0.000	-26.584								
2	0.000	7.140	24.574							
3	0.000	-24.503	-4.303	22.376						
4	0.000	7.643	-0.023	15.219	0.529					
5	0.000	4.161	-9.889	-4.746	31.918	35.701				
6	0.000	-8.333	-4.280	-13.126	-21.129	-21.198	43.333			
7	0.000	4.004	3.423	11.368	4.604	-15.107	-15.600	6.453		
8	0.000	6.321	6.341	6.777	13.132	7.852	5.700	-28.373	14.182	
9	0.000	1.894	7.383	-6.836	-1.067	-17.063	-12.281	16.899	-2.769	8.489

Carrington Rotation 1677:180

g's

	0	1	2	3	4	5	6	7	8	9
0	12.604									
1	14.974	16.634								
2	-10.108	17.568	12.639							
3	16.150	0.472	40.241	57.595						
4	2.656	1.299	12.922	-26.679	-54.986					
5	35.916	1.970	-20.164	14.283	-6.729	1.924				
6	-0.613	-0.540	3.015	-4.286	-35.362	-31.009	19.711			
7	-4.753	-3.844	11.747	-14.607	-1.379	6.318	46.913	-0.042		
8	-5.141	-1.922	0.575	4.184	18.693	30.145	7.182	-28.434	38.371	
9	10.159	1.161	-0.415	13.323	1.832	-2.888	-24.108	10.291	-2.279	-15.799

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	21.840								
2	0.000	-20.918	25.805							
3	0.000	27.031	-5.491	-9.927						
4	0.000	-3.883	4.362	-8.796	8.068					
5	0.000	-5.072	-7.002	12.610	40.780	-55.236				
6	0.000	4.385	-3.329	9.620	-23.919	6.698	78.208			
7	0.000	1.714	9.507	-20.604	-5.780	6.945	-21.228	-16.176		
8	0.000	-6.035	2.930	-4.657	13.248	-5.757	14.769	39.843	23.242	
9	0.000	-3.101	5.181	12.360	4.367	17.616	-17.685	-20.596	-10.568	-28.277

Carrington Rotation 1678

g's

	0	1	2	3	4	5	6	7	8	9
0	-4.720									
1	12.745	-15.352								
2	-12.484	-1.680	21.662							
3	17.475	-3.328	32.804	-69.996						
4	8.846	-6.601	4.580	1.625	-37.748					
5	34.562	-9.185	-30.381	1.757	18.008	-25.869				
6	-6.112	-0.091	-1.581	6.343	-25.774	37.628	8.683			
7	-6.009	11.304	17.629	15.204	-6.073	-13.934	37.098	24.686		
8	-8.231	6.069	5.356	-8.422	25.635	-8.950	6.805	21.072	17.502	
9	11.455	0.330	-3.052	-15.505	3.074	16.566	-1.122	8.717	-22.475	13.129

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-39.685								
2	0.000	21.195	36.536							
3	0.000	-31.154	21.301	6.867						
4	0.000	8.667	-6.335	-8.035	12.142					
5	0.000	10.303	-13.000	-27.466	26.890	78.056				
6	0.000	-7.188	-10.566	-18.675	-12.460	17.181	48.286			
7	0.000	-7.021	10.343	14.577	-14.534	-5.747	-13.271	25.918		
8	0.000	5.988	7.312	9.419	6.800	-15.534	0.853	-29.648	39.728	
9	0.000	-1.099	5.964	-8.492	1.589	-11.290	8.728	15.454	-10.742	12.121

Carrington Rotation 1678:180

g's

	0	1	2	3	4	5	6	7	8	9
0	2.463									
1	6.205	16.971								
2	-17.372	-12.348	47.126							
3	16.141	12.390	32.893	75.364						
4	10.935	6.941	-0.885	14.419	-42.725					
5	36.269	10.653	-30.505	5.463	1.926	34.098				
6	-7.567	-1.813	-0.399	-14.634	-30.078	-28.351	1.965			
7	-11.957	-6.971	20.569	-22.380	11.377	9.167	35.563	-25.844		
8	-6.065	-7.953	1.032	17.688	25.903	3.251	10.088	-27.053	4.180	
9	14.274	-1.560	-5.872	13.425	-0.076	-21.586	-8.037	-17.240	-33.908	10.741

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	36.752								
2	0.000	-24.846	30.589							
3	0.000	30.903	1.408	20.828						
4	0.000	-13.257	-0.722	16.576	6.976					
5	0.000	-9.784	-9.759	24.545	31.006	-63.013				
6	0.000	9.890	-5.069	6.514	0.485	-26.280	48.835			
7	0.000	6.945	2.388	-14.269	-18.962	-0.955	0.250	-10.898		
8	0.000	-10.534	10.656	-2.315	5.045	27.490	6.893	30.550	23.288	
9	0.000	0.507	4.156	5.516	3.115	9.260	-0.747	-14.814	-8.036	2.988

Carrington Rotation 1679

	0	1	2	3	4	5	6	7	8	9
g's										
0	-2.823									
1	11.228	-29.655								
2	-4.471	13.098	28.887							
3	16.462	-7.576	39.364	-81.786						
4	0.526	-3.815	8.090	-25.427	-53.976					
5	35.477	-12.067	-27.584	-9.318	4.517	-44.048				
6	-2.739	0.713	-11.910	10.680	-31.346	11.485	4.249			
7	-11.034	4.974	20.102	13.770	12.603	-21.111	34.980	26.662		
8	-7.464	5.808	4.208	-17.410	12.414	-14.001	1.880	21.119	10.151	
9	14.138	3.143	0.760	-11.189	-12.210	17.174	-11.779	19.799	-43.973	3.842
h's										
0	0.000									
1	0.000	-32.839								
2	0.000	27.142	25.050							
3	0.000	-21.500	9.865	-28.318						
4	0.000	14.536	6.192	-9.478	3.154					
5	0.000	8.814	-5.312	-11.472	33.010	50.170				
6	0.000	-9.202	-1.215	-3.577	5.112	36.124	34.250			
7	0.000	-7.664	2.099	11.723	-17.661	9.241	-13.121	7.771		
8	0.000	8.407	6.470	6.762	0.849	-22.920	-4.395	-15.758	7.542	
9	0.000	-1.236	2.974	-8.667	2.775	-22.463	-17.483	8.024	-25.912	13.539

Carrington Rotation 1679:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	4.978									
1	11.287	33.689								
2	-10.823	-4.684	35.518							
3	6.108	9.867	48.869	87.051						
4	1.185	-0.959	3.912	23.609	-22.715					
5	44.557	10.822	-28.058	31.445	-0.136	22.525				
6	-5.962	-1.179	-6.953	-26.254	-17.143	7.846	9.009			
7	-8.560	-5.646	14.965	-9.997	13.192	-2.619	7.862	-23.138		
8	-5.367	-5.426	8.771	15.854	-0.353	8.192	39.400	-11.372	7.560	
9	6.265	-5.985	5.767	8.181	-5.756	-13.975	-17.027	-25.090	-27.261	-9.723
h's										
0	0.000									
1	0.000	32.382								
2	0.000	-26.775	27.301							
3	0.000	17.929	16.347	14.558						
4	0.000	-25.079	-0.852	25.196	19.264					
5	0.000	-9.606	1.121	-4.000	23.367	-30.280				
6	0.000	14.168	-2.531	0.390	33.928	-19.931	19.161			
7	0.000	1.215	-0.368	-0.092	-25.384	-20.316	-1.981	5.442		
8	0.000	-4.443	7.934	-16.642	3.307	25.305	-14.867	-7.276	7.197	
9	0.000	3.111	2.359	6.544	-1.251	15.833	-27.433	25.623	-4.108	-6.091

Carrington Rotation 1680

	0	1	2	3	4	5	6	7	8	9
g's										
0	-0.794									
1	2.349	-45.854								
2	-10.127	29.968	46.249							
3	7.932	1.866	63.395	-102.947						
4	8.844	4.470	2.190	-37.495	-18.305					
5	45.186	-18.618	-31.422	-23.404	1.450	-21.487				
6	-11.709	-10.799	-2.220	38.672	-2.149	9.923	-8.678			
7	-12.080	2.090	14.233	10.118	9.884	0.350	-11.219	20.125		
8	-1.622	15.425	5.047	-19.510	1.044	0.095	40.782	11.205	5.968	
9	6.631	2.088	3.158	-11.208	-2.580	20.465	-17.304	9.460	-10.183	-21.429
h's										
0	0.000									
1	0.000	-42.481								
2	0.000	12.833	28.742							
3	0.000	-21.062	40.471	-9.111						
4	0.000	27.373	6.272	-16.796	9.070					
5	0.000	16.071	2.738	-7.883	9.385	44.363				
6	0.000	-12.987	-5.420	-0.572	47.648	30.481	22.975			
7	0.000	-2.864	-6.966	6.720	-15.249	27.986	11.183	-17.019		
8	0.000	2.543	8.081	15.109	1.247	-27.952	-0.986	-17.099	22.461	
9	0.000	0.217	6.313	-10.338	-2.644	-8.953	-14.541	-21.563	9.011	-6.908

Carrington Rotation 1680:180

	0	1	2	3	4	5	6	7	8	9
0	-7.532									
1	12.549	41.306								
2	-12.848	-19.566	51.937							
3	2.570	-3.039	94.726	93.039						
4	10.367	-10.188	-10.491	68.590	6.581					
5	43.288	15.480	-29.817	19.275	-7.942	-3.765				
6	-9.556	7.331	-6.003	-26.286	18.317	10.284	-8.403			
7	-8.070	0.880	16.967	-12.863	-10.354	-5.661	4.276	0.509		
8	1.947	-10.708	11.318	6.367	0.348	13.705	26.234	0.215	-19.579	
9	4.024	-6.874	6.531	12.116	-4.161	-10.374	-2.671	10.462	-7.193	23.840

g's

0	0.000									
1	0.000	33.495								
2	0.000	-15.921	33.344							
3	0.000	21.856	28.594	0.007						
4	0.000	-25.240	7.192	44.252	12.589					
5	0.000	-17.753	-2.195	-9.359	19.136	-22.270				
6	0.000	9.015	-7.854	13.755	44.855	-38.392	-10.014			
7	0.000	0.192	-4.922	-12.565	-5.061	-4.095	25.959	38.677		
8	0.000	-0.119	11.157	-13.701	-6.809	7.167	-16.783	27.468	26.147	
9	0.000	8.048	2.597	11.482	-8.581	9.045	18.487	30.829	25.778	-9.547

h's

Carrington Rotation 1681

0	-9.974									
1	0.423	-52.118								
2	-2.594	35.419	40.443							
3	4.127	-15.511	91.501	-88.519						
4	3.083	8.138	2.648	-47.879	12.147					
5	43.233	-2.690	-17.317	-21.054	-29.048	-6.799				
6	-5.872	0.469	-3.450	26.044	12.228	-1.388	4.987			
7	-5.628	2.209	9.851	6.600	-10.075	17.657	12.810	-6.403		
8	3.645	8.143	2.709	-10.346	2.670	-5.060	30.353	-9.494	-39.548	
9	-0.923	1.297	9.938	-8.855	-0.558	7.215	9.459	-16.107	-14.837	-16.395

g's

0	0.000									
1	0.000	-32.752								
2	0.000	7.362	25.511							
3	0.000	-16.920	28.676	-13.242						
4	0.000	17.695	-11.434	-39.965	20.170					
5	0.000	14.100	-1.666	25.501	32.313	18.155				
6	0.000	-6.900	1.170	-7.502	29.606	15.968	-15.451			
7	0.000	5.101	4.094	15.260	-6.979	4.351	41.943	-17.838		
8	0.000	0.461	13.994	7.612	-11.128	-11.463	-11.603	-25.989	13.579	
9	0.000	-9.250	-1.089	-15.254	-5.184	-5.569	31.193	-19.501	18.683	1.938

h's

Carrington Rotation 1681:180

0	1.999									
1	6.007	51.359								
2	-5.176	-57.897	38.645							
3	4.323	10.841	72.785	69.425						
4	3.208	-5.960	6.389	55.043	14.569					
5	45.254	2.114	-18.483	5.128	-28.334	5.247				
6	-1.689	-0.912	3.511	-5.087	26.951	-21.344	-0.547			
7	-7.812	-5.396	11.511	-6.699	2.594	7.044	16.601	16.396		
8	2.583	-7.039	1.383	5.524	-1.821	-9.566	19.710	15.428	-32.004	
9	4.564	3.062	1.109	5.165	-2.180	-6.378	20.041	36.088	-4.827	22.151

g's

0	0.000									
1	0.000	42.055								
2	0.000	4.974	35.395							
3	0.000	13.982	7.973	11.517						
4	0.000	-17.338	-11.074	24.666	6.107					
5	0.000	-16.304	-11.989	-30.419	41.339	-16.188				
6	0.000	11.591	1.570	-2.073	-0.255	-25.420	-27.882			
7	0.000	0.187	6.167	-7.170	14.092	10.665	18.114	6.748		
8	0.000	0.630	11.691	-0.339	-9.691	13.114	-11.387	17.558	13.956	
9	0.000	9.496	-2.065	18.041	-9.827	2.186	23.286	8.994	7.184	-9.759

h's

Carrington Rotation 1682

	0	1	2	3	4	5	6	7	8	9
0	1.930									
1	3.887	-45.861								
2	-5.570	29.664	24.893							
3	-2.542	-15.569	96.414	-43.769						
4	0.389	7.237	3.629	-71.872	-14.260					
5	48.041	0.437	-8.780	5.357	-20.007	9.337				
6	0.468	1.719	4.138	1.010	8.983	-21.976	-6.382			
7	-4.316	6.865	5.951	9.387	11.179	7.973	37.530	-12.504		
8	1.136	3.253	4.069	4.304	9.485	0.127	-1.962	-1.897	-45.031	
9	4.994	-2.063	6.039	1.844	-4.208	-3.149	20.298	-23.078	-16.102	-19.337

g's

0	0.000									
1	0.000	-30.849								
2	0.000	-17.458	22.180							
3	0.000	-11.890	0.048	-1.358						
4	0.000	8.659	-21.169	-15.620	15.144					
5	0.000	11.420	-14.846	39.598	46.032	-0.924				
6	0.000	-9.843	1.957	6.374	-1.392	25.644	-13.392			
7	0.000	2.053	2.207	-1.611	10.104	-13.232	-27.284	-14.078		
8	0.000	-1.584	8.843	-2.698	-2.984	-2.175	-0.883	7.766	25.043	
9	0.000	-9.316	2.160	-9.824	-6.391	1.030	9.338	-28.973	-2.125	-17.798

h's

Carrington Rotation 1682:180

0	-2.838									
1	0.534	36.520								
2	-5.886	-48.796	26.114							
3	6.889	13.195	75.350	29.458						
4	4.010	-6.834	2.551	46.183	-23.616					
5	39.821	-6.153	-20.685	-10.358	-2.329	-9.493				
6	2.199	1.046	5.186	-4.654	-10.550	15.631	-15.451			
7	-4.759	-5.711	6.647	-7.365	26.931	-5.909	21.903	-1.122		
8	-0.742	-2.665	-1.767	-3.505	8.208	-5.085	-20.369	6.221	-46.580	
9	8.659	-0.386	8.644	1.710	-4.950	0.766	15.944	10.761	-22.356	11.864

g's

0	0.000									
1	0.000	29.266								
2	0.000	22.167	25.868							
3	0.000	11.573	0.430	10.532						
4	0.000	3.934	-20.581	-6.933	7.717					
5	0.000	-10.801	-17.866	-29.078	28.624	2.620				
6	0.000	5.363	-4.834	-20.906	-5.304	-7.377	-7.232			
7	0.000	3.074	2.932	1.013	4.667	7.609	-39.517	9.336		
8	0.000	-0.938	8.753	3.212	-4.529	15.092	6.139	-10.473	18.952	
9	0.000	6.772	4.165	5.556	-8.762	-5.902	-2.831	4.411	1.231	16.992

h's

Carrington Rotation 1683

0	-1.658									
1	-5.201	-42.918								
2	-11.233	34.015	23.150							
3	1.777	-16.081	83.112	-28.385						
4	-9.316	6.521	-6.734	-43.388	-24.507					
5	42.744	11.887	-27.765	3.724	14.469	12.783				
6	5.348	-3.894	2.830	6.658	-6.137	-17.302	0.448			
7	-2.873	7.781	6.869	-0.225	34.856	7.703	19.316	-21.724		
8	4.333	5.796	0.985	-1.541	10.968	4.910	-7.922	-10.509	-20.385	
9	6.969	-2.235	4.283	0.745	-10.730	5.921	-4.060	-24.945	-8.987	-12.842

g's

0	0.000									
1	0.000	-27.179								
2	0.000	-30.058	22.424							
3	0.000	-8.802	-12.681	-16.754						
4	0.000	-6.257	-20.388	2.928	9.538					
5	0.000	-3.152	-20.720	19.602	27.499	-18.449				
6	0.000	-6.761	1.156	13.895	-10.711	21.100	8.543			
7	0.000	-10.524	2.065	-6.859	3.875	-14.295	-40.995	-15.505		
8	0.000	3.645	12.537	-3.350	-14.990	1.052	13.074	7.762	4.244	
9	0.000	-5.210	6.602	-12.466	-16.204	12.251	-9.753	-3.116	-7.926	4.650

h's

	0	1	2	3	4	5	6	7	8	9
0	8.617									
1	5.432	48.256								
2	-13.391	-25.801	27.014							
3	-3.430	19.910	76.423	27.456						
4	-3.747	-0.537	4.968	34.031	-21.292					
5	40.498	-14.607	-32.461	-3.800	18.624	-23.381				
6	6.033	5.449	-4.521	-14.583	-12.104	27.487	-3.080			
7	-6.442	-6.720	7.036	1.728	21.327	-4.242	12.931	22.893		
8	2.213	-5.123	2.888	2.998	13.059	7.256	-8.283	14.812	-13.256	
9	7.399	2.311	5.326	2.288	-7.972	0.876	-7.168	20.034	-4.815	9.712

Carrington Rotation 1683:180

g's

0	0.000									
1	0.000	33.258								
2	0.000	44.675	28.427							
3	0.000	3.833	-2.770	20.386						
4	0.000	8.876	-17.260	-5.198	16.717					
5	0.000	11.113	-13.116	-6.394	17.874	24.954				
6	0.000	5.504	-1.862	-9.907	-11.178	-14.172	2.210			
7	0.000	12.552	3.286	0.848	-6.877	16.263	-34.539	13.761		
8	0.000	-6.854	12.555	0.447	-17.999	-11.010	18.529	-12.280	5.525	
9	0.000	4.653	8.300	14.268	-16.442	-13.793	-1.025	9.911	7.291	10.423

h's

0	33.113									
1	17.338	-36.207								
2	-5.124	30.161	16.394							
3	-13.363	-17.379	65.544	5.203						
4	-4.700	-8.539	1.829	-18.621	-18.874					
5	41.190	10.676	-35.595	15.494	19.110	35.861				
6	9.719	-4.666	-11.396	12.133	-10.148	-3.168	6.485			
7	-5.174	4.943	5.947	-7.404	17.202	8.263	13.499	-5.379		
8	3.376	3.360	3.224	0.050	3.977	-1.530	-5.413	-7.515	-20.857	
9	4.487	-4.061	14.791	1.860	-15.776	-10.211	-6.582	-8.360	-4.703	-2.946

Carrington Rotation 1684

g's

0	0.000									
1	0.000	-10.567								
2	0.000	-26.188	13.212							
3	0.000	10.507	-11.345	-24.941						
4	0.000	-12.311	-18.841	1.711	27.596					
5	0.000	-4.484	-16.839	9.154	12.409	-26.774				
6	0.000	-6.540	0.246	9.591	-3.464	13.897	5.044			
7	0.000	-7.037	1.108	-0.007	-10.826	-10.850	-22.265	0.083		
8	0.000	5.032	5.017	-0.515	-14.627	7.863	19.122	12.433	18.797	
9	0.000	2.446	5.808	-11.402	-12.225	6.561	4.858	2.989	8.625	-5.175

h's

0	10.794									
1	8.352	46.447								
2	-2.018	-14.226	4.097							
3	-11.995	35.418	56.760	0.470						
4	-5.871	21.226	-0.851	11.101	-30.468					
5	37.726	-6.878	-32.281	1.046	2.852	-37.650				
6	11.810	5.631	-14.529	-7.839	-18.194	-3.342	13.674			
7	-5.659	-4.867	7.478	10.186	1.536	-18.741	17.360	-4.375		
8	1.717	-5.406	5.228	1.316	-2.846	-7.390	-5.556	-20.992	-3.747	
9	4.773	10.031	11.625	-7.848	-17.088	12.640	-9.916	13.415	-2.784	-15.583

Carrington Rotation 1684:180

g's

0	0.000									
1	0.000	-1.211								
2	0.000	23.974	16.825							
3	0.000	-10.844	6.986	15.215						
4	0.000	11.373	-12.074	-1.348	36.033					
5	0.000	2.210	-7.040	-8.255	20.124	4.793				
6	0.000	2.524	6.169	1.063	17.997	-31.283	13.646			
7	0.000	5.922	5.732	-0.571	0.690	1.762	-7.725	-14.225		
8	0.000	-5.332	9.231	0.438	-9.917	-15.927	16.671	-19.037	22.298	
9	0.000	-3.254	6.446	8.781	-6.307	-11.718	3.931	-14.641	-8.575	9.992

h's

Carrington Rotation 1685

	0	1	2	3	4	5	6	7	8	9
g's										
0	6.769									
1	3.517	-51.909								
2	-3.153	-10.918	8.064							
3	-2.448	-22.942	40.325	-2.227						
4	-6.265	-9.212	0.384	-15.599	-11.225					
5	37.918	4.432	-37.746	5.422	-16.565	28.244				
6	5.317	-9.265	-9.350	6.407	-9.526	19.119	21.622			
7	-7.160	1.315	9.768	-10.214	-6.566	3.740	18.403	-1.343		
8	4.553	-2.187	11.273	-0.766	-1.655	13.184	9.378	25.738	-15.356	
9	9.608	-2.621	6.938	9.884	-3.559	-9.452	-13.702	-18.604	-9.929	10.163
h's										
0	0.000									
1	0.000	-6.953								
2	0.000	-20.452	15.179							
3	0.000	7.632	-14.786	-26.839						
4	0.000	-4.071	-3.763	0.093	40.483					
5	0.000	-3.310	0.474	1.315	-1.127	3.591				
6	0.000	-1.128	6.615	-2.748	34.501	14.806	10.752			
7	0.000	-14.470	6.958	4.875	-2.901	-4.471	-5.211	28.590		
8	0.000	8.171	4.065	-5.397	-9.954	8.214	11.917	17.076	18.860	
9	0.000	3.344	-2.288	-4.221	1.484	14.133	4.683	30.279	-0.522	-17.645

Carrington Rotation 1685:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	-4.997									
1	9.002	30.068								
2	-11.058	18.862	18.035							
3	-20.925	24.055	65.915	-19.131						
4	-0.650	4.436	18.730	17.280	6.799					
5	39.772	-17.926	-35.665	-7.130	15.601	-29.575				
6	10.092	20.072	-12.203	-12.704	14.945	-16.532	34.483			
7	-11.156	3.779	15.792	2.789	4.016	-19.133	35.571	-24.462		
8	1.319	-9.110	15.321	7.842	3.466	-24.268	9.531	-28.891	9.178	
9	13.552	-10.604	4.205	-8.558	4.107	1.678	-18.007	-1.497	7.337	-5.350
h's										
0	0.000									
1	0.000	-10.902								
2	0.000	14.518	14.928							
3	0.000	-27.649	-8.762	15.061						
4	0.000	-8.174	2.528	-0.683	27.812					
5	0.000	4.736	-0.848	-4.014	2.027	-3.831				
6	0.000	-2.940	-2.055	-1.072	48.229	2.964	18.407			
7	0.000	15.716	13.652	-9.382	-5.940	24.820	1.133	-31.012		
8	0.000	-13.367	7.390	6.327	-17.890	3.147	16.512	-0.478	-5.419	
9	0.000	-7.572	-4.773	6.540	7.207	-10.741	-10.988	-25.792	3.087	38.853

Carrington Rotation 1686

	0	1	2	3	4	5	6	7	8	9
g's										
0	-3.398									
1	13.738	-30.234								
2	-15.047	-17.206	9.215							
3	-22.947	-23.956	75.128	23.871						
4	8.271	-7.561	2.726	-15.211	5.632					
5	43.097	19.321	-27.597	-4.983	15.049	28.812				
6	7.401	-20.505	-9.887	6.550	19.025	-4.006	31.902			
7	-15.482	-8.972	15.266	0.264	-6.201	19.254	49.762	32.089		
8	-5.029	11.540	11.668	-7.812	2.452	13.221	4.923	13.623	21.347	
9	12.971	14.197	3.322	5.971	11.948	-0.036	-12.174	15.713	27.040	7.433
h's										
0	0.000									
1	0.000	18.431								
2	0.000	-14.848	10.831							
3	0.000	28.213	-1.698	-17.423						
4	0.000	5.793	7.360	5.431	28.620					
5	0.000	0.893	0.286	-12.019	23.192	4.610				
6	0.000	8.548	-1.595	11.713	35.700	-10.924	12.195			
7	0.000	-11.766	9.915	12.392	-3.928	-25.392	3.839	26.211		
8	0.000	12.592	5.206	-7.867	-15.982	-12.222	2.454	2.947	-4.005	
9	0.000	1.230	-4.529	-5.581	2.097	11.683	-14.118	16.974	3.267	-19.566

Carrington Rotation 1686:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	-14.268									
1	1.231	20.402								
2	-5.952	20.168	3.852							
3	-20.991	5.690	71.380	-28.596						
4	7.881	-4.948	10.708	7.702	21.234					
5	40.383	-14.845	-25.343	-4.959	24.374	4.698				
6	9.306	19.158	-9.100	-3.284	36.909	35.649	16.412			
7	-13.610	11.027	19.721	4.913	-8.046	-3.870	22.558	-18.652		
8	-3.765	-11.720	5.420	4.155	-4.858	0.941	1.095	2.198	7.089	
9	10.537	-14.027	2.921	-8.512	-1.902	3.424	-8.132	-16.538	-1.585	-1.300
h's										
0	0.000									
1	0.000	-27.328								
2	0.000	6.323	1.064							
3	0.000	-27.051	-0.868	4.313						
4	0.000	-8.371	-6.390	-10.009	1.143					
5	0.000	2.388	-11.024	9.613	-4.499	13.732				
6	0.000	-13.058	-5.098	-11.403	12.364	35.914	23.968			
7	0.000	16.501	9.514	-4.079	-12.015	42.281	10.310	-27.264		
8	0.000	-12.637	7.447	17.856	-15.920	6.828	3.870	-3.010	9.621	
9	0.000	1.108	-9.157	5.890	3.248	-15.469	-11.020	-12.256	11.583	4.741

Carrington Rotation 1687

	0	1	2	3	4	5	6	7	8	9
g's										
0	-11.645									
1	4.260	-20.551								
2	-6.813	-35.577	-1.591							
3	-23.072	2.372	64.051	18.017						
4	5.604	12.482	12.690	-1.660	11.786					
5	35.908	15.685	-19.001	-6.490	24.682	-14.915				
6	11.425	-18.909	-8.382	16.905	28.665	-49.346	8.273			
7	-16.032	-13.436	15.077	-1.328	0.049	14.674	-4.463	-10.661		
8	-6.371	13.947	6.129	-9.103	2.037	0.574	-3.073	2.228	15.312	
9	11.590	14.832	2.351	5.711	-7.615	-4.625	-0.301	3.811	-18.608	-6.344
h's										
0	0.000									
1	0.000	33.766								
2	0.000	1.547	12.409							
3	0.000	26.333	-15.656	-0.217						
4	0.000	6.298	4.875	9.686	8.308					
5	0.000	-5.364	-15.430	-4.807	3.935	-15.858				
6	0.000	14.789	-4.424	11.424	2.309	-19.729	36.907			
7	0.000	-13.622	14.065	-1.154	-5.769	-47.718	2.129	17.013		
8	0.000	8.300	8.180	-14.142	-11.605	-4.211	18.059	-7.106	-4.877	
9	0.000	-2.574	-7.657	-1.376	-1.240	14.336	-13.662	3.037	27.960	5.243

Carrington Rotation 1687:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	3.822									
1	2.163	24.010								
2	-10.389	29.337	-14.282							
3	-23.545	-14.444	53.710	-24.001						
4	2.812	-11.571	-5.930	3.530	-25.927					
5	44.338	-14.288	-23.452	-1.811	2.194	25.977				
6	16.274	9.853	-4.227	-20.104	13.702	46.326	-11.062			
7	-20.513	18.489	9.395	12.181	-1.365	-4.310	-9.901	25.387		
8	-12.205	-11.572	4.573	13.591	3.409	3.423	0.396	-28.698	26.008	
9	14.030	-11.019	3.672	-10.091	-7.527	12.203	19.209	2.611	-22.606	27.733
h's										
0	0.000									
1	0.000	-8.267								
2	0.000	3.796	15.956							
3	0.000	-18.549	-19.032	22.095						
4	0.000	-8.917	-2.993	-3.993	-4.440					
5	0.000	-1.236	-12.707	-2.546	10.116	1.995				
6	0.000	-4.099	-12.451	-20.111	-14.300	4.186	32.735			
7	0.000	20.913	4.660	-2.006	-8.734	28.793	16.186	-43.068		
8	0.000	-10.443	14.634	12.257	-9.302	-12.621	17.420	-4.871	-2.291	
9	0.000	-2.715	-7.390	5.584	3.543	-24.377	-10.296	-9.621	15.466	-5.956

Carrington Rotation 1688

	0	1	2	3	4	5	6	7	8	9
0	13.586									
1	-4.246	-18.080								
2	-21.646	-13.177	5.828							
3	-28.836	16.540	47.459	24.662						
4	5.731	16.065	3.944	1.752	-29.394					
5	48.568	21.213	-40.381	-8.119	21.311	-38.223				
6	21.773	-8.854	-12.146	18.651	15.689	-37.881	-8.671			
7	-23.249	-29.850	15.642	-4.905	6.842	-15.864	7.894	-19.210		
8	-16.909	6.149	8.481	-6.971	-2.593	-2.306	16.078	17.425	39.681	
9	11.247	7.510	6.614	10.114	-13.512	-10.436	21.937	-13.746	-19.980	-37.969

g's

0	0.000									
1	0.000	6.371								
2	0.000	-7.089	22.632							
3	0.000	6.105	-10.566	-8.149						
4	0.000	7.799	6.405	-14.401	5.236					
5	0.000	3.509	-5.081	4.480	13.111	-5.928				
6	0.000	1.541	-8.990	0.067	-7.537	-3.863	23.717			
7	0.000	-19.246	5.060	-1.929	-5.002	-37.513	28.814	34.102		
8	0.000	7.737	9.737	-8.074	-2.151	10.513	9.388	18.165	4.768	
9	0.000	-0.608	-9.581	-5.023	12.671	16.588	0.061	7.875	0.725	6.850

h's

Carrington Rotation 1688:180

	0	1	2	3	4	5	6	7	8	9
0	34.056									
1	8.814	41.607								
2	-19.572	21.590	20.990							
3	-33.837	-11.824	58.267	-22.118						
4	-2.854	-16.696	-4.804	-12.418	-16.049					
5	56.023	-25.865	-29.187	2.324	16.154	43.978				
6	16.768	10.133	-11.884	-14.975	1.689	44.525	3.343			
7	-23.356	37.741	7.410	6.298	-0.186	2.874	13.653	35.148		
8	-15.449	-6.460	7.616	1.495	3.849	-3.128	11.410	-16.715	36.952	
9	11.868	-8.715	8.832	-12.232	-5.538	-3.227	2.006	10.862	-19.502	7.939

g's

0	0.000									
1	0.000	1.286								
2	0.000	15.337	38.469							
3	0.000	8.805	0.801	14.463						
4	0.000	-12.152	18.446	28.106	9.597					
5	0.000	-7.699	-5.196	2.723	3.317	16.022				
6	0.000	8.374	-14.140	16.369	1.598	1.820	27.517			
7	0.000	14.442	8.717	-1.125	3.262	32.745	29.334	-13.451		
8	0.000	-5.690	14.635	-1.503	4.186	2.279	6.142	-12.954	37.808	
9	0.000	0.300	-10.360	1.214	9.226	-5.884	5.851	-9.262	-9.868	14.485

h's

Carrington Rotation 1689

	0	1	2	3	4	5	6	7	8	9
0	12.083									
1	3.984	-20.879								
2	-21.184	-15.178	24.921							
3	-34.564	21.608	43.658	34.163						
4	2.743	16.038	0.452	-1.650	-24.504					
5	49.212	14.064	-15.750	4.141	23.734	-35.801				
6	17.697	-6.436	-2.120	-9.681	7.723	-46.869	5.247			
7	-18.850	-29.370	-0.081	-17.315	10.963	-2.558	-1.948	-16.288		
8	-11.430	3.004	4.701	-2.746	9.682	-2.513	-6.272	17.492	28.016	
9	11.498	7.667	7.037	17.956	-5.459	-4.622	10.335	9.085	-24.747	5.164

g's

0	0.000									
1	0.000	-18.109								
2	0.000	-13.254	40.632							
3	0.000	-18.400	14.459	-8.457						
4	0.000	6.491	25.085	-42.838	9.540					
5	0.000	4.786	5.499	0.180	-3.211	-20.054				
6	0.000	-10.628	-17.619	-11.219	6.186	7.152	21.056			
7	0.000	-12.604	10.539	6.538	-15.524	-11.459	23.745	19.703		
8	0.000	6.527	14.071	-2.301	-3.920	7.887	-5.690	2.257	44.121	
9	0.000	4.561	-15.024	-2.892	6.479	20.797	-18.103	18.714	-17.793	-19.150

h's

	0	1	2	3	4	5	6	7	8	9
0	6.557					**Carrington Rotation 1689:180**				
1	0.443	16.892								
2	-15.072	9.416	27.834							**g's**
3	-31.998	-14.400	31.211	-26.490						
4	1.042	-14.683	4.792	-5.109	-18.673					
5	48.349	-7.377	-10.024	6.224	20.682	46.465				
6	6.948	10.937	0.693	19.366	1.474	34.685	29.136			
7	-20.822	19.126	-0.792	9.339	16.869	17.055	9.430	6.326		
8	-4.760	-7.858	2.881	3.346	16.247	12.690	7.236	13.066	11.672	
9	16.109	-1.801	4.790	-16.613	-2.903	7.416	24.473	1.562	-28.726	-5.257
0	0.000									**h's**
1	0.000	9.685								
2	0.000	14.303	30.039							
3	0.000	21.790	11.974	2.534						
4	0.000	-8.310	22.774	31.359	6.415					
5	0.000	-1.760	-1.262	4.875	-8.322	12.295				
6	0.000	12.958	-3.456	9.406	4.903	-20.802	32.474			
7	0.000	3.600	16.888	-2.506	-15.986	-0.812	-5.591	7.571		
8	0.000	-8.683	5.240	4.293	-4.740	-12.452	1.154	3.428	36.839	
9	0.000	-0.770	-17.113	-0.168	11.449	-6.872	-10.313	-15.510	0.653	13.593

