OBSERVATORI DE L'EBRE

Consejo Superior de Investigaciones Científicas - Universitat Ramon Llull

BOLETÍN DEL OBSERVATORIO DEL EBRO

OBSERVACIONES GEOMAGNÉTICAS DE LA ISLA LIVINGSTON, ANTÁRTIDA 2005 Y CAMPAÑA 2005-2006

LIVINGSTON ISLAND GEOMAGNETIC OBSERVATIONS, ANTARCTICA 2005 AND 2005-2006 SURVEY

S. Marsal, J.M. Torta, J. Seguí, L. Gaya-Piqué, J.J. Curto, E. Sanclement, J.G. Solé, D. Altadill, A. Ugalde, A. De Santis, E.M. Apostolov, L.F. Alberca, A.García

2006

Boletín del Observatorio del Ebro

OBSERVACIONES GEOMAGNÉTICAS DE LA ISLA LIVINGSTON 2005 Y CAMPAÑA 2005-2006

LIVINGSTON ISLAND GEOMAGNETIC OBSERVATIONS 2005, AND 2005-2006 SURVEY

Por - by

S. Marsal[1], J.M. Torta[1], J. Seguí[1], L.R. Gaya-Piqué[1,2], J.J. Curto[1], E. Sanclement[1], J.G. Solé[1], D. Altadill[1], A. Ugalde[1], A. De Santis[2], E.M. Apostolov[3], L.F. Alberca[1], A. García[4]

[1]Observatori de l'Ebre. Centro Coordinado del CSIC e Instituto Universitario de la URL. Roquetes (Tarragona).
[2]Istituto Nazionale di Geofisica e Vulcanologia. Roma.
[3]Institute of Geophysics. Bulgarian Academy of Sciences. Sofia.
[4]Departamento de Volcanología. Museo Nacional de Ciencias Naturales. CSIC. Madrid.

OBSERVATORI DE L'EBRE
Roquetes
2006

1. INTRODUCCIÓN

En este Boletín se presentan las observaciones magnéticas registradas en el Observatorio Geomagnético de la Isla Livingston durante el año 2005, incluyendo la Campaña Antártica 2005-2006. La instalación y operación del Observatorio se enmarcaron en el Proyecto ANT95-0994-C03 del Programa Nacional de Investigación en la Antártida, continuado por los Proyectos ANT98-0886, REN2000-0833 y REN2003-08376-C02-02. Con este propósito, durante la campaña 1995-1996 se procedió al montaje de las casetas que en la actualidad albergan la estación magnética, en la Base Antártica Española (BAE) Juan Carlos I de la Isla Livingston (Islas Shetland del Sur) y, paralelamente, a la verificación de la estación magnética así como de los equipos de medida absoluta del campo geomagnético, en el *Observatori de l'Ebre*. Una evaluación de la homogeneidad espacial de las variaciones registradas, así como de la particular anomalía magnética cortical en el Observatorio pueden encontrarse en Torta et al. (1999a).

Durante la campaña 1996-1997 se instaló el variómetro, del que se tienen registros desde el 7 de Diciembre de 1996, y se procedió a la realización de medidas absolutas. En los anteriores Boletines (Torta et al., 1997a, 1998, 1999b; Gaya-Piqué et al., 2000, 2002; Marsal et al., 2003, 2004, 2005) se han ido resumiendo sucesivamente las medidas realizadas desde esa fecha hasta el 24 de Febrero de 2005, cuando el personal científico y técnico abandonó la BAE al final de la Campaña 2004-2005 (la Base sólo permanece ocupada durante el verano Austral). El Observatorio, sin embargo, se ha dejado en registro continuo automático durante los meses de Marzo a Noviembre de 1997 a 2005, habiéndose podido recuperar los datos de cada uno de esos períodos al inicio de la campaña siguiente (en concreto, el 14 de Diciembre de 2005 para el último).

En relación a campañas anteriores, la invernada correspondiente a este Boletín no presenta períodos considerables sin valores por cortes en el suministro eléctrico desde la BAE.

Se puede obtener más información dirigiéndose a:

Observatori de l'Ebre	**Tel.:**	**977 50 05 11**
Datos Antárticos	**Fax:**	**977 50 46 60**
43520 Roquetes (Tarragona)	**e_mail:**	**jmtorta@obsebre.es**
		smarsal@obsebre.es

Desde la Campaña 1999-2000 los valores del campo registrados por el Observatorio se transmiten vía satélite, bien utilizando el Meteosat hasta el Geomagnetic Information Node (GIN) de la red INTERMAGNET de Edimburgo, bien utilizando el GOES hasta el GIN de Ottawa, donde son recuperados por el *Observatori de l'Ebre*. Sin embargo, la calidad de las transmisiones fue deteriorándose progresivamente, y al finalizar la campaña 2004-2005 se decidió desconectar la transmisión para el ahorro de energía, necesaria para la adquisición durante la invernada.

2. SITUACIÓN GEOGRÁFICA

La instalación del observatorio requirió la edificación de tres casetas térmicamente aisladas y construidas con materiales amagnéticos. La zona de emplazamiento de la estación magnética fue definida después de un estudio realizado por el *Instituto Geográfico Nacional* (Casas et al., 1992) durante la campaña 1990-1991. Los resultados del levantamiento magnético efectuado mostraron que el lugar más apropiado es la zona de Punta Polaca, situada al Oeste de las instalaciones de la BAE y a unos 350 m de distancia de ellas aproximadamente. Asimismo, el lugar se encuentra suficientemente alejado del conjunto de instalaciones de la BAE para que no existan riesgos de contaminación de los registros magnéticos debido a la influencia de la Base o a efectos antropogénicos. De las tres casetas, una aloja los sensores de un magnetómetro vector; otra contiene la electrónica, el sistema de control y adquisición de datos; y la tercera alberga el magnetómetro para la realización de medidas absolutas.

Las coordenadas del pilar fundamental son las siguientes:

Latitud Geográfica	**62°**	**39'**	**44"**	**S**
Longitud Geográfica	**60°**	**23'**	**41"**	**W**
Latitud Geomagnética*	**52°**	**37'**	**22"**	**S**
Longitud Geomagnética*	**8º**	**35'**	**18"**	**E**
Altitud s.n.m.			**19.4 m**	

*Calculado a partir de la 10ª generación del IGRF para la época 2005.0.

A 460 m en dirección Este del pilar fundamental se clavó un jalón como marca de referencia para la determinación de la Declinación. El acimut determinado entre la línea pilar-jalón y el Norte Geográfico es 90° 52' 3.66".

3. INSTRUMENTOS Y OPERACIÓN

3.1. MAGNETÓMETRO VECTOR

El instrumento principal de la estación magnética automática está constituido por un magnetómetro de protones que mide la intensidad total del campo (F). El sensor de este magnetómetro está montado en el centro de dos conjuntos de bobinas de Helmholtz mutuamente perpendiculares orientados respectivamente según las direcciones dadas por la Declinación e Inclinación locales. Al aplicar corriente a esas bobinas y medir la magnitud de los vectores resultantes, pueden obtenerse los cambios en la Declinación, D, y la Inclinación, I; el sistema se conoce como configuración δD/δI. La estación fue desarrollada por el Geomagnetism Group del *British Geological Survey* (BGS) en Edimburgo. Los detalles técnicos de la misma pueden encontrarse en Riddick et al. (1995), y una descripción resumida de su fundamento y operación en Torta et al. (1997b).

Un PC compatible en la caseta central comunica con el magnetómetro para controlar la adquisición de datos y la conmutación de corriente en las bobinas a través de las interfases serie y paralelo estándares. Dicha caseta aloja asimismo la electrónica que permite suministrar corriente estable a las bobinas δD/δI. La sincronización de tiempo viene efectuada por un receptor GPS.

3.2. MEDIDAS ABSOLUTAS

Para la realización de medidas absolutas se ha utilizado un DI-flux ELSEC 810A, que consta de un magnetómetro de núcleo saturado o fluxgate cuyo sensor viene montado en un teodolito amagnético Zeiss 015B. La electrónica se encuentra en la misma caseta.

El procedimiento de observación está basado en la determinación de campo nulo para la obtención de D e I. Para eliminar los errores de colimación entre el sensor y el eje óptico del teodolito, así como los debidos al "offset" de campo nulo generados por la electrónica, se realizan observaciones en las cuatro posiciones posibles para cada elemento (ver, p.e., Jankowski y Sucksdorff, 1996, o Torta et al., 1997b).

Para la determinación contemporánea de la intensidad total (F), que se usa en conjunción con la inclinación (I) medida para calcular las intensidades horizontal (H) y vertical (Z), se extraen los valores correspondientes de la secuencia de medidas del magnetómetro vector cuando éste mide con las bobinas sin polarizar. Para su reducción a la posición del pilar fundamental se han efectuado medidas en el mismo con el magnetómetro de precesión de protones Gem Systems GSM19 de efecto Overhauser. La F en la estación automática se obtiene con el magnetómetro GEOMAG SM90R, también de efecto Overhauser. Esas medidas han proporcionado una diferencia promedio de -2.2 nT ($F_{\text{pilar fundamental}} - F_{\text{magnetómetro vector}}$).

4. PROCESO DE LOS DATOS

El proceso de datos preliminar, realizado en las instalaciones de la BAE, incluye la detección y eventual eliminación de valores espúreos, la visualización de los valores de polarización en D y en I del magnetómetro vector para la detección de posibles derivas en la fuente de corriente, y la visualización de los magnetogramas, con la adopción de líneas de base preliminares.Tras la compilación de la serie de medidas absolutas, se ha procedido a la determinación de las líneas de base definitivas según el siguiente procedimiento:

Para cada elemento observado D e I se han substraído de los valores de las medidas absolutas los valores correspondientes del magnetómetro vector (diferencias o líneas de base observadas). Sobre esta serie de diferencias se ha realizado un análisis que finaliza con la obtención de las líneas de base (diferencias adoptadas). Este proceso incluye un análisis de la dispersión local y global de la serie, el descarte de los valores con diferencias superiores a un umbral, y una interpolación de los datos no rechazados del tipo que se decida más oportuno según el caso, ya sea una media móvil, un ajuste lineal, cuadrático, etc. Las diferencias observadas y las correspondientes líneas de base adoptadas se ilustran en la fig. 1. Tras añadir estas últimas a las medidas del magnetómetro vector (y así trasladarlas a las referencias absolutas) se han producido los valores minuto definitivos para cada elemento. De estos valores se obtienen fácilmente los magnetogramas y las tablas de medias que se presentan a continuación.

Teniendo en cuenta la conducta manifestada durante las últimas campañas en las que se han realizado medidas absolutas, las líneas de base que se han adoptado para D e I para el período entre ellas obedecen a funciones lineales con las pendientes necesarias para pasar de las diferencias adoptadas al final de una campaña a las del principio de la siguiente (fig. 2).