0	-8.406					**Carrington Rotation 1690**				
1	-7.678	-2.309								
2	-11.071	-10.198	20.356							**g's**
3	-21.907	3.124	23.882	8.425						
4	2.751	7.109	6.788	16.787	-33.888					
5	47.189	6.772	7.921	13.009	-14.410	-40.981				
6	8.847	-11.198	4.040	-17.187	-0.383	-19.086	21.524			
7	-22.300	-14.975	-8.747	-7.394	5.862	-12.751	0.838	13.389		
8	-2.754	8.876	-7.738	1.522	15.120	-10.829	15.368	-11.299	8.615	
9	18.044	2.682	5.413	11.028	-8.266	-4.486	21.669	2.945	-18.512	11.792
0	0.000									**h's**
1	0.000	-16.042								
2	0.000	-17.610	49.197							
3	0.000	-24.169	3.682	0.682						
4	0.000	7.655	4.769	-19.805	-8.717					
5	0.000	2.446	-7.682	-6.703	-9.379	-18.804				
6	0.000	-5.937	-5.749	9.401	15.016	-3.467	22.050			
7	0.000	2.392	13.020	6.986	-16.213	-8.675	6.947	-13.290		
8	0.000	7.077	8.855	-5.072	-2.708	8.749	8.982	-26.028	48.715	
9	0.000	2.903	-15.073	-4.702	15.520	3.657	-8.155	16.372	6.984	-14.073

0	-15.540					**Carrington Rotation 1690:180**				
1	-4.479	-13.700								
2	-11.146	6.286	9.737							**g's**
3	-25.510	-0.064	9.180	-2.664						
4	5.746	-4.259	13.351	-16.175	-17.827					
5	43.696	-9.103	11.991	-8.940	-28.628	29.354				
6	6.973	8.814	0.138	22.304	-6.331	14.963	8.006			
7	-18.014	15.628	-14.828	3.739	8.243	9.026	-9.816	-35.829		
8	-6.103	-4.547	-6.490	-8.150	8.907	3.735	27.653	-3.109	-5.214	
9	12.331	-1.347	6.576	-3.186	-10.623	-3.333	19.441	-3.715	-23.534	-9.764
0	0.000									**h's**
1	0.000	14.573								
2	0.000	30.105	37.748							
3	0.000	19.107	1.061	-15.650						
4	0.000	-10.935	4.675	20.396	2.822					
5	0.000	2.171	-7.554	12.095	-6.096	36.660				
6	0.000	5.074	-5.375	-7.910	20.241	-2.527	28.007			
7	0.000	-4.039	13.616	-5.940	-8.747	-1.246	11.063	14.164		
8	0.000	-3.944	4.372	0.845	-2.500	-5.538	7.560	15.891	31.385	
9	0.000	-7.037	-13.010	0.991	7.093	-6.585	-16.908	-7.838	-6.785	1.899

	0	1	2	3	4	5	6	7	8	9
0	5.402									
1	1.815	-20.507								
2	-12.184	-24.639	6.124							
3	-27.186	-12.077	16.602	4.803						
4	-3.586	6.988	14.553	8.649	19.541					
5	33.191	14.450	5.452	6.061	-36.693	-31.935				
6	7.769	-6.525	-1.147	-4.253	-4.518	0.918	15.135			
7	-15.576	-13.672	-9.248	-7.499	4.863	-11.038	-14.417	35.130		
8	-12.259	10.103	-2.555	1.434	-0.626	-6.355	23.006	-2.625	-20.255	
9	11.260	6.078	2.593	-1.084	-12.298	11.845	12.995	1.030	-7.695	-1.152

Carrington Rotation 1691

g's

0	0.000									
1	0.000	-1.137								
2	0.000	-25.417	13.855							
3	0.000	-12.431	-12.540	-6.753						
4	0.000	18.750	-6.619	-8.731	0.537					
5	0.000	-6.854	-16.557	-7.593	-25.661	-15.084				
6	0.000	-15.478	-2.829	8.517	14.206	0.083	26.223			
7	0.000	3.054	18.315	8.281	5.697	7.517	19.860	5.227		
8	0.000	6.003	8.719	2.424	-10.771	6.521	3.601	-28.640	35.702	
9	0.000	2.300	-5.870	-2.362	-0.498	-0.761	-10.014	2.882	-8.094	-11.926

h's

0	8.169									
1	4.284	25.296								
2	-15.539	21.797	5.133							
3	-32.086	14.677	2.636	-12.487						
4	-7.993	-6.190	12.023	-11.801	10.101					
5	31.959	-11.804	5.094	-7.223	-38.275	17.989				
6	9.335	6.801	0.307	3.862	-3.791	-10.243	5.321			
7	-15.774	13.045	-7.158	15.018	3.248	9.665	-17.232	-39.198		
8	-12.401	-8.725	-4.272	2.727	2.724	1.800	20.982	-1.332	-24.102	
9	9.008	-6.715	-0.341	-4.156	-6.115	-7.091	12.286	2.842	-3.932	6.939

Carrington Rotation 1691:180

g's

0	0.000									
1	0.000	5.723								
2	0.000	36.412	22.916							
3	0.000	12.180	-10.145	12.937						
4	0.000	-22.280	-5.378	3.386	3.643					
5	0.000	1.384	-17.097	5.358	-19.371	12.861				
6	0.000	13.695	-3.314	-10.371	12.075	1.089	15.096			
7	0.000	-2.674	16.413	-9.848	6.477	-7.047	20.069	-16.452		
8	0.000	-4.007	12.504	-3.485	-5.649	-9.660	-2.613	29.379	21.787	
9	0.000	-3.829	-2.595	1.958	1.413	2.742	-12.108	-4.427	-1.459	-7.893

h's

0	4.751									
1	9.919	-25.609								
2	-9.980	-11.139	3.974							
3	-39.968	-24.628	-19.426	11.894						
4	-15.545	1.769	2.775	-1.205	21.813					
5	31.611	9.995	3.519	5.586	-35.795	-14.100				
6	13.570	-6.587	-4.229	7.289	-11.230	7.201	6.669			
7	-16.330	-11.051	-6.792	-10.663	8.604	-5.205	-25.912	40.494		
8	-15.877	10.668	-2.142	-6.439	8.495	-0.282	22.305	21.299	-28.188	
9	9.649	2.331	-1.246	6.228	1.248	6.358	14.619	4.316	-14.505	-5.078

Carrington Rotation 1692

g's

0	0.000									
1	0.000	-9.137								
2	0.000	-18.883	22.499							
3	0.000	-1.333	3.552	-20.549						
4	0.000	16.436	-13.197	-15.736	-0.013					
5	0.000	-7.309	-24.141	-5.511	-29.239	-4.635				
6	0.000	-15.108	-9.085	3.415	5.176	3.648	15.170			
7	0.000	4.349	18.853	0.495	15.401	0.215	0.363	24.416		
8	0.000	3.454	13.448	-0.299	-4.369	10.518	-4.656	-30.677	19.780	
9	0.000	0.372	1.370	0.585	0.598	-1.192	-2.168	1.513	-1.012	15.642

h's

Carrington Rotation 1692:180

	0	1	2	3	4	5	6	7	8	9
0	5.866									
1	14.286	22.442								
2	-13.323	15.753	-9.244							
3	-51.823	26.401	-18.672	-27.319						
4	-14.243	-1.439	-7.460	11.795	6.226					
5	33.775	-3.328	8.559	-20.605	-44.369	-9.113				
6	8.934	7.861	-3.012	-6.377	-7.141	-26.969	-8.120			
7	-15.228	4.066	-8.254	17.838	7.461	19.179	-20.623	-31.557		
8	-9.792	-6.520	-5.871	-2.159	11.144	-1.005	17.198	-18.267	-7.618	
9	4.517	3.361	0.567	-10.219	0.932	-4.819	24.205	-15.736	-12.292	19.736

g's

0	0.000									
1	0.000	18.931								
2	0.000	25.627	30.653							
3	0.000	1.777	3.199	21.355						
4	0.000	-27.017	-8.283	21.468	-0.757					
5	0.000	8.126	-23.457	-5.999	-11.122	-4.760				
6	0.000	15.131	-5.359	-1.586	-15.776	-13.314	-13.501			
7	0.000	-8.083	22.418	0.312	17.463	-0.050	-13.914	-55.020		
8	0.000	-2.939	11.442	-1.347	3.165	-15.398	1.437	28.918	6.444	
9	0.000	4.283	2.638	-3.436	-9.121	3.427	-2.769	-9.092	-6.303	-17.779

h's

Carrington Rotation 1693

	0	1	2	3	4	5	6	7	8	9
0	9.268									
1	8.817	-30.316								
2	-6.878	-9.877	1.069							
3	-46.605	-11.574	-21.183	36.818						
4	-12.170	5.718	-1.410	7.071	11.127					
5	35.503	3.124	2.439	19.481	-44.931	-10.896				
6	-1.304	-10.926	-6.081	-5.379	-4.480	10.903	-7.285			
7	-18.137	-5.640	-6.165	-16.529	-0.694	-30.551	-14.299	25.120		
8	-1.636	6.653	-2.431	3.347	10.186	1.133	13.925	24.021	9.107	
9	5.613	-1.585	4.503	10.963	5.053	7.908	22.499	15.855	-17.977	-12.562

g's

0	0.000									
1	0.000	-24.979								
2	0.000	-29.935	21.609							
3	0.000	1.922	1.055	-21.441						
4	0.000	31.945	4.709	-24.413	15.562					
5	0.000	0.378	-12.592	9.936	15.039	3.306				
6	0.000	-13.911	-4.567	-0.167	-6.797	9.771	-23.635			
7	0.000	-3.070	17.911	1.589	12.154	3.480	-17.341	42.737		
8	0.000	0.517	10.513	0.648	2.917	5.853	-4.816	-20.492	-7.421	
9	0.000	0.519	-2.466	0.139	-11.361	-3.784	-1.856	1.645	10.552	17.657

h's

Carrington Rotation 1693:180

	0	1	2	3	4	5	6	7	8	9
0	12.671									
1	-6.978	29.030								
2	-13.823	-0.275	-12.433							
3	-32.303	5.299	-32.107	-58.221						
4	-7.333	-4.067	4.155	-12.031	-8.808					
5	27.128	-1.242	7.191	-18.069	-11.384	15.018				
6	-3.310	1.818	-1.249	13.050	-9.716	-2.137	20.886			
7	-16.397	0.846	-6.283	9.738	1.064	25.092	-3.424	4.781		
8	-2.297	-8.071	-0.353	-4.686	5.193	-10.438	3.224	-23.689	9.270	
9	5.966	-4.676	3.724	-12.412	-1.459	-5.165	4.391	-18.096	-23.065	3.486

g's

0	0.000									
1	0.000	36.715								
2	0.000	14.493	32.162							
3	0.000	-11.137	-5.662	22.494						
4	0.000	-23.125	0.473	-8.758	-3.685					
5	0.000	0.199	-12.891	-3.708	3.269	-33.070				
6	0.000	8.765	-0.093	8.231	-2.018	2.977	-39.747			
7	0.000	1.947	11.416	2.522	25.383	1.095	-15.121	-25.673		
8	0.000	-1.059	8.788	0.830	-3.342	8.923	-3.537	37.992	19.783	
9	0.000	-2.342	-5.358	1.172	-15.991	-4.357	-1.095	-2.924	9.985	-4.492

h's

Carrington Rotation 1694

	0	1	2	3	4	5	6	7	8	9
0	9.332									
1	-0.785	-42.489								
2	-12.567	-9.558	-36.333							
3	-41.173	-18.563	-9.348	54.065						
4	-9.150	11.643	-12.691	20.780	-13.980					
5	33.254	5.537	19.689	1.928	32.103	-7.596				
6	1.615	-8.735	4.175	4.910	-5.400	-8.401	25.496			
7	-24.317	-0.196	-16.803	-0.969	3.785	-28.886	-16.659	-29.820		
8	-9.620	7.149	-3.517	-10.053	1.637	6.668	-15.271	26.268	16.080	
9	9.783	-5.939	8.272	8.536	-7.452	-5.869	3.303	-5.772	-7.180	-5.580

g's

0	0.000									
1	0.000	-26.093								
2	0.000	-21.009	27.886							
3	0.000	18.568	-5.392	-35.016						
4	0.000	15.237	-3.097	3.144	-7.187					
5	0.000	-6.248	-11.065	-7.165	11.796	22.693				
6	0.000	2.322	-3.736	2.630	-14.538	39.069	-19.948			
7	0.000	6.396	16.217	0.376	45.376	11.525	-29.066	22.782		
8	0.000	-9.186	14.820	-3.043	5.229	-0.306	-2.657	-39.401	6.315	
9	0.000	-1.343	-11.353	0.096	-26.666	4.233	2.805	-2.623	-13.471	7.991

h's

Carrington Rotation 1694:180

	0	1	2	3	4	5	6	7	8	9
0	5.848									
1	-13.823	15.025								
2	1.922	8.052	-21.830							
3	-46.071	8.799	-41.834	-46.174						
4	-20.877	-7.398	16.699	-34.410	-13.249					
5	49.978	-3.173	4.340	3.102	45.310	14.472				
6	3.853	1.620	2.246	-6.449	-1.911	10.013	39.203			
7	-30.279	-6.384	-11.222	-1.111	-2.335	10.957	-26.266	46.842		
8	0.770	-4.958	-9.534	16.803	6.476	2.474	-14.477	-28.833	11.522	
9	8.576	4.777	7.278	-5.208	3.489	-2.863	4.645	0.566	6.264	-3.500

g's

0	0.000									
1	0.000	11.964								
2	0.000	24.484	2.592							
3	0.000	-14.727	13.812	39.108						
4	0.000	-24.336	-12.307	-34.581	-13.344					
5	0.000	3.990	-5.453	33.574	3.372	-28.295				
6	0.000	5.181	-1.422	-21.011	-2.766	-35.322	-24.761			
7	0.000	-7.388	9.906	2.467	39.664	3.010	-31.795	-9.280		
8	0.000	10.959	7.640	-0.386	8.249	-16.760	-11.857	21.644	24.097	
9	0.000	10.001	-6.590	-5.122	-21.974	12.406	-1.536	12.360	-26.058	-1.938

h's

Carrington Rotation 1695

	0	1	2	3	4	5	6	7	8	9
0	27.916									
1	-28.657	-37.402								
2	0.943	2.407	-8.898							
3	-39.567	6.173	-64.363	32.568						
4	-25.933	-4.211	19.059	30.277	-2.094					
5	45.989	2.424	2.915	3.176	44.383	-21.475				
6	8.576	9.649	4.192	-7.965	-4.458	10.516	17.030			
7	-25.815	-0.517	-1.439	-4.331	8.312	16.855	-16.612	-37.096		
8	1.106	2.002	-6.466	1.690	6.081	3.439	-9.467	25.904	0.123	
9	5.876	5.609	-3.085	5.487	-0.743	13.539	-7.978	1.951	-9.832	1.850

g's

0	0.000									
1	0.000	0.348								
2	0.000	-29.726	-8.508							
3	0.000	19.196	23.995	-25.662						
4	0.000	25.308	-8.643	11.648	-27.488					
5	0.000	-8.467	-10.325	-27.467	-5.526	59.696				
6	0.000	-12.648	6.582	14.097	-12.763	18.829	-43.281			
7	0.000	10.481	8.935	-3.217	20.250	-2.355	-12.699	12.506		
8	0.000	-2.696	-0.075	8.891	7.084	29.775	6.422	-19.204	23.836	
9	0.000	-6.636	0.419	7.860	-4.681	-17.176	-6.661	1.477	-19.895	4.476

h's

Carrington Rotation 1695:180

g's

	0	1	2	3	4	5	6	7	8	9
0	25.192									
1	-22.519	19.930								
2	-2.797	-7.361	-16.661							
3	-33.929	1.773	-39.032	-47.167						
4	-20.115	-2.299	-4.468	-33.832	-8.049					
5	33.603	-9.341	21.537	12.387	43.025	25.494				
6	13.230	-2.966	8.611	-26.449	-11.370	-20.118	42.441			
7	-20.185	2.920	-8.893	15.461	10.919	7.785	-17.159	21.130		
8	-6.787	-6.049	-2.979	5.613	3.548	-9.983	6.383	-11.433	-23.175	
9	12.895	-0.504	1.955	-13.546	-6.087	-2.819	-10.518	16.756	0.686	4.841

h's

0	0.000									
1	0.000	2.756								
2	0.000	22.219	-16.208							
3	0.000	-16.081	28.175	22.423						
4	0.000	-19.001	-16.270	5.475	-45.156					
5	0.000	6.210	0.262	8.223	2.077	-76.167				
6	0.000	8.490	-0.562	8.393	-19.677	-16.392	-41.389			
7	0.000	-4.161	5.884	3.139	-0.842	-20.899	-19.099	15.520		
8	0.000	-0.329	5.044	-9.975	13.005	-12.213	13.417	14.621	2.789	
9	0.000	2.930	-1.984	-4.018	-0.090	12.090	-5.125	-0.900	4.370	-22.431

Carrington Rotation 1696

g's

0	14.135									
1	-26.620	1.860								
2	7.757	5.957	-42.361							
3	-41.142	-6.111	-27.832	55.835						
4	-28.271	12.089	0.598	-3.926	-22.145					
5	38.681	10.120	2.169	-1.182	43.350	-34.755				
6	11.510	-6.302	12.550	20.657	-29.986	20.827	36.022			
7	-23.272	0.522	1.836	-27.949	1.831	-2.679	17.199	-3.958		
8	1.589	11.108	-13.395	2.775	6.629	14.457	1.045	-10.464	-26.170	
9	13.752	-1.656	3.932	23.499	-6.267	2.454	-5.826	0.400	12.398	-11.743

h's

0	0.000									
1	0.000	0.161								
2	0.000	-27.792	-4.477							
3	0.000	23.121	46.453	-36.126						
4	0.000	19.049	-24.266	2.198	-30.875					
5	0.000	-11.198	9.704	6.318	-24.399	59.017				
6	0.000	-12.905	4.897	-21.470	-14.971	5.935	-51.282			
7	0.000	3.094	-4.215	-0.043	-5.920	9.464	-19.876	-33.746		
8	0.000	-1.825	2.709	14.408	2.436	-3.219	13.764	16.676	20.915	
9	0.000	1.006	4.148	-6.774	4.929	-8.152	-2.146	-11.265	-24.321	-7.586

Carrington Rotation 1696:180

g's

0	10.196									
1	-12.828	-0.888								
2	7.663	-7.030	-48.168							
3	-41.778	4.860	-15.745	-37.463						
4	-23.145	-9.137	-11.441	9.006	7.282					
5	26.617	-7.961	14.245	-10.901	28.432	55.271				
6	8.454	0.200	7.118	-6.484	-38.138	-9.686	37.400			
7	-15.389	-5.037	-7.273	25.050	6.279	-20.866	22.319	3.869		
8	0.008	-2.125	-13.304	-1.185	7.146	2.322	-0.753	18.577	-16.526	
9	8.034	8.613	2.907	-18.340	-11.275	-5.070	-5.930	5.317	13.699	14.324

h's

0	0.000									
1	0.000	-3.529								
2	0.000	35.870	-16.321							
3	0.000	-18.813	38.210	13.528						
4	0.000	-14.517	-15.114	15.420	-29.859					
5	0.000	15.721	4.783	-9.637	-32.421	-43.468				
6	0.000	9.328	6.059	34.543	-8.930	-16.877	-32.724			
7	0.000	-4.853	-9.362	-6.330	-2.714	-14.989	-20.018	34.859		
8	0.000	6.757	-5.562	-17.984	0.811	13.781	-5.867	-17.024	28.055	
9	0.000	-3.792	10.368	2.062	6.659	4.893	15.536	11.641	-21.846	20.727

	0	1	2	3	4	5	6	7	8	9
0	17.102									
1	-25.375	1.898								
2	6.479	21.483	-43.192							
3	-36.419	-1.169	-18.124	47.329						
4	-26.293	3.010	-19.948	-35.610	-5.933					
5	24.361	6.629	22.037	15.607	19.376	-55.046				
6	8.773	-6.609	9.203	2.473	-50.291	-6.259	31.406			
7	-14.406	2.718	-7.788	-18.534	-3.874	8.670	34.263	-34.353		
8	1.215	6.683	-13.394	0.405	8.782	-15.678	-23.723	-24.759	-3.866	
9	10.437	-8.123	1.888	11.178	-3.513	6.067	-1.561	-15.485	0.947	-22.611

Carrington Rotation 1697

g's

0	0.000									
1	0.000	9.013								
2	0.000	-46.680	-18.334							
3	0.000	25.380	69.892	-0.409						
4	0.000	13.330	-12.322	-17.309	-16.724					
5	0.000	-20.232	4.229	13.833	-31.892	37.791				
6	0.000	-11.658	2.759	-23.966	4.576	1.852	-9.933			
7	0.000	4.918	-16.480	5.215	0.929	16.899	-24.739	-49.493		
8	0.000	-7.137	-3.316	13.144	4.824	-20.235	-3.975	26.106	14.195	
9	0.000	6.725	13.456	-2.186	0.767	-2.012	7.811	-37.252	-16.216	-17.148

h's

0	28.920									
1	-18.432	12.953								
2	7.949	-6.857	-24.964							
3	-48.624	12.557	-24.515	-33.667						
4	-28.299	-9.486	-15.227	51.790	11.826					
5	26.709	-3.277	10.779	-22.786	3.229	54.947				
6	8.242	11.106	9.768	2.598	-52.333	5.895	28.008			
7	-17.583	-5.197	-3.226	14.598	-12.261	-18.469	21.785	29.211		
8	3.485	-7.236	-11.904	2.715	8.390	17.137	-7.525	17.859	-1.945	
9	8.442	12.006	-4.638	-9.090	-0.356	-8.193	-8.387	34.068	-12.112	19.865

Carrington Rotation 1697:180

g's

0	0.000									
1	0.000	-11.445								
2	0.000	63.152	-15.094							
3	0.000	-22.755	73.362	3.849						
4	0.000	-17.719	1.605	31.534	-2.880					
5	0.000	20.893	-2.170	-10.294	-15.752	-19.765				
6	0.000	9.810	9.453	17.005	5.753	1.098	-0.789			
7	0.000	-6.583	-14.016	-2.739	2.511	-27.423	-15.126	53.153		
8	0.000	8.452	-6.441	-13.574	5.175	13.118	-21.467	-25.379	16.606	
9	0.000	-4.421	15.633	2.475	4.850	3.778	7.780	42.442	-17.451	23.688

h's

0	7.656									
1	-6.014	13.139								
2	14.199	-2.732	-32.285							
3	-52.888	-4.196	-0.891	43.381						
4	-24.720	6.282	-16.768	-37.906	8.288					
5	23.018	2.617	23.415	29.802	-4.599	-49.414				
6	3.482	-9.912	11.606	1.581	-24.884	5.429	46.806			
7	-10.161	2.431	-11.824	-9.592	-2.659	27.084	-1.786	-35.688		
8	9.292	5.617	-11.207	-5.281	6.451	-12.107	32.746	8.895	-1.260	
9	6.094	-7.276	-7.317	6.339	-2.050	0.444	-14.630	-50.929	-40.887	11.131

Carrington Rotation 1698

g's

0	0.000									
1	0.000	-4.587								
2	0.000	-59.565	-4.891							
3	0.000	19.165	54.312	-15.943						
4	0.000	15.956	6.912	-2.613	2.709					
5	0.000	-16.421	-7.682	-14.043	-21.117	1.072				
6	0.000	-7.784	10.510	-7.952	11.532	17.968	4.755			
7	0.000	0.303	-12.325	9.045	0.644	20.177	-23.336	-44.567		
8	0.000	-2.126	-9.069	10.872	17.255	3.535	-3.836	26.377	-4.085	
9	0.000	5.820	10.130	-2.003	5.205	-4.936	1.594	-11.129	0.547	-20.526

h's

Carrington Rotation 1698:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-16.097									
1	-15.202	-6.001								
2	15.549	14.038	-46.831							
3	-46.197	-2.527	-2.078	-47.469						
4	-24.352	-2.258	-12.737	50.818	22.757					
5	16.190	6.234	16.569	-20.667	-13.036	35.251				
6	3.530	5.473	20.426	0.681	-23.090	15.371	3.797			
7	-9.343	-7.209	-3.932	-0.455	11.832	-27.968	19.008	36.077		
8	6.326	2.919	-17.417	-0.496	13.928	1.551	23.636	-20.911	-3.986	
9	6.261	6.819	-7.502	1.724	-9.897	1.723	-9.240	31.639	-30.812	-28.027

h's

0	0.000									
1	0.000	-6.336								
2	0.000	50.430	6.041							
3	0.000	-26.026	53.529	0.778						
4	0.000	-9.550	-3.143	-0.521	11.786					
5	0.000	11.887	-0.510	13.697	-20.634	29.929				
6	0.000	0.285	21.920	-5.714	18.438	-39.036	-2.131			
7	0.000	3.428	-14.383	-5.522	12.508	-15.062	0.992	17.938		
8	0.000	1.189	-14.916	-1.790	9.631	-0.022	6.758	-18.887	2.118	
9	0.000	-10.979	14.672	1.727	0.100	15.868	-7.453	5.721	-2.992	6.748

Carrington Rotation 1699

g's

0	-21.499									
1	-20.415	4.857								
2	15.369	-21.469	-39.855							
3	-45.136	-1.824	1.879	30.251						
4	-22.972	0.196	-2.935	-47.669	34.032					
5	17.204	-5.049	7.022	2.085	-24.032	-43.034				
6	-0.879	-0.868	17.637	9.436	-7.682	1.575	19.571			
7	-7.708	3.095	-4.334	-2.688	4.156	2.306	34.673	-16.430		
8	5.662	2.505	-13.862	-3.629	10.930	14.526	26.088	26.187	-2.579	
9	2.833	-4.514	-4.277	-2.522	-2.787	-4.678	-10.692	-26.988	-16.109	24.201

h's

0	0.000									
1	0.000	-4.340								
2	0.000	-56.115	17.492							
3	0.000	20.476	43.353	-8.044						
4	0.000	13.436	4.483	5.229	4.850					
5	0.000	-7.699	-9.759	-13.546	-30.336	-32.746				
6	0.000	-2.128	22.567	2.212	15.781	19.995	-18.618			
7	0.000	-8.706	-8.465	7.479	10.536	30.754	11.420	-6.778		
8	0.000	1.004	-19.163	-5.964	6.823	-8.202	-23.449	17.403	19.076	
9	0.000	8.774	19.653	0.269	1.024	-14.302	7.765	13.625	11.358	-2.150

Carrington Rotation 1699:180

g's

0	-4.482									
1	-27.832	-18.747								
2	12.429	15.703	-47.169							
3	-45.273	-13.253	18.056	-5.314						
4	-20.170	2.114	5.156	42.738	50.888					
5	13.788	2.737	2.808	0.820	-1.074	7.959				
6	-1.247	-1.901	14.899	-15.706	5.376	-12.393	12.139			
7	-6.737	-0.787	-2.547	0.197	-0.778	0.991	12.604	16.307		
8	5.505	-5.368	-11.438	1.980	1.736	-26.867	5.917	-25.895	-8.454	
9	2.623	-0.157	-0.163	5.505	1.095	10.486	-1.257	18.288	13.579	9.626

h's

0	0.000									
1	0.000	19.418								
2	0.000	41.106	-1.459							
3	0.000	-23.929	43.529	-2.842						
4	0.000	-10.638	-9.556	-7.741	37.694					
5	0.000	13.374	-4.676	15.263	-28.079	48.136				
6	0.000	-3.843	17.795	-1.661	13.098	5.712	-42.485			
7	0.000	9.190	-10.749	-4.663	11.777	-8.448	2.765	7.501		
8	0.000	-3.623	-19.008	3.926	-1.957	0.436	-17.533	-44.645	-5.512	
9	0.000	-6.317	16.067	2.499	-5.788	-0.569	-5.527	-27.230	7.999	-5.246

Carrington Rotation 1700

	0	1	2	3	4	5	6	7	8	9
0	-6.761									
1	-22.187	21.454								
2	10.883	-36.983	-58.514							
3	-50.047	7.780	27.698	-5.394						
4	-11.438	0.282	16.207	-47.452	59.833					
5	14.950	-3.955	-4.391	1.658	-12.009	-1.694				
6	-10.308	5.613	13.115	15.557	9.373	8.961	20.864			
7	-8.474	1.317	-2.574	6.323	-2.407	21.472	7.779	7.540		
8	4.391	-0.803	-15.278	-8.324	1.529	6.025	7.549	17.962	-49.192	
9	2.002	-4.162	5.205	-7.290	1.655	4.324	-3.095	0.128	32.651	-15.959

g's

0	0.000									
1	0.000	-16.013								
2	0.000	-37.248	3.559							
3	0.000	14.904	30.466	-8.061						
4	0.000	11.920	-18.631	23.662	23.036					
5	0.000	-1.022	-4.139	-11.936	-33.318	-41.864				
6	0.000	4.078	13.294	-2.799	-1.388	-7.969	-54.485			
7	0.000	-11.819	-5.757	9.168	21.596	11.865	0.675	25.554		
8	0.000	0.746	-15.629	-5.322	-3.525	-2.840	-10.223	32.746	13.926	
9	0.000	2.647	9.074	-2.014	-12.331	3.791	-19.566	32.344	-1.914	-13.018

h's

Carrington Rotation 1700:180

0	-0.308									
1	-22.611	-29.964								
2	13.193	32.644	-52.793							
3	-47.242	-10.102	31.663	15.085						
4	-14.883	3.807	10.362	47.374	44.264					
5	14.260	4.825	-4.033	-7.763	-8.738	14.697				
6	-9.015	-8.599	8.603	-13.306	6.819	-44.079	-7.091			
7	-9.931	4.189	-2.944	-2.893	-10.900	-26.031	-2.744	-13.042		
8	5.646	0.102	-15.423	8.540	4.547	11.889	-14.675	-39.023	-61.873	
9	4.372	0.634	3.699	8.839	8.268	-6.424	-10.683	-1.454	26.622	18.399

g's

0	0.000									
1	0.000	23.691								
2	0.000	35.362	-8.598							
3	0.000	-7.375	32.903	32.119						
4	0.000	-8.013	-17.086	-20.815	22.243					
5	0.000	-0.189	-6.141	14.291	-9.436	57.961				
6	0.000	-3.265	9.610	9.592	-2.711	17.882	-39.662			
7	0.000	12.803	-5.055	-17.225	10.792	1.029	-7.420	-31.258		
8	0.000	-0.477	-11.343	1.732	-1.893	2.556	-12.578	-36.836	15.155	
9	0.000	-2.016	8.864	5.068	-12.011	-12.007	-7.605	-36.792	-10.312	13.053

h's

Carrington Rotation 1701

0	-5.351									
1	-15.939	43.898								
2	9.712	-30.829	-57.008							
3	-49.622	-0.306	32.841	-32.537						
4	-7.508	-0.256	-4.636	-26.465	32.835					
5	5.259	3.176	1.264	-4.131	2.443	8.187				
6	-5.759	10.452	5.624	6.891	1.374	18.382	-2.428			
7	-13.143	-2.289	-1.090	11.865	-19.511	17.428	10.497	-22.203		
8	-1.004	-8.008	-9.611	-1.652	-2.939	6.563	-19.192	50.872	-23.247	
9	6.683	4.799	-0.417	-11.712	16.276	6.270	-13.364	29.971	37.806	21.767

g's

0	0.000									
1	0.000	-23.960								
2	0.000	-30.500	9.477							
3	0.000	7.514	25.031	-30.848						
4	0.000	11.243	-21.791	13.977	2.789					
5	0.000	2.556	-1.176	-24.464	17.881	-73.892				
6	0.000	-2.474	9.071	3.120	-16.095	-19.393	-12.606			
7	0.000	-9.796	-2.942	14.324	-2.357	-9.062	-26.013	11.275		
8	0.000	-2.518	-7.982	-3.666	4.963	-1.736	-43.893	40.699	-28.292	
9	0.000	-0.237	3.968	-2.757	1.262	0.954	7.324	19.075	5.058	21.599

h's

	0	1	2	3	4	5	6	7	8	9
0	-7.060					**Carrington Rotation 1701:180**				
1	-23.143	-37.418								
2	22.427	36.975	-75.232							**g's**
3	-49.338	2.886	33.928	36.110						
4	-14.345	-0.412	-0.073	35.662	33.029					
5	8.418	-9.069	-3.553	6.370	17.730	-3.803				
6	-10.938	-9.129	5.391	-6.262	16.196	4.410	1.520			
7	-12.654	10.706	1.082	-14.507	-25.069	3.009	5.805	13.116		
8	3.231	5.277	-8.311	-1.669	-7.377	-16.982	-17.074	-23.880	-5.760	
9	6.215	-7.752	-2.205	10.018	11.884	-8.402	2.143	-28.749	12.327	-33.987
0	0.000									**h's**
1	0.000	27.268								
2	0.000	23.168	11.391							
3	0.000	1.665	19.279	12.633						
4	0.000	-11.538	-21.512	-21.460	4.781					
5	0.000	-1.154	3.341	22.463	5.358	61.046				
6	0.000	2.774	5.528	-6.554	-23.707	34.787	-2.846			
7	0.000	3.661	-2.510	-8.529	10.861	20.343	-29.497	-25.226		
8	0.000	3.551	-2.045	7.165	3.075	-12.714	-27.702	-28.640	-28.285	
9	0.000	4.010	0.626	0.069	-4.891	-0.413	15.534	-13.331	12.413	-15.763

0	-3.812					**Carrington Rotation 1702**				
1	-30.149	36.131								
2	12.844	-44.762	-78.963							**g's**
3	-46.426	14.886	30.305	-53.833						
4	-3.680	-2.955	-14.764	-17.672	35.900					
5	8.191	-4.756	-0.652	-9.691	5.743	6.683				
6	-16.776	10.177	13.056	12.211	-0.881	-0.052	-16.478			
7	-17.106	-0.193	2.614	10.173	-20.109	-10.007	11.971	-7.815		
8	5.391	-3.635	-15.171	-1.950	-0.334	19.517	-26.171	19.191	2.008	
9	8.369	0.120	-3.754	-8.665	8.566	1.970	-2.198	1.418	13.620	7.096
0	0.000									**h's**
1	0.000	-19.238								
2	0.000	-27.687	20.144							
3	0.000	-5.514	4.219	-9.878						
4	0.000	10.881	-0.821	21.639	-8.269					
5	0.000	4.046	-3.809	-28.236	16.210	-45.670				
6	0.000	-1.058	-3.175	5.659	-10.665	-50.369	-4.725			
7	0.000	-2.868	-0.243	9.569	10.663	-34.910	-16.343	15.121		
8	0.000	-6.781	5.851	-2.943	-2.467	18.173	-12.454	25.212	-13.167	
9	0.000	-4.377	-0.118	-3.029	-6.473	3.362	11.401	-2.103	19.581	33.115