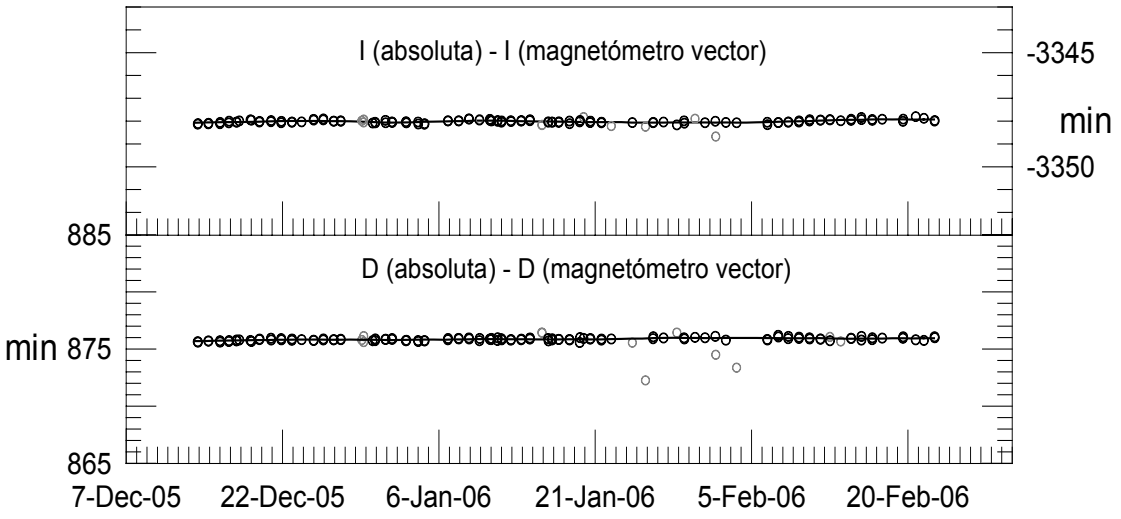


Fig. 1. Diferencias observadas (círculos) y líneas de base adoptadas (líneas continuas) para los dos elementos D e I. Los círculos en trazo fino corresponden a las diferencias descartadas antes de la adopción de la línea de base.

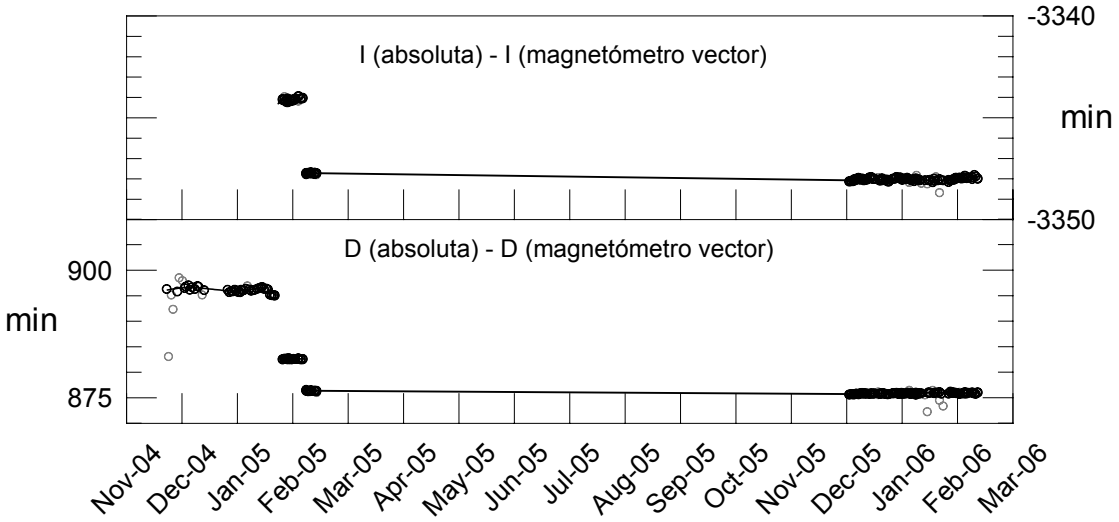


Fig. 2. Equivalente a la fig. 1 para el período completo de registro desde Noviembre de 2004.

5. PRESENTACIÓN DE LOS DATOS

Los valores medios anuales para todos los elementos del campo obtenidos hasta la publicación de este Boletín se presentan en la tabla 1. Puesto que las líneas de base adoptadas en la fig. 2 para el período sin medidas absolutas podrían diferir de las reales, damos en la tabla 2 las medias correspondientes únicamente a los períodos con referencias absolutas. Corresponden básicamente a las medias sobre los meses de Diciembre, Enero y Febrero de cada campaña.

Año	D	H	Z	X	Y	I	F
1997.5	14º 55.5'	20522	-30040	19830	5286	-55º 39.7'	36380
1998.5	14º 54.7'	20465	-29976	19776	5266	-55º 40.7'	36295
1999.5	14º 53.5'	20415	-29910	19729	5246	-55º 41.1'	36213
2000.5	14º 52.4'	20369	-29855	19686	5228	-55º 41.8'	36141
2001.5	14º 49.8'	20319	-29786	19642	5201	-55º 42.0'	36057
2002.5	14º 47.1'	20262	-29717	19591	5171	-55º 42.7'	35967
2003.5	14º 45.0'	20210	-29665	19544	5146	-55º 44.1'	35895
2004.5	14º 42.0'	-	-	-	-	-	35813
2005.5	14º 39.5'	20113	-29536	19459	5088	-55º 44.7'	35738

Tabla 1. Valores medios anuales para todos los elementos del campo magnético. H, Z, X, Y y F vienen dados en unidades de nT.

Año	D	H	Z	X	Y	I	F
1997.0	14º 55.7'	20554	-30065	19860	5295	-55º 38.5'	36419
1998.0	14º 54.8'	20504	-29995	19814	5277	-55º 38.6'	36334
1999.0	14º 53.9'	20447	-29934	19759	5257	-55º 39.9'	36250
2000.0	14º 52.7'	20399	-29868	19715	5238	-55º 40.1'	36169
2001.1	14º 50.5'	20345	-29799	19666	5211	-55º 40.6'	36082
2002.0	14º 48.6'	20298	-29738	19624	5188	-55º 41.0'	36005
2003.0	14º 45.9'	20246	-29679	19578	5160	-55º 42.0'	35927
2004.0	14º 43.8'	20194	-29630	19530	5135	-55º 43.4'	35857
2005.0	14º 41.4'	20144	-29564	19486	5109	-55º 43.8'	35775
2006.0	14º 37.8'	20102	-29494	19451	5077	-55º 43.4'	35693

Tabla 2. Valores medios para los períodos con referencias absolutas.

Los datos que se presentan a continuación son:

i) Índices K, calculados automáticamente mediante el método FMI, según una modificación del programa original (en lenguaje C) creado por P. McFadden (AGSO). Q y D indican los cinco días Internacionales de Calma y Perturbados de cada mes, respectivamente.
ii) Magnetogramas diarios de la declinación (D), intensidad horizontal (H) e intensidad vertical (Z), mostrados secuencialmente y por meses.
iii) Magnetogramas diarios de la intensidad total (F), mostrados secuencialmente y por meses.
iv) Tablas mensuales de los valores medios horarios de D, H, Z y F. Todas las medias han sido calculadas a partir de valores minuto siempre y cuando el porcentaje de valores perdidos en el intervalo en cuestión no exceda el 10%.

Agradecimientos. Estos resultados forman parte de los Proyectos ANT95-0994-C03, ANT98-0886, REN2000-0833 y REN2003-08376-C02-02 de los sucesivos Planes Nacionales de I+D+I. Los autores desean expresar su más sincero agradecimiento al personal técnico y científico de la BAE en las distintas campañas desde que se instaló el Observatorio, así como al Servicio Geográfico del Ejército por la determinación de posiciones y acimuts. El apoyo técnico recibido por parte del Global Seismology and Geomagnetism Group del *British Geological Survey*, especialmente por parte de John C. Riddick, Christopher W. Turbitt y Simon Flower, han resultado ser también fundamentales.

REFERENCIAS

Casas, B., Avalos, J.A., Marín, V., Merino, J. y Socías, I., Levantamiento magnético en la isla Livingston, islas Shetland del Sur. Geología de la Antártida Occidental. J. López-Martínez (Ed.). 241-250. Simposios T 3. III Congreso Geológico de España y VIII Congreso Latinoamericano de Geología. Salamanca, 1992.

Gaya-Piqué, L., Torta, J.M., Casas, B.J., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Merino, J., Alberca, L.F. y García, A., Observatorio Geomagnético de la Isla Livingston. Boletín 1999 y Campaña 1999-2000. Observatori de l'Ebre. Miscelánea 43. Roquetes, Tarragona, 2000.

Gaya-Piqué, L., Torta, J.M., Curto, J.J., Sanclement, E., Marsal, S., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Merino, J., Alberca, L.F. y García, A., Observaciones Geomagnéticas de la Isla Livingston 2000, 2001 y campaña 2001-2002. Observatori de l'Ebre. Roquetes, Tarragona, 2002.

Jankowski, J. y Sucksdorff, C., Guide for magnetic measurements and observatory practice. IAGA. Boulder, Colorado, 1996.

Marsal, S., Torta, J.M., Gaya-Piqué, L., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Alberca, L.F. y García, A., Observaciones Geomagnéticas de la Isla Livingston 2002 y campaña 2002-2003. Observatori de l'Ebre. Roquetes, Tarragona, 2003.

Marsal, S., Torta, J.M., Gaya-Piqué, L., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Alberca, L.F. y García, A., Observaciones Geomagnéticas de la Isla Livingston 2003 y campaña 2003-2004. Observatori de l'Ebre. Roquetes, Tarragona, 2004.

Marsal, S., Torta, J.M., Gaya-Piqué, L., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Alberca, L.F. y García, A., Observaciones Geomagnéticas de la Isla Livingston 2004 y campaña 2004-2005. Observatori de l'Ebre. Roquetes, Tarragona, 2005.

Riddick, J.C., Turbitt, C.W. y McDonald, J., The BGS Proton Magnetometer (δ D/δ I) Observatory Mark II System, Installation Guide and Technical Manual, British Geological Survey Technical report, WM/95/32. BGS Geomagnetism Series. Edinburgh, 1995.

Torta, J.M., Solé, J.G., Curto, J.J., Sanclement, E., Blanco, I., Altadill, D., Alberca, L.F. y García, A., Observatorio Geomagnético de la Isla Livingston. Boletín Campaña 1996-1997. Observatori de l'Ebre. Roquetes, Tarragona, 1997a.

Torta, J.M., Solé, J.G., Altadill, D., Ugalde, A., Curto, J.J., Sanclement, E., Alberca, L.F. y García, A., Estación magnética en la Base Antártica Española Juan Carlos I. Bol. R. Soc. Esp. Hist. Nat.