0	-22.233					**Carrington Rotation 1702:180**				
1	-34.294	-40.248								
2	24.494	61.521	-76.990							**g's**
3	-48.054	-5.252	57.791	23.482						
4	-7.603	-10.843	-27.989	17.558	54.176					
5	11.406	1.266	-13.540	26.516	42.894	-37.398				
6	-20.037	-1.019	15.685	-13.340	-1.010	-9.335	23.788			
7	-22.293	-2.993	18.085	-10.230	-32.510	29.201	50.545	-10.620		
8	4.350	9.806	-21.378	-0.802	-9.456	-0.787	-8.694	-8.700	0.783	
9	11.730	-3.616	-8.760	4.212	20.699	-0.784	-27.589	7.087	5.585	-18.850
0	0.000									**h's**
1	0.000	-2.118								
2	0.000	9.315	38.459							
3	0.000	18.588	19.660	-11.057						
4	0.000	-5.240	-6.187	-25.958	-9.449					
5	0.000	-5.214	-14.803	17.276	25.191	31.668				
6	0.000	-4.765	0.779	-5.148	-11.836	64.953	-22.358			
7	0.000	1.904	5.650	-1.103	-0.756	19.274	-26.781	15.564		
8	0.000	6.898	6.942	4.979	1.924	-15.181	-3.267	24.317	-34.271	
9	0.000	1.896	4.276	-4.136	0.446	-6.967	28.107	3.849	23.127	-23.342

Carrington Rotation 1703

	0	1	2	3	4	5	6	7	8	9
0	-4.844									
1	-41.822	46.272								
2	19.586	-41.859	-36.007							
3	-40.396	11.085	22.631	-19.889						
4	-8.187	-4.351	-19.523	6.947	57.454					
5	7.062	-2.071	-15.839	-41.593	34.527	32.463				
6	-17.321	14.153	19.271	9.536	3.933	17.327	31.467			
7	-19.102	3.893	17.725	14.449	-26.960	-37.675	40.114	1.325		
8	0.451	-15.315	-15.287	5.395	-6.741	-10.206	-7.403	3.252	5.428	
9	6.828	8.584	-8.186	-10.221	20.623	3.391	-27.844	-14.605	-7.547	4.157

g's

0	0.000									
1	0.000	-5.400								
2	0.000	-0.325	43.444							
3	0.000	-21.619	22.618	36.738						
4	0.000	8.597	8.730	5.532	0.532					
5	0.000	3.013	-23.699	-12.250	43.907	-26.657				
6	0.000	2.365	-2.901	-1.491	-13.067	-72.606	-16.096			
7	0.000	-0.021	11.724	1.453	-3.214	-12.571	-10.375	-10.363		
8	0.000	-2.720	9.838	-6.426	3.041	16.623	-4.655	-31.782	-33.096	
9	0.000	-3.204	4.141	10.892	1.127	8.658	11.208	1.183	18.270	18.863

h's

Carrington Rotation 1703:180

	0	1	2	3	4	5	6	7	8	9
0	-11.921									
1	-29.547	-43.254								
2	9.729	35.064	-41.082							
3	-49.325	-8.081	32.689	19.781						
4	8.720	-1.896	-28.505	-15.667	21.690					
5	9.556	9.996	-16.766	28.746	33.992	-31.452				
6	-23.353	-11.975	21.729	-0.399	-6.588	-3.432	33.861			
7	-20.587	-9.215	11.472	-5.196	-11.279	29.014	40.388	2.198		
8	0.653	11.727	-7.144	-9.064	-1.622	16.035	-4.847	-14.857	12.738	
9	5.982	-5.720	-4.878	3.103	7.384	-4.836	-22.092	16.038	-13.509	-16.331

g's

0	0.000									
1	0.000	8.233								
2	0.000	8.533	47.283							
3	0.000	10.448	20.711	-19.652						
4	0.000	-12.377	16.715	5.046	3.550					
5	0.000	5.380	-36.341	5.568	29.835	-1.086				
6	0.000	3.272	0.081	-7.778	-18.891	76.347	-11.335			
7	0.000	-3.397	17.540	-3.878	-6.603	0.225	3.640	-3.214		
8	0.000	-1.407	11.345	11.015	12.747	-9.981	-16.345	37.471	-16.939	
9	0.000	6.068	-2.275	-1.746	5.632	-6.173	3.220	-0.352	16.190	-26.564

h's

Carrington Rotation 1704

	0	1	2	3	4	5	6	7	8	9
0	0.142									
1	-20.166	40.880								
2	7.270	-41.099	-27.306							
3	-52.907	1.762	29.314	-13.263						
4	11.263	6.692	-12.504	24.614	30.081					
5	8.576	-10.015	-25.324	-32.280	62.636	41.803				
6	-23.998	9.597	22.915	-21.924	-10.355	-4.977	23.792			
7	-16.335	6.638	13.177	9.113	-12.350	-20.222	30.938	6.921		
8	7.103	-9.314	-11.146	22.386	-3.439	-27.228	-7.664	7.100	-6.778	
9	5.041	7.162	-6.884	-0.041	4.726	-0.697	-5.267	-15.384	0.109	2.531

g's

0	0.000									
1	0.000	-5.861								
2	0.000	-0.373	40.618							
3	0.000	-16.340	14.567	28.539						
4	0.000	16.083	11.350	-21.036	1.326					
5	0.000	-2.139	-20.512	10.355	43.087	18.783				
6	0.000	-5.829	-2.211	0.938	-30.206	-53.357	-5.543			
7	0.000	2.878	4.224	8.074	-11.965	6.139	6.150	10.126		
8	0.000	5.016	7.224	-7.477	16.984	-3.418	-15.694	-43.952	1.568	
9	0.000	-1.875	4.128	-3.933	1.984	8.000	4.752	8.628	11.712	6.965

h's

	0	1	2	3	4	5	6	7	8	9
0	-10.907									
1	-32.888	-38.509								
2	7.233	27.266	-28.145							
3	-38.583	-9.300	5.279	23.284						
4	17.079	-0.165	-17.998	-36.576	41.742					
5	2.220	10.333	-13.191	16.832	55.087	-34.309				
6	-24.020	-14.422	24.823	25.839	-12.085	6.096	5.963			
7	-8.757	-9.623	1.777	-7.100	-10.749	2.848	5.069	3.998		
8	7.778	4.262	-7.492	-17.905	-7.700	33.412	-6.658	-4.706	-19.023	
9	0.692	-6.132	-0.306	2.832	6.515	-2.108	12.676	10.599	-13.217	38.275

Carrington Rotation 1704:180

g's

0	0.000									
1	0.000	-2.580								
2	0.000	-2.899	34.655							
3	0.000	14.382	8.206	-34.656						
4	0.000	-13.649	17.141	6.102	-0.026					
5	0.000	3.962	-19.939	-15.696	28.597	-0.529				
6	0.000	6.255	-6.271	5.492	-30.045	54.480	-10.588			
7	0.000	-3.837	1.654	-4.936	-14.023	-11.197	-1.130	-14.389		
8	0.000	-2.412	2.513	-1.312	17.439	-3.183	-26.874	24.228	-11.084	
9	0.000	4.172	0.778	4.959	6.391	-9.747	4.087	-13.739	5.294	-18.325

h's

0	-7.243									
1	-23.852	44.920								
2	17.464	-23.473	-42.476							
3	-49.435	3.639	11.443	-16.078						
4	16.491	2.788	-11.874	14.600	26.324					
5	9.697	-8.604	-4.462	-4.504	67.358	23.883				
6	-23.905	11.629	3.757	-20.063	-5.681	-0.049	-26.962			
7	-5.198	12.447	-2.919	-3.372	-3.889	6.478	17.081	-10.046		
8	4.690	-7.000	-0.273	11.669	-9.842	-38.255	-10.375	9.725	-28.775	
9	-1.344	0.231	-6.040	1.924	1.487	9.811	6.645	-9.523	-15.626	-35.917

Carrington Rotation 1705

g's

0	0.000									
1	0.000	14.375								
2	0.000	8.681	37.836							
3	0.000	-7.436	21.558	40.595						
4	0.000	2.561	5.283	-6.903	14.464					
5	0.000	9.111	-19.714	19.314	9.956	9.192				
6	0.000	-0.300	-0.532	-1.534	-28.410	-48.909	-9.879			
7	0.000	1.990	4.299	-5.735	-6.775	17.999	-4.411	-5.708		
8	0.000	8.258	2.866	0.278	6.993	16.128	-19.332	-8.206	-13.786	
9	0.000	-3.492	-5.161	-0.666	4.508	7.987	0.258	5.016	10.548	5.242

h's

0	6.803									
1	-43.467	-26.018								
2	8.797	20.592	-17.940							
3	-31.977	9.104	-4.287	-12.421						
4	23.122	-0.746	-6.181	-33.950	42.923					
5	1.383	-4.473	-2.743	17.330	48.876	-33.228				
6	-29.995	-6.357	-0.344	15.306	5.626	-30.665	-22.622			
7	-0.076	-5.224	-5.343	-6.384	-2.873	-13.528	18.104	2.152		
8	12.642	-1.416	-3.137	-7.851	-8.885	37.539	4.469	-1.814	-3.757	
9	-4.021	-3.100	-6.235	0.771	-3.131	-1.187	11.997	2.195	8.380	37.412

Carrington Rotation 1705:180

g's

0	0.000									
1	0.000	-17.085								
2	0.000	-21.907	68.121							
3	0.000	-0.614	33.401	-33.356						
4	0.000	6.336	13.620	-2.226	4.352					
5	0.000	-0.130	-18.070	-23.471	12.517	2.851				
6	0.000	-4.404	-5.473	3.223	-7.762	24.754	-18.841			
7	0.000	-8.183	8.548	7.899	-10.119	-16.852	-35.822	3.945		
8	0.000	-4.996	6.695	-0.970	-7.758	-16.591	-11.502	-13.611	-29.442	
9	0.000	8.841	-5.611	-4.125	7.500	0.965	6.221	10.050	2.926	24.145

h's

Carrington Rotation 1706

g's

	0	1	2	3	4	5	6	7	8	9
0	-17.455									
1	-31.553	8.913								
2	5.918	-17.150	-16.208							
3	-30.616	-8.090	-6.300	7.378						
4	32.363	3.210	-2.401	31.770	4.534					
5	-0.977	7.135	1.335	-1.372	49.366	0.765				
6	-27.248	9.326	-3.881	-12.967	-4.339	28.915	-28.102			
7	1.243	0.822	8.308	11.822	-11.447	15.514	-8.385	-4.964		
8	13.865	-2.345	-7.336	2.028	4.813	-24.580	26.096	-2.352	-2.490	
9	-4.699	10.602	-3.991	4.605	-3.249	1.257	9.940	10.316	-5.909	-22.036

h's

0	0.000									
1	0.000	1.896								
2	0.000	33.903	61.329							
3	0.000	-12.118	36.617	52.895						
4	0.000	-4.081	3.413	8.077	13.670					
5	0.000	4.164	-18.376	23.354	12.242	-28.431				
6	0.000	-0.306	-3.353	3.377	-0.084	-5.505	-47.288			
7	0.000	11.651	17.332	-16.848	-15.790	-5.579	-35.673	-21.132		
8	0.000	8.393	0.859	11.686	0.443	10.302	-12.185	4.609	-53.991	
9	0.000	-8.072	-8.828	0.998	9.714	10.850	14.017	-1.993	0.818	-38.724

Carrington Rotation 1706:180

g's

0	-25.140									
1	-38.012	-28.519								
2	5.450	3.165	13.840							
3	-26.220	14.230	9.274	-13.882						
4	34.741	9.502	6.913	-37.511	-27.521					
5	-3.502	-4.191	5.164	-1.650	29.724	34.183				
6	-25.593	-17.843	-1.463	14.007	0.709	-9.440	-17.504			
7	1.925	-5.134	9.543	-14.102	-0.466	-11.763	5.648	-8.850		
8	15.064	9.359	-9.664	-6.649	8.241	8.678	22.533	3.300	7.215	
9	-2.729	-7.787	-2.084	-3.343	-7.516	-8.323	-12.252	-12.279	-22.854	22.525

h's

0	0.000									
1	0.000	-20.625								
2	0.000	-46.101	45.952							
3	0.000	5.968	24.123	-19.679						
4	0.000	5.295	7.788	11.022	-13.471					
5	0.000	-4.408	-7.173	-18.593	-8.902	2.003				
6	0.000	-1.553	1.567	-2.874	-3.813	-10.762	-18.694			
7	0.000	-10.179	12.221	18.044	-3.585	15.166	-28.848	13.140		
8	0.000	-9.564	-3.682	-8.967	2.410	11.481	-9.571	11.167	-55.223	
9	0.000	7.683	-6.855	-2.906	3.395	-2.638	-0.523	7.031	-1.816	30.780

Carrington Rotation 1707

g's

0	-25.718									
1	-34.898	52.457								
2	3.126	2.126	7.127							
3	-31.576	-9.021	16.255	13.734						
4	33.811	-9.698	6.702	20.823	-31.757					
5	-7.958	4.163	4.556	13.791	28.434	-56.782				
6	-25.600	13.601	-0.236	-3.868	6.817	7.121	-14.827			
7	6.174	2.541	-0.654	3.349	7.887	5.854	-8.623	17.163		
8	11.106	-2.455	-2.711	2.211	-5.745	1.362	20.048	-11.082	34.029	
9	-4.439	10.826	4.115	-1.063	-13.258	-7.208	-2.878	8.604	-30.178	-1.372

h's

0	0.000									
1	0.000	22.270								
2	0.000	47.839	64.063							
3	0.000	-7.816	37.442	12.158						
4	0.000	-6.519	10.536	-2.673	-0.263					
5	0.000	2.590	-12.761	16.148	-17.126	-17.177				
6	0.000	-0.678	9.783	0.252	14.650	19.122	-43.147			
7	0.000	8.148	10.960	-12.536	-1.047	-8.077	-29.927	-36.806		
8	0.000	7.019	-6.570	2.125	3.444	-6.418	-1.799	-20.494	-71.824	
9	0.000	-10.371	-3.291	10.102	0.021	-13.598	10.346	-5.310	-12.132	-31.287

Carrington Rotation 1707:180

	0	1	2	3	4	5	6	7	8	9
0	-8.253									
1	-25.132	-52.311								
2	-4.276	-21.351	-15.974							
3	-39.838	-1.414	15.907	-31.811						
4	30.762	14.883	17.161	-29.251	-40.638					
5	-1.743	2.077	8.161	-3.648	18.412	83.470				
6	-20.308	-19.213	-1.253	11.952	7.694	10.969	-9.719			
7	-1.912	-7.423	-2.794	-6.107	5.514	-4.177	-7.777	10.001		
8	6.144	5.881	-4.206	-7.854	-11.363	-11.029	5.726	20.991	52.209	
9	0.306	-5.452	4.224	5.541	-10.653	8.976	-7.259	-17.459	-18.757	-34.989

g's

0	0.000									
1	0.000	3.997								
2	0.000	-36.584	70.039							
3	0.000	1.001	23.908	-20.421						
4	0.000	-0.132	-3.872	10.380	-30.174					
5	0.000	-5.044	-12.861	-7.692	-38.671	3.221				
6	0.000	8.532	15.758	2.551	18.248	-26.796	-40.586			
7	0.000	-2.760	7.347	13.367	11.746	18.345	-24.367	28.619		
8	0.000	-12.913	-12.804	-2.712	2.778	7.130	3.954	12.633	-30.650	
9	0.000	6.941	-3.488	-10.996	-13.707	5.456	10.726	-6.292	13.336	53.510

h's

Carrington Rotation 1708

0	-6.772									
1	-28.017	36.085								
2	-5.240	20.751	-19.714							
3	-40.558	-4.748	24.609	27.663						
4	27.513	-13.810	23.232	14.990	-24.447					
5	-1.928	-1.435	7.708	-7.629	6.003	-66.555				
6	-21.410	17.733	-2.453	-8.349	31.975	-9.652	8.039			
7	-6.571	4.691	-8.673	12.317	5.983	-9.084	1.005	22.669		
8	11.307	-7.181	-4.494	9.930	-10.195	13.131	-15.332	-16.828	62.205	
9	-0.898	3.943	8.326	-10.709	-15.439	1.065	-5.525	17.438	-14.757	24.676

g's

0	0.000									
1	0.000	-3.948								
2	0.000	31.515	57.930							
3	0.000	-3.869	29.820	5.464						
4	0.000	0.154	-3.657	1.167	-48.692					
5	0.000	3.729	-14.096	3.163	-51.562	-3.880				
6	0.000	-5.438	10.831	-2.458	13.486	15.066	-46.220			
7	0.000	-1.031	6.670	-13.999	13.516	14.775	-32.080	-16.081		
8	0.000	7.170	-11.405	0.098	0.803	-6.496	-12.581	-9.817	5.805	
9	0.000	-2.478	-4.332	6.980	-8.736	-3.919	14.092	8.664	6.336	-33.435

h's

Carrington Rotation 1708:180

0	-1.729									
1	-26.029	-49.423								
2	-2.655	-28.921	-21.698							
3	-36.338	-0.378	27.285	-11.967						
4	25.944	11.347	26.783	-3.045	-15.205					
5	-8.180	-1.044	4.188	5.445	8.268	81.527				
6	-16.494	-16.057	-8.874	11.651	26.838	20.041	-10.105			
7	-4.368	-2.181	-8.338	-1.232	-5.595	10.752	-4.794	-18.078		
8	8.100	8.505	0.485	-8.108	-7.405	-15.593	-8.125	1.911	36.844	
9	-3.053	-3.576	5.876	4.036	-6.609	-5.822	-0.876	-21.886	-18.194	-29.158

g's

0	0.000									
1	0.000	8.370								
2	0.000	-31.380	37.564							
3	0.000	6.173	16.257	-7.875						
4	0.000	8.021	-7.320	0.616	-49.562					
5	0.000	-3.098	-18.442	2.935	-49.787	22.712				
6	0.000	0.475	2.192	7.445	9.709	-9.271	-34.683			
7	0.000	3.855	6.227	5.865	15.767	-20.164	-16.007	16.506		
8	0.000	-4.375	-7.219	-5.255	9.923	-4.699	-11.103	7.734	18.953	
9	0.000	1.004	-2.246	-2.281	-6.968	-0.253	9.764	-2.550	-6.236	-2.466

h's

Carrington Rotation 1709

g's

	0	1	2	3	4	5	6	7	8	9
0	13.166									
1	-27.146	46.467								
2	-11.777	31.973	-16.918							
3	-37.068	1.109	28.762	18.734						
4	28.290	-11.256	31.219	5.077	-9.795					
5	-7.999	-0.755	-5.598	-16.929	15.881	-44.804				
6	-13.085	14.037	-8.622	-13.584	23.679	-25.793	8.051			
7	-11.177	8.965	-2.930	1.837	-6.891	-5.751	-1.558	14.420		
8	6.189	-7.039	4.002	9.951	-11.592	4.108	-10.407	23.860	25.936	
9	1.040	1.929	5.416	-0.693	-3.740	13.450	-0.166	4.224	-26.245	22.902

h's

0	0.000									
1	0.000	1.064								
2	0.000	29.871	27.167							
3	0.000	-12.779	17.304	9.194						
4	0.000	-4.716	-1.046	-3.398	-65.326					
5	0.000	2.561	-15.366	2.149	-47.573	-25.362				
6	0.000	-2.053	-3.275	-14.312	0.455	14.261	-3.806			
7	0.000	-2.003	3.238	-4.753	20.665	20.538	-32.784	5.522		
8	0.000	-1.433	-2.221	7.370	1.924	1.598	-2.866	0.438	33.040	
9	0.000	-1.086	2.448	6.512	-9.221	-2.308	-1.731	-4.307	15.154	5.688

Carrington Rotation 1709:180

g's

0	11.690									
1	-30.618	-39.524								
2	-15.295	-41.224	-35.724							
3	-35.548	-9.537	29.350	-12.583						
4	26.504	15.228	32.495	13.926	5.089					
5	-12.449	3.187	-14.005	18.162	14.196	46.835				
6	-9.850	-12.911	-12.230	12.885	17.806	7.805	-4.267			
7	-10.554	-8.942	0.611	-1.677	-6.511	10.371	10.528	-17.135		
8	2.872	3.452	0.391	-14.257	-12.836	1.187	-16.103	-26.059	29.976	
9	-1.258	-5.320	4.989	-0.021	-1.832	-21.628	-4.325	-1.848	-27.991	-15.825

h's

0	0.000									
1	0.000	6.772								
2	0.000	-33.324	29.271							
3	0.000	9.614	2.271	-28.202						
4	0.000	9.951	-8.677	2.001	-60.102					
5	0.000	-4.684	-13.479	1.803	-25.329	39.003				
6	0.000	-4.230	-2.040	9.505	-3.347	-23.529	1.207			
7	0.000	5.315	8.164	0.437	16.709	-22.402	-38.591	-12.669		
8	0.000	2.019	-1.595	-7.847	5.322	0.023	-1.133	5.878	30.107	
9	0.000	-2.178	-3.389	-10.345	-8.281	-5.444	-1.110	-6.287	14.631	4.299

Carrington Rotation 1710

g's

0	0.570									
1	-21.745	43.028								
2	-20.072	42.950	-12.726							
3	-39.535	5.342	30.034	20.713						
4	29.759	-14.818	37.614	-3.900	13.499					
5	-10.253	-0.474	-10.713	-16.846	17.989	-20.073				
6	-6.303	10.363	-16.909	-18.782	-9.595	4.401	2.110			
7	-11.904	8.828	3.180	3.017	-7.761	-7.788	15.854	-12.292		
8	-0.876	-5.702	-2.219	17.274	-6.312	0.194	-6.033	22.460	10.208	
9	2.469	3.360	4.663	1.494	-0.846	22.984	-30.100	-1.895	-17.677	27.894

h's

0	0.000									
1	0.000	-25.132								
2	0.000	41.292	25.359							
3	0.000	-16.428	-2.828	40.487						
4	0.000	-12.329	-12.548	-1.207	-65.212					
5	0.000	4.379	-8.811	14.199	-24.119	-25.254				
6	0.000	5.687	-1.229	-4.976	-3.840	25.655	37.815			
7	0.000	-1.776	4.158	-9.832	13.809	-1.267	-24.996	39.750		
8	0.000	-2.740	-0.952	10.104	6.228	10.483	3.612	-1.177	12.365	
9	0.000	-3.616	-6.974	8.367	-6.249	6.209	2.497	10.509	17.976	2.141

	0	1	2	3	4	5	6	7	8	9
0	-5.715					**Carrington Rotation 1710:180**				
1	-23.397	-40.315								
2	-16.205	-39.322	-16.775							**g's**
3	-34.035	-3.007	16.216	-33.980						
4	27.704	12.401	26.238	15.897	16.158					
5	-16.251	0.631	-10.882	25.373	8.500	41.027				
6	-6.759	-3.298	-6.646	5.864	-14.798	0.516	-21.478			
7	-6.817	-2.185	2.865	-13.224	4.306	7.459	25.002	26.196		
8	0.533	1.288	-10.489	-5.934	-4.572	3.105	4.751	-21.619	5.138	
9	1.533	-7.706	8.578	2.996	-4.844	-16.771	-35.780	2.214	-30.954	-22.511
0	0.000									**h's**
1	0.000	23.903								
2	0.000	-37.137	28.855							
3	0.000	22.718	-7.143	-39.432						
4	0.000	15.937	-14.078	-4.492	-91.043					
5	0.000	-9.497	-4.411	-22.428	-19.005	43.942				
6	0.000	-9.776	2.535	-1.274	4.417	-38.339	36.897			
7	0.000	4.528	4.678	17.987	3.171	-13.384	-22.180	-47.575		
8	0.000	5.058	2.442	-9.122	-4.524	-0.856	7.289	12.780	17.658	
9	0.000	2.171	-4.156	-14.413	8.545	2.593	4.840	-8.254	7.403	1.133

0	1.737					**Carrington Rotation 1711**				
1	-28.126	26.846								
2	-13.619	50.294	-45.540							**g's**
3	-37.420	-1.982	39.727	31.346						
4	24.075	-19.918	19.734	-16.332	43.377					
5	-11.843	0.544	-18.853	-6.412	-10.833	-60.886				
6	-6.460	9.054	-7.526	-5.974	-20.300	28.414	-57.352			
7	-8.884	-0.805	8.928	5.870	5.805	-10.071	26.849	-4.421		
8	3.663	-1.591	-9.630	10.260	-4.128	-8.308	13.324	-18.545	-3.838	
9	0.699	5.752	3.363	-2.931	-4.572	15.318	-34.345	1.623	-24.684	-12.884
0	0.000									**h's**
1	0.000	-5.281								
2	0.000	25.795	22.620							
3	0.000	-16.115	1.283	12.115						
4	0.000	-17.966	-28.452	33.113	-86.033					
5	0.000	7.798	-10.341	20.248	-26.077	-8.535				
6	0.000	9.737	8.255	-8.484	17.221	32.245	12.345			
7	0.000	-5.476	6.746	-19.776	1.801	3.029	22.898	31.398		
8	0.000	-3.950	-0.596	13.882	-7.952	-3.760	7.997	-10.434	43.692	
9	0.000	2.506	-1.383	13.072	12.541	-5.273	-7.722	12.032	-15.531	-19.198

0	5.082					**Carrington Rotation 1711:180**				
1	-38.096	-44.706								
2	-18.964	-45.382	-64.828							**g's**
3	-31.779	-1.204	14.873	-57.979						
4	24.721	9.989	8.645	12.884	37.434					
5	-7.377	4.090	-6.455	10.577	-21.983	38.785				
6	-4.486	0.201	0.027	5.001	-16.660	-11.143	-29.368			
7	-20.400	-0.588	4.096	1.461	25.345	19.249	27.466	-2.847		
8	-1.868	-2.832	-13.971	-11.186	4.692	7.071	14.971	36.554	10.690	
9	8.204	-11.288	1.171	-12.349	-15.027	-11.601	-27.801	-0.052	-36.292	-10.293
0	0.000									**h's**
1	0.000	17.016								
2	0.000	-24.995	30.317							
3	0.000	15.274	4.770	-26.581						
4	0.000	10.605	-38.086	-48.203	-90.119					
5	0.000	-12.730	-17.477	-32.672	-39.412	-18.923				
6	0.000	2.739	10.486	3.232	10.392	-46.971	-0.805			
7	0.000	11.216	12.069	20.700	1.367	-5.564	23.837	-25.534		
8	0.000	-7.243	8.956	-4.188	-1.312	14.330	11.824	10.024	43.806	
9	0.000	-9.825	-2.434	-8.856	9.463	17.613	-1.774	-10.820	-0.150	32.346

Carrington Rotation 1712

g's

	0	1	2	3	4	5	6	7	8	9
0	9.184									
1	-58.296	6.593								
2	-14.799	43.576	-79.817							
3	-13.690	4.830	11.287	65.296						
4	15.224	-6.965	1.905	-9.700	76.694					
5	-15.089	0.298	-2.180	4.034	-21.598	-37.833				
6	6.704	-4.314	1.562	-3.494	-20.665	29.248	-19.122			
7	-16.771	-8.251	-4.755	-8.831	18.684	-34.781	20.227	1.438		
8	-9.107	8.177	-11.741	8.055	6.939	-21.035	13.266	-64.615	-28.007	
9	10.243	15.252	8.143	13.013	-7.407	10.136	-13.956	10.563	-52.520	19.877

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-10.987								
2	0.000	4.395	-5.305							
3	0.000	-5.592	1.854	-5.139						
4	0.000	-1.057	-43.651	38.894	-99.485					
5	0.000	1.641	-15.255	32.818	-41.041	41.589				
6	0.000	-5.264	20.897	4.557	27.181	46.597	-10.102			
7	0.000	-1.981	10.094	-25.373	7.016	2.934	59.686	61.076		
8	0.000	4.962	0.305	-7.256	-0.819	-23.906	-2.923	-13.056	25.903	
9	0.000	8.185	1.236	12.678	3.822	-17.295	-25.843	1.744	10.759	-57.533

Carrington Rotation 1712:180

g's

	0	1	2	3	4	5	6	7	8	9
0	0.098									
1	-43.463	4.142								
2	-11.899	-43.082	-98.490							
3	-23.424	3.558	25.605	-41.769						
4	8.549	10.411	0.651	8.619	100.928					
5	-11.555	-4.446	-14.626	-21.705	-17.854	-15.057				
6	9.138	-3.442	-2.272	-8.915	-36.510	-37.295	-13.275			
7	-17.317	8.260	4.516	15.288	4.060	40.636	22.450	8.916		
8	-6.731	-0.422	-5.157	2.531	7.527	17.191	17.995	41.035	-45.981	
9	10.220	-10.015	3.730	-10.971	-3.346	-11.831	-3.610	-3.690	-31.682	-21.730

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	10.621								
2	0.000	5.006	-3.873							
3	0.000	9.416	5.674	-22.363						
4	0.000	2.774	-27.873	-25.799	-51.867					
5	0.000	-7.900	-7.293	-24.216	-32.357	-30.094				
6	0.000	2.491	15.510	-7.175	12.697	-40.040	-45.194			
7	0.000	-1.175	-2.295	18.009	-3.379	-15.547	69.785	-42.957		
8	0.000	-1.614	-1.547	10.906	4.964	5.409	-7.041	10.688	24.882	
9	0.000	-1.558	8.891	-10.854	6.620	12.718	-47.121	-1.624	-0.375	47.531

Carrington Rotation 1713

g's

	0	1	2	3	4	5	6	7	8	9
0	0.520									
1	-42.605	17.959								
2	-18.637	34.662	-102.223							
3	-27.272	-2.068	23.387	29.915						
4	15.106	-4.651	-6.977	4.837	101.699					
5	-9.664	1.547	-17.859	14.109	-21.854	7.593				
6	2.906	-1.354	3.540	14.744	-18.767	31.228	-26.649			
7	-16.545	-3.029	8.895	-6.418	3.698	-16.043	10.046	-31.174		
8	-0.859	3.919	-6.752	-8.267	4.151	-22.414	2.896	-18.124	-18.516	
9	7.703	7.729	0.821	6.492	-2.072	2.400	10.399	-2.762	-39.518	57.370

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-7.319								
2	0.000	-1.558	21.654							
3	0.000	-15.172	-10.491	20.625						
4	0.000	-5.829	-24.429	28.724	-47.109					
5	0.000	10.606	-2.415	7.368	-28.292	34.520				
6	0.000	-3.450	9.425	1.620	-4.803	43.708	-39.156			
7	0.000	-3.846	-5.092	-10.719	10.988	31.913	49.445	19.801		
8	0.000	4.388	5.044	-6.382	14.526	-15.574	12.724	-20.105	-6.653	
9	0.000	5.853	8.244	7.964	-0.820	-14.424	-33.818	-8.290	3.263	-22.761

	0	1	2	3	4	5	6	7	8	9
0	36.459					**Carrington Rotation 1713:180**				
1	-50.457	-20.326								
2	-31.758	-24.364	-100.457							**g's**
3	-13.365	9.734	30.122	-17.736						
4	16.135	5.248	-13.275	-13.465	85.212					
5	-19.904	-6.820	-23.972	-21.694	-14.107	11.098				
6	12.611	-0.578	6.348	-12.611	-14.060	-65.923	-19.623			
7	-10.307	-4.957	11.338	3.106	-8.363	3.987	4.876	26.488		
8	-12.153	-2.067	-5.572	6.139	5.528	34.954	-16.642	36.089	-14.266	
9	7.181	0.814	0.617	4.135	2.544	-10.092	8.735	2.081	-62.022	-39.792
0	0.000									**h's**
1	0.000	38.151								
2	0.000	-11.173	10.425							
3	0.000	13.214	5.891	-3.535						
4	0.000	21.332	-10.610	-29.401	-50.071					
5	0.000	-14.815	-3.231	-12.446	-13.793	-47.104				
6	0.000	-6.021	7.744	3.530	1.754	-32.336	-22.142			
7	0.000	16.435	-3.813	6.676	6.883	-19.098	15.692	-21.513		
8	0.000	-0.053	-9.389	3.388	14.102	6.365	7.961	30.808	-10.039	
9	0.000	-14.200	9.194	0.551	1.672	4.998	-19.575	-5.769	10.805	15.654

0	39.257					**Carrington Rotation 1714**				
1	-59.723	11.398								
2	-27.838	24.819	-108.186							**g's**
3	-10.273	-6.712	18.727	30.582						
4	8.746	-0.392	-23.860	22.511	57.839					
5	-14.228	5.003	-22.851	-2.577	11.177	-25.145				
6	20.263	-4.071	12.342	13.161	-18.199	75.229	-29.614			
7	-18.272	4.980	10.927	6.771	-8.403	11.131	24.961	-68.635		
8	-19.491	4.837	-11.025	-10.552	17.999	-33.162	-14.892	-30.645	-1.302	
9	12.713	-4.713	2.503	-8.493	1.511	12.054	-4.025	-4.963	-61.282	60.655
0	0.000									**h's**
1	0.000	-28.916								
2	0.000	4.003	2.293							
3	0.000	-3.897	-1.780	16.088						
4	0.000	-23.242	1.465	1.702	-27.692					
5	0.000	5.058	3.105	7.501	-16.417	31.515				
6	0.000	11.672	1.184	-2.527	-24.025	34.391	-5.369			
7	0.000	-5.193	-6.080	-10.808	11.605	12.805	16.781	-0.556		
8	0.000	-7.244	-5.210	-3.421	19.347	0.622	13.280	-11.953	-49.594	
9	0.000	6.172	7.964	7.911	-3.489	2.852	-9.777	7.251	7.214	-19.205

0	35.589					**Carrington Rotation 1714:180**				
1	-47.393	-2.181								
2	-22.823	-20.676	-64.432							**g's**
3	-23.372	13.931	18.416	-4.895						
4	5.773	5.562	-24.332	-15.561	49.116					
5	-8.297	-5.698	-8.104	-12.081	9.438	9.692				
6	19.699	3.652	13.526	-13.940	-12.205	-61.050	-13.222			
7	-20.638	-2.952	-3.229	-4.889	-2.406	-15.164	0.405	30.594		
8	-14.237	-4.354	-9.371	9.914	18.794	27.299	-4.229	46.368	-32.604	
9	10.991	5.315	13.709	10.697	0.877	-7.090	-5.033	2.663	-42.859	-62.114
0	0.000									**h's**
1	0.000	4.668								
2	0.000	9.663	-1.016							
3	0.000	9.468	-5.024	16.232						
4	0.000	9.004	15.591	3.688	6.253					
5	0.000	-6.742	10.321	-9.340	-20.477	-34.118				
6	0.000	-1.824	-1.212	10.619	-30.522	-25.001	12.366			
7	0.000	1.622	-6.383	13.433	18.935	-12.016	21.274	31.404		
8	0.000	1.295	-3.839	-6.817	16.906	10.632	7.192	-19.584	-77.883	
9	0.000	-0.010	7.177	-8.870	-4.568	6.975	-5.443	4.839	27.274	1.199

	0	1	2	3	4	5	6	7	8	9
0	37.438									
1	-46.762	21.368								
2	-28.529	8.580	-48.743							
3	-22.323	-16.664	12.717	18.303						
4	8.885	0.527	-24.446	5.281	16.358					
5	-4.309	7.103	-4.466	9.505	17.603	-20.618				
6	17.089	-9.064	12.660	7.325	-3.605	54.658	13.727			
7	-18.489	3.560	-6.152	0.109	-0.515	18.221	-16.640	9.149		
8	-12.205	4.043	-5.559	-8.599	5.527	-24.175	-4.859	-69.395	17.382	
9	7.071	-5.733	13.638	-6.092	0.756	1.818	8.709	-7.233	-46.308	37.734

Carrington Rotation 1715

g's

0	0.000									
1	0.000	-8.687								
2	0.000	-7.753	5.239							
3	0.000	-14.180	-7.317	6.635						
4	0.000	-11.506	16.383	-10.885	21.126					
5	0.000	9.184	16.425	5.305	-24.138	-7.038				
6	0.000	6.620	1.904	-11.291	-33.094	37.876	-9.433			
7	0.000	-6.544	-10.197	-7.410	11.943	20.817	24.215	-44.682		
8	0.000	2.095	-6.137	6.760	16.315	-16.651	10.581	8.068	-35.684	
9	0.000	3.433	6.413	6.586	-2.432	-16.824	-10.155	3.959	-2.568	54.697

h's

0	26.192									
1	-47.390	5.853								
2	-18.018	-13.917	-43.311							
3	-19.712	19.209	27.718	-20.733						
4	2.640	0.534	-21.952	0.237	4.973					
5	-9.516	-9.173	-3.376	-0.129	15.295	12.335				
6	16.165	11.609	14.879	-4.314	-9.448	-47.539	22.293			
7	-9.881	3.511	-7.907	-4.203	-4.325	-13.160	-22.258	-19.422		
8	-5.090	-14.542	-9.332	3.727	2.521	25.381	1.530	51.620	33.837	
9	-2.579	0.224	14.699	7.385	6.927	3.953	2.383	12.632	-11.383	-22.103

Carrington Rotation 1715:180

g's

0	0.000									
1	0.000	-4.287								
2	0.000	-0.128	27.284							
3	0.000	22.391	-14.547	-2.630						
4	0.000	16.165	14.592	20.825	30.503					
5	0.000	-12.526	14.466	2.345	-22.734	-9.772				
6	0.000	-12.571	1.970	18.235	-28.354	-38.331	-9.053			
7	0.000	4.183	-3.014	11.879	11.189	-24.610	41.681	36.141		
8	0.000	6.779	-0.780	-14.653	10.090	20.603	14.181	-30.786	-52.134	
9	0.000	2.934	-7.059	-11.987	-1.881	17.306	-15.717	7.769	-4.655	-47.765

h's

0	24.893									
1	-41.244	11.185								
2	-14.002	12.013	-15.138							
3	-19.341	-15.864	28.654	43.425						
4	3.161	-3.053	-26.750	-21.832	-6.542					
5	-6.816	7.463	4.673	-5.396	11.084	8.779				
6	12.959	-6.047	16.055	9.736	-16.977	45.167	34.100			
7	-11.823	-1.427	-9.559	1.054	-8.309	-2.965	-18.582	34.765		
8	0.514	10.713	-7.208	-7.590	4.265	-17.416	1.651	-34.235	27.897	
9	-0.451	1.068	11.645	-0.245	8.749	3.339	5.680	-5.534	11.742	-9.842

Carrington Rotation 1716

g's

0	0.000									
1	0.000	-10.241								
2	0.000	4.408	23.569							
3	0.000	-16.008	-5.974	25.870						
4	0.000	-17.380	24.410	-18.673	36.281					
5	0.000	13.189	7.316	-0.952	-41.017	0.915				
6	0.000	18.159	-0.515	-9.460	-20.125	31.065	7.355			
7	0.000	-8.358	4.530	-12.255	9.015	17.790	21.431	-25.990		
8	0.000	-5.919	-3.056	15.137	1.631	-21.563	1.764	21.149	-15.706	
9	0.000	3.238	-9.697	11.405	-1.202	-17.281	-8.443	-13.519	-5.722	42.198

h's

Carrington Rotation 1716:180

g's

	0	1	2	3	4	5	6	7	8	9
0	9.649									
1	-34.653	4.170								
2	-9.391	-33.718	-1.816							
3	-35.775	18.313	26.199	-37.339						
4	-1.659	8.839	-19.333	44.489	-19.905					
5	9.330	-9.199	11.102	0.175	9.464	-1.246				
6	14.688	1.181	9.334	-7.937	-6.980	-54.810	26.245			
7	-22.694	-1.542	-13.113	5.233	-8.536	-6.771	3.181	-18.232		
8	2.002	-7.495	2.404	6.799	-3.168	10.885	6.725	13.051	29.183	
9	4.348	2.713	9.513	-6.376	5.050	4.637	3.655	-7.219	12.599	18.361

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-7.384								
2	0.000	5.350	29.364							
3	0.000	14.819	-33.909	-11.782						
4	0.000	-1.107	32.199	18.723	36.894					
5	0.000	-14.564	10.164	1.794	-23.744	-4.535				
6	0.000	-3.789	-5.110	9.803	-15.133	-42.377	5.939			
7	0.000	2.483	0.837	10.624	13.685	-10.902	27.180	17.567		
8	0.000	-1.856	-2.038	-12.652	2.010	21.616	1.702	-3.626	-3.128	
9	0.000	0.747	-3.719	-8.201	-7.135	11.187	-15.247	20.175	-29.223	-41.319

Carrington Rotation 1717

g's

	0	1	2	3	4	5	6	7	8	9
0	8.723									
1	-27.845	-18.466								
2	-5.251	29.893	-10.927							
3	-33.153	-17.384	18.390	28.073						
4	-7.571	-14.669	-7.563	-33.847	-26.663					
5	0.180	8.011	11.033	7.674	-3.663	8.963				
6	14.493	3.440	5.474	1.388	0.279	27.387	14.300			
7	-16.540	1.863	-12.530	-2.941	-6.228	1.575	7.023	13.207		
8	-2.967	9.026	-0.150	2.982	-4.710	0.015	13.582	8.154	1.684	
9	1.652	-2.400	3.993	2.722	3.478	-6.813	-3.590	12.640	17.872	-18.895

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	11.744								
2	0.000	4.896	23.567							
3	0.000	-15.581	-38.767	11.904						
4	0.000	7.550	27.569	-16.369	24.592					
5	0.000	15.321	5.366	2.963	-2.364	7.875				
6	0.000	-2.697	-5.988	-7.797	-9.216	29.305	11.845			
7	0.000	-2.082	-1.386	-9.257	-0.096	14.529	2.091	-14.800		
8	0.000	8.528	-1.431	13.344	6.137	-15.006	-5.798	-0.006	-4.302	
9	0.000	-8.717	-0.844	5.987	3.970	-7.088	-8.162	-14.971	-9.045	8.289

Carrington Rotation 1717:180

g's

	0	1	2	3	4	5	6	7	8	9
0	12.609									
1	-31.762	8.046								
2	-14.272	-11.166	8.971							
3	-17.764	11.449	3.771	-16.647						
4	2.313	5.116	-5.072	13.826	-6.033					
5	-7.574	-9.983	3.825	5.311	4.803	1.912				
6	5.818	-1.624	4.827	9.444	0.221	-20.443	15.637			
7	-11.220	6.833	-1.275	-1.592	-1.744	-10.192	-1.432	-2.736		
8	-3.123	-4.631	-0.147	-10.020	-1.844	3.352	0.004	-7.130	11.967	
9	4.923	-4.836	-3.379	-0.473	-0.070	5.491	7.499	-7.493	3.643	4.405

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-19.012								
2	0.000	-5.842	7.446							
3	0.000	6.182	-14.074	-8.496						
4	0.000	6.711	17.270	0.203	22.304					
5	0.000	-7.216	-5.505	-2.673	-16.603	11.600				
6	0.000	-5.077	-8.200	0.181	3.812	-22.029	15.932			
7	0.000	-3.390	1.655	7.975	6.911	-8.649	0.923	22.903		
8	0.000	-1.969	4.703	-1.277	0.165	9.940	-10.426	0.391	13.704	
9	0.000	4.500	0.439	-7.186	-0.900	4.762	2.822	3.085	-18.626	18.991

Carrington Rotation 1718

g's

	0	1	2	3	4	5	6	7	8	9
0	9.825									
1	-32.255	-11.827								
2	-11.316	12.354	18.840							
3	-13.813	-14.100	-2.219	11.669						
4	1.323	-5.454	-5.303	-9.687	-4.768					
5	-9.492	9.682	3.041	-0.624	-2.447	0.209				
6	4.352	1.139	9.677	-10.348	1.431	11.908	18.500			
7	-7.547	-7.719	-4.303	0.163	-3.960	12.767	5.496	2.330		
8	0.227	1.421	-5.209	11.302	-2.960	-0.738	-2.356	0.251	-7.310	
9	3.005	5.279	-0.312	-0.824	2.398	-6.259	3.120	1.691	2.712	1.960

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	11.783								
2	0.000	7.649	6.670							
3	0.000	-3.841	-13.603	14.675						
4	0.000	-3.100	13.075	-1.765	15.691					
5	0.000	5.988	-5.398	2.093	-7.117	-7.480				
6	0.000	3.924	-7.726	1.715	6.728	11.416	13.769			
7	0.000	3.200	1.968	-2.238	4.448	9.906	0.882	-8.649		
8	0.000	4.500	4.957	-4.206	-1.082	-8.830	-2.685	1.956	7.445	
9	0.000	-3.324	-0.624	2.516	0.224	-3.177	3.917	-6.093	-22.450	-34.097

Carrington Rotation 1718:180

g's

	0	1	2	3	4	5	6	7	8	9
0	2.723									
1	-36.378	8.820								
2	-4.556	-11.328	24.812							
3	-13.888	10.779	6.731	-10.129						
4	-5.555	5.289	-7.386	12.964	-13.840					
5	-4.821	-8.524	-4.981	-6.535	-10.073	18.062				
6	7.848	1.315	6.177	4.617	7.213	-12.653	26.608			
7	-13.610	5.086	-2.602	3.600	-1.396	-3.188	11.267	-18.229		
8	-0.387	-3.883	0.338	-6.798	2.584	-2.968	-10.390	-0.189	-15.746	
9	6.157	-1.818	-0.827	0.440	3.350	-0.329	2.930	-5.416	11.534	3.789

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-20.607								
2	0.000	-14.450	2.142							
3	0.000	11.063	-13.962	-8.615						
4	0.000	4.050	12.671	11.043	7.764					
5	0.000	-10.503	-3.576	-3.236	-3.185	-2.992				
6	0.000	-0.673	-8.521	-9.819	-4.765	-18.560	35.108			
7	0.000	-3.090	1.727	-4.533	-0.197	-0.398	2.764	14.660		
8	0.000	-8.943	1.773	5.098	5.302	9.364	2.495	-2.643	-0.981	
9	0.000	4.995	-1.845	7.658	2.317	6.487	-6.772	2.436	-20.082	21.764

Carrington Rotation 1719

g's

	0	1	2	3	4	5	6	7	8	9
0	2.527									
1	-38.355	-1.774								
2	-2.919	15.167	19.909							
3	-12.477	-15.161	9.863	0.405						
4	-10.321	-3.756	-5.144	-6.904	-16.800					
5	-8.588	12.263	-9.276	10.889	-18.013	-12.153				
6	10.021	1.902	3.148	-8.357	9.959	9.876	13.166			
7	-13.091	-2.979	1.575	-4.870	6.184	2.171	11.017	15.396		
8	-2.644	5.093	2.234	6.921	3.376	1.339	-1.620	4.026	-8.285	
9	5.627	2.363	-0.662	0.684	-2.404	0.998	2.100	8.215	13.320	0.569

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	23.241								
2	0.000	11.889	11.916							
3	0.000	-9.811	-14.185	8.169						
4	0.000	-1.241	6.596	-5.001	-0.852					
5	0.000	8.154	-0.074	3.540	2.865	6.342				
6	0.000	-3.804	-6.300	2.997	-2.590	13.463	37.974			
7	0.000	3.142	3.255	1.892	-0.779	-0.994	0.186	-29.485		
8	0.000	8.301	3.085	0.441	3.653	-4.838	1.350	-0.123	-6.124	
9	0.000	-6.634	-0.528	-7.207	1.101	-3.944	-6.392	7.141	-19.045	-18.520

Carrington Rotation 1719:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-8.341									
1	-47.096	17.445								
2	0.213	-18.626	44.058							
3	-9.376	13.416	2.933	17.215						
4	-10.391	0.669	2.182	-3.968	-12.829					
5	-7.695	-12.361	-12.369	-18.911	-21.497	31.124				
6	11.494	2.610	2.048	9.922	0.360	-10.099	-1.304			
7	-15.294	3.441	7.245	6.821	7.163	-0.875	-1.328	-18.553		
8	-3.052	-10.205	-0.509	-11.811	6.515	-3.610	10.677	7.769	-18.452	
9	6.096	0.415	-3.116	-0.239	-5.339	-2.884	1.702	-5.790	17.719	-8.400

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-43.420								
2	0.000	-16.446	11.530							
3	0.000	8.310	-11.068	6.796						
4	0.000	0.893	10.881	1.602	4.749					
5	0.000	-8.366	-4.261	6.106	-6.457	11.322				
6	0.000	2.521	-8.573	-8.210	-7.991	-11.861	60.345			
7	0.000	-2.220	9.185	-3.607	0.429	-9.985	-9.179	29.946		
8	0.000	-8.889	2.068	5.234	5.078	2.993	0.565	-13.568	5.469	
9	0.000	2.685	-5.213	3.949	-2.488	7.824	-5.822	2.444	-11.365	12.686

Carrington Rotation 1720

g's

	0	1	2	3	4	5	6	7	8	9
0	8.720									
1	-56.120	-2.921								
2	-2.186	26.147	34.787							
3	-10.927	-22.868	11.646	-19.724						
4	-15.922	0.948	-0.221	10.453	-10.903					
5	-8.910	16.831	-18.155	17.255	-33.476	-26.684				
6	14.849	-5.747	0.978	-8.187	-4.947	15.803	-13.269			
7	-21.789	-0.552	13.169	-3.102	9.463	12.690	14.580	24.002		
8	-2.490	11.082	-0.799	12.553	10.759	-2.914	9.450	-23.127	-9.101	
9	11.300	-2.773	-3.309	-1.892	-6.712	-3.097	-7.228	-3.186	7.899	-0.755

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	62.160								
2	0.000	6.548	23.692							
3	0.000	-4.224	-9.667	-9.050						
4	0.000	-2.110	3.289	9.464	4.070					
5	0.000	3.904	-1.184	-3.329	-3.355	-4.300				
6	0.000	-6.412	-8.631	1.585	-16.769	-0.453	62.956			
7	0.000	4.031	6.300	-0.538	6.843	7.110	1.832	-42.629		
8	0.000	0.856	6.272	-0.746	9.499	0.059	12.953	31.607	15.904	
9	0.000	-1.744	-4.664	-2.765	-4.394	-5.449	-11.542	-4.052	-33.030	-9.135

Carrington Rotation 1720:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-12.092									
1	-54.689	5.334								
2	4.296	-34.380	37.908							
3	-20.323	24.022	20.290	13.373						
4	-16.082	8.704	12.122	-16.534	-32.724					
5	-2.430	-14.629	-25.505	-18.118	-32.014	23.327				
6	12.836	-6.064	-2.140	16.908	-7.281	-5.875	-38.032			
7	-24.102	-0.452	19.055	0.792	15.918	-5.716	0.250	-32.759		
8	-2.451	-3.888	-1.962	-18.098	7.992	-2.977	24.173	33.803	-13.396	
9	10.242	2.515	-6.932	7.684	-8.565	-1.675	-1.527	6.709	10.037	-4.115

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-77.403								
2	0.000	-6.342	30.176							
3	0.000	-0.101	-15.665	23.996						
4	0.000	-4.672	3.164	-0.270	4.056					
5	0.000	-0.544	4.282	10.863	-17.007	4.150				
6	0.000	7.559	-4.873	-14.409	-22.144	12.713	65.341			
7	0.000	-6.921	-0.201	3.141	20.545	-15.182	1.850	23.166		
8	0.000	-0.197	3.104	6.809	10.880	-2.815	15.048	-40.772	10.943	
9	0.000	-1.398	-1.392	-1.336	-13.206	7.842	-9.073	14.312	-14.446	-2.394

	0	1	2	3	4	5	6	7	8	9
0	-6.202					**Carrington Rotation 1721**				
1	-57.264	-21.543								
2	3.447	33.663	34.357							**g's**
3	-20.423	-16.668	19.383	-10.223						
4	-16.839	-3.981	14.828	13.757	-41.135					
5	0.082	10.617	-26.321	14.876	-31.425	-28.815				
6	11.988	-0.784	-5.255	-11.770	-4.335	10.247	-23.860			
7	-25.170	-0.581	20.011	-2.996	22.595	4.126	-7.637	33.966		
8	-2.657	5.939	1.168	14.067	4.975	-0.151	20.994	-39.239	-5.069	
9	10.159	-7.287	-7.014	-6.939	-9.455	-0.039	3.966	1.597	18.848	2.204
0	0.000									**h's**
1	0.000	83.565								
2	0.000	4.272	16.619							
3	0.000	-0.198	-15.402	-23.825						
4	0.000	2.510	10.513	-0.892	5.054					
5	0.000	1.702	7.184	-8.814	-20.833	-20.746				
6	0.000	-5.742	-5.139	8.217	-22.679	-9.527	59.443			
7	0.000	4.970	-2.834	-5.470	28.248	21.802	8.149	-22.331		
8	0.000	-0.645	2.544	-4.213	10.712	3.049	9.353	30.668	10.369	
9	0.000	1.795	-2.792	1.308	-16.398	-16.239	-8.453	-10.251	-12.275	3.799

0	-0.141					**Carrington Rotation 1721:180**				
1	-58.101	1.721								
2	-3.221	-36.624	39.241							**g's**
3	-19.689	16.402	23.605	3.751						
4	-12.231	4.698	16.234	-24.169	-36.985					
5	-0.556	-13.139	-24.761	-0.012	-31.116	22.087				
6	11.911	1.702	-8.281	8.135	-9.545	-12.728	-28.080			
7	-24.319	1.682	19.112	2.588	22.177	-2.008	-16.856	-9.029		
8	-2.721	-6.480	4.245	-10.470	5.880	2.318	5.615	36.524	0.561	
9	12.415	6.581	-5.449	1.460	-10.015	-3.486	8.323	3.933	9.345	-0.059
0	0.000									**h's**
1	0.000	-80.239								
2	0.000	-6.833	4.156							
3	0.000	-5.084	-11.212	27.112						
4	0.000	-2.565	1.436	4.769	-4.784					
5	0.000	0.947	8.034	13.284	-26.044	27.538				
6	0.000	5.710	-5.214	-7.553	-14.443	16.543	35.396			
7	0.000	-5.106	-2.968	0.141	23.478	-16.978	6.609	18.663		
8	0.000	-0.637	4.591	5.171	13.927	-7.108	11.580	-32.219	21.948	
9	0.000	0.373	-1.570	1.178	-9.696	8.944	-8.825	-1.955	-11.601	-0.297

0	14.094					**Carrington Rotation 1722**				
1	-61.069	-6.877								
2	-3.049	40.496	37.165							**g's**
3	-19.367	-12.749	27.147	0.259						
4	-13.966	-5.069	22.974	16.558	-34.541					
5	3.237	9.335	-25.093	3.869	-25.821	-29.275				
6	10.597	1.665	-10.971	-7.260	-13.360	11.558	-29.214			
7	-22.376	-2.112	15.697	-9.728	20.468	6.389	-13.041	15.149		
8	-2.792	4.955	6.779	5.970	3.959	-0.361	10.179	-30.759	-6.140	
9	11.181	-5.168	-3.892	6.133	-8.435	2.276	6.807	-4.759	9.754	1.563
0	0.000									**h's**
1	0.000	91.827								
2	0.000	1.746	-1.319							
3	0.000	6.544	-4.643	-27.371						
4	0.000	1.810	2.675	-7.005	0.340					
5	0.000	1.916	6.967	-4.946	-31.233	-24.216				
6	0.000	-2.925	-3.981	9.003	-12.273	-15.853	28.228			
7	0.000	3.762	2.381	1.381	22.596	14.458	-0.222	-15.326		
8	0.000	3.108	-0.934	-9.557	9.110	8.153	17.491	33.651	26.488	
9	0.000	1.306	-2.587	1.877	-12.713	-4.995	-8.390	4.770	-12.888	-3.214

Carrington Rotation 1722:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-9.323									
1	-66.920	3.380								
2	-0.427	-33.566	48.484							
3	-16.058	5.326	41.992	-13.973						
4	-11.863	2.826	17.352	-19.667	-32.944					
5	-0.549	-6.828	-25.340	7.742	-21.832	23.308				
6	4.178	-0.976	-14.300	4.930	-8.503	-5.843	-44.967			
7	-22.770	0.596	13.219	8.018	15.310	1.517	-15.817	-5.136		
8	-0.337	0.213	10.470	-2.387	5.442	5.189	1.862	38.814	-2.430	
9	12.869	4.848	-0.170	-6.701	-3.213	-4.366	4.648	7.092	2.593	-19.254

h's

0	0.000									
1	0.000	-115.121								
2	0.000	-14.196	4.027							
3	0.000	-6.941	1.515	31.920						
4	0.000	2.029	-10.655	14.270	-8.011					
5	0.000	0.560	6.383	-2.662	-35.761	34.265				
6	0.000	-0.118	-0.752	-4.121	-10.381	23.450	14.679			
7	0.000	-12.065	-0.416	-4.163	18.563	-10.397	0.114	2.316		
8	0.000	-6.537	-1.964	3.092	10.206	-8.551	25.327	-30.460	34.685	
9	0.000	-1.275	2.738	-0.083	-10.668	5.495	-4.001	-17.978	0.457	-2.210

Carrington Rotation 1723

g's

0	-22.706									
1	-65.864	-8.364								
2	3.414	33.619	48.269							
3	-18.552	-0.185	45.416	16.477						
4	-14.954	-5.704	14.406	20.594	-30.241					
5	4.803	5.445	-20.061	-2.867	-21.184	-19.980				
6	1.144	1.862	-11.111	-5.619	-9.761	4.431	-30.484			
7	-21.376	2.797	15.008	-6.919	7.696	-11.113	-27.815	9.785		
8	1.510	-4.971	7.074	3.752	8.040	-4.146	3.708	-32.346	-1.650	
9	12.067	-2.358	1.077	3.916	-0.174	11.274	7.955	-8.395	2.536	23.847

h's

0	0.000									
1	0.000	103.425								
2	0.000	14.007	-2.702							
3	0.000	9.692	1.785	-38.467						
4	0.000	-7.672	-8.027	-10.205	-11.121					
5	0.000	-3.896	4.150	0.953	-33.865	-41.902				
6	0.000	2.339	-2.924	9.963	0.105	-15.311	12.857			
7	0.000	9.450	0.483	5.338	16.297	7.475	-1.876	8.228		
8	0.000	8.739	2.021	-3.389	7.145	1.874	21.639	22.079	35.189	
9	0.000	-0.082	-1.438	-3.244	-7.690	-3.152	-4.352	17.696	12.453	11.094

Carrington Rotation 1723:180

g's

0	-11.971									
1	-54.845	-17.633								
2	0.084	-49.299	31.073							
3	-28.136	-10.660	47.547	-7.654						
4	-14.944	11.195	21.509	-0.454	-25.251					
5	14.033	6.539	-17.235	13.261	-30.671	-12.722				
6	5.157	-8.208	-12.167	4.881	-22.303	-12.892	7.744			
7	-26.510	-11.799	10.517	-6.150	1.176	22.931	2.938	2.733		
8	-5.688	2.567	2.504	-4.094	13.609	5.776	11.150	34.806	-22.975	
9	10.350	4.103	5.560	3.904	1.014	-10.259	0.405	9.528	-13.138	-18.844

h's

0	0.000									
1	0.000	-89.397								
2	0.000	-2.960	-21.271							
3	0.000	-12.796	-21.040	18.867						
4	0.000	0.252	-26.822	17.822	8.445					
5	0.000	3.430	9.065	10.595	-20.100	19.050				
6	0.000	6.823	14.002	-4.910	-4.611	-3.651	-14.675			
7	0.000	-2.232	-3.683	-9.895	17.198	-17.679	-6.752	23.002		
8	0.000	-11.621	-7.941	-0.566	1.591	-1.932	29.206	7.851	38.196	
9	0.000	-9.214	-6.660	1.657	-8.680	5.673	-0.230	-12.138	13.552	-32.700

Carrington Rotation 1724

	0	1	2	3	4	5	6	7	8	9
0	-16.339									
1	-57.881	16.982								
2	0.886	47.397	36.612							
3	-34.756	15.341	47.411	2.833						
4	-19.715	-14.770	10.694	1.835	-33.250					
5	20.156	-8.152	-14.847	-9.400	-21.597	11.137				
6	5.593	12.214	-6.117	-7.078	-21.395	13.461	14.913			
7	-28.731	10.026	6.493	9.290	-4.773	-25.575	-1.282	3.503		
8	-4.906	-3.440	-1.544	5.599	16.161	-5.480	8.250	-38.541	-28.571	
9	11.570	-2.571	5.504	-5.737	6.401	10.741	4.481	-5.266	-13.090	22.441

g's

0	0.000									
1	0.000	84.699								
2	0.000	1.240	-20.097							
3	0.000	18.036	-22.208	-10.944						
4	0.000	-8.774	-24.971	-22.012	4.049					
5	0.000	-10.828	5.649	-19.182	-17.898	-25.520				
6	0.000	-2.539	13.052	7.083	-0.123	12.754	-21.672			
7	0.000	2.599	-2.076	12.025	12.778	15.596	-1.672	-14.097		
8	0.000	9.740	-8.767	-5.123	5.401	-4.981	25.816	-8.130	39.233	
9	0.000	7.597	-6.685	-4.590	-8.055	-1.830	-3.404	3.816	18.335	35.897

h's

Carrington Rotation 1724:180

0	1.353									
1	-44.719	-37.425								
2	-2.543	-55.742	32.192							
3	-41.816	-19.333	42.642	-20.062						
4	-24.954	17.273	-4.225	9.893	-15.238					
5	16.372	12.347	-22.708	19.429	-14.007	-26.714				
6	9.660	-6.970	-2.963	11.248	-20.575	-18.176	29.678			
7	-19.583	-13.619	11.768	-11.934	-5.255	12.549	-9.685	-6.166		
8	-9.617	-1.604	2.750	-11.609	15.941	4.877	3.304	41.345	-43.466	
9	4.579	4.114	-1.448	1.985	10.920	-12.428	0.341	1.844	-21.337	15.805

g's

0	0.000									
1	0.000	-69.011								
2	0.000	15.037	-24.195							
3	0.000	-9.778	-36.234	2.483						
4	0.000	10.220	-33.755	22.028	-5.627					
5	0.000	3.643	5.340	9.603	-12.589	36.125				
6	0.000	-5.614	17.980	-12.399	12.552	2.516	-43.945			
7	0.000	1.105	5.806	-13.855	17.906	-15.542	-10.643	44.678		
8	0.000	2.228	-10.459	4.100	5.659	4.124	20.145	14.984	5.658	
9	0.000	-7.194	-12.739	11.319	-9.499	-3.016	0.882	-10.332	-0.979	-18.295

h's

Carrington Rotation 1725

0	-0.536									
1	-49.281	40.509								
2	-7.991	54.077	38.478							
3	-37.227	22.803	41.288	20.459						
4	-21.673	-20.930	-6.596	-14.646	-15.730					
5	12.582	-12.912	-23.560	-24.413	-6.384	39.916				
6	8.271	5.186	-2.882	-0.775	-19.556	10.153	34.199			
7	-17.038	13.543	10.076	8.095	-10.145	-13.746	-25.491	6.149		
8	-9.403	1.680	6.988	8.980	17.701	-2.486	-0.330	-39.131	-26.691	
9	4.117	-2.834	-2.494	-0.197	12.708	11.710	1.636	5.881	-24.319	-22.418

g's

0	0.000									
1	0.000	63.891								
2	0.000	-18.849	-25.726							
3	0.000	5.078	-33.309	-2.270						
4	0.000	-6.254	-27.683	-24.811	-15.020					
5	0.000	-3.395	-3.126	-13.315	-10.762	-44.337				
6	0.000	2.939	19.648	14.889	10.314	13.682	-38.008			
7	0.000	-4.062	6.074	12.078	23.737	15.753	-17.020	-57.343		
8	0.000	-0.548	-12.250	-7.166	3.504	-8.276	14.515	-19.023	5.731	
9	0.000	7.408	-13.495	-7.220	-10.411	2.418	8.262	2.513	-0.389	13.686

h's

	0	1	2	3	4	5	6	7	8	9
0	-2.403					**Carrington Rotation 1725:180**				
1	-41.833	-36.934								
2	-0.643	-51.808	19.411							**g's**
3	-41.139	-30.902	28.213	-18.903						
4	-26.668	21.997	-5.246	19.315	-14.966					
5	12.041	16.088	-19.583	17.858	8.367	-38.370				
6	5.534	-2.346	-11.564	-0.361	-5.927	-18.281	46.038			
7	-13.003	-13.558	7.943	1.668	-10.612	7.996	-18.765	-35.777		
8	-2.913	-4.067	12.978	-8.608	9.285	16.414	-1.790	38.519	-5.129	
9	1.010	-2.344	0.157	-9.408	11.544	-2.659	-3.610	-1.783	-10.167	11.406
0	0.000									**h's**
1	0.000	-58.938								
2	0.000	30.083	-20.552							
3	0.000	1.377	-34.631	-16.303						
4	0.000	3.585	-32.338	7.300	-7.201					
5	0.000	6.245	-3.002	11.094	-5.073	28.785				
6	0.000	-3.900	16.134	-10.387	2.985	-11.643	-15.893			
7	0.000	-3.514	10.311	-13.085	15.027	-1.038	-25.452	49.733		
8	0.000	3.677	-4.891	4.091	6.498	12.914	0.623	18.594	-6.653	
9	0.000	3.081	-14.668	6.591	-4.754	-7.868	15.065	7.675	-13.331	3.936

0	-8.816					**Carrington Rotation 1726**				
1	-35.948	17.803								
2	-6.063	47.531	21.563							**g's**
3	-46.743	34.938	29.938	4.408						
4	-18.032	-18.994	-6.382	-26.490	-1.754					
5	16.569	-13.882	-19.640	-28.587	-4.541	52.363				
6	-0.678	-2.162	-9.117	-0.776	-13.503	17.983	48.003			
7	-14.997	5.903	5.883	9.840	6.105	-10.281	-42.859	40.888		
8	-1.097	9.874	12.011	8.398	11.024	-10.722	-8.758	-30.831	-1.762	
9	0.311	2.468	2.071	3.660	3.629	1.806	1.490	17.562	-4.665	1.976
0	0.000									**h's**
1	0.000	51.806								
2	0.000	-22.905	-30.334							
3	0.000	-8.260	-34.228	7.759						
4	0.000	-9.105	-26.251	5.404	-32.783					
5	0.000	-1.373	-0.409	-10.148	-11.084	-23.267				
6	0.000	9.571	14.966	-0.465	-6.675	15.916	-19.156			
7	0.000	-0.021	6.820	14.876	12.612	-3.063	-30.078	-50.594		
8	0.000	-5.597	-6.699	0.708	19.005	-4.544	-14.559	-43.230	-13.699	
9	0.000	-3.327	-8.724	-6.657	-4.153	10.454	21.273	-18.968	-1.842	-10.214

0	-1.995					**Carrington Rotation 1726:180**				
1	-41.838	-19.815								
2	-1.099	-37.258	14.606							**g's**
3	-46.902	-38.545	15.500	-7.244						
4	-20.136	14.204	-10.149	32.327	-3.196					
5	13.287	18.583	-14.347	20.050	-12.115	-47.715				
6	-0.354	10.190	-7.201	-4.062	-1.166	-4.138	47.516			
7	-16.573	-8.246	1.036	-7.317	5.090	1.781	-40.936	-64.069		
8	-0.848	-14.249	11.240	-6.959	6.318	4.179	-9.792	17.174	18.908	
9	1.931	-4.856	4.786	-5.053	3.915	2.437	-0.638	-23.790	5.096	-13.119
0	0.000									**h's**
1	0.000	-45.125								
2	0.000	24.693	-26.753							
3	0.000	15.107	-29.398	-13.950						
4	0.000	5.590	-25.441	-13.650	-30.316					
5	0.000	1.431	-1.689	2.949	-9.150	15.502				
6	0.000	-10.430	16.309	4.472	-10.335	-27.856	2.141			
7	0.000	0.794	11.886	-9.690	9.740	12.669	-8.233	33.239		
8	0.000	1.006	-4.985	-4.725	17.837	6.028	-22.298	34.651	-17.868	
9	0.000	3.278	-11.777	4.707	-3.415	-10.378	9.648	21.159	-2.413	14.284