(Sec. Geol.), 93, 113- 121, 1997b.

Torta, J.M., Gaya-Piqué, L., Altadill, D., Curto, J.J., Sanclement, E., Solé, J.G., Apostolov, E.M., Alberca, L.F. y García, A., Observatorio Geomagnético de la Isla Livingston. Boletín 1997 y Campaña 1997-1998. Observatori de l'Ebre. Miscelánea 41. Roquetes, Tarragona, 1998.

Torta, J.M., Gaya-Piqué, L., Solé, J.G., Blanco, I. y García, A., A new geomagnetic observatory at Livingston Island (South Shetland Islands): Implications for future regional magnetic surveys. Annali di Geofisica, 42, 2, 141-151, 1999a.

Torta, J.M., Casas, B.J., Gaya-Piqué, L., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Apostolov, E.M., Alberca, L.F. y García, A., Observatorio Geomagnético de la Isla Livingston. Boletín 1998 y Campaña 1998-1999. Observatori de l'Ebre. Miscelánea 42. Roquetes, Tarragona, 1999b.

1. INTRODUCTION

In this Bulletin we give details of the magnetic observations recorded at the Livingston Island Geomagnetic Observatory during 2005, including the 2005-2006 austral summer survey. Both its installation and operation were on behalf of the National Program for Antarctic Research Project ANT95-0994-C03, followed by the ANT98-0886, REN2000-0833 and REN2003-08376-C02-02 projects. In order that this objective could be achieved, during the 1995-1996 survey, the magnetic observatory instrument accommodation was deployed at the Spanish Antarctic Station Juan Carlos I (Livingston Island in the South Shetland Island group). In parallel with this work both the variometer station and the absolute observing instruments were tested and calibrated at Ebre Geomagnetic Observatory, Roquetes, Tarragona, Spain. An assessment of the spatial homogeneity of the recorded variations, as well as of the particular observatory crustal anomaly biases are given in Torta *et al. (1999a).*

*Both the variometer, deployed in a set of δD/δI coils and the absolute instruments were installed during December 1996, with continuous recording and the absolute observing program beginning on December 7, 1996. In the previous Bulletins (*Torta *et al., 1997a, 1998, 1999b;* Gaya-Piqué *et al., 2000, 2002;* Marsal *et al., 2003, 2004, 2005) the measurements made between that date and February 24, 2005 were summarized. As this site is only manned during the Austral summer all scientific staff departs at the end of February each survey, but the magnetometers are left recording and we retrieve the data recorded throughout the winter at the beginning of the next survey season (in December 14, 2005 for the latest).*

As compared with preceding surveys, the winter epoch corresponding to this Bulletin does not present considerable periods without data.

It is possible to obtain more information applying to:

Observatori de l'Ebre
Antarctic Data
43520 Roquetes (Tarragona)
SPAIN

Tel.: +34 977 50 05 11
Fax: +34 977 50 46 60
e-mail: jmtorta@obsebre.es
smarsal@obsebre.es

Since the 1999-2000 Survey, data recorded at the Observatory are transmitted either via Meteosat satellite to the INTERMAGNET Geomagnetic Information Node (GIN) at Edinburgh, or via GOES satellite to the GIN at Ottawa, being them afterwards retrieved by Ebre Observatory. Nevertheless, the quality of the transmissions has deteriorated progressively and at he end of the 2004-2005 survey it was decided to disable the transmission in order to save the energy necessary for the data acquisition.

2. POSITION

The installation of the observatory required the erection of three thermally isolated huts which had been prefabricated using non-magnetic materials. The location of the observatory was determined using the results of a study made by the Instituto Geográfico Nacional *(*Casas *et al., 1992) during the 1990-1991 field season. The results of this magnetic survey showed the most appropriate site to be around the area named as Punta Polaca, located to the west of the Station settlement and at approximately 350 m from the main base. Located at this position, the site is far enough from the settlement to avoid man-made disturbances. One hut houses the proton magnetometer and δD/δI coils; the second contains the control electronics and the data acquisition system; and the third accommodates the D/I fluxgate theodolite for the absolute observations.*

The coordinates of the absolute pillar are:

Geographic latitude	***62°***	***39′***	***44″***	***S***
Geographic longitude	***60°***	***23′***	***41″***	***W***
Geomagnetic latitude*	***52°***	***37′***	***22″***	***S***
Geomagnetic longitude*	***8°***	***35′***	***18″***	***E***
Height above msl			***19.4 m***	

** Computed from the 10th Generation of IGRF evaluated at 2005.0.*

At a position 460 m to the west of the absolute pillar a fixed mark was constructed which is used as the reference mark in the determination of declination. The angle viewed from the D/I pillar between the azimuth mark and the geographic north (the azimuth of the mark) is 90° 52′ 3.66″.

3. INSTRUMENTS AND OPERATION

3.1. VECTOR MAGNETOMETER

The main instrument in the automatic magnetic observatory is a proton magnetometer used to measure total field intensity (F). This magnetometer is deployed at the centre of a pair of dual axis Helmholtz coils which are deployed parallel to the directions given by the local declination and inclination. By applying bias currents through these coils and measuring the resultant vectors, changes in declination, D, and inclination, I, may be obtained; this is known as the δD/δI configuration. The equipment was developed by the Geomagnetism Group of the British Geological Survey *(BGS) in Edinburgh. Its technical details are described by Riddick et al. (1995), and a summarized description of its principles and operation by Torta et al. (1997b).*

An IBM compatible PC in the central hut communicates with the magnetometer to control the data acquisition and bias coil switching using the standard PC serial and parallel interfaces. This hut also accommodates the electronics which generates stable currents to the δD/δI bias coils. Time synchronisation is provided by a GPS receiver.

3.2. ABSOLUTE OBSERVATIONS

For the absolute measurements of declination and inclination an ELSEC 810A D/I-fluxgate theodolite is used. It comprises a single axis fluxgate magnetometer sensor element mounted on a Zeiss 015B non-magnetic theodolite with the electronics package placed in the same hut.

The D/I observation procedure is based on the null-field technique to measure D and I. To remove the errors due to the misalignment of the magnetic axis of the fluxgate and the optical axis of the theodolite, as well as those due to the zero-field offset generated by the control electronics, the observations are made in four positions for each element (see, e.g., Jankowski & Sucksdorff, 1996, or Torta et al., 1997b).

The total field intensity (F) values, used in conjunction with the measured inclination (I) to calculate the horizontal (H) and vertical (Z) intensities, is obtained from the vector magnetometer, when it measures without polarizing the coils. F measured at the δD/δI site is corrected for the site difference between the two positions before using it in the reduction of the observations. This correction was obtained by making simultaneous measurements of F on the one hand at the D/I pillar using a Gem Systems GSM19 Overhauser proton precession magnetometer and, on the other hand, F was measured at the automatic observatory using the GEOMAG SM90R Overhauser magnetometer. These measurements gave a mean difference of -2.2 nT ($F_{absolute\ pillar}$ - $F_{vector\ magnetometer}$).

4. DATA PROCESSING

The preliminary data processing, done at the Antarctic Station, included the detection and eventual elimination of any spikes in the data, the graphical inspection of the D and I polarization values in the vector magnetometer daily records to detect any drift in the current supply unit, the examination of the magnetograms, and the adoption of preliminary baselines. After the absolute measurements had been reduced, the following procedure was adopted to allocate definitive baselines:

For each observed element D and I, the corresponding vector magnetometer values were subtracted from the absolute measurements (observed differences or observed baselines). To this series of differences a sequential analysis was applied towards the determination of the adopted differences or adopted baselines. This process included an analysis of both the local and global dispersion of the series, the removal of the values with differences higher than a given threshold, and the most suitable interpolation of the not rejected data, regarding the given case: a running average, a linear or square fitting, etc. The observed differences and the corresponding adopted baselines are plotted in Figure 1. By adding the latter to the vector magnetometer values (and thus translating the vector data to the absolute references) the definitive minute values for each element were produced. From these values the magnetograms and the tables of means which are presented following were obtained.

Taking into account the behaviour exhibited during the last surveys in which absolute measurements were made, the baselines adopted for D and I for the period in between are lineal functions with the necessary slopes to pass from the adopted differences at the end of the penultimate survey to those of the beginning of the last one (Figure 2).

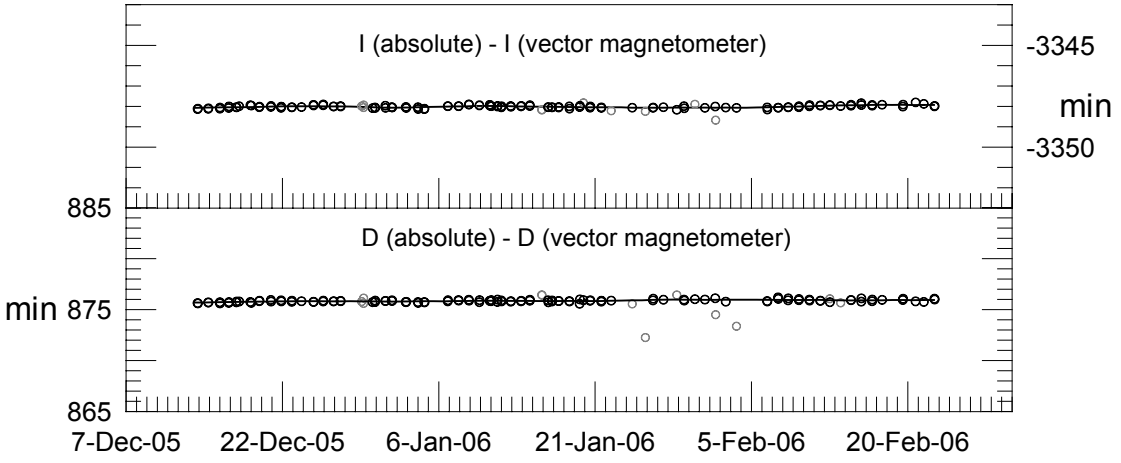


Fig. 1. Observed differences (circles) and adopted base-lines (lines) for the two elements I and D during the last survey. Thin circles correspond to differences removed before the adoption of the baseline.