Carrington Rotation 1727

	0	1	2	3	4	5	6	7	8	9
0	3.234									
1	-42.541	38.210								
2	-5.964	32.708	35.814							
3	-40.134	23.106	8.098	21.559						
4	-14.890	-11.019	-15.542	-43.096	3.694					
5	7.241	-5.949	-6.082	-27.833	-10.151	36.469				
6	-0.283	-10.398	-1.035	11.501	-12.420	10.470	31.475			
7	-12.281	1.470	-5.100	7.486	6.330	1.175	-28.242	50.152		
8	-3.552	16.554	10.987	0.807	13.529	2.463	-18.582	-7.754	9.263	
9	0.256	4.431	9.233	6.281	-0.977	2.932	0.032	6.274	-1.482	23.981

g's

0	0.000									
1	0.000	40.975								
2	0.000	-25.021	-16.454							
3	0.000	-16.402	-29.719	30.837						
4	0.000	-1.620	-34.507	2.843	-5.469					
5	0.000	-2.368	-4.060	-1.306	-23.868	7.941				
6	0.000	9.296	23.513	3.948	-20.455	17.913	9.876			
7	0.000	2.850	15.645	7.555	11.888	-16.972	-12.925	-30.991		
8	0.000	-0.658	-7.330	2.595	14.502	-2.174	-15.022	-25.997	-29.063	
9	0.000	-5.876	-14.251	-0.859	-3.826	10.854	15.759	-26.799	7.752	-17.823

h's

Carrington Rotation 1727:180

0	5.710									
1	-43.974	-24.232								
2	3.465	-24.595	9.542							
3	-41.280	-21.091	-6.569	-27.006						
4	-19.930	10.132	-15.655	41.716	-7.341					
5	6.378	7.321	5.942	18.210	-4.949	-16.745				
6	-1.175	8.010	1.867	-12.028	-5.385	-11.578	29.120			
7	-12.173	1.145	-5.515	-7.235	2.574	2.072	-19.001	-42.221		
8	0.700	-15.197	8.960	-2.171	12.682	-5.901	-22.061	-5.110	6.670	
9	-0.530	-4.345	8.756	-1.056	-0.942	-0.989	3.973	-14.932	-7.162	-26.441

g's

0	0.000									
1	0.000	-26.306								
2	0.000	28.931	-7.282							
3	0.000	24.773	-20.334	-41.044						
4	0.000	-4.917	-27.326	-18.708	-20.033					
5	0.000	1.594	-3.110	-0.323	-17.731	-18.319				
6	0.000	-9.288	22.684	5.622	-27.127	-23.829	17.505			
7	0.000	-2.729	14.799	-2.669	13.323	25.049	-1.128	26.682		
8	0.000	0.239	-6.314	-1.716	11.393	-0.090	-10.386	33.659	-19.513	
9	0.000	11.347	-13.062	1.023	-4.575	-8.869	11.878	31.360	12.221	15.754

h's

Carrington Rotation 1728

0	8.298									
1	-42.039	32.126								
2	2.374	21.642	0.898							
3	-46.754	24.376	-7.384	30.537						
4	-15.285	-11.450	-11.985	-40.867	-27.576					
5	8.611	-16.100	0.798	-10.768	-4.459	6.157				
6	-0.810	-2.910	0.008	8.797	-0.165	9.972	41.360			
7	-14.531	7.863	-0.844	3.737	-9.145	-0.591	-18.945	25.607		
8	2.705	8.564	8.308	3.503	4.596	-0.361	-14.534	-0.062	5.269	
9	-2.010	-1.183	3.860	2.033	8.786	-1.380	10.721	9.076	-17.049	9.648

g's

0	0.000									
1	0.000	35.239								
2	0.000	-24.864	1.073							
3	0.000	-29.244	-22.525	48.758						
4	0.000	2.541	-26.634	20.459	-3.351					
5	0.000	4.046	-3.361	-2.013	-16.468	1.209				
6	0.000	8.217	17.269	-6.676	-19.648	26.800	28.042			
7	0.000	3.328	18.098	7.571	13.015	-25.323	-0.686	-14.179		
8	0.000	1.246	-0.958	1.002	8.124	-16.143	-2.942	-27.243	-17.416	
9	0.000	-7.081	-17.615	-5.355	-5.640	5.837	7.843	-23.680	2.462	9.498

h's

	0	1	2	3	4	5	6	7	8	9
0	3.642					**Carrington Rotation 1728:180**				
1	-44.179	-10.167								
2	2.741	-20.359	-25.136							**g's**
3	-44.684	-16.264	-16.148	-49.066						
4	-14.708	9.355	-5.934	31.417	-43.597					
5	6.022	12.625	1.407	11.237	-2.895	12.644				
6	-3.412	-2.127	-0.478	-11.352	-9.314	-32.721	24.534			
7	-11.179	-0.210	-6.916	-5.756	5.714	5.653	-13.431	-20.269		
8	0.088	-6.819	3.700	4.205	5.045	11.449	-10.476	7.491	22.195	
9	-4.342	-0.353	4.247	-3.469	-1.606	0.194	12.439	0.168	2.864	12.271
0	0.000									**h's**
1	0.000	-24.699								
2	0.000	25.346	22.323							
3	0.000	25.632	-13.460	-57.750						
4	0.000	-1.096	-18.618	-31.730	-26.071					
5	0.000	-1.902	-5.083	9.803	-10.189	-13.443				
6	0.000	-7.880	15.923	2.464	-18.319	-36.746	30.677			
7	0.000	-2.962	10.447	-6.465	4.667	17.529	-22.082	-19.414		
8	0.000	0.441	5.049	-1.064	7.373	30.957	0.025	14.688	-24.682	
9	0.000	1.444	-14.499	1.649	0.234	-3.889	18.002	24.919	2.734	-21.971

0	6.987					**Carrington Rotation 1729**				
1	-38.140	19.192								
2	8.379	17.355	-36.589							**g's**
3	-46.083	11.491	-17.180	50.336						
4	-12.752	-8.774	-7.095	-23.274	-38.057					
5	-0.346	-12.182	0.707	6.705	8.609	-8.495				
6	1.238	5.749	1.299	8.373	-9.604	20.931	22.723			
7	-5.590	-0.567	-3.122	-9.455	-2.636	-24.488	-6.261	-0.037		
8	-2.472	3.752	-1.453	-4.524	7.170	-2.661	1.950	12.365	18.790	
9	-11.531	5.170	-0.681	12.988	7.827	10.432	8.310	3.015	1.448	-9.985
0	0.000									**h's**
1	0.000	31.177								
2	0.000	-20.140	29.499							
3	0.000	-21.042	-20.360	47.384						
4	0.000	4.642	-28.749	25.254	-21.748					
5	0.000	3.947	-4.169	-10.752	-2.522	16.149				
6	0.000	-0.366	22.058	3.958	3.880	41.281	47.525			
7	0.000	11.406	13.430	8.686	-0.757	-23.375	-41.911	19.725		
8	0.000	7.600	-1.867	-3.502	-9.908	-32.836	-10.945	-5.753	-36.182	
9	0.000	-3.013	-17.951	-3.071	2.074	11.419	30.389	-11.768	8.709	16.643

0	11.742					**Carrington Rotation 1729:180**				
1	-36.246	-8.383								
2	5.634	-11.598	-36.790							**g's**
3	-44.654	-3.538	-18.757	-42.142						
4	-12.308	2.708	-12.186	26.378	-20.307					
5	-2.675	5.022	2.908	-8.443	-1.452	6.164				
6	-1.984	-6.912	4.942	-14.229	-19.214	-1.978	4.359			
7	-3.947	0.327	1.023	9.928	-1.649	15.870	-0.817	37.639		
8	-1.836	-2.681	-3.608	8.085	6.959	-9.445	3.954	-29.426	30.824	
9	-8.413	-3.007	-0.600	-10.767	2.747	-10.592	-1.461	-1.424	-12.673	-8.628
0	0.000									**h's**
1	0.000	-27.530								
2	0.000	22.903	29.817							
3	0.000	22.122	-17.517	-53.273						
4	0.000	-3.973	-17.919	-20.576	-19.092					
5	0.000	-4.935	-4.594	10.546	-5.862	7.473				
6	0.000	-2.840	16.588	-2.223	11.707	-49.700	27.455			
7	0.000	-12.960	8.149	-6.735	-1.105	11.985	-16.765	-30.852		
8	0.000	-7.855	-5.804	8.763	-10.225	37.743	-15.282	14.803	-1.853	
9	0.000	2.545	-16.099	-0.569	-1.841	-14.139	13.065	3.783	-3.299	0.325

Carrington Rotation 1730

	0	1	2	3	4	5	6	7	8	9
0	-2.743									
1	-27.497	10.727								
2	17.389	2.558	-41.194							
3	-51.687	1.092	-19.811	30.893						
4	-12.549	0.949	-14.683	-7.423	-3.778					
5	1.658	-5.120	4.758	20.208	-8.597	-7.304				
6	1.238	2.758	5.582	8.606	-17.586	-1.235	-17.899			
7	-4.748	-3.780	2.325	-14.528	1.723	-22.727	19.437	-31.934		
8	-2.645	1.114	-5.858	-4.602	9.667	9.279	10.899	17.330	35.016	
9	-7.819	5.907	0.471	13.007	-3.616	11.654	-13.335	0.931	-2.093	12.763

g's

0	0.000									
1	0.000	15.296								
2	0.000	-13.375	37.813							
3	0.000	-14.691	-34.448	39.998						
4	0.000	-1.166	-24.834	23.533	-26.215					
5	0.000	5.178	1.561	-12.737	7.152	13.115				
6	0.000	5.311	19.209	3.008	23.669	33.429	21.060			
7	0.000	17.693	3.850	5.952	-4.226	-13.948	-10.999	15.454		
8	0.000	7.693	-10.432	-5.378	-14.251	-27.073	-16.444	-6.472	-0.663	
9	0.000	-3.807	-16.477	2.362	-0.296	15.267	8.802	6.383	-16.042	-0.135

h's

Carrington Rotation 1730:180

0	-14.413									
1	-29.620	-4.137								
2	17.160	9.819	-48.896							
3	-50.310	12.537	-18.410	-12.123						
4	-3.297	-3.906	-10.884	3.261	3.103					
5	-1.170	-4.362	2.196	-19.003	-13.675	1.087				
6	-5.569	2.504	14.580	-12.973	-20.220	16.534	-10.740			
7	-1.545	9.245	2.334	12.441	-2.177	25.183	3.614	40.665		
8	6.346	1.316	-14.785	6.177	12.915	-17.035	7.584	-30.296	11.626	
9	-8.660	-7.244	-6.295	-8.604	5.712	-18.229	-4.446	9.658	-0.631	-0.954

g's

0	0.000									
1	0.000	-21.873								
2	0.000	12.132	29.677							
3	0.000	7.033	-21.915	-51.572						
4	0.000	3.299	-12.028	-17.221	-13.343					
5	0.000	0.022	1.513	12.430	3.949	-12.756				
6	0.000	-8.251	15.184	-4.052	28.050	-26.633	12.314			
7	0.000	-20.056	5.958	3.493	-5.770	9.955	13.474	1.254		
8	0.000	-2.815	-10.682	1.576	-10.930	18.311	-17.028	-4.432	-2.761	
9	0.000	7.667	-12.995	-9.372	-0.870	-6.889	-3.243	-16.346	-4.247	-19.671

h's

Carrington Rotation 1731

0	2.427									
1	-34.621	0.152								
2	10.506	3.338	-51.661							
3	-44.176	-8.135	-28.436	8.690						
4	0.999	-5.162	-3.000	1.447	21.027					
5	-4.368	6.312	-0.556	7.837	-22.987	-15.940				
6	-7.460	1.433	6.898	9.507	-20.947	-7.039	-14.808			
7	-0.753	-12.965	0.567	-5.697	2.582	-13.972	12.194	-22.482		
8	6.266	-0.774	-8.983	-2.791	15.884	11.680	5.782	20.303	5.830	
9	-5.416	12.933	-6.021	2.706	1.645	11.569	-9.271	-19.731	5.551	-2.179

g's

0	0.000									
1	0.000	35.038								
2	0.000	-12.944	29.762							
3	0.000	-13.146	-13.475	42.816						
4	0.000	1.409	-4.278	12.024	-10.377					
5	0.000	6.918	-2.497	-6.360	7.468	27.869				
6	0.000	6.885	15.104	0.578	16.072	11.171	-9.188			
7	0.000	17.513	5.840	-10.556	-7.664	-7.553	29.028	2.345		
8	0.000	1.793	-11.461	-2.120	-1.151	-12.663	-5.467	3.009	6.709	
9	0.000	-5.475	-9.147	14.776	1.086	4.691	-12.744	14.983	-7.645	12.770

h's

	0	1	2	3	4	5	6	7	8	9
0	6.282									
1	-31.541	-7.012								
2	3.301	8.851	-50.884							
3	-47.394	8.537	-20.799	-8.881						
4	3.966	-0.372	-4.607	1.889	13.932					
5	-6.605	-8.536	-3.875	-12.830	-12.630	6.004				
6	-6.028	0.037	6.882	-6.420	-17.370	10.076	-10.953			
7	-3.220	7.424	1.578	9.157	-5.979	11.980	10.563	11.207		
8	2.550	0.297	-12.329	2.937	16.790	-13.498	8.863	-1.660	2.413	
9	-5.326	-8.585	-4.488	-5.029	4.672	-7.482	-4.459	15.965	12.882	1.578

Carrington Rotation 1731:180

g's

0	0.000									
1	0.000	-30.029								
2	0.000	12.328	28.159							
3	0.000	7.311	-6.898	-36.180						
4	0.000	0.420	-1.714	-11.819	-2.727					
5	0.000	-6.197	-5.501	1.360	7.761	-32.063				
6	0.000	-9.711	12.184	2.232	13.309	-2.572	-7.939			
7	0.000	-13.725	5.651	10.093	-1.895	7.749	21.194	3.244		
8	0.000	-4.959	-14.795	-0.042	-1.519	4.284	-6.609	-5.895	-0.738	
9	0.000	1.833	-9.945	-14.651	0.781	-2.904	-5.265	-10.265	3.229	-10.331

h's

0	-11.169									
1	-26.690	-3.237								
2	9.693	-3.695	-51.275							
3	-42.416	-7.111	-22.257	9.373						
4	-2.335	3.411	-3.701	-2.847	11.258					
5	-12.006	5.973	-2.907	7.604	-10.450	-8.762				
6	-5.871	-0.243	8.014	4.006	-8.903	-11.045	-3.728			
7	-1.955	-3.819	1.854	-5.794	-2.843	-5.081	11.380	-4.721		
8	2.384	3.240	-13.725	-3.148	9.151	9.896	1.532	1.278	-2.184	
9	-3.978	4.890	-3.826	3.977	3.096	5.168	-4.087	-11.573	10.824	-7.869

Carrington Rotation 1732

g's

0	0.000									
1	0.000	15.670								
2	0.000	-8.926	20.228							
3	0.000	-4.356	-2.118	32.741						
4	0.000	6.340	0.570	9.439	-4.087					
5	0.000	1.617	-1.116	-3.550	9.539	24.748				
6	0.000	7.840	8.319	-0.623	5.077	3.092	-14.290			
7	0.000	11.896	4.997	-5.274	-0.608	2.043	22.179	2.659		
8	0.000	5.258	-11.189	2.275	1.545	-0.817	-5.911	7.522	5.098	
9	0.000	-2.676	-7.069	10.191	-1.051	-2.337	-7.673	3.720	4.980	7.911

h's

0	0.316									
1	-23.940	-3.051								
2	3.205	5.473	-33.042							
3	-34.379	4.010	-12.846	-6.765						
4	1.837	0.030	-2.938	0.257	12.423					
5	-9.133	-5.638	-3.336	-5.988	-7.986	7.467				
6	-0.854	-1.755	6.213	-2.241	-6.727	6.403	-11.465			
7	-1.527	4.526	3.297	5.722	-1.961	4.057	8.489	0.092		
8	-1.916	0.952	-8.706	3.541	8.033	-6.283	3.522	3.449	1.694	
9	-3.897	-4.701	-3.741	-3.125	0.827	-2.224	-3.729	4.493	3.543	6.106

Carrington Rotation 1732:180

g's

0	0.000									
1	0.000	-14.254								
2	0.000	4.868	15.162							
3	0.000	-0.141	-0.055	-17.017						
4	0.000	0.664	-3.044	-3.787	-1.602					
5	0.000	-0.256	1.292	2.347	8.617	-13.770				
6	0.000	-2.893	7.165	0.869	6.458	3.515	-11.770			
7	0.000	-7.905	3.617	2.696	0.961	-0.955	13.526	-5.177		
8	0.000	-2.146	-10.332	2.294	-2.011	0.528	-2.824	-3.090	3.136	
9	0.000	1.561	-1.835	-5.334	0.003	-0.721	-1.309	-0.234	1.543	-0.272

h's

	0	1	2	3	4	5	6	7	8	9
0	-0.854									
1	-23.707	2.110								
2	2.019	-3.622	-34.082							
3	-33.101	-4.118	-12.517	3.867						
4	0.679	-2.046	0.634	-0.093	14.413					
5	-11.832	3.976	-2.462	1.386	-3.867	-12.086				
6	-3.137	1.790	4.812	0.094	-4.103	-5.572	-11.775			
7	-2.025	-0.825	3.818	-2.259	0.115	0.807	12.114	-1.835		
8	-0.471	-0.009	-8.206	-2.190	4.608	3.227	-2.331	-1.613	-0.335	
9	-2.928	2.041	-3.740	0.562	0.103	1.819	-1.359	-0.347	4.320	-9.930

Carrington Rotation 1733

g's

0	0.000									
1	0.000	13.869								
2	0.000	-5.869	17.241							
3	0.000	-2.018	1.696	15.138						
4	0.000	1.108	-1.756	0.249	-0.224					
5	0.000	0.547	1.109	-0.305	9.143	15.300				
6	0.000	1.314	3.600	-0.382	-0.325	-3.901	-13.818			
7	0.000	4.443	1.537	-1.744	0.829	7.095	14.055	6.510		
8	0.000	0.757	-5.719	-1.179	-0.105	0.846	-2.955	4.900	2.683	
9	0.000	-0.861	-1.116	3.254	-2.014	-2.629	-3.201	-3.075	3.906	-0.843

h's

0	-5.830									
1	-24.510	-8.784								
2	1.161	6.937	-30.874							
3	-31.761	4.190	-9.988	-1.838						
4	3.832	1.202	1.877	4.299	15.062					
5	-12.028	-3.011	-2.654	-6.497	1.340	12.826				
6	-4.241	-3.181	4.508	-0.707	-2.144	3.211	-5.850			
7	-0.175	-0.166	2.472	5.765	-0.274	-3.175	11.884	1.708		
8	0.134	1.183	-7.247	-0.429	4.770	-1.527	-5.836	0.981	-4.361	
9	-4.582	-0.771	-2.864	-2.367	1.658	-0.206	0.636	1.014	5.625	7.974

Carrington Rotation 1733:180

g's

0	0.000									
1	0.000	-19.365								
2	0.000	3.075	11.294							
3	0.000	-1.146	2.894	-14.502						
4	0.000	0.305	0.399	-2.248	-0.546					
5	0.000	1.481	1.547	-0.382	15.113	-16.795				
6	0.000	-1.486	2.331	1.224	-3.258	7.086	-13.274			
7	0.000	-5.462	1.583	1.381	-0.059	-3.808	15.614	1.215		
8	0.000	0.921	-5.117	-0.982	1.658	-1.255	-6.608	-5.408	3.479	
9	0.000	1.280	-1.262	-2.536	-4.032	1.599	-1.995	1.291	7.532	2.597

h's

0	-3.745									
1	-25.787	10.397								
2	2.603	-7.794	-33.187							
3	-31.280	-5.123	-4.831	6.340						
4	-0.774	1.502	0.304	-13.650	19.826					
5	-11.536	2.525	-1.647	10.758	-1.871	-20.060				
6	-1.307	-1.471	4.796	-0.603	-8.731	5.918	-6.156			
7	-4.698	2.922	1.154	-7.734	6.626	4.345	6.574	-6.655		
8	-0.121	2.528	-6.256	4.996	5.625	-4.836	0.820	1.974	-6.801	
9	-1.301	-3.349	-0.418	1.489	-5.593	3.469	-2.647	-1.476	8.691	-5.165

Carrington Rotation 1734

g's

0	0.000									
1	0.000	21.510								
2	0.000	-6.212	10.921							
3	0.000	5.038	5.999	10.486						
4	0.000	-0.593	-2.577	7.888	7.223					
5	0.000	-6.005	5.005	3.438	3.259	19.761				
6	0.000	4.397	2.703	-3.609	-1.359	-5.430	-15.082			
7	0.000	6.750	-4.758	-3.202	2.716	-3.823	19.046	0.066		
8	0.000	-6.895	-2.005	5.062	-1.000	8.090	-5.495	0.471	-3.504	
9	0.000	0.410	3.883	2.517	-3.341	-1.582	-8.834	2.596	15.233	-6.775

h's

Carrington Rotation 1734:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-9.318									
1	-26.903	-15.400								
2	-0.879	9.224	-37.418							
3	-37.192	0.198	0.899	-1.832						
4	-0.148	-2.764	2.240	10.567	24.884					
5	-8.872	-1.966	0.733	-8.050	1.224	20.383				
6	-2.307	-1.832	7.050	2.958	-7.952	-0.244	-4.008			
7	-5.091	-2.919	1.504	13.336	9.728	-9.449	7.021	9.364		
8	1.810	0.052	-7.071	-4.726	6.434	5.981	0.235	-6.122	-12.104	
9	-2.645	1.728	0.367	-0.162	-6.281	-3.717	-7.124	-0.907	9.737	1.263

h's

0	0.000									
1	0.000	-23.889								
2	0.000	3.733	5.280							
3	0.000	-10.508	8.137	-17.283						
4	0.000	-6.073	-7.991	-4.997	9.554					
5	0.000	4.192	3.490	-4.006	-1.597	-18.395				
6	0.000	-3.979	-0.847	2.867	1.989	9.392	-14.522			
7	0.000	-8.736	-8.235	4.177	4.215	4.256	24.086	4.495		
8	0.000	6.257	-1.711	-4.622	1.923	-3.693	-7.827	2.168	1.999	
9	0.000	-0.124	3.516	-4.942	-3.790	1.987	-7.564	-2.679	12.709	2.970

Carrington Rotation 1735

g's

0	-8.346									
1	-32.826	12.618								
2	5.129	-3.183	-55.249							
3	-39.480	-1.253	8.450	-1.142						
4	-6.701	3.270	2.711	-18.499	30.000					
5	-10.889	3.341	-1.746	12.819	3.449	-43.198				
6	1.122	1.957	6.722	-4.061	-3.798	10.306	-4.302			
7	-11.259	1.341	2.241	-15.104	8.458	7.177	6.233	-9.059		
8	0.162	2.131	-8.438	6.310	1.770	-9.745	2.700	6.679	-14.986	
9	1.153	0.564	2.226	2.385	-4.669	5.502	-8.931	4.035	8.489	3.804

h's

0	0.000									
1	0.000	31.885								
2	0.000	-11.483	8.292							
3	0.000	16.768	15.754	2.411						
4	0.000	5.011	-12.292	8.433	20.381					
5	0.000	-7.780	5.635	4.665	-11.650	18.704				
6	0.000	1.909	1.741	-4.445	4.368	-5.745	-31.384			
7	0.000	11.596	-9.747	-2.614	6.946	0.274	28.806	-3.551		
8	0.000	-14.524	-4.246	4.290	0.996	2.275	-12.291	-0.454	-6.271	
9	0.000	-0.279	7.176	2.761	-4.647	-5.705	-6.994	12.100	12.363	-5.078

Carrington Rotation 1735:180

g's

0	0.882									
1	-37.514	-3.850								
2	3.027	0.146	-56.610							
3	-39.218	3.907	5.221	-3.714						
4	-4.637	3.374	0.040	13.120	34.051					
5	-15.920	-4.572	2.864	-15.799	6.779	68.053				
6	2.499	-3.563	7.512	-0.953	1.253	-22.695	-16.054			
7	-13.227	1.029	0.403	7.664	-0.947	-7.405	14.317	3.386		
8	-0.743	-0.981	-9.564	-2.595	-3.678	17.330	0.885	-18.753	-34.699	
9	3.134	0.194	5.917	-2.018	0.318	-6.879	-7.037	0.508	11.338	16.406

h's

0	0.000									
1	0.000	-22.665								
2	0.000	7.977	12.782							
3	0.000	-16.743	17.996	0.555						
4	0.000	-5.612	-6.726	-15.913	2.735					
5	0.000	9.651	10.993	-9.672	-7.000	-3.781				
6	0.000	-6.103	3.809	13.870	4.987	0.040	-15.949			
7	0.000	-9.109	-10.264	6.891	-2.132	2.605	26.910	10.520		
8	0.000	9.168	-4.312	-10.247	-4.412	-6.621	-12.529	1.496	-17.529	
9	0.000	0.363	9.853	-2.875	3.136	3.576	-8.551	-15.789	5.858	-6.514

Carrington Rotation 1736

	0	1	2	3	4	5	6	7	8	9
0	-15.191									
1	-36.914	7.094								
2	6.590	-4.221	-62.094							
3	-41.462	1.108	16.767	4.859						
4	-4.179	-2.154	-0.374	-13.349	5.835					
5	-13.109	0.160	2.561	12.600	18.202	-71.991				
6	-1.538	-0.295	4.966	0.762	10.490	19.783	-17.815			
7	-15.214	0.800	0.869	-4.731	-10.608	11.144	18.234	-3.027		
8	2.652	-0.099	-6.204	0.676	-2.797	-17.417	-6.433	13.227	-23.682	
9	1.313	-0.618	3.300	1.297	5.720	1.346	-4.059	-3.121	6.124	-13.190

g's

0	0.000									
1	0.000	15.468								
2	0.000	-13.086	14.802							
3	0.000	15.499	15.236	9.204						
4	0.000	4.998	-0.384	17.800	6.322					
5	0.000	-7.509	12.160	3.742	-6.448	-17.537				
6	0.000	7.617	-0.550	-8.869	3.309	8.932	-18.320			
7	0.000	2.807	-12.254	-7.493	-2.357	5.884	26.176	-24.529		
8	0.000	-8.657	-2.954	7.886	-1.160	-1.051	-7.258	7.388	-18.717	
9	0.000	1.062	6.837	5.644	-0.885	-1.278	-11.471	8.339	-3.044	15.636

h's

Carrington Rotation 1736:180

	0	1	2	3	4	5	6	7	8	9
0	0.599									
1	-48.510	-15.288								
2	4.773	2.819	-56.822							
3	-31.773	-1.214	16.608	-10.872						
4	-6.734	-1.534	-0.990	22.878	18.769					
5	-20.945	-0.223	3.349	-14.649	3.816	70.645				
6	6.137	0.914	5.357	-4.683	11.693	-23.441	-30.709			
7	-15.990	-0.550	-2.836	5.781	-2.651	-5.330	25.536	-7.317		
8	-5.118	-1.850	-7.494	-0.130	-9.231	14.824	-6.285	-3.715	-1.961	
9	5.082	1.384	0.682	-2.527	2.844	-0.621	-6.497	3.372	-5.133	9.368

g's

0	0.000									
1	0.000	-6.747								
2	0.000	1.924	13.077							
3	0.000	-12.669	9.765	-9.496						
4	0.000	1.560	-1.277	-14.757	2.964					
5	0.000	4.263	12.034	-2.793	0.908	33.544				
6	0.000	-10.003	-0.881	7.330	-2.821	-24.537	-15.312			
7	0.000	5.756	-13.466	8.237	-3.263	-3.444	19.940	9.165		
8	0.000	5.360	-1.916	-7.240	-0.591	8.362	-5.482	-2.488	-26.179	
9	0.000	-6.390	6.179	-7.784	-3.159	-8.042	-10.948	-5.933	-0.960	4.961

h's

Carrington Rotation 1737

	0	1	2	3	4	5	6	7	8	9
0	-0.328									
1	-46.271	20.490								
2	6.085	-14.423	-65.621							
3	-36.903	6.431	22.926	15.329						
4	-7.239	8.343	0.974	-17.353	14.311					
5	-18.375	-1.745	4.868	6.702	7.072	-60.803				
6	8.887	-1.178	3.775	3.697	9.141	9.955	-13.685			
7	-16.308	1.169	-5.490	-3.694	-8.119	6.807	16.499	17.759		
8	-8.578	3.481	-8.198	3.183	-7.030	-5.671	-11.004	9.188	2.813	
9	5.349	-0.843	2.058	-0.274	6.437	3.518	-0.890	-3.462	-4.517	-19.801

g's

0	0.000									
1	0.000	9.340								
2	0.000	-1.168	12.116							
3	0.000	12.961	-2.238	2.351						
4	0.000	-5.775	7.989	20.783	-0.178					
5	0.000	-4.578	15.379	6.357	7.478	-50.063				
6	0.000	11.805	-3.326	-4.404	-6.686	35.598	-12.248			
7	0.000	-2.042	-13.672	-11.364	-8.405	4.709	6.187	-3.272		
8	0.000	-6.397	-0.266	3.820	-0.305	-14.750	-4.455	0.528	-10.724	
9	0.000	3.384	7.360	9.464	3.765	7.749	-3.656	2.109	-1.990	1.149

h's

	0	1	2	3	4	5	6	7	8	9
0	-6.927					**Carrington Rotation 1737:180**				
1	-42.475	-16.873								
2	8.744	8.161	-59.844							**g's**
3	-39.031	-5.616	19.084	-27.578						
4	-11.271	-10.699	4.273	19.735	18.975					
5	-16.772	3.689	4.152	-0.387	6.781	58.831				
6	8.441	4.047	1.831	-4.037	-1.951	-11.342	-19.508			
7	-16.951	-3.452	-2.187	1.517	0.357	-3.815	12.143	-16.687		
8	-9.050	-4.541	-8.471	2.677	-4.256	5.323	-2.189	-1.955	17.949	
9	4.318	4.041	0.448	1.063	-1.024	-5.371	-3.336	-3.786	-5.498	6.573
0	0.000									**h's**
1	0.000	-18.483								
2	0.000	6.794	22.623							
3	0.000	-10.889	-9.059	-3.582						
4	0.000	3.822	4.979	-21.388	-4.998					
5	0.000	2.177	12.192	2.857	6.203	53.580				
6	0.000	-10.899	0.956	-1.534	-3.429	-32.973	-13.623			
7	0.000	0.373	-15.028	8.483	-10.071	-14.642	-1.489	-9.993		
8	0.000	6.901	-2.599	3.150	1.021	20.570	2.307	-2.026	-2.924	
9	0.000	-5.093	9.188	-11.385	6.802	-2.968	-4.835	5.325	-5.036	3.682

0	1.319					**Carrington Rotation 1738**				
1	-47.374	16.719								
2	2.296	-8.342	-60.112							**g's**
3	-34.556	5.926	17.136	44.440						
4	-13.153	3.740	9.702	-16.346	1.585					
5	-20.631	1.085	2.223	-3.481	11.299	-36.717				
6	11.483	3.012	0.482	8.381	1.387	-7.963	-25.361			
7	-13.511	-3.002	-0.188	0.163	-2.338	-1.840	17.801	1.880		
8	-14.263	-0.453	-8.120	-8.126	-6.148	9.004	-4.671	-4.687	32.188	
9	3.040	0.752	-1.593	0.170	1.864	2.001	-9.791	10.295	-14.560	-41.462
0	0.000									**h's**
1	0.000	27.888								
2	0.000	-11.359	12.373							
3	0.000	5.111	-7.405	15.279						
4	0.000	0.062	7.085	16.462	-1.083					
5	0.000	-4.325	1.347	-0.505	21.529	-63.549				
6	0.000	6.263	5.077	1.826	-4.388	34.473	20.370			
7	0.000	2.490	-5.086	-10.100	-18.537	20.481	-9.056	-6.952		
8	0.000	-3.609	-8.479	-4.182	6.032	-21.750	-6.845	14.514	16.034	
9	0.000	-0.190	4.736	13.706	9.127	-2.764	3.445	-2.374	-14.341	-3.660

0	-2.855					**Carrington Rotation 1738:180**				
1	-48.234	-9.441								
2	7.221	5.759	-71.514							**g's**
3	-31.283	-8.911	22.299	-42.123						
4	-17.263	-3.265	9.743	11.274	5.157					
5	-19.278	-1.449	-2.545	9.078	2.115	23.418				
6	13.932	-1.870	0.089	-9.475	1.590	14.489	-29.285			
7	-15.340	5.201	-0.941	-3.574	-0.551	7.324	19.440	18.213		
8	-15.059	0.152	-8.445	7.699	-2.848	-14.721	-5.738	0.915	26.905	
9	4.579	-4.354	-1.831	1.712	1.003	-4.974	-9.783	-11.537	-12.701	35.847
0	0.000									**h's**
1	0.000	-26.622								
2	0.000	8.635	17.290							
3	0.000	-1.112	-7.695	-25.565						
4	0.000	3.977	2.192	-7.777	7.192					
5	0.000	1.634	2.385	1.337	13.287	65.396				
6	0.000	-3.709	6.199	-6.102	-3.047	-39.960	1.990			
7	0.000	-0.060	-4.613	7.602	-16.216	-19.784	-5.918	5.152		
8	0.000	2.592	-7.729	4.673	4.607	21.802	0.105	-14.441	31.016	
9	0.000	0.673	4.775	-10.598	7.343	3.160	-1.091	0.592	-21.961	-6.591

Carrington Rotation 1739

	0	1	2	3	4	5	6	7	8	9
0	-12.740									
1	-48.794	7.444								
2	7.185	-11.417	-69.390							
3	-30.236	10.674	18.421	45.553						
4	-18.860	3.562	12.377	-9.790	-1.119					
5	-19.082	-1.491	-2.367	-10.791	-2.445	-1.082				
6	12.924	2.701	0.456	14.159	2.530	-19.910	-37.223			
7	-12.412	-5.149	-3.091	3.549	2.195	-13.563	21.156	-1.910		
8	-13.788	3.079	-6.850	-9.020	-2.974	16.751	-0.221	-13.367	12.890	
9	3.252	2.025	-0.883	-0.156	-4.165	6.763	-11.526	6.168	-1.804	-11.622

g's

0	0.000									
1	0.000	18.997								
2	0.000	-7.684	7.605							
3	0.000	-2.075	-11.839	30.250						
4	0.000	-3.547	6.833	5.840	-10.197					
5	0.000	-3.602	-1.639	-1.791	17.877	-64.393				
6	0.000	3.774	2.763	6.335	2.217	31.918	2.256			
7	0.000	-3.266	-3.047	-7.137	-16.331	16.527	-2.111	-6.176		
8	0.000	-0.224	-8.494	-5.667	1.784	-16.079	0.535	5.362	31.845	
9	0.000	-0.372	6.440	9.756	8.728	-2.383	-5.153	-0.276	-27.518	-9.684

h's

Carrington Rotation 1739:180

0	-6.470									
1	-46.391	-16.325								
2	6.278	10.931	-77.457							
3	-30.974	-7.779	26.246	-56.243						
4	-19.036	-1.079	12.018	15.935	-7.117					
5	-17.390	-1.293	-6.107	10.549	-1.151	-1.635				
6	10.751	-3.074	1.261	-14.907	7.105	18.583	-32.931			
7	-15.301	8.620	0.245	0.899	-4.424	13.035	21.210	-4.836		
8	-11.590	-3.915	-7.866	8.150	-4.336	-16.171	-1.028	19.438	6.327	
9	3.715	-4.422	1.068	-4.755	-1.174	-7.322	-15.000	-6.383	-0.588	8.939

g's

0	0.000									
1	0.000	-9.675								
2	0.000	6.807	8.401							
3	0.000	2.129	-15.779	-31.600						
4	0.000	5.370	8.123	0.554	-15.668					
5	0.000	4.799	1.055	-1.331	22.164	57.044				
6	0.000	-3.692	-1.253	-5.423	1.612	-27.697	2.535			
7	0.000	1.764	-2.670	9.634	-16.015	-13.939	-3.950	9.864		
8	0.000	-1.717	-2.890	6.098	4.651	12.122	-1.367	-2.554	27.902	
9	0.000	2.636	4.795	-10.808	7.411	2.027	-3.137	-1.458	-17.703	2.701

h's

Carrington Rotation 1740

0	-7.257									
1	-49.574	7.140								
2	8.328	-13.517	-58.569							
3	-28.404	6.129	23.672	48.517						
4	-14.596	2.706	9.949	-10.440	2.148					
5	-19.408	0.750	-9.314	-2.328	-8.527	17.667				
6	8.656	1.715	3.771	17.682	5.270	-11.393	-36.641			
7	-14.717	-8.924	4.555	-5.016	4.561	-18.758	7.400	3.922		
8	-8.154	2.725	-12.839	-11.598	-4.078	7.093	-2.670	-13.173	12.347	
9	3.191	3.089	1.773	5.684	-5.970	8.775	-6.668	2.800	5.073	-3.674

g's

0	0.000									
1	0.000	-1.597								
2	0.000	-8.210	3.375							
3	0.000	0.125	-22.193	38.434						
4	0.000	-3.896	3.230	1.875	-32.916					
5	0.000	-0.987	2.808	1.143	20.034	-46.136				
6	0.000	0.769	0.010	-3.065	10.887	27.821	9.869			
7	0.000	-0.614	-2.485	-5.792	-7.370	12.774	-1.705	-12.564		
8	0.000	1.188	-3.565	0.101	0.284	-11.171	-1.159	-14.178	26.259	
9	0.000	1.182	3.221	6.974	1.028	1.840	-5.805	-2.426	-10.204	-1.672

h's

Carrington Rotation 1740:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-13.678									
1	-50.269	-5.631								
2	14.334	15.833	-60.318							
3	-31.694	-7.020	26.188	-33.525						
4	-19.375	0.514	6.706	6.479	-8.464					
5	-14.843	-1.107	-10.545	-4.725	-2.193	-28.345				
6	10.426	-1.592	0.780	-9.323	7.284	11.870	-26.277			
7	-16.727	9.563	6.426	6.073	-0.413	23.263	0.575	4.381		
8	-8.620	-3.306	-11.569	5.644	-1.958	-9.853	-6.721	3.972	3.549	
9	4.185	-2.737	1.298	-2.295	-2.472	-6.951	-0.685	-2.978	12.502	9.402

h's

0	0.000									
1	0.000	-2.293								
2	0.000	6.726	-3.460							
3	0.000	6.415	-18.238	-35.668						
4	0.000	0.279	6.145	-2.759	-18.669					
5	0.000	-1.489	1.476	-2.150	19.102	33.509				
6	0.000	0.998	-2.172	2.528	3.932	-19.825	-0.622			
7	0.000	0.774	2.461	1.733	0.051	-8.455	4.306	22.055		
8	0.000	-2.095	-5.009	-0.372	-0.674	3.339	1.167	6.963	26.194	
9	0.000	-0.908	1.860	-5.246	-1.588	-0.789	-8.527	2.213	-13.296	-2.202

Carrington Rotation 1741

g's

0	-5.615									
1	-50.328	-4.331								
2	7.627	-13.010	-60.734							
3	-30.508	3.684	16.742	27.440						
4	-10.038	-1.967	9.584	-3.022	1.332					
5	-14.612	1.874	-8.584	12.401	9.550	26.953				
6	5.679	2.370	1.415	5.383	3.670	-12.077	-30.290			
7	-18.664	-6.589	1.873	-8.139	-6.051	-18.861	-9.213	-3.732		
8	-4.875	1.563	-12.070	-6.032	-3.519	3.505	-8.337	1.373	-2.864	
9	4.287	-0.166	2.430	-0.356	0.751	6.957	0.108	2.504	17.563	-3.687

h's

0	0.000									
1	0.000	9.149								
2	0.000	-3.630	-7.274							
3	0.000	-14.238	-17.662	33.478						
4	0.000	0.229	-1.989	-9.736	-24.470					
5	0.000	9.068	3.681	3.282	21.736	-21.404				
6	0.000	1.889	-0.863	2.046	5.329	30.168	-4.948			
7	0.000	-3.903	2.268	1.567	1.372	4.641	1.867	-16.001		
8	0.000	0.605	-1.096	-4.375	-2.267	-7.183	5.508	-15.533	22.497	
9	0.000	2.739	0.563	1.703	-4.152	1.112	-12.440	-9.965	-12.286	5.312

Carrington Rotation 1741:180

g's

0	-2.919									
1	-53.794	-4.683								
2	10.255	13.163	-59.592							
3	-33.016	-0.487	15.615	-26.117						
4	-9.805	-0.753	11.091	1.553	-3.352					
5	-13.292	-2.001	-8.138	-15.087	14.852	-29.961				
6	3.169	-1.121	0.675	-5.491	0.223	12.999	-20.292			
7	-18.379	4.677	1.640	4.948	-2.646	16.734	-13.863	-2.741		
8	-2.737	-3.444	-10.005	5.655	-3.903	-1.719	-8.213	-0.346	3.839	
9	3.834	1.371	1.644	0.593	-1.031	-5.999	1.844	2.957	12.295	2.856

h's

0	0.000									
1	0.000	-8.358								
2	0.000	1.425	-13.906							
3	0.000	16.744	-16.655	-31.957						
4	0.000	-4.098	1.634	6.431	-22.916					
5	0.000	-6.936	1.306	0.440	20.152	11.466				
6	0.000	-1.708	1.323	-4.763	4.627	-23.566	-4.091			
7	0.000	1.035	3.344	-1.321	-0.143	-6.460	1.295	17.877		
8	0.000	-0.465	-2.841	5.434	-4.583	8.115	0.917	16.355	16.761	
9	0.000	-1.059	-0.540	-1.265	-4.020	-1.901	-9.493	8.928	-13.479	1.588

Carrington Rotation 1742

g's

	0	1	2	3	4	5	6	7	8	9
0	2.970									
1	-50.687	1.503								
2	13.263	-11.726	-55.017							
3	-29.694	3.397	7.753	25.763						
4	-5.347	3.452	1.415	-6.111	8.007					
5	-13.393	6.619	-5.696	14.560	14.197	30.308				
6	7.498	5.538	3.415	4.129	0.780	-1.656	-13.615			
7	-14.670	1.187	5.464	-4.121	6.727	-7.914	-11.962	-0.463		
8	-2.904	5.638	-9.790	-3.456	-5.575	9.143	-5.619	-11.054	-4.392	
9	0.158	3.567	-0.647	-3.110	-8.962	1.336	-0.264	-10.101	2.738	5.935

h's

0	0.000									
1	0.000	8.792								
2	0.000	3.470	-16.903							
3	0.000	-10.400	-14.460	28.798						
4	0.000	5.295	2.434	-11.975	-24.967					
5	0.000	8.625	2.424	-7.490	12.322	-5.265				
6	0.000	1.745	4.566	2.004	0.265	20.541	-4.745			
7	0.000	5.127	6.548	3.570	-4.978	3.512	14.727	-5.422		
8	0.000	6.193	2.963	2.397	-0.192	0.117	10.455	-12.287	7.840	
9	0.000	4.670	3.822	4.588	1.994	0.970	-2.400	-7.360	-19.299	-3.951

Carrington Rotation 1742:180

g's

0	6.617									
1	-49.793	5.610								
2	12.395	9.049	-46.540							
3	-28.858	-1.114	5.724	-21.310						
4	-3.922	-2.344	2.566	6.830	4.573					
5	-10.730	-6.311	-4.725	-12.818	16.698	-27.390				
6	6.715	-6.230	3.087	-3.512	0.368	-1.261	-2.893			
7	-12.641	-1.504	5.950	5.667	6.012	5.099	-16.756	-7.151		
8	-1.178	-2.929	-8.185	6.001	-5.949	-5.363	-8.150	15.894	-4.325	
9	-1.282	-4.495	0.224	2.070	-7.392	-3.588	3.375	11.836	2.507	-4.856

h's

0	0.000									
1	0.000	-10.233								
2	0.000	-2.311	-14.355							
3	0.000	10.018	-17.195	-22.316						
4	0.000	-6.185	4.111	10.001	-21.034					
5	0.000	-7.272	2.328	9.265	12.755	-1.546				
6	0.000	-0.249	4.838	-2.035	3.753	-16.166	3.454			
7	0.000	-6.559	4.232	-3.407	-5.904	-1.598	9.424	12.552		
8	0.000	-3.467	3.534	-2.863	2.449	-2.748	8.565	10.066	4.049	
9	0.000	-2.630	4.877	-4.000	4.402	-0.347	3.019	5.960	-16.727	5.385

Carrington Rotation 1743

g's

0	1.735									
1	-50.600	-13.749								
2	8.858	-9.977	-44.234							
3	-34.767	-1.375	-0.739	16.728						
4	-7.007	-3.004	-2.740	-15.508	20.960					
5	-11.215	-1.069	-4.166	10.513	4.935	27.139				
6	5.541	3.403	4.710	3.074	-3.023	3.252	10.987			
7	-13.812	-2.828	3.295	-5.842	7.337	-3.804	-13.581	14.755		
8	-1.960	-1.870	-6.359	-4.567	-2.629	9.839	-2.344	-15.903	-0.272	
9	-0.766	-0.308	1.157	2.375	-5.213	0.794	11.402	-6.232	-8.365	12.071

h's

0	0.000									
1	0.000	3.601								
2	0.000	7.225	-18.543							
3	0.000	-10.500	-12.555	11.185						
4	0.000	0.015	4.137	-6.841	-28.198					
5	0.000	1.382	-2.330	-11.927	6.401	3.947				
6	0.000	-0.319	-0.804	-1.583	1.491	7.302	-5.565			
7	0.000	2.767	1.777	0.419	-10.893	-4.213	10.167	-1.286		
8	0.000	0.309	-3.096	0.106	1.676	-2.901	7.376	-3.930	1.572	
9	0.000	-0.323	-1.690	2.095	6.814	2.436	1.861	0.751	-11.480	3.946

	0	1	2	3	4	5	6	7	8	9
0	-1.387					**Carrington Rotation 1743:180**				
1	-54.448	12.295								
2	8.895	8.496	-44.124							**g's**
3	-37.019	3.614	1.745	-18.879						
4	-6.704	2.320	-2.536	16.693	13.886					
5	-11.246	-0.348	-5.729	-9.379	7.118	-26.284				
6	6.376	-4.550	4.936	-6.932	-0.521	-5.305	21.045			
7	-14.382	2.746	3.963	8.142	5.287	4.330	-19.239	-22.090		
8	-1.083	1.868	-6.254	3.526	-1.866	-6.404	-3.909	19.368	-0.429	
9	-1.469	-1.188	1.761	-5.268	-3.046	-0.823	15.841	7.745	-7.024	-12.145
0	0.000									**h's**
1	0.000	-5.941								
2	0.000	-10.929	-18.246							
3	0.000	9.476	-14.035	-9.433						
4	0.000	-2.340	5.155	8.002	-29.445					
5	0.000	-1.917	-0.979	10.707	7.597	-15.303				
6	0.000	-1.443	-2.074	-0.094	2.157	-1.680	-1.467			
7	0.000	-2.680	1.055	-0.525	-15.296	6.879	6.786	5.726		
8	0.000	-1.634	-1.425	-1.319	3.901	-2.156	7.236	1.102	-3.804	
9	0.000	1.076	-1.581	-1.843	5.441	-0.599	3.697	-0.843	-9.841	-4.030

0	-3.844					**Carrington Rotation 1744**				
1	-52.444	-14.421								
2	13.770	-2.162	-24.569							**g's**
3	-35.428	-3.187	7.025	24.415						
4	-7.035	1.999	-11.918	-13.469	5.560					
5	-14.394	0.854	-10.769	2.157	-9.828	14.493				
6	4.838	2.040	12.287	1.820	0.829	0.646	30.501			
7	-9.328	-4.129	7.951	-7.617	7.613	-2.116	-8.665	16.267		
8	0.496	0.390	-8.861	0.322	-1.209	3.518	-4.145	-16.259	-5.885	
9	-4.126	3.827	-0.623	7.854	-5.025	-1.740	6.170	-4.464	-4.975	5.308
0	0.000									**h's**
1	0.000	-5.119								
2	0.000	11.483	-20.028							
3	0.000	-1.708	-10.705	26.493						
4	0.000	7.039	8.237	4.282	-17.039					
5	0.000	-0.073	6.906	-17.833	13.141	10.196				
6	0.000	-3.808	-1.817	-2.499	-5.321	-14.932	-2.951			
7	0.000	3.517	-2.871	6.308	-14.469	-8.424	2.398	6.110		
8	0.000	7.420	-4.295	3.119	5.694	8.919	3.917	1.039	-4.881	
9	0.000	0.007	1.775	2.350	6.763	3.921	4.268	-1.026	-11.379	8.233

0	-7.968					**Carrington Rotation 1744:180**				
1	-52.603	20.883								
2	13.099	-0.905	-30.958							**g's**
3	-33.138	5.824	7.418	-19.904						
4	-6.611	-2.036	-10.453	10.399	1.753					
5	-14.476	0.377	-15.113	-1.635	-7.280	-6.466				
6	7.929	-5.548	11.595	4.229	-0.514	-4.138	29.442			
7	-9.078	3.082	8.608	6.281	3.414	-0.078	-11.654	-14.194		
8	-0.918	-0.285	-7.797	-2.916	2.142	-2.081	-0.190	16.862	-2.806	
9	-4.516	-2.620	-3.476	-7.585	-6.729	-0.463	4.736	-1.482	-1.491	-9.482
0	0.000									**h's**
1	0.000	5.183								
2	0.000	-11.981	-18.963							
3	0.000	-0.896	-11.519	-30.054						
4	0.000	-2.930	11.094	-4.673	-16.948					
5	0.000	-1.183	4.016	18.633	11.348	-15.637				
6	0.000	3.837	0.586	2.312	-2.081	18.846	4.571			
7	0.000	-1.274	-3.727	-9.346	-10.877	5.830	-2.645	-13.080		
8	0.000	-5.362	-4.922	-2.231	6.204	-11.866	5.907	-2.956	3.877	
9	0.000	-1.178	0.675	0.656	4.535	-1.722	5.664	5.588	-14.727	-16.742

Carrington Rotation 1745

g's

	0	1	2	3	4	5	6	7	8	9
0	-11.335									
1	-56.814	-26.793								
2	15.825	3.351	-12.500							
3	-30.745	-3.636	18.391	23.950						
4	-6.883	6.254	-10.989	-5.594	-12.466					
5	-18.312	-2.353	-19.080	-0.208	-21.429	1.128				
6	5.555	3.196	7.814	-5.507	-4.533	9.731	33.339			
7	-6.428	-2.948	13.110	-4.980	11.069	1.934	8.129	-7.593		
8	1.627	0.769	-1.631	4.703	11.036	-4.413	1.269	-19.616	3.719	
9	-4.877	1.979	-5.105	9.847	-11.733	1.496	-4.891	1.793	-4.732	19.137

h's

0	0.000									
1	0.000	-15.796								
2	0.000	3.822	-23.477							
3	0.000	3.846	-13.429	49.083						
4	0.000	6.487	13.060	17.040	-9.120					
5	0.000	2.760	9.658	-16.119	11.595	6.662				
6	0.000	-9.365	-1.316	-7.194	-4.623	-36.687	13.329			
7	0.000	-2.967	-6.591	2.540	-6.454	-8.940	2.825	11.061		
8	0.000	7.366	-5.420	6.782	6.255	22.199	5.814	17.698	-16.350	
9	0.000	5.816	1.146	7.880	2.823	10.156	1.077	-4.375	-19.609	23.735

Carrington Rotation 1745:180

g's

0	-8.473									
1	-54.219	35.457								
2	17.042	-7.075	-7.182							
3	-31.083	-0.825	20.198	-11.382						
4	-0.517	-0.731	-15.836	1.125	-7.773					
5	-15.311	1.528	-18.555	-1.083	-22.722	20.130				
6	2.589	-6.765	12.090	5.958	-8.590	-17.886	22.897			
7	-4.652	1.991	12.478	5.506	15.488	-6.966	13.714	14.761		
8	4.253	0.962	-5.062	-4.677	13.938	6.558	2.202	16.332	-9.006	
9	-6.259	-4.402	-2.160	-6.629	-14.168	2.676	-9.033	-4.188	6.713	-2.383

h's

0	0.000									
1	0.000	15.709								
2	0.000	-2.844	-28.319							
3	0.000	-2.160	-13.284	-44.525						
4	0.000	-7.198	12.441	-16.085	-13.837					
5	0.000	1.904	13.226	12.773	12.604	7.039				
6	0.000	11.417	-4.381	6.369	-1.769	31.384	24.710			
7	0.000	4.091	-8.043	0.887	-6.598	2.083	-1.763	-7.303		
8	0.000	-5.419	-7.530	-7.240	2.499	-14.849	4.617	-20.793	-12.923	
9	0.000	-3.873	1.552	-9.024	5.550	-6.727	1.793	0.144	-19.554	-28.596

Carrington Rotation 1746

g's

0	-4.760									
1	-50.409	-40.247								
2	16.555	6.727	-12.878							
3	-39.273	2.358	25.714	8.000						
4	-1.590	2.476	-8.673	3.713	-21.964					
5	-9.299	-1.185	-16.365	-1.156	-15.597	-17.597				
6	1.302	2.187	7.888	-5.704	-10.757	27.974	9.973			
7	-11.825	-3.319	10.455	-6.294	11.486	5.692	8.525	-24.558		
8	3.498	-0.008	-4.092	4.185	14.406	-15.441	8.142	-23.381	7.511	
9	-1.557	5.330	0.352	5.272	-8.902	0.971	-4.355	6.358	19.071	-5.897

h's

0	0.000									
1	0.000	-8.151								
2	0.000	4.889	-29.017							
3	0.000	-0.257	-17.479	50.963						
4	0.000	-0.064	14.162	17.800	-15.904					
5	0.000	0.547	16.739	-6.917	10.192	-11.571				
6	0.000	-5.968	-3.300	-4.375	-3.376	-23.024	32.873			
7	0.000	-5.783	-11.904	-2.893	-0.305	-5.103	8.804	-13.081		
8	0.000	-1.895	-7.517	4.231	0.652	10.413	1.287	13.195	-14.220	
9	0.000	2.166	2.078	9.029	1.760	7.584	-5.641	4.209	-25.069	40.984

	0	1	2	3	4	5	6	7	8	9
0	-3.658					**Carrington Rotation 1746:180**				
1	-53.909	43.620								
2	13.885	-5.309	4.864							**g's**
3	-36.611	-4.454	25.321	1.263						
4	-3.014	-5.508	-12.309	-7.634	-25.608					
5	-12.604	5.184	-12.230	-4.614	-8.848	18.037				
6	4.613	1.131	10.065	8.586	-12.688	-22.744	3.403			
7	-11.729	2.282	8.637	8.186	7.979	-3.769	2.057	6.476		
8	0.550	-0.554	-3.949	-6.894	17.397	13.303	14.789	34.682	17.849	
9	0.238	-3.193	1.049	-5.483	-6.216	-2.804	-5.591	-1.552	12.079	0.287
0	0.000									**h's**
1	0.000	1.709								
2	0.000	-8.893	-30.405							
3	0.000	0.418	-15.135	-35.649						
4	0.000	0.948	14.536	-22.292	-6.152					
5	0.000	-4.758	12.988	4.496	3.674	16.182				
6	0.000	4.409	-1.483	9.885	-10.047	30.927	46.348			
7	0.000	8.665	-9.284	1.701	3.147	-0.896	5.606	5.115		
8	0.000	0.243	-8.243	-6.869	3.561	-11.765	-1.629	-13.564	-24.062	
9	0.000	-4.203	1.099	-7.472	-2.328	-3.718	-1.583	-2.149	-17.056	-32.225

0	-9.556					**Carrington Rotation 1747**				
1	-53.583	-35.832								
2	17.433	3.752	10.070							**g's**
3	-37.793	1.256	23.708	-11.825						
4	-5.314	3.178	-8.764	10.913	-29.149					
5	-11.785	-2.624	-10.718	10.974	0.110	-16.289				
6	1.527	-1.587	6.942	-5.317	-18.884	18.367	-7.305			
7	-11.925	-3.007	6.187	-7.506	3.029	1.768	-7.197	4.944		
8	2.191	-0.366	-2.976	5.326	16.980	-11.465	25.452	-16.300	-3.868	
9	0.369	1.855	2.276	4.015	-0.103	1.042	3.426	-6.672	21.257	-10.818
0	0.000									**h's**
1	0.000	-8.108								
2	0.000	9.433	-19.179							
3	0.000	1.301	-18.193	42.469						
4	0.000	-2.308	9.149	16.840	-13.405					
5	0.000	6.062	9.782	1.231	5.907	-9.615				
6	0.000	-3.211	0.290	-7.124	-4.440	-21.372	41.064			
7	0.000	-12.765	-9.525	-2.430	5.278	-7.617	-6.194	-3.235		
8	0.000	-0.595	-7.330	2.516	4.858	4.120	2.521	3.567	-10.526	
9	0.000	5.362	-1.052	6.255	-5.006	5.345	6.194	10.762	-1.070	3.347

0	2.440					**Carrington Rotation 1747:180**				
1	-52.682	32.114								
2	9.061	-6.840	3.172							**g's**
3	-38.492	-1.227	29.620	26.348						
4	-1.994	-3.352	-8.709	-23.606	-48.968					
5	-14.627	0.244	-14.321	-6.457	13.244	24.298				
6	-2.375	3.284	9.989	11.999	-17.458	-27.768	-22.827			
7	-10.889	7.439	9.283	0.571	-5.833	-0.191	8.683	12.585		
8	5.027	-0.120	-6.474	-10.520	17.713	18.416	26.910	3.637	-4.920	
9	-1.369	-2.687	0.699	3.432	4.485	-5.705	-2.714	4.736	22.120	16.889
0	0.000									**h's**
1	0.000	25.656								
2	0.000	-12.416	-33.200							
3	0.000	-7.945	-12.219	-28.873						
4	0.000	5.938	8.175	-21.797	-13.115					
5	0.000	-3.682	3.950	-5.267	3.419	7.220				
6	0.000	-1.753	0.303	11.509	0.238	22.751	37.753			
7	0.000	11.283	-3.734	6.156	4.092	5.149	-8.960	-9.136		
8	0.000	2.577	-8.944	-4.925	0.009	-6.498	8.195	10.899	2.052	
9	0.000	-4.209	-2.439	-7.422	-3.814	-4.393	8.582	-11.436	-13.641	-5.710

Carrington Rotation 1748

g's

	0	1	2	3	4	5	6	7	8	9
0	-7.563									
1	-55.221	-35.806								
2	15.583	8.842	-0.543							
3	-37.056	3.897	32.936	-46.626						
4	-4.967	-1.355	-7.920	24.338	-27.319					
5	-13.417	-0.470	-18.244	21.526	22.818	-57.093				
6	0.334	4.479	11.807	-11.265	-26.142	19.673	-12.821			
7	-8.933	-6.586	10.600	-6.257	-16.799	5.857	18.953	-14.923		
8	4.129	-5.925	-8.840	5.187	22.329	-12.766	14.928	6.133	-13.795	
9	-3.816	2.846	1.139	-3.650	13.081	1.735	-14.067	-1.349	15.812	1.507

h's

0	0.000									
1	0.000	-34.837								
2	0.000	7.775	-21.415							
3	0.000	12.427	-10.133	11.904						
4	0.000	-3.390	1.503	18.150	-11.001					
5	0.000	-0.065	-1.335	12.022	7.859	3.566				
6	0.000	-0.037	5.194	-7.864	8.255	-19.172	6.134			
7	0.000	-8.131	5.673	-8.767	0.192	-6.035	-19.688	30.154		
8	0.000	0.818	-8.540	-0.918	-0.460	2.660	15.859	4.618	-26.538	
9	0.000	1.887	-9.425	7.163	-2.761	3.183	12.304	-4.407	-7.888	18.820

Carrington Rotation 1748:180

g's

0	-10.516									
1	-51.571	39.410								
2	13.262	-14.634	7.241							
3	-37.562	-6.068	31.605	45.076						
4	-4.998	2.720	-7.832	-25.538	-24.003					
5	-15.572	-0.318	-17.950	-16.526	22.403	44.714				
6	-2.944	-4.859	12.475	7.670	-21.244	-11.173	-8.346			
7	-8.195	8.071	7.412	6.635	-16.947	-6.615	17.645	19.778		
8	3.165	5.914	-6.740	-1.880	19.382	11.283	13.903	-13.545	-8.427	
9	-3.970	-2.543	2.275	2.794	13.910	-0.702	-13.969	-2.901	7.753	-15.113

h's

0	0.000									
1	0.000	28.521								
2	0.000	-3.554	-15.777							
3	0.000	-14.814	-15.033	-9.944						
4	0.000	4.831	-2.397	-17.613	-3.665					
5	0.000	-0.198	0.514	-14.654	1.291	-2.886				
6	0.000	-0.281	4.054	9.459	12.289	20.168	-3.050			
7	0.000	4.051	3.472	10.621	-2.816	10.558	-11.654	-27.555		
8	0.000	-1.307	-7.349	-2.017	-0.829	-1.590	18.699	-2.638	-18.903	
9	0.000	-4.357	-8.622	-7.739	-1.519	-4.851	6.370	6.723	-15.882	-8.917

Carrington Rotation 1749

g's

0	-10.324									
1	-49.610	-39.119								
2	10.877	11.117	3.120							
3	-39.543	5.509	30.780	-41.828						
4	-3.446	-0.609	-8.869	29.442	-16.021					
5	-15.333	1.757	-14.660	16.369	19.623	-39.524				
6	-2.320	4.432	9.487	-8.808	-17.370	10.234	3.806			
7	-9.345	-8.230	6.437	-6.420	-12.533	3.505	10.491	-24.712		
8	2.369	-6.005	-6.769	4.134	18.810	-10.384	0.954	15.189	11.345	
9	-2.556	2.298	2.602	-4.597	8.892	-0.404	-9.125	7.769	8.864	-1.722

h's

0	0.000									
1	0.000	-28.381								
2	0.000	6.213	-16.652							
3	0.000	13.535	-19.892	-1.953						
4	0.000	-7.469	-3.107	19.310	-1.386					
5	0.000	0.848	2.087	14.612	3.867	-5.175				
6	0.000	1.714	5.468	-9.510	12.264	-19.402	8.512			
7	0.000	-3.351	2.815	-15.061	-4.622	2.166	-11.233	21.619		
8	0.000	-0.911	-7.062	5.183	1.190	3.840	12.090	-6.021	-7.583	
9	0.000	3.289	-7.361	7.765	0.878	-2.349	4.928	-7.189	-8.316	13.840

	0	1	2	3	4	5	6	7	8	9
0	-1.077									
1	-51.979	35.978								
2	11.801	-6.908	9.081							
3	-37.567	-7.298	27.272	35.319						
4	-3.972	0.527	-14.778	-27.848	-8.137					
5	-17.821	-2.151	-10.678	-13.597	16.466	29.736				
6	-1.941	-1.090	9.399	7.416	-23.333	-3.782	10.459			
7	-9.699	5.035	4.614	1.685	-8.302	-0.460	10.413	25.126		
8	1.739	5.042	-7.374	0.897	19.644	5.942	0.606	-10.446	6.658	
9	-1.746	-1.838	3.800	5.360	3.785	0.718	-8.287	-11.417	6.524	4.041

Carrington Rotation 1749:180

g's

0	0.000									
1	0.000	31.449								
2	0.000	-7.170	-13.823							
3	0.000	-7.168	-18.325	1.779						
4	0.000	7.276	-6.322	-21.346	-0.928					
5	0.000	-0.866	3.020	-13.941	2.179	8.298				
6	0.000	-1.992	8.267	11.016	12.112	15.482	-0.830			
7	0.000	5.144	3.528	13.684	-3.705	-6.534	-7.428	-13.133		
8	0.000	-1.473	-10.512	-3.375	-1.918	0.785	16.004	4.618	-13.031	
9	0.000	-2.465	-4.492	-7.479	5.716	1.878	0.118	3.658	0.966	-17.691

h's

0	-3.907									
1	-50.164	-41.607								
2	11.567	2.854	3.364							
3	-40.644	5.707	29.152	-36.519						
4	-8.760	-0.633	-11.969	26.928	-2.149					
5	-13.995	3.632	-14.750	13.033	19.248	-25.458				
6	0.034	0.726	10.020	-5.351	-14.133	-0.714	8.595			
7	-12.242	-4.525	6.500	1.106	-8.708	-3.986	15.540	-23.817		
8	-1.493	-6.035	-6.277	-1.621	12.359	-2.158	-0.682	4.249	13.550	
9	0.324	1.892	1.606	-8.430	4.012	5.993	-12.771	12.003	2.958	-5.116

Carrington Rotation 1750

g's

0	0.000									
1	0.000	-32.117								
2	0.000	8.557	-17.578							
3	0.000	6.013	-20.104	-11.157						
4	0.000	-8.589	-7.971	22.042	-5.068					
5	0.000	-3.482	0.835	12.210	4.126	-7.558				
6	0.000	4.084	7.332	-14.684	12.477	-14.381	1.369			
7	0.000	-5.268	4.746	-10.627	-5.278	15.478	-7.323	5.868		
8	0.000	0.852	-7.826	4.688	-2.811	-0.938	10.858	2.875	-9.642	
9	0.000	-0.491	-5.482	4.878	8.143	-7.623	1.333	-1.745	-3.378	16.627

h's

0	4.355									
1	-48.863	47.780								
2	7.542	-2.532	11.673							
3	-42.612	-5.098	27.784	37.984						
4	-5.080	-2.751	-15.330	-25.346	8.260					
5	-16.157	-3.628	-12.985	-12.894	8.735	15.708				
6	-2.375	3.121	10.353	3.347	-13.651	9.868	20.903			
7	-10.619	5.177	5.402	0.281	-6.660	-0.200	9.558	21.552		
8	0.262	2.572	-4.639	1.923	11.872	-2.955	-2.655	1.930	13.725	
9	-2.022	-1.255	2.731	7.981	2.745	-1.588	-8.114	-8.614	6.322	9.726

Carrington Rotation 1750:180

g's

0	0.000									
1	0.000	33.638								
2	0.000	-5.313	-12.662							
3	0.000	-6.785	-21.470	11.042						
4	0.000	6.764	-7.075	-16.303	2.733					
5	0.000	6.063	-0.644	-14.897	-0.020	10.758				
6	0.000	-5.627	6.406	14.107	14.533	9.535	-4.101			
7	0.000	3.198	6.653	11.034	-4.588	-14.527	-3.211	7.745		
8	0.000	-0.330	-6.488	-4.837	-3.941	-0.266	5.882	-12.267	-16.562	
9	0.000	2.485	-7.553	-4.026	6.578	6.564	-1.222	1.579	4.780	-8.137

h's

Carrington Rotation 1751

g's

	0	1	2	3	4	5	6	7	8	9
0	-8.380									
1	-48.406	-32.148								
2	8.438	1.415	-10.853							
3	-41.617	-3.851	18.649	-29.014						
4	-6.826	-1.035	-10.500	25.070	3.232					
5	-17.984	10.180	-6.618	8.066	10.183	3.495				
6	-2.500	-1.045	4.974	-3.034	-4.794	-3.550	23.255			
7	-8.597	-9.625	1.697	1.691	-3.721	-7.311	11.877	-6.018		
8	1.355	-3.365	-3.573	-1.816	4.889	-1.221	-1.195	-3.470	3.557	
9	-3.913	4.015	6.057	-7.301	-1.419	5.050	-9.382	3.195	-0.203	-21.053

h's

0	0.000									
1	0.000	-32.486								
2	0.000	8.919	-8.538							
3	0.000	2.373	-22.082	-26.220						
4	0.000	-8.335	-10.384	8.119	0.480					
5	0.000	-5.112	-4.176	12.967	-2.755	-21.137				
6	0.000	6.078	8.576	-10.273	13.804	-12.200	6.856			
7	0.000	-6.272	7.147	-10.512	-3.800	20.761	3.385	-6.107		
8	0.000	0.409	-9.588	3.942	-4.484	4.868	1.173	15.599	9.817	
9	0.000	-0.815	-7.899	1.268	4.428	-10.874	-4.723	1.450	8.273	-0.317

Carrington Rotation 1751:180

g's

0	-8.226									
1	-47.666	34.889								
2	8.602	0.097	-7.060							
3	-42.344	5.348	14.333	24.668						
4	-6.485	0.336	-7.561	-20.593	4.330					
5	-17.587	-8.378	-7.447	-10.868	5.943	-10.098				
6	-0.983	0.687	1.942	3.885	-1.061	5.172	26.099			
7	-8.660	8.653	1.723	-1.350	-1.996	8.172	10.476	1.084		
8	0.272	4.026	-0.642	2.497	3.315	-0.624	-4.476	4.671	7.049	
9	-2.813	-2.585	5.541	4.261	-1.034	-3.773	-6.849	0.940	-3.948	17.470

h's

0	0.000									
1	0.000	30.106								
2	0.000	-5.625	-2.088							
3	0.000	-3.329	-23.619	26.976						
4	0.000	7.362	-8.737	-7.814	4.207					
5	0.000	6.225	-4.234	-11.646	-0.676	19.918				
6	0.000	-5.684	10.698	7.275	10.041	10.310	6.755			
7	0.000	6.333	5.983	8.744	-1.257	-14.666	4.422	6.042		
8	0.000	-0.725	-9.091	-3.409	-3.235	-6.839	-2.561	-14.902	8.894	
9	0.000	1.033	-7.381	0.109	3.764	9.118	-3.288	-1.439	7.900	2.475

Carrington Rotation 1752

g's

0	-4.205									
1	-45.515	-34.285								
2	3.950	1.291	-11.949							
3	-44.291	-5.529	5.701	-22.883						
4	-2.062	-1.624	-8.430	14.848	4.008					
5	-16.113	5.345	-8.740	3.317	3.509	15.262				
6	-2.848	2.009	1.981	-2.136	2.000	-4.051	27.333			
7	-10.914	-6.549	1.802	2.642	0.837	-4.329	6.053	-4.554		
8	1.449	-4.049	0.190	-5.259	2.336	0.806	-4.802	-4.338	3.739	
9	-1.384	-0.895	3.716	-4.926	-4.159	4.348	0.212	3.614	-8.030	-6.091

h's

0	0.000									
1	0.000	-23.783								
2	0.000	12.260	-3.877							
3	0.000	-1.146	-19.687	-28.776						
4	0.000	-9.200	-4.566	4.681	1.390					
5	0.000	-3.044	-6.710	7.738	-5.187	-20.718				
6	0.000	7.817	6.619	-11.753	3.418	-10.590	9.533			
7	0.000	-7.668	9.085	-7.586	-0.906	15.852	3.253	-3.616		
8	0.000	-0.871	-6.636	6.470	-4.401	3.771	-2.029	12.324	-1.213	
9	0.000	0.331	-8.043	0.489	1.504	-9.382	-3.821	1.502	5.826	-5.544

	0	1	2	3	4	5	6	7	8	9
0	-7.342									
1	-45.425	35.359								
2	3.148	1.921	-13.776							
3	-43.673	7.383	3.209	20.858						
4	-3.924	3.069	-4.718	-14.671	-0.212					
5	-15.538	-3.410	-10.089	-1.866	2.229	-16.052				
6	-2.511	-1.832	0.784	0.495	4.089	1.539	24.301			
7	-11.338	5.868	2.136	-0.649	2.043	4.587	5.600	-0.179		
8	0.534	4.671	0.807	3.574	-0.403	-1.166	-5.813	5.777	2.825	
9	-1.206	0.592	3.155	4.969	-3.163	-3.748	-0.119	-2.513	-8.677	4.159