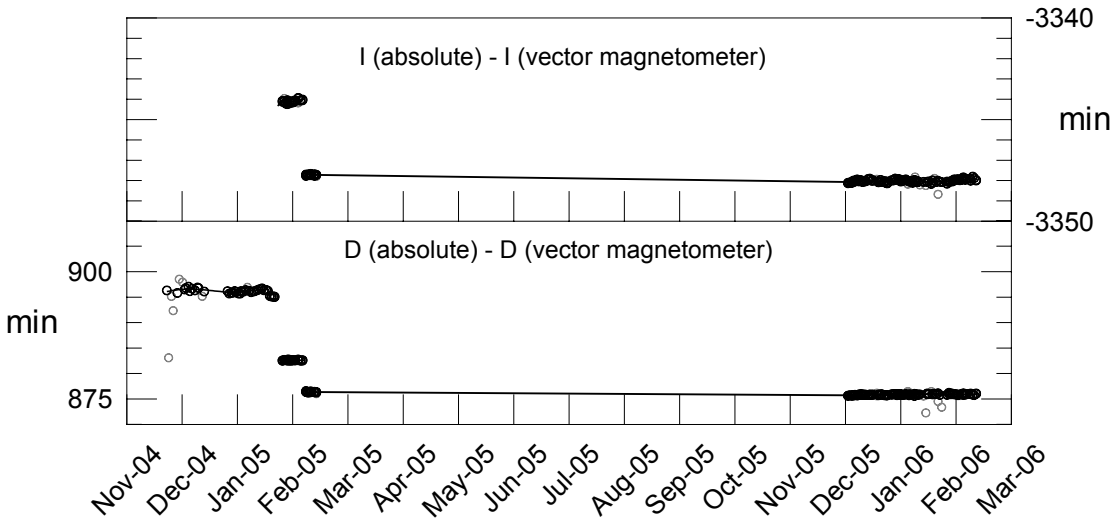


Fig. 2. As figure 1 but for the complete recording period from December 2004.

5. PRESENTATION OF DATA

The annual mean values for all magnetic elements obtained until the publication of this Bulletin are presented in table 1. Since the adopted baselines of figure 2 for the period without absolute measurements might differ from the actual ones, we give in table 2 the means corresponding to only the periods with absolute references, basically corresponding to the means over December, January and February of each Survey.

Year	D	H	Z	X	Y	I	F
1997.5	14º 55.5'	20522	-30040	19830	5286	-55º 39.7'	36380
1998.5	14º 54.7'	20465	-29976	19776	5266	-55º 40.7'	36295
1999.5	14º 53.5'	20415	-29910	19729	5246	-55º 41.1'	36213
2000.5	14º 52.4'	20369	-29855	19686	5228	-55º 41.8'	36141
2001.5	14º 49.8'	20319	-29786	19642	5201	-55º 42.0'	36057
2002.5	14º 47.1'	20262	-29717	19591	5171	-55º 42.7'	35967
2003.5	14º 45.0'	20210	-29665	19544	5146	-55º 44.1'	35895
2004.5	14º 42.0'	-	-	-	-	-	35813
2005.5	14º 39.5'	20113	-29536	19459	5088	-55º 44.7'	35738

Table 1. Annual mean values for all magnetic elements. H, Z, X, Y and F are given in nT units.

Year	D	H	Z	X	Y	I	F
1997.0	14º 55.7'	20554	-30065	19860	5295	-55º 38.5'	36419
1998.0	14º 54.8'	20504	-29995	19814	5277	-55º 38.6'	36334
1999.0	14º 53.9'	20447	-29934	19759	5257	-55º 39.9'	36250
2000.0	14º 52.7'	20399	-29868	19715	5238	-55º 40.1'	36169
2001.1	14º 50.5'	20345	-29799	19666	5211	-55º 40.6'	36082
2002.0	14º 48.6'	20298	-29738	19624	5188	-55º 41.0'	36005
2003.0	14º 45.9'	20246	-29679	19578	5160	-55º 42.0'	35927
2004.0	14º 43.8'	20194	-29630	19530	5135	-55º 43.4'	35857
2005.0	14º 41.4'	20144	-29564	19486	5109	-55º 43.8'	35775
2006.0	14º 37.8'	20102	-29494	19451	5077	-55º 43.4'	35693

Table 2. Mean values for periods with absolute references.

The data presented next in this bulletin are:

i) Computer-produced K indices by means of the FMI method, according to a modification of the original C-language program created by P. McFadden (AGSO). Q and D refer to the five International Quiet and Disturbed days in each month, respectively.
ii) Month-at-a-glance daily magnetograms of declination (D), horizontal intensity (H) and vertical intensity, (Z).
iii) Month-at-a-glance daily magnetograms of total intensity (F).
iv) Monthly tables of hourly mean values of D, H, Z and F. All means have been calculated from minute values and only whenever the percentage of missing values in the corresponding interval does not exceed 10%.

***Acknowledgments**. These results are part of the Research Projects ANT95-0994-C03, ANT98-0886, REN2000-0833, and REN2003-08376-C02-02, PN I+D+I, Spain. The authors would like to express their deep thanks to the technical and scientific staff at the Spanish Antarctic Station during the Surveys from which the Observatory was deployed and to the* Servicio Geográfico del Ejército *for the measurement of positions and azimuth bearings. The technical support received from the Global Seismology and Geomagnetism Group of the* British Geological Survey*, specially from John C. Riddick, Christopher W. Turbitt and Simon Flower, have also turned out to be fundamental.*

REFERENCES

Casas, B., Avalos, J.A., Marín, V., Merino, J. & Socías, I., Levantamiento magnético en la isla Livingston, islas Shetland del Sur. Geología de la Antártida Occidental. J. López-Martínez (Ed.). 241-250. Simposios T 3. III Congreso Geológico de España y VIII Congreso Latinoamericano de Geología. Salamanca, 1992.

Gaya-Piqué, L., Torta, J.M., Casas, B.J., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Merino, J., Alberca, L.F. & García, A., Observatorio Geomagnético de la Isla Livingston. Boletín 1999 y Campaña 1999-2000. Observatori de l'Ebre. Miscelánea 43. Roquetes, Tarragona, 2000.

Gaya-Piqué, L., Torta, J.M., Curto, J.J., Sanclement, E., Marsal, S., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Merino, J., Alberca, L.F. & García, A., Observaciones Geomagnéticas de la Isla Livingston 2000, 2001 y campaña 2001-2002. Observatori de l'Ebre. Roquetes, Tarragona, 2002.

Jankowski, J. & Sucksdorff, C., Guide for magnetic measurements and observatory practice. IAGA. Boulder, Colorado, 1996.

Marsal, S., Torta, J.M., Gaya-Piqué, L., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Alberca, L.F. & García, A., Observaciones Geomagnéticas de la Isla Livingston 2002 y campaña 2002-2003. Observatori de l'Ebre. Roquetes, Tarragona, 2003.

Marsal, S., Torta, J.M., Gaya-Piqué, L., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Alberca, L.F. & García, A., Observaciones Geomagnéticas de la Isla Livingston 2003 y campaña 2003-2004. Observatori de l'Ebre. Roquetes, Tarragona, 2004.

Marsal, S., Torta, J.M., Gaya-Piqué, L., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Ugalde, A., De Santis, A., Apostolov, E.M., Alberca, L.F. & García, A., Observaciones Geomagnéticas de la Isla Livingston 2004 y campaña 2004-2005. Observatori de l'Ebre. Roquetes, Tarragona, 2005.

Riddick, J.C., Turbitt, C.W. & McDonald, J., The BGS Proton Magnetometer (δD/δI) Observatory Mark II System, Installation Guide and Technical Manual, British Geological Survey Technical report, WM/95/32. BGS Geomagnetism Series. Edinburgh, 1995.

Torta, J.M., Solé, J.G., Curto, J.J., Sanclement, E., Blanco, I., Altadill, D., Alberca, L.F. & García, A., Observatorio Geomagnético de la Isla Livingston. Boletín Campaña 1996-1997. Observatori de l'Ebre. Roquetes, Tarragona, 1997a.

Torta, J.M., Solé, J.G., Altadill, D., Ugalde, A., Curto, J.J., Sanclement, E., Alberca, L.F. & García, A., Estación magnética en la Base Antártica Española Juan Carlos I. Bol. R. Soc. Esp. Hist. Nat. (Sec.

Geol.), 93, 113-121, 1997b.

Torta, J.M., Gaya-Piqué, L., Altadill, D., Curto, J.J., Sanclement, E., Solé, J.G., Apostolov, E.M., Alberca, L.F. & García, A., Observatorio Geomagnético de la Isla Livingston. Boletín 1997 y Campaña 1997-1998. Observatori de l'Ebre. Miscelánea 41. Roquetes, Tarragona, 1998.

Torta, J.M., Gaya-Piqué, L., Solé, J.G., Blanco, I. & García, A., A new geomagnetic observatory at Livingston Island (South Shetland Islands): Implications for future regional magnetic surveys. Annali di Geofisica, 42, 2, 141-151, 1999a.

Torta, J.M., Casas, B.J., Gaya-Piqué, L., Curto, J.J., Sanclement, E., Solé, J.G., Altadill, D., Apostolov, E.M., Alberca, L.F. & García, A., Observatorio Geomagnético de la Isla Livingston. Boletín 1998 y Campaña 1998-1999. Observatori de l'Ebre. Miscelánea 42. Roquetes, Tarragona, 1999b.

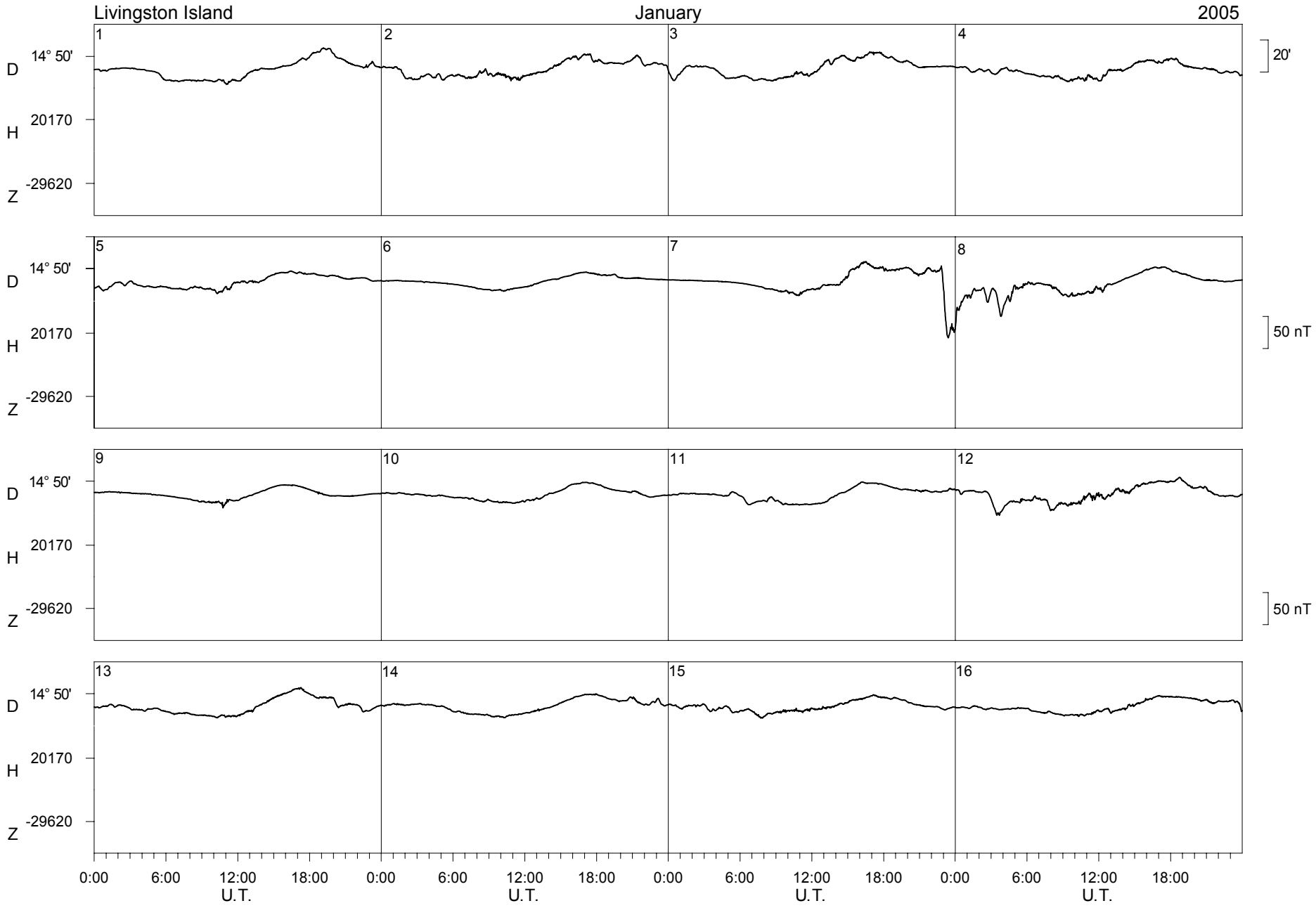
K INDICES & DAILY K SUMS AT LIVINGSTON ISLAND (K=9 LIMIT: 450 nT) FOR 2005 & JANUARY-FEBRUARY 2006