Carrington Rotation 1752:180

g's

0	0.000									
1	0.000	22.972								
2	0.000	-10.965	-1.525							
3	0.000	-1.274	-17.005	29.934						
4	0.000	9.745	-4.644	-5.337	1.828					
5	0.000	1.997	-3.954	-6.010	-3.003	19.081				
6	0.000	-7.086	8.020	9.660	3.640	9.980	12.167			
7	0.000	6.860	10.278	8.096	-0.620	-12.820	1.141	0.599		
8	0.000	1.188	-6.346	-6.194	-1.963	-3.692	-3.066	-12.045	-2.984	
9	0.000	-0.972	-7.334	-0.969	1.070	7.397	-2.934	-1.147	6.456	2.974

h's

0	-4.542									
1	-45.235	-26.053								
2	6.777	1.955	-9.361							
3	-41.335	-10.612	0.491	-14.920						
4	-5.148	2.286	-6.475	10.819	5.557					
5	-19.077	4.964	-8.729	-2.252	-0.756	18.284				
6	-0.545	0.115	3.625	-0.210	1.301	-0.831	15.214			
7	-9.676	-5.665	2.596	1.990	2.621	-4.826	2.936	2.998		
8	-0.824	0.801	-1.581	-1.533	-0.688	0.475	-0.544	-3.288	2.264	
9	-2.416	-0.069	3.645	-3.943	-2.790	1.861	-0.293	2.856	-8.373	-1.759

Carrington Rotation 1753

g's

0	0.000									
1	0.000	-23.599								
2	0.000	12.099	1.644							
3	0.000	5.959	-13.057	-28.212						
4	0.000	-7.658	-4.581	5.010	6.123					
5	0.000	-3.123	0.620	6.330	-6.284	-7.993				
6	0.000	4.481	7.541	-8.238	0.432	-11.537	14.219			
7	0.000	-3.270	7.617	-5.395	1.732	7.405	-1.120	-3.357		
8	0.000	-0.354	-6.848	6.120	-0.625	4.843	-4.549	8.583	-0.232	
9	0.000	-0.123	-2.322	0.534	1.199	-5.918	-2.303	3.257	5.887	-2.529

h's

0	-12.395									
1	-44.436	23.984								
2	8.072	0.365	-14.140							
3	-43.253	13.116	-1.654	6.494						
4	-4.881	-2.396	-2.141	-9.956	-1.159					
5	-18.226	-6.841	-7.013	6.045	-1.523	-22.748				
6	0.724	-1.853	0.849	0.192	5.723	-1.124	7.517			
7	-10.056	7.576	1.908	-2.530	3.089	6.854	2.401	-7.804		
8	-1.375	-0.801	0.741	0.910	-1.935	2.590	2.890	0.925	-3.517	
9	-2.947	-0.707	3.900	3.701	-3.159	-3.091	0.703	-0.940	-9.108	-1.810

Carrington Rotation 1753:180

g's

0	0.000									
1	0.000	20.632								
2	0.000	-10.008	5.777							
3	0.000	-9.203	-11.438	28.868						
4	0.000	5.161	-5.006	-5.681	3.597					
5	0.000	4.175	0.760	-6.823	-3.838	7.141				
6	0.000	-3.571	7.122	8.453	2.145	11.086	12.391			
7	0.000	2.851	6.811	4.351	0.062	-6.037	-0.777	-0.998		
8	0.000	0.016	-5.456	-6.164	-0.065	-5.245	-3.222	-8.769	-3.819	
9	0.000	0.633	-3.915	0.290	1.422	5.228	-1.599	-0.873	4.225	-4.029

h's

Carrington Rotation 1754

	0	1	2	3	4	5	6	7	8	9
0	-8.139									
1	-44.960	-23.419								
2	9.067	1.163	-11.371							
3	-44.523	-12.787	-3.138	-3.264						
4	-0.531	0.468	-2.989	6.772	0.952					
5	-19.440	6.613	-5.206	-9.061	-0.596	22.288				
6	-0.547	-1.562	1.716	-1.470	2.660	0.568	-0.247			
7	-10.586	-6.118	2.281	4.191	0.866	-6.288	-0.123	8.658		
8	0.113	0.308	-1.169	-1.346	-0.119	-3.107	3.581	-0.555	-3.474	
9	-3.280	0.211	3.705	-3.430	-2.175	3.199	1.597	0.907	-6.951	1.622

g's

0	0.000									
1	0.000	-18.659								
2	0.000	10.526	4.423							
3	0.000	10.186	-7.904	-25.920						
4	0.000	-6.608	-3.246	4.349	6.096					
5	0.000	0.158	1.077	7.222	-5.055	0.305				
6	0.000	2.412	5.656	-6.272	-0.236	-9.613	12.537			
7	0.000	-1.412	4.309	-3.097	0.150	2.570	-1.904	-2.672		
8	0.000	-0.742	-4.088	6.121	0.620	3.361	-3.724	5.990	-2.410	
9	0.000	1.712	-4.084	-0.841	0.713	-2.200	-0.893	-0.605	3.177	3.147

h's

Carrington Rotation 1754:180

0	-11.677									
1	-44.305	24.003								
2	8.987	2.410	-15.764							
3	-44.104	12.503	-1.547	-1.548						
4	0.289	0.132	-4.569	-4.733	1.385					
5	-18.788	-7.518	-5.465	7.240	-3.120	-19.327				
6	0.927	0.964	-0.080	0.211	3.510	-2.091	-1.012			
7	-10.070	6.919	2.957	-4.060	1.069	4.608	3.105	-5.322		
8	0.622	0.192	-1.316	1.122	-0.291	4.425	2.314	1.341	0.193	
9	-3.524	0.782	2.506	1.668	-2.196	-2.082	-1.189	-2.704	-6.179	3.402

g's

0	0.000									
1	0.000	17.973								
2	0.000	-10.607	6.915							
3	0.000	-10.699	-6.090	21.869						
4	0.000	7.237	-1.944	-2.092	0.473					
5	0.000	-0.006	2.998	-8.874	-2.163	-1.638				
6	0.000	-1.971	4.332	6.624	0.097	6.407	10.803			
7	0.000	2.239	4.085	0.997	-0.280	-1.500	-2.836	-1.158		
8	0.000	2.411	-2.827	-5.527	-0.555	-1.194	-3.613	-4.660	-2.956	
9	0.000	-0.730	-3.357	0.514	0.613	0.054	1.537	0.337	2.581	-3.219

h's

Carrington Rotation 1755

0	-6.833									
1	-43.865	-20.055								
2	6.499	-0.538	-13.155							
3	-43.128	-11.849	-2.472	3.223						
4	0.435	1.758	-2.559	1.685	-3.909					
5	-19.053	7.578	-5.387	-6.633	-1.310	14.306				
6	-0.519	-1.526	1.635	0.500	3.276	3.703	-7.752			
7	-9.362	-2.572	0.824	5.182	-0.862	-1.624	3.089	7.420		
8	0.746	1.729	-0.140	-1.200	0.419	-5.881	2.570	-1.866	3.061	
9	-4.257	-1.229	1.234	-0.988	-0.614	1.184	-3.030	0.921	-6.458	-0.985

g's

0	0.000									
1	0.000	-14.210								
2	0.000	11.137	9.294							
3	0.000	8.510	-3.481	-14.925						
4	0.000	-5.850	-1.976	0.512	4.967					
5	0.000	-0.283	4.417	9.887	-4.898	2.942				
6	0.000	2.881	3.090	-4.823	-0.668	-5.270	6.838			
7	0.000	-3.991	3.603	0.300	1.520	1.292	-2.135	-5.421		
8	0.000	-0.853	0.355	3.355	0.124	0.939	-0.252	5.284	-3.126	
9	0.000	-0.586	-1.186	0.345	-0.521	1.634	0.766	-0.248	2.166	3.583

h's

Carrington Rotation 1755:180

	0	1	2	3	4	5	6	7	8	9
0	-6.633									
1	-45.851	16.622								
2	8.618	-2.027	-13.935							
3	-45.430	12.093	-4.076	-5.688						
4	1.906	-4.019	1.689	0.680	-2.694					
5	-18.147	-9.057	-2.818	6.415	-2.008	-13.698				
6	-0.440	0.472	0.960	-0.472	3.162	-3.226	-10.218			
7	-10.365	1.826	-0.619	-5.346	-1.464	1.608	3.553	-5.199		
8	0.872	-1.950	1.044	1.247	0.064	4.299	-0.675	1.665	5.972	
9	-4.115	0.601	0.591	1.239	-0.741	-0.165	-2.177	0.221	-1.998	0.092

g's

0	0.000									
1	0.000	14.016								
2	0.000	-11.726	7.928							
3	0.000	-8.830	-6.503	13.548						
4	0.000	2.119	-1.680	-1.794	1.818					
5	0.000	2.561	2.561	-6.043	-3.954	-1.507				
6	0.000	-2.068	2.227	6.184	-0.887	3.514	5.009			
7	0.000	4.266	1.711	0.012	1.660	1.702	-1.371	2.096		
8	0.000	-0.397	-0.107	-4.214	-0.712	-1.472	-0.877	-7.544	-1.659	
9	0.000	0.754	-2.307	1.173	-2.880	-2.071	-1.053	-1.370	1.905	-2.291

h's

Carrington Rotation 1756

0	-4.831									
1	-45.606	-15.913								
2	8.947	4.516	-10.671							
3	-45.773	-9.166	-2.952	7.344						
4	2.829	2.585	-0.639	-3.944	-0.545					
5	-20.023	7.174	0.127	-6.549	0.575	7.552				
6	-0.240	-0.781	0.059	0.108	2.187	4.126	-10.349			
7	-9.831	-2.376	-0.832	4.599	-2.936	-0.208	1.436	8.289		
8	1.381	2.359	0.268	-1.898	-1.438	-5.061	0.576	-2.415	1.564	
9	-4.700	-2.305	1.134	-2.208	1.881	1.166	-1.003	-1.069	-3.069	-0.780

g's

0	0.000									
1	0.000	-14.274								
2	0.000	11.256	7.967							
3	0.000	10.420	-2.614	-11.815						
4	0.000	-2.828	1.053	1.365	6.035					
5	0.000	-1.505	2.085	5.036	-5.882	4.717				
6	0.000	0.473	1.923	-3.014	-0.667	-0.175	-0.589			
7	0.000	-3.955	1.523	-0.040	1.871	-3.444	-0.982	1.562		
8	0.000	0.107	-0.025	2.500	-1.400	0.893	0.927	7.536	-0.608	
9	0.000	-0.712	-2.088	-2.562	-3.041	0.155	-1.611	1.863	-0.091	0.758

h's

Carrington Rotation 1756:180

0	-8.958									
1	-46.101	12.097								
2	11.120	-5.054	-10.459							
3	-45.665	9.324	-2.643	-9.830						
4	3.551	-3.182	0.954	4.895	-2.064					
5	-20.020	-7.789	-0.495	5.171	2.341	-5.184				
6	0.743	0.416	-0.213	0.425	0.577	-4.434	-7.763			
7	-9.986	2.812	1.007	-4.127	-3.072	-0.078	2.099	-6.614		
8	1.727	-1.247	-0.548	1.508	-0.885	2.896	1.510	1.093	1.755	
9	-4.307	1.489	-0.175	2.243	2.748	0.317	-2.010	-0.221	-2.081	3.126

g's

0	0.000									
1	0.000	10.485								
2	0.000	-12.086	6.015							
3	0.000	-10.297	-3.236	11.354						
4	0.000	2.941	1.698	-2.442	1.632					
5	0.000	2.087	1.512	-3.114	-4.712	-7.827				
6	0.000	-1.284	0.763	2.417	-1.472	0.868	-1.433			
7	0.000	5.133	1.207	-0.354	3.054	2.218	0.188	-0.646		
8	0.000	0.260	0.401	-1.613	-2.305	-1.017	0.873	-7.185	-0.942	
9	0.000	0.947	-0.578	2.340	-3.424	-0.158	-4.115	-0.672	0.353	-0.556

h's

Carrington Rotation 1757

	0	1	2	3	4	5	6	7	8	9
0	-6.590									
1	-46.848	-12.986								
2	10.615	6.953	-8.872							
3	-46.188	-9.277	-0.748	10.734						
4	3.922	2.405	1.615	-4.409	-4.328					
5	-20.684	7.832	0.805	-2.635	2.355	1.608				
6	1.182	-0.724	0.667	0.919	0.098	3.488	-8.961			
7	-8.981	-3.546	0.714	3.247	-4.772	0.475	0.043	5.670		
8	1.611	0.626	-0.711	0.367	0.344	-1.973	1.124	-2.509	0.100	
9	-4.536	-0.703	-1.159	-1.094	1.876	-2.800	-0.815	0.416	1.515	-5.099

g's

0	0.000									
1	0.000	-9.022								
2	0.000	10.720	5.401							
3	0.000	9.914	-1.748	-8.190						
4	0.000	-3.574	0.435	3.618	4.296					
5	0.000	-2.068	0.351	3.685	-3.056	7.825				
6	0.000	0.485	1.759	-0.340	0.201	-0.002	-3.100			
7	0.000	-4.182	0.686	0.582	3.284	-2.508	0.943	0.486		
8	0.000	0.532	-0.975	1.780	-1.401	-0.171	1.924	3.652	-1.671	
9	0.000	-0.647	-0.669	-1.439	-0.493	1.664	-3.547	-0.562	0.201	-1.515

h's

Carrington Rotation 1757:180

0	-2.509									
1	-44.552	11.956								
2	12.479	-5.631	-6.862							
3	-43.908	7.746	-0.887	-10.181						
4	5.424	-1.883	1.821	5.687	-2.340					
5	-19.624	-8.053	-0.789	2.807	3.336	0.324				
6	2.508	0.392	0.394	-1.616	-1.187	-2.274	-6.302			
7	-8.335	3.808	0.908	-1.291	-2.275	-0.885	-0.554	-2.502		
8	1.081	-1.002	-0.666	1.467	0.028	2.624	1.412	2.475	1.130	
9	-4.047	0.583	-0.691	-0.054	1.002	1.442	-1.511	-1.792	0.951	2.368

g's

0	0.000									
1	0.000	10.372								
2	0.000	-9.321	3.989							
3	0.000	-7.797	-1.604	8.360						
4	0.000	6.273	-0.807	-3.945	2.948					
5	0.000	3.908	1.305	-2.060	-2.544	-7.674				
6	0.000	1.098	0.395	-1.456	0.360	1.082	-3.344			
7	0.000	6.462	-0.502	-0.337	2.971	2.243	2.287	1.387		
8	0.000	0.654	-0.348	-0.517	0.506	2.293	2.260	-3.608	2.335	
9	0.000	1.391	-0.834	2.035	0.201	-1.417	-1.782	1.754	0.726	3.015

h's

Carrington Rotation 1758

0	0.881									
1	-47.349	-8.645								
2	13.633	6.947	-6.037							
3	-42.638	-7.655	-0.940	8.977						
4	6.275	1.426	-1.351	-2.422	-5.198					
5	-20.462	6.808	-1.910	-3.068	4.667	-1.909				
6	5.032	-0.001	1.682	-0.020	-0.539	0.236	0.512			
7	-7.093	-3.278	0.730	2.631	-2.344	5.597	-3.964	3.699		
8	-0.632	2.622	-1.735	-0.549	0.793	-0.390	0.269	-2.705	-0.647	
9	-3.610	-0.670	0.246	-0.937	1.692	-2.879	-0.062	0.700	4.599	-2.528

g's

0	0.000									
1	0.000	-8.271								
2	0.000	6.589	7.144							
3	0.000	10.280	-2.096	-6.398						
4	0.000	-5.559	-0.804	2.804	3.490					
5	0.000	-4.206	1.590	-0.209	1.094	2.584				
6	0.000	-2.629	-1.112	0.530	-2.140	1.107	-5.182			
7	0.000	-2.728	-1.195	0.203	0.477	-1.703	1.629	3.973		
8	0.000	-0.606	0.039	-0.974	1.863	-3.168	6.254	-0.339	2.549	
9	0.000	-2.406	0.528	-1.789	0.181	1.384	-0.908	-2.142	-0.672	-2.658

h's

Carrington Rotation 1758:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	-0.814									
1	-45.517	5.314								
2	14.664	-6.585	-5.799							
3	-43.647	7.274	-0.528	-8.321						
4	5.640	-1.477	-1.564	0.618	-6.264					
5	-20.021	-6.779	-0.978	2.712	3.304	4.602				
6	4.937	0.625	1.704	-2.889	0.327	0.227	3.144			
7	-6.728	3.756	0.731	-1.624	-1.184	-6.882	-3.531	-5.539		
8	-0.481	-2.565	-2.215	0.827	0.790	0.819	-0.650	2.176	-1.618	
9	-3.693	0.901	0.275	1.228	0.936	4.360	1.554	2.675	2.779	3.992
h's										
0	0.000									
1	0.000	6.657								
2	0.000	-4.930	4.060							
3	0.000	-9.575	-0.765	6.403						
4	0.000	4.600	-1.283	-1.352	1.891					
5	0.000	3.764	2.773	-0.236	-0.186	-4.854				
6	0.000	3.105	-2.052	-0.820	-2.426	-1.823	-2.557			
7	0.000	2.513	-1.025	-0.415	-2.075	2.693	1.770	-1.911		
8	0.000	0.981	0.398	1.613	1.435	3.067	3.373	1.442	1.326	
9	0.000	2.212	0.623	0.489	0.651	-2.087	-1.826	1.379	-1.860	2.958

Carrington Rotation 1759

	0	1	2	3	4	5	6	7	8	9
g's										
0	-2.840									
1	-44.771	-4.656								
2	13.614	7.688	-6.085							
3	-43.635	-5.944	-0.659	8.731						
4	7.042	-0.752	-2.042	-0.532	-9.062					
5	-19.210	6.077	0.206	-3.128	4.680	-5.979				
6	3.872	-1.061	1.347	3.229	1.043	-0.276	5.190			
7	-7.235	-3.861	0.823	1.121	-1.542	4.106	-3.227	3.168		
8	0.703	1.531	-1.140	0.029	-0.721	-1.243	0.288	-2.462	-2.383	
9	-3.894	-0.730	0.492	-0.983	1.313	-4.626	1.812	-2.297	4.604	-4.138
h's										
0	0.000									
1	0.000	-7.644								
2	0.000	5.328	4.820							
3	0.000	8.005	0.556	-5.439						
4	0.000	-4.989	0.629	0.293	3.750					
5	0.000	-2.712	1.142	-1.208	0.737	1.755				
6	0.000	-2.074	-2.016	1.889	-0.538	2.138	-1.596			
7	0.000	-4.096	-2.010	1.070	-1.732	-3.176	2.678	2.951		
8	0.000	-1.027	0.240	-1.218	1.481	-3.143	1.601	-2.171	-0.044	
9	0.000	-0.935	-0.559	0.000	1.279	0.572	-0.948	-0.824	-0.732	-4.083

Carrington Rotation 1759:180

	0	1	2	3	4	5	6	7	8	9
g's										
0	-1.961									
1	-46.364	2.919								
2	12.297	-6.859	-8.726							
3	-44.010	6.403	-1.184	-10.609						
4	5.843	1.711	-1.824	1.530	-3.140					
5	-20.808	-5.613	-0.350	3.531	3.370	9.600				
6	3.009	2.420	-0.624	-2.154	-0.705	0.943	1.716			
7	-7.623	2.083	0.178	-2.438	-3.142	-6.342	-3.050	-5.893		
8	0.511	-0.567	-0.310	0.389	-0.026	1.137	0.442	0.616	-2.811	
9	-3.296	1.150	0.351	0.125	2.093	5.557	2.638	2.516	3.081	3.746
h's										
0	0.000									
1	0.000	9.432								
2	0.000	-6.063	4.334							
3	0.000	-8.272	0.348	0.939						
4	0.000	5.004	1.041	0.008	0.518					
5	0.000	2.496	1.080	2.675	1.216	3.624				
6	0.000	0.641	-0.413	-1.580	1.107	-3.018	1.981			
7	0.000	2.557	-1.335	-2.895	-0.908	2.297	4.166	-4.503		
8	0.000	-0.255	-0.604	-0.030	0.917	1.349	0.118	2.817	-1.035	
9	0.000	0.554	0.026	0.562	1.203	0.054	-1.031	0.619	-2.608	1.008

Carrington Rotation 1760

	0	1	2	3	4	5	6	7	8	9
0	-0.349									
1	-47.019	-1.456								
2	10.809	5.907	-7.133							
3	-42.847	-5.182	-1.958	8.813						
4	6.119	-1.327	-2.036	-2.040	-2.618					
5	-20.032	5.096	-0.905	-3.545	4.228	-7.803				
6	2.298	-3.666	-0.971	0.974	0.155	-1.688	2.830			
7	-8.176	-1.635	-1.070	1.015	-2.729	4.492	-3.046	5.064		
8	1.120	0.368	-0.942	-1.170	0.465	-0.192	0.035	-0.059	-1.920	
9	-2.834	-2.179	-0.551	0.218	1.292	-3.328	3.197	-1.490	2.501	-1.085

g's

0	0.000									
1	0.000	-8.860								
2	0.000	5.464	5.954							
3	0.000	7.492	0.040	-0.131						
4	0.000	-4.207	2.335	-1.327	-1.655					
5	0.000	-2.165	2.005	-3.284	1.133	-3.725				
6	0.000	0.945	-0.319	0.921	2.375	3.285	2.858			
7	0.000	-3.118	-1.814	2.576	-2.125	-1.393	3.418	4.887		
8	0.000	0.158	-0.109	-0.100	-1.699	-1.600	-1.567	-2.596	-2.950	
9	0.000	0.298	0.080	-1.898	0.233	0.932	-0.397	-0.402	-1.463	-0.442

h's

Carrington Rotation 1760:180

0	-3.161									
1	-47.275	-1.752								
2	11.128	-7.977	-9.505							
3	-43.968	4.627	-0.906	-7.003						
4	5.432	1.894	-0.100	2.562	1.573					
5	-21.254	-5.980	0.903	3.037	5.366	12.554				
6	1.857	2.083	-0.948	-0.179	-1.042	0.749	4.040			
7	-7.796	1.514	-0.160	-1.140	-3.930	-6.315	-0.372	-3.126		
8	1.584	0.481	-0.082	1.612	2.125	-2.014	-0.998	-1.075	-6.550	
9	-3.766	1.848	0.552	0.150	3.397	2.801	2.328	1.479	0.446	-5.093

g's

0	0.000									
1	0.000	7.213								
2	0.000	-6.126	1.993							
3	0.000	-8.470	-1.699	-4.562						
4	0.000	2.909	2.367	1.136	-3.865					
5	0.000	1.400	2.253	5.103	1.682	5.531				
6	0.000	-2.847	-1.238	1.007	2.897	-3.485	5.828			
7	0.000	1.950	-3.239	-3.706	-0.396	1.087	3.399	-1.047		
8	0.000	-0.414	-0.635	-0.799	-2.084	1.494	-3.221	6.145	2.896	
9	0.000	-0.443	0.993	2.314	0.206	-0.511	-2.633	-1.665	-1.686	-1.825

h's

Carrington Rotation 1761

0	-5.826									
1	-46.062	-1.556								
2	9.410	9.955	-10.710							
3	-44.507	-3.979	3.482	5.207						
4	4.785	-1.641	2.816	1.057	0.361					
5	-21.092	5.715	-0.174	-3.471	7.742	-13.796				
6	2.370	0.736	0.838	-2.171	-0.770	-1.100	2.159			
7	-8.060	-1.363	2.170	1.986	-5.178	5.038	1.192	-0.206		
8	2.012	-0.400	0.235	1.541	3.227	2.138	-1.509	4.594	-5.840	
9	-4.296	-0.117	-0.024	-0.916	4.858	-1.014	0.866	-2.208	1.405	5.093

g's

0	0.000									
1	0.000	-8.236								
2	0.000	5.109	1.240							
3	0.000	5.051	-2.443	4.432						
4	0.000	-2.202	2.841	0.664	-4.094					
5	0.000	-3.520	3.417	-3.954	4.059	-5.528				
6	0.000	1.945	-2.007	-0.611	3.171	5.160	6.751			
7	0.000	-2.414	-2.848	4.122	-1.995	-0.528	1.713	-0.759		
8	0.000	1.131	-0.324	1.464	-2.480	-1.261	-4.087	-4.658	0.646	
9	0.000	-0.123	2.139	-1.836	3.063	1.220	-2.173	1.079	0.002	2.306

h's

	0	1	2	3	4	5	6	7	8	9
0	0.632					**Carrington Rotation 1761:180**				
1	-48.652	-6.113								
2	6.114	-5.469	-5.789							**g's**
3	-40.739	5.270	-1.212	-12.591						
4	4.769	-1.853	3.241	3.437	8.543					
5	-24.488	-4.292	2.441	5.094	6.579	13.486				
6	0.544	1.989	0.499	-1.507	-1.609	3.886	5.816			
7	-6.130	-0.149	-0.579	-2.284	-5.585	-4.239	-3.712	-4.220		
8	1.967	-1.604	1.793	-0.381	0.640	-4.071	-2.613	-4.444	-8.964	
9	-5.925	3.108	0.558	-0.353	4.070	2.996	1.571	2.016	-1.241	-8.455
0	0.000									**h's**
1	0.000	10.390								
2	0.000	-5.962	-0.010							
3	0.000	-6.005	-0.929	-5.051						
4	0.000	4.374	1.851	-3.966	-9.897					
5	0.000	3.868	2.848	5.349	7.496	10.720				
6	0.000	-3.040	0.035	3.683	3.140	-5.088	6.645			
7	0.000	0.092	-1.967	-3.205	-4.442	1.308	6.071	7.235		
8	0.000	-0.240	-0.949	-3.110	-2.494	1.732	-3.966	0.458	-2.927	
9	0.000	0.117	0.885	1.399	3.514	-2.790	-5.127	-1.901	2.753	-4.706

0	0.609					**Carrington Rotation 1762**				
1	-49.168	5.477								
2	5.680	4.030	-5.788							**g's**
3	-40.866	-3.211	-2.438	12.089						
4	3.515	0.818	4.105	-4.174	7.408					
5	-24.753	1.901	1.914	-2.837	4.604	-12.678				
6	1.965	-2.154	-1.794	2.367	0.049	-4.828	6.468			
7	-6.707	1.638	-1.271	1.127	-4.608	4.778	-3.091	4.755		
8	0.251	1.188	2.936	-0.784	-2.033	4.259	-2.154	3.924	-8.521	
9	-4.935	-3.933	0.517	1.695	3.528	-4.003	-0.226	-1.723	-3.636	8.712
0	0.000									**h's**
1	0.000	-10.257								
2	0.000	6.401	-0.726							
3	0.000	5.739	-1.296	5.485						
4	0.000	-4.470	2.741	4.371	-11.363					
5	0.000	-4.294	1.446	-5.048	7.477	-12.092				
6	0.000	3.066	-0.994	-4.544	5.359	3.621	6.241			
7	0.000	0.232	-1.534	2.522	-4.278	0.408	5.658	-7.491		
8	0.000	-0.871	-0.779	2.749	-3.111	-0.330	-2.617	0.892	-3.031	
9	0.000	-1.196	0.712	-1.148	2.357	0.640	-4.841	3.313	2.624	4.907

0	-3.952					**Carrington Rotation 1762:180**				
1	-47.468	-5.035								
2	7.971	-4.009	-5.794							**g's**
3	-43.076	1.721	-2.195	-7.858						
4	1.094	-0.641	1.789	4.523	10.250					
5	-23.517	-0.817	1.798	1.062	5.467	9.213				
6	4.101	1.545	-1.402	-0.294	-2.166	4.396	-2.237			
7	-9.037	-1.557	-0.818	1.195	-3.774	-2.372	-3.845	-2.664		
8	-0.815	-0.647	0.569	-0.612	-0.193	-1.224	3.251	-3.391	-10.805	
9	-3.601	2.586	-0.561	-1.179	4.268	1.211	0.533	-0.521	-1.485	5.129
0	0.000									**h's**
1	0.000	6.722								
2	0.000	-4.559	-2.776							
3	0.000	-3.249	-1.637	-6.321						
4	0.000	2.942	2.264	-4.032	-7.600					
5	0.000	1.741	0.443	3.949	7.697	19.437				
6	0.000	-1.787	-1.673	3.617	2.930	-2.485	1.777			
7	0.000	1.913	-0.979	-3.227	-4.322	-6.195	5.039	3.911		
8	0.000	-0.589	-0.227	-2.243	-0.688	0.685	0.448	-2.174	-9.200	
9	0.000	-0.516	0.205	0.081	2.263	1.978	-2.403	-2.216	2.821	-7.357

	0	1	2	3	4	5	6	7	8	9
0	-1.827					**Carrington Rotation 1763**				
1	-50.118	8.227								
2	6.448	2.532	-0.583							**g's**
3	-43.317	-2.077	-3.253	11.785						
4	0.705	1.750	0.588	-5.581	15.987					
5	-24.050	1.257	3.954	-4.591	3.411	-0.723				
6	3.280	-2.198	-1.299	2.460	-3.666	-6.572	1.845			
7	-8.628	1.305	-1.745	-0.603	-0.222	-2.760	-4.355	6.560		
8	-1.103	0.842	-1.116	-1.061	3.191	4.075	0.528	2.572	-7.939	
9	-4.026	-2.613	-0.002	0.959	1.106	1.428	2.753	-1.916	-1.906	-6.125
0	0.000									**h's**
1	0.000	-8.117								
2	0.000	2.750	-3.918							
3	0.000	3.666	-2.369	6.183						
4	0.000	-4.898	4.915	3.526	-9.620					
5	0.000	-2.365	-0.089	-3.271	7.343	-16.985				
6	0.000	1.672	-2.771	-4.399	4.198	0.388	6.895			
7	0.000	-1.594	-0.041	0.978	-4.212	7.109	2.713	-0.424		
8	0.000	-0.150	0.016	3.698	-2.825	0.834	-1.709	0.677	-2.630	
9	0.000	-0.171	-1.429	-0.409	3.189	-1.230	-1.000	1.729	-0.458	12.813

0	0.621					**Carrington Rotation 1763:180**				
1	-51.712	-13.558								
2	2.976	0.896	2.862							**g's**
3	-41.451	2.859	-6.668	-13.998						
4	0.553	-4.165	0.011	6.969	18.819					
5	-25.335	-0.598	4.881	4.030	1.481	-5.788				
6	2.951	5.094	0.416	-3.875	-3.798	6.734	1.773			
7	-7.105	-2.490	-3.263	-0.273	0.705	4.198	-5.326	-8.949		
8	-1.279	-2.355	-0.824	2.081	2.830	-4.863	-1.068	-1.773	-0.142	
9	-5.197	2.529	1.249	-2.075	-1.339	-3.497	3.876	2.478	-1.996	7.264
0	0.000									**h's**
1	0.000	8.536								
2	0.000	-2.886	-5.297							
3	0.000	-5.508	-0.071	-5.304						
4	0.000	5.667	5.092	-5.338	-7.785					
5	0.000	0.660	-0.976	3.177	9.229	18.851				
6	0.000	-1.971	-0.777	4.654	2.487	-2.200	3.109			
7	0.000	1.067	1.572	-0.322	-4.748	-5.599	3.058	-2.652		
8	0.000	0.686	-0.360	-3.502	-1.173	-0.822	-1.890	-2.087	-6.447	
9	0.000	-0.344	-1.522	0.911	4.820	0.457	-0.156	-0.160	-0.838	-5.227

0	-4.867					**Carrington Rotation 1764**				
1	-48.435	7.305								
2	4.236	3.132	-2.462							**g's**
3	-42.967	-1.149	-3.111	8.179						
4	0.600	1.803	1.388	-6.550	13.833					
5	-23.075	0.808	2.178	-2.233	1.742	-0.084				
6	2.312	-2.590	2.036	2.361	-4.912	-7.419	-8.173			
7	-7.987	-0.052	-2.324	1.834	1.361	-0.695	-5.269	-1.437		
8	-0.138	2.356	-2.789	-2.984	2.279	5.022	2.121	0.486	-10.875	
9	-5.390	-0.488	2.236	1.259	-3.104	2.993	4.245	1.445	-3.696	-14.864
0	0.000									**h's**
1	0.000	-8.828								
2	0.000	4.751	-4.534							
3	0.000	4.118	3.602	6.796						
4	0.000	-5.433	3.644	9.296	-6.688					
5	0.000	-0.544	-2.303	-3.679	11.949	-14.811				
6	0.000	3.585	0.522	-7.212	-0.174	4.711	5.517			
7	0.000	-1.408	3.671	3.450	-7.114	0.724	5.233	2.444		
8	0.000	-0.866	-2.314	5.277	2.411	0.335	-3.511	5.104	-10.092	
9	0.000	0.306	-1.372	-2.137	4.565	1.848	-2.521	-3.242	1.771	0.497

Carrington Rotation 1764:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-7.836									
1	-48.685	-3.048								
2	6.057	-2.893	-8.499							
3	-45.216	-4.451	-3.375	-3.156						
4	-2.813	0.360	5.539	4.413	7.737					
5	-20.803	2.043	-0.463	-1.921	2.737	0.586				
6	2.437	-0.948	0.217	1.373	0.266	5.831	-9.306			
7	-10.489	-0.032	1.595	-0.891	-0.865	1.838	-3.110	7.033		
8	0.762	0.712	-4.846	0.735	0.580	-2.358	3.414	-1.072	-11.652	
9	-3.916	-2.105	0.149	0.002	-1.270	-4.963	0.098	-3.201	-1.599	16.406

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	9.970								
2	0.000	-4.359	-4.476							
3	0.000	-4.488	4.689	-7.408						
4	0.000	3.862	1.316	-9.863	-3.786					
5	0.000	-0.171	-2.233	4.164	11.177	10.681				
6	0.000	-3.832	0.819	5.654	-4.651	-5.193	3.483			
7	0.000	0.816	2.243	-2.921	-5.194	3.245	4.047	-3.492		
8	0.000	-0.061	-2.174	-3.616	3.048	-0.859	-2.967	-4.454	-7.044	
9	0.000	-0.210	-0.671	-0.029	3.218	-3.106	-0.314	6.554	2.392	2.014

Carrington Rotation 1765

g's

	0	1	2	3	4	5	6	7	8	9
0	-8.491									
1	-47.848	5.956								
2	2.708	0.537	-5.432							
3	-43.906	3.103	-3.884	4.727						
4	-2.954	-0.141	5.332	-5.153	7.835					
5	-20.841	-2.080	1.029	1.866	1.929	-3.152				
6	1.590	0.013	-0.264	0.730	0.351	-2.788	-11.452			
7	-9.035	2.164	0.733	-0.114	-0.027	-2.204	-2.498	-8.600		
8	0.268	-0.128	-3.169	-0.940	-0.564	1.233	4.372	4.274	-8.914	
9	-4.221	1.058	0.460	-0.132	-2.030	4.027	-1.573	2.595	1.550	-13.331

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	-11.438								
2	0.000	4.737	-3.104							
3	0.000	2.012	2.360	9.203						
4	0.000	-3.073	0.920	9.139	-1.230					
5	0.000	-0.847	-2.801	-4.301	7.273	-10.013				
6	0.000	4.284	0.448	-4.018	-3.814	2.809	1.611			
7	0.000	-2.701	1.153	2.103	-2.267	-2.507	2.841	-0.989		
8	0.000	1.544	-0.266	3.127	1.841	3.638	-1.727	1.392	-12.514	
9	0.000	-0.356	-0.478	0.204	1.891	1.472	1.560	-2.557	2.791	-5.784