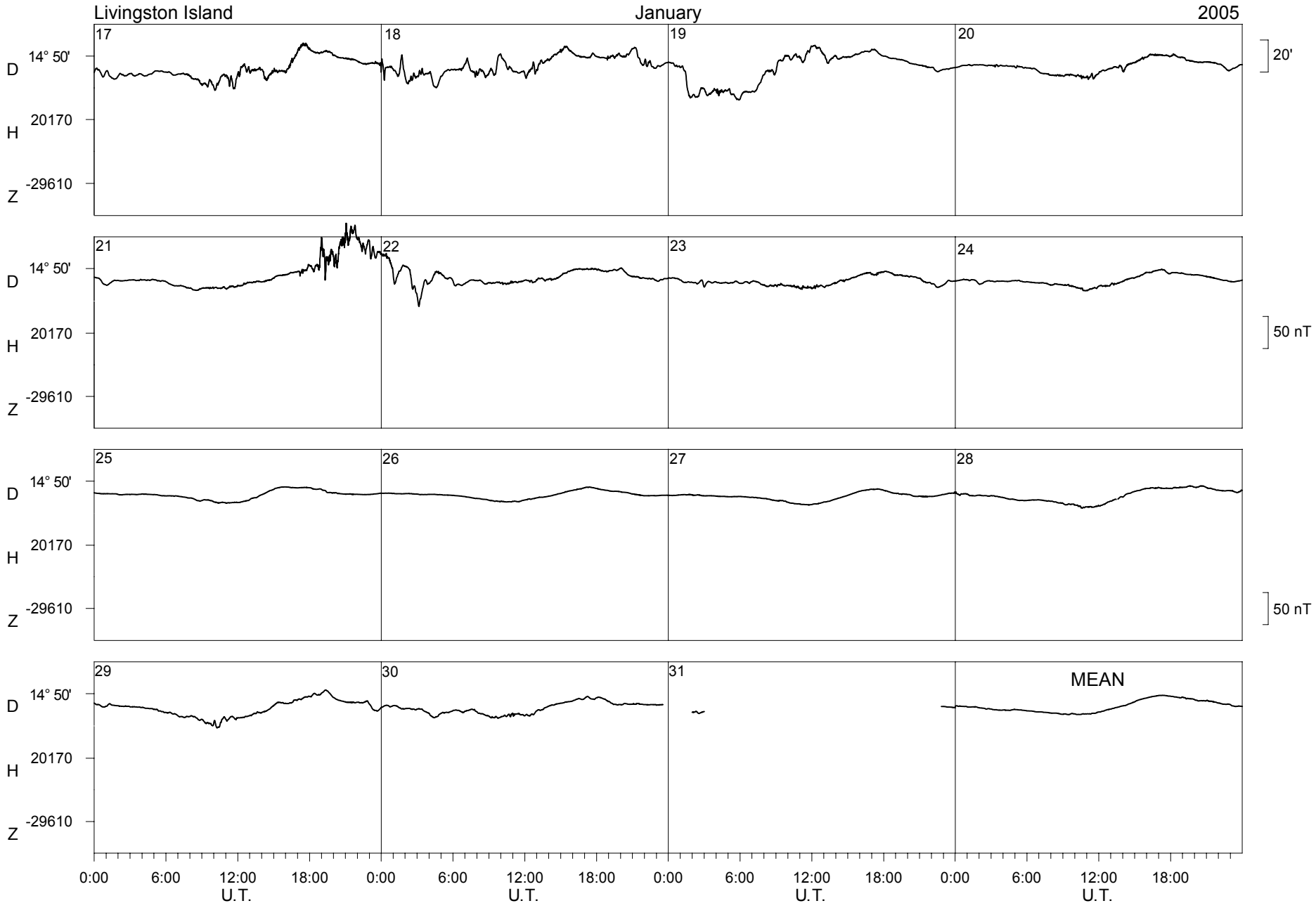
Date	JAN2005	FEB2005	MAR2005	APR2005	MAY2005	JUN2005	JUL2005
1	---- ---- -	---- ---- -	2133 1223 17	0230 1110 8	D5543 2233 27	4211 0011 10	2221 2224 17
2	D---- ---- -	---- ---- -	3233 2311 18	2001 0100 4	3221 2112 14	2211 1112 11	5331 1223 20
3	---- ---- -	---- ---- -	2110 1211 9	1221 1122 12	3223 2222 18	3231 11-- -	3322 1103 15
4	---- ---- -	Q---- ---- -	Q1001 0111 5	D2222 2445 23	3320 0011 10	D3--- ---- -	2320 0002 9
5	---- ---- -	Q1111 11-1 -	2331 1223 17	D7643 3234 32	Q1111 1110 7	---- ---- -	Q21-- ---- -
6	Q---- ---- -	1232 123- -	D6444 2446 34	4222 2224 20	0000 1111 4	---- 0024 -	Q---- ---- -
7	---- ---- -	D3333 4456 31	D4443 3344 29	3332 2100 14	2100 2124 12	4532 2112 20	---- ---- -
8	---- ---- -	D4534 3444 31	D4443 2344 28	3010 0010 5	D6544 6543 37	3220 1--- -	Q---- ---- -
9	Q---- ---- -	D3443 3333 26	D343- ---- -	2100 0001 4	5421 0123 18	1--- ---1 -	D---- ---- -
10	---- ---- -	D4333 3342 25	--43 2322 -	Q2100 0000 3	3331 1011 13	Q0111 0000 3	D---- --55 -
11	---- ---- -	3322 21-3 -	2321 1112 13	1200 0134 11	0133 1234 17	3110 0012 8	---2 31-2 -
12	---- ---- -	22-- --11 -	Q1110 0101 5	D5533 2244 28	3433 1223 21	D3333 3355 28	D5544 5211 27
13	---- ---- -	Q1211 1--- -	1001 1223 10	D2444 3445 30	5443 3311 24	D5543 4231 27	D2334 4333 25
14	---- ---- -	1221 1221 12	5433 3323 26	3433 2233 23	2222 1111 12	3231 0132 15	3332 1100 13
15	---- ---- -	Q1221 11-- -	2111 0011 7	2321 2224 18	D5--- ---- -	3443 3211 21	122- ---2 -
16	---- ---- -	3212 3323 19	1012 3213 13	33-- -122 -	D---- -322 -	D0124 3223 17	3331 0121 14
17	D---- ---- -	2202 ---- -	3433 1322 21	2220 0001 7	3433 3313 23	4422 2211 18	2225 2225 22
18	D---- ---- -	D---- ---3 -	1212 0133 13	2230 2--2 -	3222 2100 12	1231 1011 10	4542 1013 20
19	D---- ---- -	2244 2323 22	5432 2001 17	2241 1112 14	1232 1012 12	2200 1000 5	4221 1113 15
20	---- ---- -	4331 1222 18	Q1311 1011 9	---- 3121 -	3564 2212 25	Q1100 0100 3	4333 3234 25
21	D---- ---- -	3221 1112 13	0012 3112 10	Q2000 0011 4	3443 2132 22	Q0000 0000 0	5453 1223 25
22	---- ---- -	121- ---- -	Q0111 0112 7	2200 2122 11	4333 2101 17	1100 1003 6	4311 2333 20
23	---- ---- -	Q--11 1122 -	Q--01 1132 -	1111 0121 8	3100 1101 7	D4566 5232 33	2--0 0112 -
24	---- ---- -	011- -223 -	1110 2122 10	3321 1112 14	Q0000 0002 2	5323 2002 17	Q0010 0000 1
25	Q---- ---- -	2223 2332 19	D2443 3324 25	3321 1012 13	Q1120 0000 4	4411 1124 18	Q2210 0003 8
26	Q---- ---- -	3233 2322 20	2433 3234 24	Q0000 0010 1	Q0000 0000 0	3322 1112 15	1120 0011 6
27	Q---- ---- -	1332 2222 17	2232 2332 19	Q0010 0000 1	Q0000 0000 0	Q1000 1111 5	1231 2--- -
28	---- ---- -	2223 1223 17	2211 0011 8	Q0000 1010 2	1111 1144 14	Q01-- 1000 -	D--22 4223 -
29	---- ---- -		0110 0112 6	1221 1134 15	4433 1125 23	22-- 0--0 -	3433 2223 22
30	---- ---- -		2332 1201 14	D6433 3334 29	D5466 5544 39	1111 1111 8	5433 0012 18
31	---- ---- -		-321 0222 -		4432 2113 20		2221 2114 15
Mean K sum	-	20.8	15.3	13.1	15.7	13.5	16.9

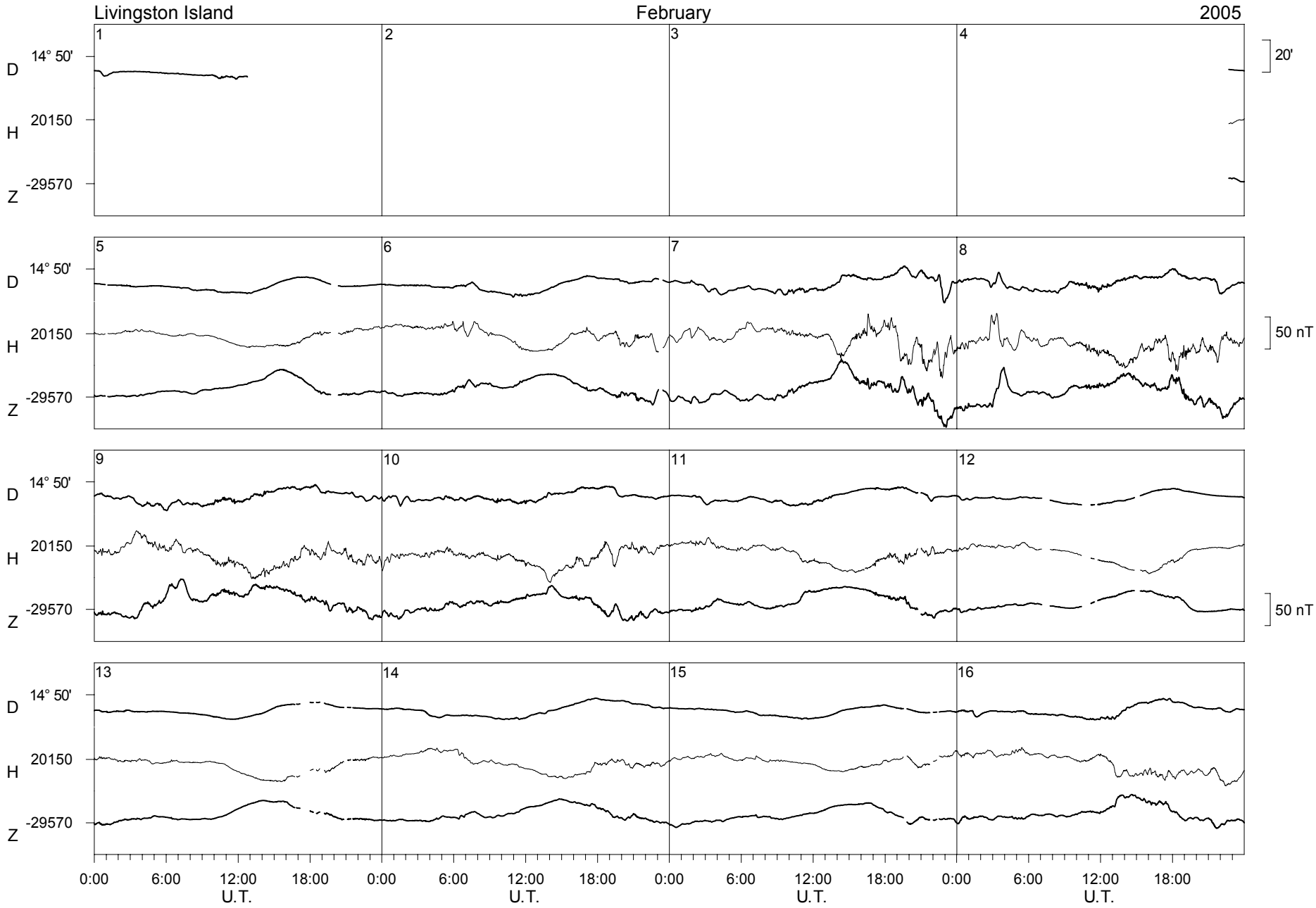
Date	AUG2005	SEP2005	OCT2005	NOV2005	DEC2005	JAN2006	FEB2006
1	4343 2212 21	5532 3112 22	3332 -123 -	---- ---- -	D-223 223- -	3221 2232 17	1121 1012 9
2	3322 2-21 -	D3343 3343 26	D4333 1223 21	---- ---- -	---- ---- -	3333 1223 20	3102 1222 13
3	2321 1113 14	5544 3214 28	2321 1112 13	D---- ---4 -	3313 2333 21	2101 0221 9	2222 1232 16
4	5332 1112 18	4444 3213 25	2101 0110 6	D3432 2342 23	2122 2232 16	Q1111 2100 7	2311 1111 11
5	0111 0-3- -	4222 1222 17	-1-- ---- -	3231 23-- -	2111 1122 11	1012 2111 9	1121 0132 11
6	D5444 2334 29	3302 1212 14	--1- ---0 -	D4322 2332 21	Q1111 1121 9	2322 2222 17	D2322 3234 21
7	4333 2223 22	3322 2--- -	---- ---- -	2012 1112 10	Q0011 0111 5	2212 2322 16	2120 0122 10
8	3220 2112 13	Q---- ---1 -	D---- ---- -	Q1010 1111 6	Q1000 1111 5	1111 1211 9	2111 0110 7
9	2311 2113 14	2201 4333 18	--1- ---- -	2111 0210 8	2121 1224 15	Q1101 1222 10	Q0111 1111 7
10	3234 4310 20	2332 ---5 -	2332 1--- -	Q0011 0112 6	--32 13-3 -	Q1011 2212 10	1102 1123 11
11	Q1111 1110 7	D5685 5354 41	--01 22-- -	2321 1221 14	D3232 3433 23	2102 2121 11	2121 2321 14
12	Q1110 0012 6	D4554 3557 38	Q-00- ---- -	2222 2--- -	2302 2233 17	2112 1122 12	1222 2210 12
13	D--32 2--- -	D6545 3234 32	---- ---- -	D---- ---3 -	1111 ---- -	2111 2212 12	Q0010 0211 5
14	-321 ---1 -	4244 3242 25	Q1200 0000 3	32-- ---2 -	1211 1122 11	1112 -232 -	Q1110 1111 7
15	---- --12 -	D4234 ---5 -	Q0111 0011 5	1122 1112 11	Q1221 1001 8	2111 1333 15	D1122 2133 15
16	34-- ---- -	3323 323- -	1231 1223 15	Q1111 0-11 -	2223 1232 17	D1333 33-3 -	2233 1121 15
17	---- ---- -	1212 3--- -	D3432 1220 17	Q1121 0100 6	1122 --12 -	2323 --22 -	1221 1111 10
18	---- ---- -	-333 2221 -	1222 2211 13	112- ---- -	2112 1112 11	D2233 1322 18	Q0101 1111 6
19	---- ---- -	2--- --3- -	2221 1211 12	---- ---3 -	2112 3443 20	2112 2223 15	3222 1222 16
20	Q---- ---- -	Q---- --11 -	Q1011 0100 4	233- --2- -	D3323 3343 24	2102 2222 13	D3233 4433 25
21	---- ---2 -	Q1021 1011 7	0011 0013 6	---- ---1 -	1223 3321 17	2312 2211 14	D3333 3333 24
22	3321 2213 17	1212 122- -	4312 1011 13	1122 2313 15	2112 22-2 -	1113 1212 12	D4233 3212 20
23	2221 2112 13	---- ---- -	Q1011 1110 6	2232 2222 17	Q1001 1011 5	D3433 3224 24	2222 ---- -
24	D3269 6444 38	Q---- ---- -	1002 1123 10	1123 1223 15	1112 2222 13	3322 1212 16	
25	D6432 3322 25	Q---- ---- -	D4444 1224 25	3332 1322 19	2323 2111 15	3212 1233 17	
26	4431 0111 15	---- -233 -	2233 2221 17	2012 2122 12	0011 113- -	D3323 3454 27	
27	3221 1001 10	4432 1113 19	4102 -211 -	Q0210 12-- -	D-102 3445 -	D3112 2232 16	
28	Q2300 0112 9	4332 2212 19	1012 2121 10	1121 3233 16	D-333 3343 -	2221 1132 14	
29	343- ---- -	3212 2211 14	0001 1111 5	2023 ---- -	3332 2223 20	1101 0101 5	
30	Q---- 1--- -	1221 3222 15	--1- ---- -	D3223 -23- -	3222 1222 16	Q1101 1110 6	
31	D---- -455 -		D---- ---- -		3221 2323 18	Q0010 1211 6	
Mean K sum	17.1	22.5	11.2	13.3	14.4	13.5	13.0