Carrington Rotation 1765:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-8.478									
1	-46.234	-8.954								
2	2.248	1.113	0.087							
3	-42.514	-4.437	-4.719	-3.793						
4	-3.233	1.225	3.042	3.731	6.353					
5	-20.676	1.916	0.323	-2.048	2.491	-2.138				
6	0.996	-1.209	1.195	-1.088	-0.616	1.685	-8.539			
7	-8.904	-1.986	-0.559	1.450	2.216	5.156	0.455	10.287		
8	-0.690	1.165	-2.045	-0.841	-0.406	-0.010	0.601	-4.254	-5.997	
9	-3.780	-1.755	-0.250	0.478	-3.380	-2.610	1.095	-1.331	4.273	6.648

h's

	0	1	2	3	4	5	6	7	8	9
0	0.000									
1	0.000	9.010								
2	0.000	-3.686	-4.674							
3	0.000	-0.986	4.458	-5.019						
4	0.000	4.950	-1.115	-10.967	2.478					
5	0.000	-0.515	-1.254	4.024	7.199	8.267				
6	0.000	-2.791	-0.569	2.666	-6.963	-5.382	-1.487			
7	0.000	2.209	0.930	-2.375	-2.039	4.321	1.764	1.820		
8	0.000	-1.069	-0.089	-2.737	1.913	-3.462	-1.673	-1.755	-8.179	
9	0.000	-0.509	0.272	0.399	-0.520	-2.944	4.476	1.719	2.369	9.582

Carrington Rotation 1766

	0	1	2	3	4	5	6	7	8	9
0	-8.513									
1	-46.483	12.379								
2	-0.299	-1.930	1.892							
3	-42.230	3.678	-5.354	4.355						
4	-3.510	0.536	2.246	-3.775	10.084					
5	-21.681	-1.617	-1.524	4.091	-0.034	5.687				
6	1.077	0.390	1.730	1.291	-1.780	-1.838	-10.151			
7	-7.784	3.137	-1.295	-1.713	2.710	-5.095	3.512	-6.730		
8	-1.741	-0.858	-1.326	1.227	-0.096	0.773	-1.088	4.941	0.513	
9	-4.437	1.048	-0.017	0.198	-2.878	0.734	-0.292	0.280	2.578	-3.221

g's

0	0.000									
1	0.000	-9.868								
2	0.000	3.966	-3.541							
3	0.000	-0.485	3.601	4.065						
4	0.000	-3.850	-2.243	11.606	0.392					
5	0.000	-1.140	-0.048	-3.819	6.861	-5.399				
6	0.000	1.705	-0.410	-4.055	-4.971	1.947	-1.587			
7	0.000	-2.607	0.455	1.424	-1.914	-3.824	1.263	-5.737		
8	0.000	1.719	0.557	1.178	2.454	3.918	0.182	3.995	-7.018	
9	0.000	-0.778	1.059	-0.421	-0.730	2.063	5.830	-1.741	3.277	-5.685

h's

Carrington Rotation 1766:180

0	-10.061									
1	-45.890	-7.248								
2	1.476	-1.691	-3.942							
3	-43.403	-2.051	-1.045	1.185						
4	-3.377	0.034	-2.742	-1.813	4.960					
5	-20.205	0.700	-1.482	-0.130	3.216	-3.345				
6	0.695	-0.319	1.193	-2.118	-3.916	-2.939	-9.593			
7	-7.384	-1.171	-1.118	1.315	4.255	8.351	5.563	9.074		
8	-1.015	-1.384	-2.394	1.121	1.073	-4.659	-4.852	-6.682	-0.124	
9	-4.613	0.558	1.462	-0.115	-4.575	-0.659	-0.069	1.717	2.868	1.176

g's

0	0.000									
1	0.000	12.078								
2	0.000	-5.551	-4.047							
3	0.000	3.772	4.778	-5.099						
4	0.000	2.875	-2.887	-10.475	2.875					
5	0.000	1.434	0.013	1.877	5.671	0.400				
6	0.000	-1.044	-0.619	3.439	-3.578	0.226	0.070			
7	0.000	2.927	-0.248	-2.735	-1.437	3.125	-2.101	4.230		
8	0.000	-1.800	1.187	-0.129	2.686	-2.619	2.429	-1.147	-3.268	
9	0.000	1.873	0.258	-0.477	0.472	-1.557	2.244	-2.320	0.812	2.714

h's

Carrington Rotation 1767

0	-12.419									
1	-47.499	4.089								
2	1.982	-0.262	-8.997							
3	-43.244	1.253	-1.694	-7.231						
4	-3.072	1.275	-2.239	-1.679	-1.213					
5	-22.406	-4.959	1.107	3.675	0.622	-3.385				
6	1.157	-1.400	-1.563	2.389	0.681	1.180	-13.368			
7	-7.821	-0.364	-2.150	-3.740	5.155	-3.544	5.160	-7.052		
8	-1.419	2.322	-1.250	-3.597	-0.802	4.337	-2.793	4.811	2.879	
9	-5.070	-2.273	2.249	1.767	-5.517	-0.033	1.836	-2.321	2.130	3.265

g's

0	0.000									
1	0.000	-11.091								
2	0.000	4.573	-2.559							
3	0.000	-4.573	5.265	4.440						
4	0.000	-3.639	-5.169	10.930	0.793					
5	0.000	-0.040	1.045	-4.217	3.726	-5.379				
6	0.000	-0.059	-2.194	-1.849	-3.172	-2.285	-9.113			
7	0.000	-3.249	-0.306	1.892	-0.594	-0.763	-3.940	-12.917		
8	0.000	0.164	-1.760	-0.136	0.839	3.395	7.743	0.154	-8.774	
9	0.000	-1.624	0.274	0.796	-0.890	-0.011	1.759	5.237	-3.281	-8.935

h's

Carrington Rotation 1767:180

g's

	0	1	2	3	4	5	6	7	8	9
0	-11.478									
1	-46.520	0.701								
2	3.378	-1.085	-9.984							
3	-44.107	1.623	0.549	9.056						
4	-2.657	0.058	-3.405	-0.761	-5.711					
5	-20.959	5.344	1.787	-3.704	0.636	5.088				
6	0.349	0.887	-0.990	-2.786	-0.354	-0.002	-10.593			
7	-7.947	1.998	-1.898	2.668	6.210	1.221	3.987	5.063		
8	-0.874	-3.118	-0.304	3.541	-2.182	-2.952	-1.314	-3.205	2.836	
9	-5.213	3.176	2.652	-1.953	-5.380	-0.090	1.420	1.641	0.029	-4.695

h's

0	0.000									
1	0.000	12.341								
2	0.000	-4.487	-0.164							
3	0.000	6.274	4.882	-3.054						
4	0.000	2.417	-2.052	-8.550	2.672					
5	0.000	0.942	2.080	3.789	0.229	0.155				
6	0.000	1.017	-1.405	1.554	-0.355	4.349	-5.283			
7	0.000	2.585	-0.055	-0.260	-1.605	-1.434	-5.555	12.984		
8	0.000	-0.020	-0.589	0.222	0.238	-2.154	7.826	1.195	-7.811	
9	0.000	2.013	-0.111	0.524	-0.666	-0.560	1.969	-5.811	-3.646	7.048

Carrington Rotation 1768

g's

0	-2.728									
1	-47.980	7.549								
2	3.298	-2.610	-5.753							
3	-42.052	-0.183	-1.468	-8.386						
4	2.222	0.980	-4.510	-2.094	-7.536					
5	-22.613	1.236	4.578	2.576	-1.501	-7.886				
6	-0.204	-3.356	-0.395	5.277	0.700	0.757	-9.488			
7	-7.471	-1.642	-2.766	-3.827	5.803	0.023	2.886	-2.228		
8	1.482	2.910	-2.227	-4.143	-3.424	2.431	-0.790	3.103	0.485	
9	-5.183	1.445	2.646	-0.080	-5.376	0.261	0.549	-0.893	4.131	2.418

h's

0	0.000									
1	0.000	-7.585								
2	0.000	3.696	5.617							
3	0.000	-5.590	3.124	8.538						
4	0.000	-1.693	-1.232	7.419	6.305					
5	0.000	3.942	1.729	-5.631	-3.544	-0.015				
6	0.000	-1.254	4.670	1.408	-2.427	-6.819	-7.287			
7	0.000	-1.012	-1.517	2.876	0.952	0.953	-6.862	-10.415		
8	0.000	0.360	0.623	-0.430	1.502	3.488	7.178	-5.557	-4.376	
9	0.000	1.288	-0.537	-2.298	-2.254	0.902	3.471	4.896	-6.405	-8.244

UAG SERIES OF REPORTS

Fewer than four UAG Reports are published at irregular intervals each year. Copies of these publications may be purchased through the NATIONAL GEOPHYSICAL DATA CENTER, Solar-Terrestrial Physics Division (E/GC2) 325 Broadway, Boulder, Colorado 80303, USA. A $3.00 handling charge per order will be added to single-copy price, if any, listed below. Please note, too, that some reports are available on microfiche only. Orders must include check or money order payable in U.S. currency to Commerce, NOAA/NGDC.

UAG- 1 IQSY NIGHT AIRGLOW DATA, by L.L. Smith, F.E. Roach, and J.M. McKennan, ESSA Aeronomy Laboratory Boulder, CO, July 1968, 305 pp, $1.75.

UAG- 2 A REEVALUATION OF SOLAR FLARES, 1964-1966, by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, University of Michigan, Pontiac, MI, August 1968, 28 pp.

UAG- 3 OBSERVATIONS OF JUPITER'S SPORADIC RADIO EMISSION IN THE RANGE 7.6-41 MHZ, 6 JULY 1966 THROUGH 8 SEPTEMBER 1968, by James W. Warwick and George A. Dulk, University of Colorado, Boulder, CO, October 1968, 35 pp.

UAG- 4 ABBREVIATED CALENDAR RECORD 1966-1967, by J. Virginia Lincoln, Hope I. Leighton and Dorothy K. Kropp, ESSA now NOAA, Aeronomy and Space Data Center, Boulder, CO, January 1969, 170 pp, $1.25.

UAG- 5 DATA ON SOLAR EVENT OF MAY 23, 1967, AND ITS GEOPHYSICAL EFFECTS, compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, February 1969, 120 pp.

UAG- 6 INTERNATIONAL GEOPHYSICAL CALENDARS 1957-1969, by A.H. Shapley and J. Virginia Lincoln, ESSA Research Laboratories, now NOAA, Boulder, CO, March 1969, 25 pp.

UAG- 7 OBSERVATIONS OF THE SOLAR ELECTRON CORONA: FEBRUARY 1964 - JANUARY 1968, by Richard T. Hansen, High Altitude Observatory, NCAR, Boulder, CO, and Kamuela, HI, October 1969, 12 pp.

UAG- 8 DATA ON SOLAR-GEOPHYSICAL ACTIVITY OCTOBER 24 - NOVEMBER 6, 1968, Parts 1 and 2, compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, March 1970, 312 pp, $1.75 (includes Parts 1 and 2).

UAG- 9 DATA ON COSMIC RAY EVENT OF NOVEMBER 18, 1968, AND ASSOCIATED PHENOMENA, compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, April 1970, 109 pp.

UAG-10 ATLAS OF IONOGRAMS, edited by A.H. Shapley, ESSA Research Laboratories now NOAA, Boulder, CO, May 1970, 243 pp, $1.50.

UAG-12 SOLAR-GEOPHYSICAL ACTIVITY ASSOCIATED WITH THE MAJOR GEOMAGNETIC STORM OF MARCH 8, 1970, Parts 1, 2 and 3, compiled by J. Virginia Lincoln and Dale B. Bucknam, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, April 1971, 466 pp, $3.00 (includes Parts 1-3).

UAG-13 DATA ON THE SOLAR PROTON EVENT OF NOVEMBER 2, 1969, THROUGH THE GEOMAGNETIC STORM OF NOVEMBER 8-10, 1969, compiled by Dale B. Bucknam and J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, May 1971, 76 pp.

UAG-14 AN EXPERIMENTAL, COMPREHENSIVE FLARE INDEX AND ITS DERIVATION FOR 'MAJOR' FLARES, 1955-1969, by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, University of Michigan, Pontiac, MI, July 1971, 25 pp.

UAG-16 TEMPORAL DEVELOPMENT OF THE GEOPHYSICAL DISTRIBUTION OF AURORAL ABSORPTION FOR 30 SUBSTORM EVENTS IN EACH OF IQSY (1964-65) AND IASY (1960), by F.T. Berkey, University of Alaska, Fairbanks, AK; V.M. Driatskiy, Arctic and Antarctic Research Institute, Leningrad, USSR; K. Henriksen, Auroral Observatory, Tromso, Norway; D.H. Jelly, Communications Research Center, Ottawa, Canada; T.I. Shchuka, Arctic and Antarctic Research Institute, Leningrad, USSR; A. Theander, Kiruna Geophysical Observatory, Kiruna, Sweden; and J. Yliniemi, University of Oulu, Oulu, Finland, September 1971, 131 pp, $1.50 (microfiche only).

UAG-17 IONOSPHERIC DRIFT VELOCITY MEASUREMENTS AT JICAMARCA, PERU (JULY 1967 - MARCH 1970), by Ben B. Balsley, NOAA Aeronomy Laboratory, Boulder, CO, and Ronald F. Woodman, Jicamarca Radar Observatory, Instituto Geofisico del Peru, Lima, Peru, October 1971, 45 pp, $1.50 (microfiche only).

UAG-18 A STUDY OF POLAR CAP AND AURORAL ZONE MAGNETIC VARIATIONS, by K. Kawasaki and S.-I. Akasofu, University of Alaska, Fairbanks, AK, June 1972, 21 pp.

UAG-19 REEVALUATION OF SOLAR FLARES 1967, by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, University of Michigan, Pontiac, MI, and Marta Rovira de Miceli, San Miguel Observatory, Argentina, June 1972, 15 pp.

UAG-21 PRELIMINARY COMPILATION OF DATA FOR RETROSPECTIVE WORLD INTERVAL JULY 26 - AUGUST 14, 1972, by J. Virginia Lincoln and Hope I. Leighton, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, November 1972, 128 pp.

UAG-22 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES (AE) FOR 1970, by Joe Haskell Allen, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, November 1972, 146 pp.

UAG-23 U.R.S.I. HANDBOOK OF IONOGRAM INTERPRETATION AND REDUCTION, Second Edition, November 1972, edited by W.R. Piggott, Radio and Space Research Station, Slough, UK, and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, November 1972, 324 pp, $1.75.

UAG-23A U.R.S.I. HANDBOOK OF IONOGRAM INTERPRETATION AND REDUCTION, Second Edition, Revision of Chapters 1-4, edited by W.R. Piggott, Radio and Space Research Station, Slough, UK, and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, November 1972, 135 pp, $2.14.

UAG-24 DATA ON SOLAR-GEOPHYSICAL ACTIVITY ASSOCIATED WITH THE MAJOR GROUND LEVEL COSMIC RAY EVENTS OF 24 JANUARY AND 1 SEPTEMBER 1971, Parts 1 and 2, compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, December 1972, 462 pp, $2.00 (includes Parts 1 and 2).

UAG-25 OBSERVATIONS OF JUPITER'S SPORADIC RADIO EMISSION IN THE RANGE 7.6-41 MHZ, 9 SEPTEMBER 1968 THROUGH 9 DECEMBER 1971, by James W. Warwick, George A. Dulk and David G. Swann, University of Colorado, Boulder, CO, February 1973, 35 pp.

UAG-26 DATA COMPILATION FOR THE MAGNETOSPHERICALLY QUIET PERIODS FEBRUARY 19-23 AND NOVEMBER 29 - DECEMBER 3, 1970, compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, May 1973, 129 pp.

UAG-27 HIGH SPEED STREAMS IN THE SOLAR WIND, by D.S. Intriligator, University of Southern California, Los Angeles, CA, June 1973, 16 pp.

UAG-28 COLLECTED DATA REPORTS ON AUGUST 1972 SOLAR-TERRESTRIAL EVENTS, Parts 1, 2 and 3, edited by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, July 1973, 932 pp, $4.50.

UAG-29 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(11) FOR 1968, by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, October 1973, 148 pp.

UAG-30 CATALOGUE OF DATA ON SOLAR-TERRESTRIAL PHYSICS, prepared by NOAA Environmental Data Service, Boulder, CO, October 1973, 317 pp, $1.75. Supersedes catalogs UAG-11, 15 and 20.

UAG-31 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(11) FOR 1969, by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1974, 142 pp.

UAG-32 SYNOPTIC RADIO MAPS OF THE SUN AT 3.3 MM FOR THE YEARS 1967-1969, by Earle B. Mayfield, Kennon P. White III, and Fred I. Shimabukuro, Aerospace Corp., El Segundo, CA, April 1974, 26 pp.

UAG-33 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(10) FOR 1967, by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, May 1974, 142 pp.

UAG-34 ABSORPTION DATA FOR THE IGY/IGC AND IQSY, compiled and edited by A.H. Shapley, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; W.R. Piggott, Appleton Laboratory, Slough, UK; and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, June 1974, 381 pp, $2.00.

UAG-36 AN ATLAS OF EXTREME ULTRAVIOLET FLASHES OF SOLAR FLARES OBSERVED VIA SUDDEN FREQUENCY DEVIATIONS DURING THE ATM-SKYLAB MISSIONS, by R.F. Donnelly and E.L. Berger, NOAA Space Environment Laboratory; Lt. J.D. Busman, NOAA Commissioned Corps; B. Henson, NASA Marshall Space Flight Center; T.B. Jones, University of Leicester, UK; G.M. Lerfald, NOAA Wave Propagation Laboratory; K. Najita, University of Hawaii; W.M. Retallack, NOAA Space Environment Laboratory and W.J. Wagner, Sacramento Peak Observatory, October 1974, 95 pp.

UAG-37 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(10) FOR 1966, by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, December 1974, 142 pp.

UAG-38 MASTER STATION LIST FOR SOLAR-TERRESTRIAL PHYSICS DATA AT WDC-A FOR SOLAR-TERRESTRIAL PHYSICS, by R.W. Buhmann, World Data Center A for Solar-Terrestrial Physics, Boulder, CO; Juan D. Roederer, University of Denver, Denver, CO; and M.A. Shea and D.F. Smart, Air Force Cambridge Research Laboratories, Hanscom AFB, MA, December 1974, 110 pp, $1.60.

UAG-39 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(11) FOR 1971, by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1975, 144 pp, $2.05.

UAG-40 H-ALPHA SYNOPTIC CHARTS OF SOLAR ACTIVITY FOR THE PERIOD OF SKYLAB OBSERVATIONS, MAY 1973 - MARCH 1974, by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO, February 1975, 32 pp.

UAG-41 H-ALPHA SYNOPTIC CHARTS OF SOLAR ACTIVITY DURING THE FIRST YEAR OF SOLAR CYCLE 20 OCTOBER 1964 - AUGUST 1965, by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO, and Jerome T. Nolte, American Science and Engineering, Inc., Cambridge, MA, March 1975, 25 pp.

UAG-42 OBSERVATIONS OF JUPITER'S SPORADIC RADIO EMISSION IN THE RANGE 7.6-80 MHZ, 10 DECEMBER 1971 THROUGH 21 MARCH 1975, by James W. Warwick, George A. Dulk and Anthony C. Riddle, University of Colorado, Boulder, CO, April 1975, 49 pp.

UAG-43 CATALOG OF OBSERVATION TIMES OF GROUND-BASED SKYLAB-COORDINATED SOLAR OBSERVING PROGRAMS, compiled by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, May 1975, 159 pp, $3.00.

UAG-44 SYNOPTIC MAPS OF SOLAR 9.1 CM MICROWAVE EMISSION FROM JUNE 1962 TO AUGUST 1973, by Werner Graf and Ronald N. Bracewell, Stanford University, Stanford, CA, May 1975, 183 pp, $2.55.

UAG-45 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(11) FOR 1972, by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, May 1975, 144 pp, $1.50 (microfiche only).

UAG-46 INTERPLANETARY MAGNETIC FIELD DATA 1963-1964, by Joseph H. King, National Space Science Data Center, NASA Goddard Space Flight Center, Greenbelt, MD, June 1975, 382 pp, $2.95.

UAG-47 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(11) FOR 1973, by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, June 1975, 144 pp, $1.50 (microfiche only).

UAG-48A SYNOPTIC OBSERVATIONS OF THE SOLAR CORONA DURING CARRINGTON ROTATIONS 1580-1596 (11 OCTOBER 1971 - 15 JANUARY 1973), [Re-issue of UAG-48 with quality images], by R.A. Howard, M.J. Koomen, D.J. Michels, R. Tousey, C.R. Detwiler, D.E. Roberts, R.T. Seal, and J.D. Whitney, U.S. Naval Research Laboratory, Washington, DC; and R.T. Hansen and S.F. Hansen, C.J. Garcia and E. Yasukawa, High Altitude Observatory, NCAR, Boulder, CO, February 1976, 200 pp, $4.27. Supersedes UAG-48.

UAG-50 HIGH-LATITUDE SUPPLEMENT TO THE URSI HANDBOOK ON IONOGRAM INTERPRETATION AND REDUCTION, edited by W.R. Piggott, British Antarctic Survey, c/o Appleton Laboratory, Slough, UK, October 1975, 294 pp, $4.00.

UAG-51 SYNOPTIC MAPS OF SOLAR CORONAL HOLE BOUNDARIES DERIVED FROM HE II 304A SPECTROHELIOGRAMS FROM THE MANNED SKYLAB MISSIONS, by J.D. Bohlin and D.M. Rubenstein, U.S. Naval Research Laboratory, Washington, DC, November 1975, 30 pp.

UAG-52 EXPERIMENTAL COMPREHENSIVE SOLAR FLARE INDICES FOR CERTAIN FLARES, 1970-1974, by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, University of Michigan, Pontiac, MI, November 1975, 27 pp.

UAG-53 DESCRIPTION AND CATALOG OF IONOSPHERIC F-REGION DATA, JICAMARCA RADIO OBSERVATORY (NOVEMBER 1966 - APRIL 1969), by W.L. Clark and T.E. Van Zandt, NOAA Aeronomy Laboratory, Boulder, CO, and J.P. McClure, University of Texas at Dallas, Dallas, TX, April 1976, 10 pp.

UAG-55 EQUIVALENT IONOSPHERIC CURRENT REPRESENTATIONS BY A NEW METHOD, ILLUSTRATED FOR 8-9 NOVEMBER 1969 MAGNETIC DISTURBANCES, by Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO; H.W. Kroehl, Data Studies Division, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; M. Kanamitsu, Advanced Study Program, National Center for Atmospheric Research, Boulder, CO; Joe Haskell Allen, Data Studies Division, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; and S.-I. Akasofu, Geophysical Institute, University of Alaska, Fairbanks, AK, April 1976, 91 pp, $1.50 (microfiche only).

UAG-56 ISO-INTENSITY CONTOURS OF GROUND MAGNETIC H PERTURBATIONS FOR THE DECEMBER 16-18, 1971, GEOMAGNETIC STORM, Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO, April 1976, 37 pp, $1.39.

UAG-57 MANUAL ON IONOSPHERIC ABSORPTION MEASUREMENTS, edited by K. Rawer, Institut fur Physikalische Weltraumforschung, Freiburg, GFR, June 1976, 302 pp, $4.27.

UAG-58 ATS6 RADIO BEACON ELECTRON CONTENT MEASUREMENTS AT BOULDER, JULY 1974 - MAY 1975, by R.B. Fritz, NOAA Space Environment Laboratory, Boulder, CO, September 1976, 61 pp.

UAG-59 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(11) FOR 1974, by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, December 1976, 144 pp, $2.16.

UAG-60 GEOMAGNETIC DATA FOR JANUARY 1976 [AE(7) INDICES AND STACKED MAGNETOGRAMS], by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, July 1977, 57 pp.

UAG-61 COLLECTED DATA REPORTS FOR STIP INTERVAL II 20 MARCH - 5 MAY 1976, edited by Helen E. Coffey and John A. McKinnon, World Data Center A for Solar-Terrestrial Physics, Boulder, CO, August 1977, 313 pp, $2.95.

UAG-62 GEOMAGNETIC DATA FOR FEBRUARY 1976 [AE(7) INDICES AND STACKED MAGNETOGRAMS], by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, September 1977, 55 pp.

UAG-63 GEOMAGNETIC DATA FOR MARCH 1976 [AE(7) INDICES AND STACKED MAGNETOGRAMS], by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, September 1977, 57 pp.

UAG-64 GEOMAGNETIC DATA FOR APRIL 1976 [AE(8) INDICES AND STACKED MAGNETOGRAMS], by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1978, 55 pp.

UAG-65 THE INFORMATION EXPLOSION AND ITS CONSEQUENCES FOR DATA ACQUISITION, DOCUMENTATION, PROCESSING, by G.K. Hartmann, Max-Planck-Institut fur Aeronomie, Lindau, GFR, May 1978, 36 pp.

UAG-66 SYNOPTIC RADIO MAPS OF THE SUN AT 3.3 MM 1970-1973, by Earle B. Mayfield and Fred I. Shimabukuro, Aerospace Corp., El Segundo, CA, May 1978, 30 pp.

UAG-67 IONOSPHERIC D-REGION PROFILE DATA BASE, A COLLECTION OF COMPUTER-ACCESSIBLE EXPERIMENTAL PROFILES OF THE D AND LOWER E REGIONS, by L.F. McNamara, Ionospheric Prediction Service, Sydney, Australia, August 1978, 30 pp, $1.50 (microfiche only).

UAG-68 A COMPARATIVE STUDY OF METHODS OF ELECTRON DENSITY PROFILE ANALYSIS, by L.F. McNamara, Ionospheric Prediction Service, Sydney, Australia, August 1978, 30 pp, $1.50 (microfiche only).

UAG-69 SELECTED DISTURBED D-REGION ELECTRON DENSITY PROFILES. THEIR RELATION TO THE UNDISTURBED D REGION, by L.F. McNamara, Ionospheric Prediction Service, Sydney, Australia, October 1978, 50 pp, $1.50 (microfice only).

UAG-70 ANNOTATED ATLAS OF H-ALPHA SYNOPTIC CHARTS FOR SOLAR CYCLE 20 (1964-1974) CARRINGTON SOLAR ROTATIONS 1487-1616, by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO, February 1979, 327 pp, $3.50.

UAG-71 MAGNETIC POTENTIAL PLOTS OVER THE NORTHERN HEMISPHERE FOR 26-28 MARCH 1976, A.D. Richmond, NOAA Space Environment Laboratory, Boulder, CO; H.W. Kroehl, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; M.A. Henning, Lockheed Missiles and Space Co., Aurora, CO; and Y. Kamide, Kyoto Sangyo University, Kyoto, Japan, April 1979, 118 pp, $1.50.

UAG-72 ENERGY RELEASE IN SOLAR FLARES, PROCEEDINGS OF THE WORKSHOP ON ENERGY RELEASE IN FLARES, 26 FEBRUARY - 1 MARCH 1979, CAMBRIDGE, MASSACHUSETTS, U.S.A., edited by David M. Rust, American Science and Engineering, Inc., Cambridge, MA; and A. Gordon Emslie, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, July 1979, 68 pp, $1.50 (microfiche only).

UAG-73 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(11-12) FOR JANUARY - JUNE 1975, by Joe Haskell Allen, Carl C. Abston, J.E. Salazar and J.A. McKinnon, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, August 1979, 114 pp, $1.75 (microfiche only).

UAG-74 ATS-6 RADIO BEACON ELECTRON CONTENT MEASUREMENTS AT OOTACAMUND, INDIA, OCTOBER - JULY 1976, by S.D. Bouwer, K. Davies, R.F. Donnelly, R.N. Grubb, J.E. Jones and J.H. Taylor, NOAA Space Environment Laboratory, Boulder, CO; and R.G. Rastogi, M.R. Deshpande, H. Chandra and G. Sethia, Physical Research Laboratory, Ahmedabad, India, March 1980, 58 pp, $2.50.

UAG-75 THE ALASKA IMS MERIDIAN CHAIN: MAGNETIC VARIATIONS FOR 9 MARCH - 27 APRIL 1978, by H.W. Kroehl and G.P. Kosinski, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; S.-I. Akasofu, G.J. Romick, C.E. Campbell and G.K. Corrick, University of Alaska, Fairbanks, AK; and C.E. Hornback and A.M. Gray, NOAA Space Environment Laboratory, Boulder, CO, June 1980, 107 pp, $3.00.

UAG-76 AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE(12) FOR JULY - DECEMBER 1975, by Joe Haskell Allen, Carl C. Abston, J.E. Salazar and J.A. McKinnon, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, August 1980, 116 pp, $2.50.

UAG-77 SYNOPTIC SOLAR MAGNETIC FIELD MAPS FOR THE INTERVAL INCLUDING CARRINGTON ROTATIONS 1601-1680, MAY 5, 1973 - APRIL 26, 1979, by J. Harvey, B. Gillespie, P. Miedaner and C. Slaughter, Kitt Peak National Observatory, Tucson, AZ, August 1980, 66 pp, $2.50.

UAG-78 THE EQUATORIAL LATITUDE OF AURORAL ACTIVITY DURING 1972-1977, by N.R. Sheeley, Jr. and R.A. Howard, E.O. Hulbert Center for Space Research, U.S. Naval Research Laboratory, Washington, DC and B.S. Dandekar, Air Force Geophysics Laboratory, Hanscom AFB, MA, October 1980, 61 pp, $3.00.

UAG-79 SOLAR OBSERVATIONS DURING SKYLAB, APRIL 1973 - FEBRUARY 1974, I. CORONAL X-RAY STRUCTURE, II. SOLAR FLARE ACTIVITY, by J.M. Hanson, University of Michigan, Ann Arbor, MI; and E.C. Roelof and and R.E. Gold, The Johns Hopkins University, Laurel, MD, December 1980, 43 pp, $2.50.

UAG-80 EXPERIMENTAL COMPREHENSIVE SOLAR FLARE INDICES FOR 'MAJOR' AND CERTAIN LESSER FLARES, 1975-1979, compiled by Helen W. Dodson and E. Ruth Hedeman, The Johns Hopkins University, Laurel, MD, July 1981, 33 pp, $2.00.

UAG-81 EVOLUTIONARY CHARTS OF SOLAR ACTIVITY (CALCIUM PLAGES) AS FUNCTIONS OF HELIOGRAPHIC LONGITUDE AND TIME, 1964-1979, by E. Ruth Hedeman, Helen W. Dodson and Edmond C. Roelof, The Johns Hopkins University, Laurel, MD, August 1981, 103 pp, $4.00.

UAG-82 INTERNATIONAL REFERENCE IONOSPHERE - IRI 79, edited by J. Virginia Lincoln and Raymond O. Conkright, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, November 1981, 243 pp, $4.50.

UAG-83 SOLAR-GEOPHYSICAL ACTIVITY REPORTS FOR SEPTEMBER 7-24, 1977 AND NOVEMBER 22, 1977, Parts 1 and 2, compiled by John A. McKinnon and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, February 1982, 553 pp, $10.00.

UAG-84 CATALOG OF AURORAL RADIO ABSORPTION DURING 1976-1979 AT ABISKO, SWEDEN, by J.K. Hargreaves, C.M. Taylor and J.M. Penman, Environmental Sciences Department, University of Lancaster, Lancaster, UK, July 1982, 69 pp, $3.00.

UAG-85 CATALOG OF IONOSPHERE VERTICAL SOUNDINGS DATA, edited by Raymond O. Conkright and H. Irene Brophy, National Geophysical Data Center, NOAA, Boulder, CO, July 1982, 107 pp. Supersedes UAG-54.

UAG-86 INTERNATIONAL CATALOG OF GEOMAGNETIC DATA, compiled by J.H. Allen and C.C. Abston, National Geophysical Data Center, NOAA, Boulder, CO; E.P. Kharin and N.E. Papitashvili, Academy of Sciences of the USSR, World Data Center B2, Moscow, USSR; and V.O. Papitashvili, IZMIRAN, Moscow Region, USSR, November 1982, 191 pp. Supersedes UAG-35 and 49.

UAG-87 CHANGES IN THE GLOBAL ELECTRIC FIELDS AND CURRENTS FOR MARCH 17-19, 1978, FROM SIX IMS MERIDIAN CHAINS OF MAGNETOMETERS, by Y. Kamide, Kyoto Sangyo University, Kyoto, Japan; H.W. Kroehl, National Geophysical Data Center, NOAA, Boulder, CO; and A.D. Richmond, NOAA Space Environment Laboratory, Boulder, CO, November 1982, 102 pp, $3.50.

UAG-88 NUMERICAL MODELING OF IONOSPHERIC PARAMETERS FROM GLOBAL IMS MAGNETOMETER DATA FOR THE CDAW-6 INTERVALS, by Y. Kamide, Kyoto Sangyo University, Kyoto, Japan; H.W. Kroehl, National Geophysical Data Center, NOAA, Boulder, CO; and B.A. Hausman, National Geophysical Data Center, NOAA, Boulder, CO, November 1983, 197 pp, $4.00.

UAG-89 ATMOSPHERIC HANDBOOK: ATMOSPHERIC DATA TABLES AVAILABLE ON COMPUTER TAPE, by V.E. Derr, NOAA Environmental Research Laboratories, Boulder, CO, July 1984, 56 pp.

UAG-90 EXPERIENCE WITH PROPOSED IMPROVEMENTS OF THE INTERNATIONAL REFERENCE IONOSPHERE (IRI): CONTRIBUTED PAPERS, MAINLY FROM THE URSI-COSPAR WORKSHOP HELD IN BUDAPEST IN 1980, edited by K. Rawer, University of Freiburg, Federal Republic of Germany, and C.M. Minnis, former Secretary General of URSI, Brussels, Belgium, May 1984, 233 pp, $6.00.

UAG-91 COMBINED CATALOG OF IONOSPHERE VERTICAL SOUNDINGS DATA, compiled by Raymond O. Conkright and Marcus O. Ertle, National Geophysical Data Center, NOAA, Boulder, CO; December 1984, 174 pp.

UAG-92 INTERNATIONAL CATALOG OF GEOMAGNETIC DATA, compiled by C.C. Abston, National Geophysical Data Center, NOAA, Boulder, CO; N.E. Papitashvili, Academy of Sciences of the USSR, World Data Center B2, Moscow, USSR; and V.O. Papitashvili, IZMIRAN, Moscow Region, USSR, August 1985, 291 pp. Supercedes UAG-35, -49, and -86.

UAG-93 IONOGRAM ANALYSIS WITH THE GENERALISED PROGRAM POLAN, by J.E. Titheridge, University of Auckland, New Zealand, December 1985, 194 pp.

UAG-94 THE SOLAR MAGNETIC FIELD--1976 THROUGH 1985: AN ATLAS OF PHOTOSPHERIC MAGNETIC FIELD OBSERVATIONS AND COMPUTED CORONAL MAGNETIC FIELDS FROM THE JOHN M. WILCOX SOLAR OBSERVATORY AT STANFORD, by J. Todd Hoeksema and Philip H. Scherrer, Center for Space Science and Astrophysics, Stanford University, Stanford, CA, January 1986, 370 pp, $9.00.

☆U.S. GOVERNMENT PRINTING OFFICE:1986—677-581