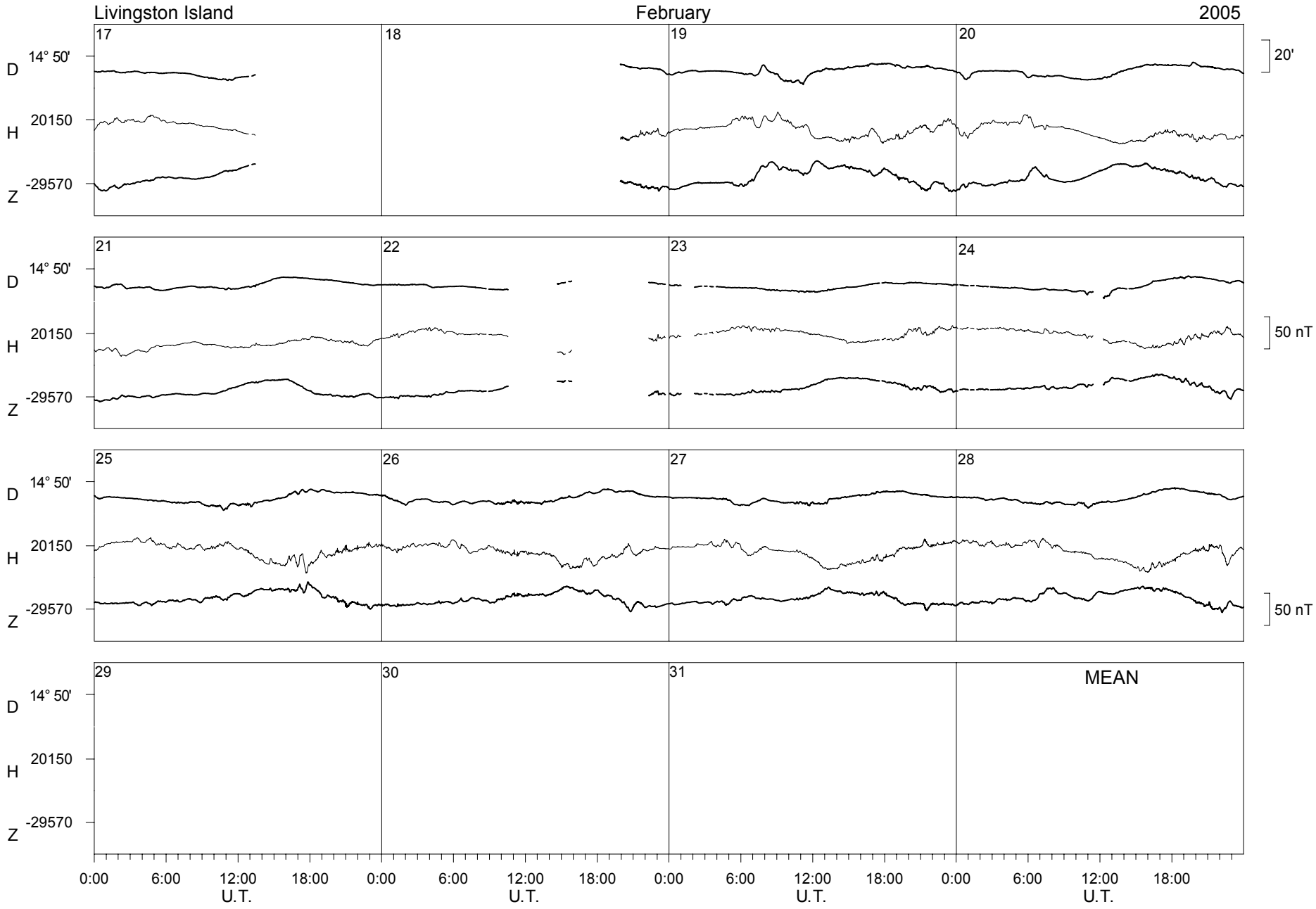
OCURRENCE DISTRIBUTION OF K INDICES

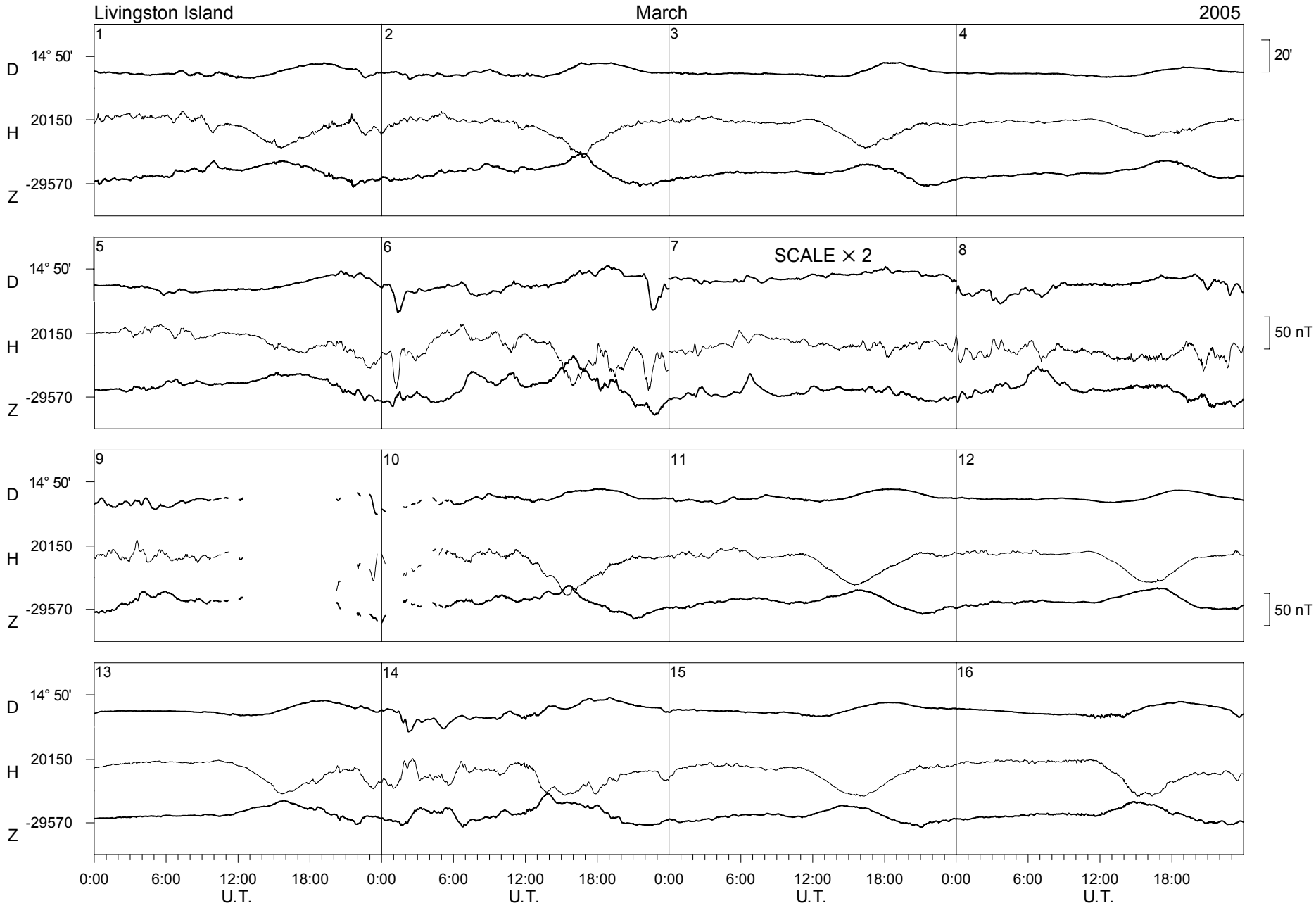
K index:	0	1	2	3	4	5	6	7	8	9	-
JAN2005	0	0	0	0	0	0	0	0	0	0	248
FEB2005	2	41	56	44	14	2	1	0	0	0	64
MAR2005	29	73	56	51	25	2	2	0	0	0	10
APR2005	63	50	59	32	20	4	2	1	0	0	9
MAY2005	48	58	45	44	24	12	5	0	0	0	12
JUN2005	49	65	37	29	14	8	2	0	0	0	36
JUL2005	27	38	55	41	16	12	0	0	0	0	59
AUG2005	14	48	44	36	18	4	3	0	0	1	80
SEP2005	4	31	53	44	25	16	2	1	1	0	63
OCT2005	35	67	43	20	9	0	0	0	0	0	74
NOV2005	16	54	63	31	4	0	0	0	0	0	72
DEC2005	15	74	76	51	8	1	0	0	0	0	23
2005 TOTAL	302	599	587	423	177	61	17	2	1	1	750
JAN2006	17	86	93	43	4	1	0	0	0	0	4
FEB2006	17	71	58	30	4	0	0	0	0	0	4

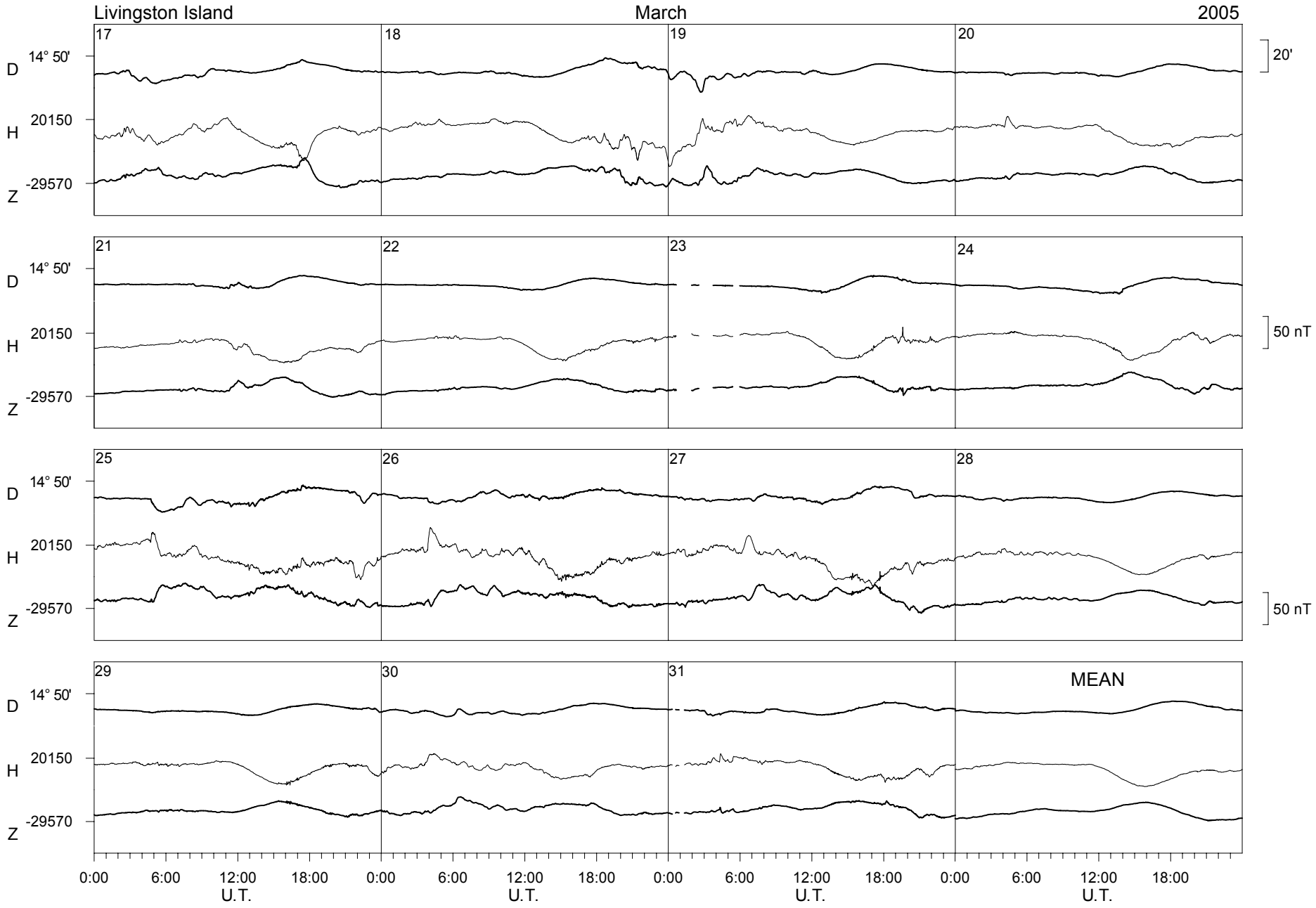

Livingston Island
January
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20170
-29620
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

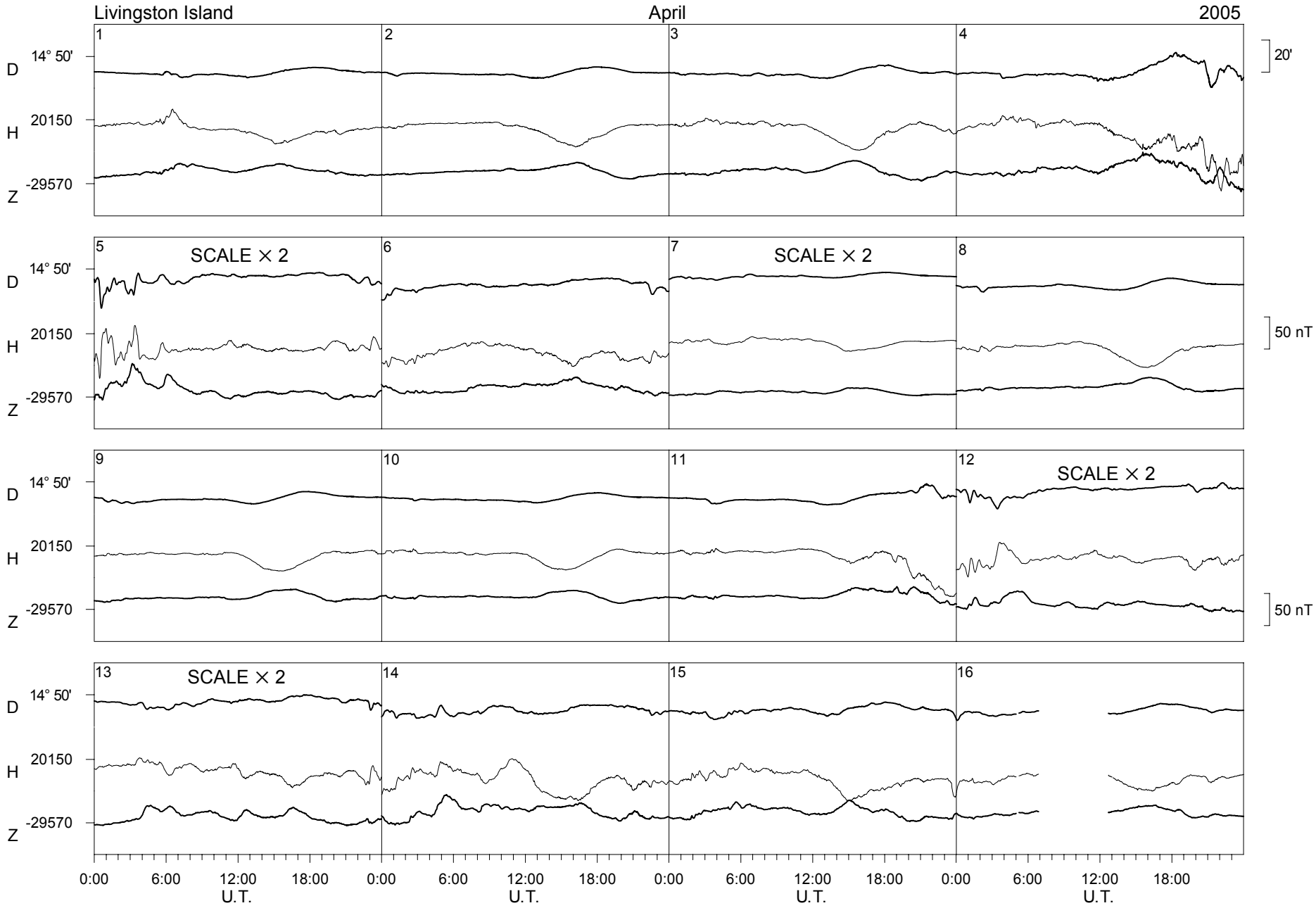

Livingston Island
January
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20170
-29610
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

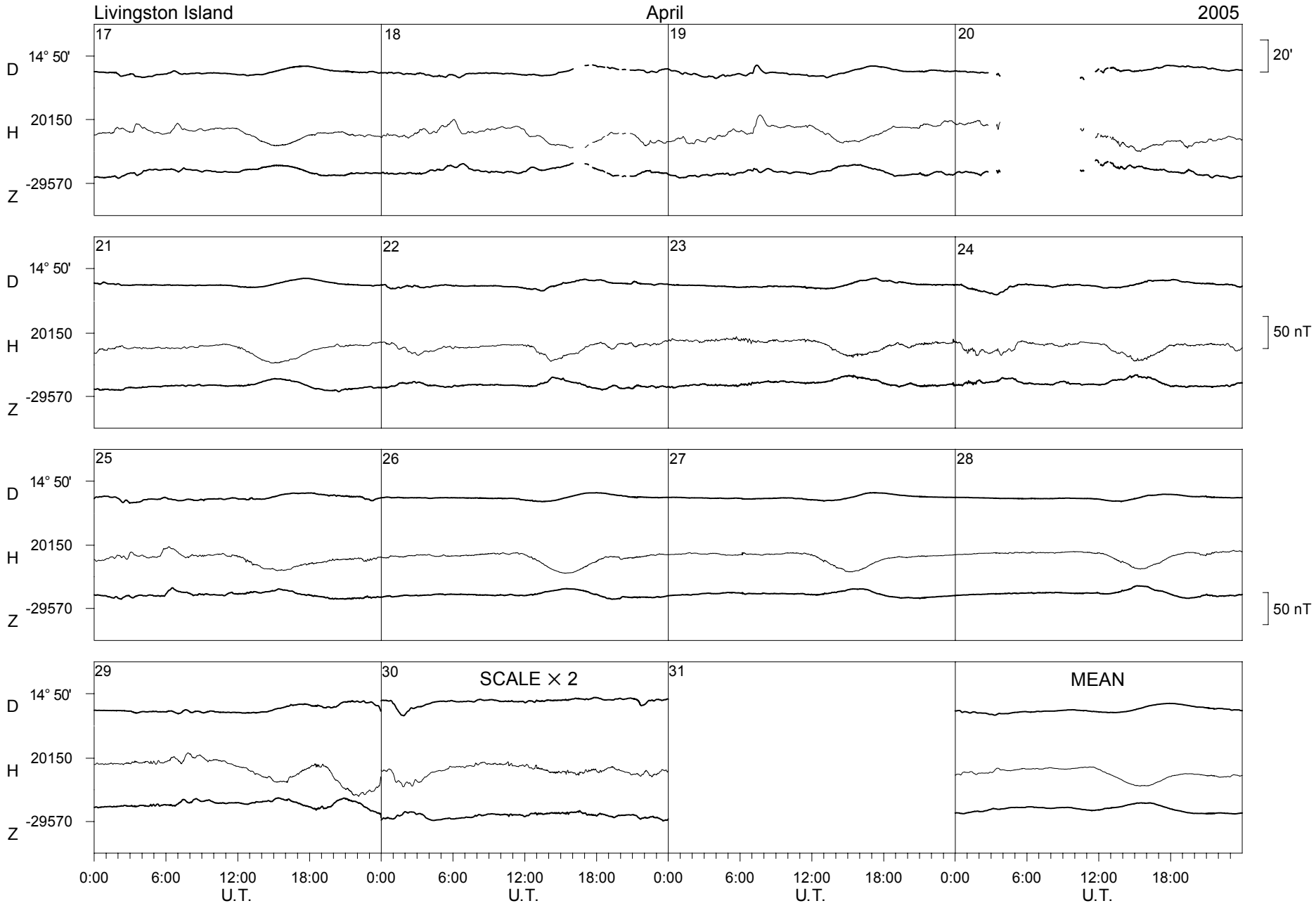

Livingston Island
February
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20150
-29570
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

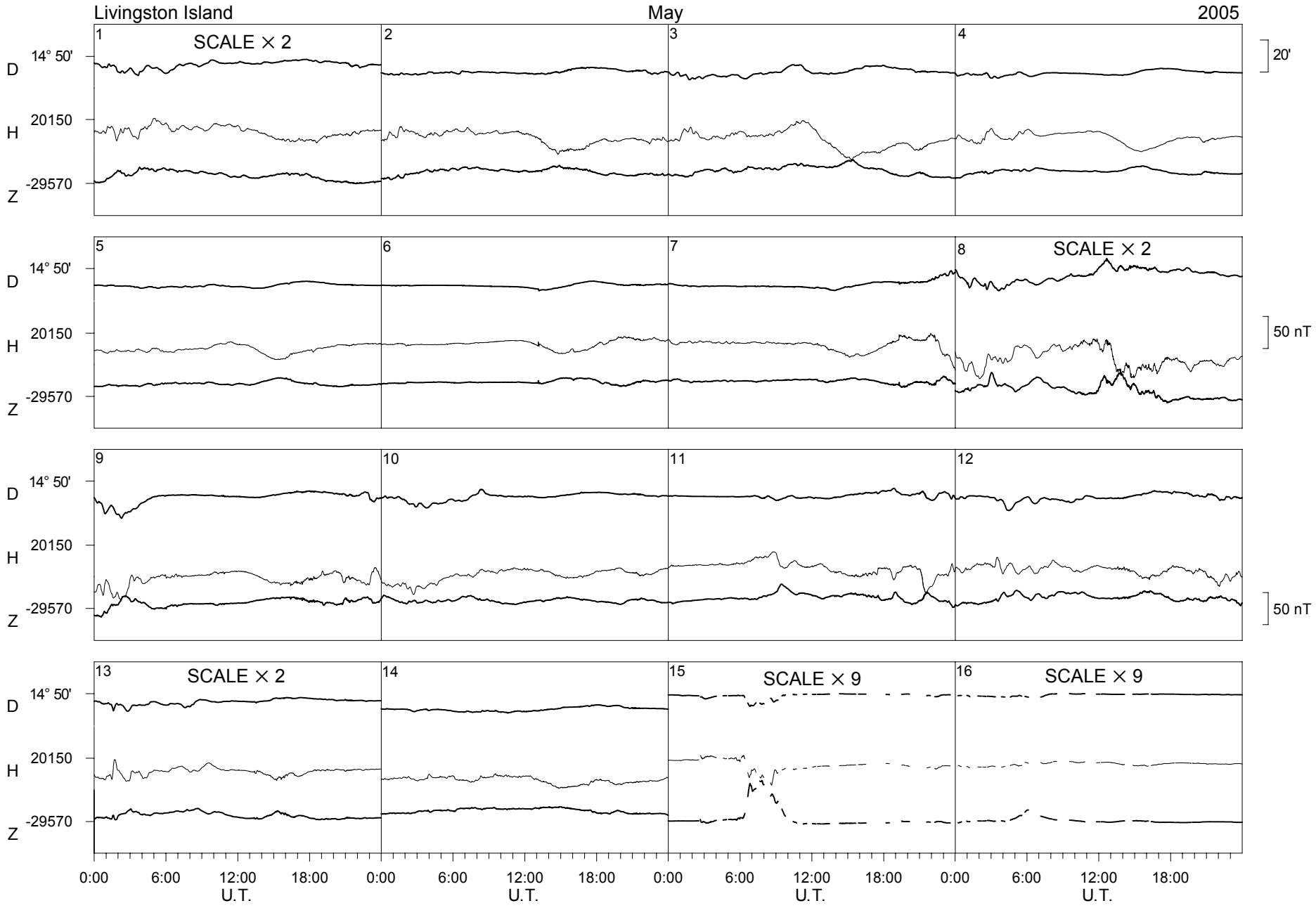

Livingston Island
February
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20150
-29570
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

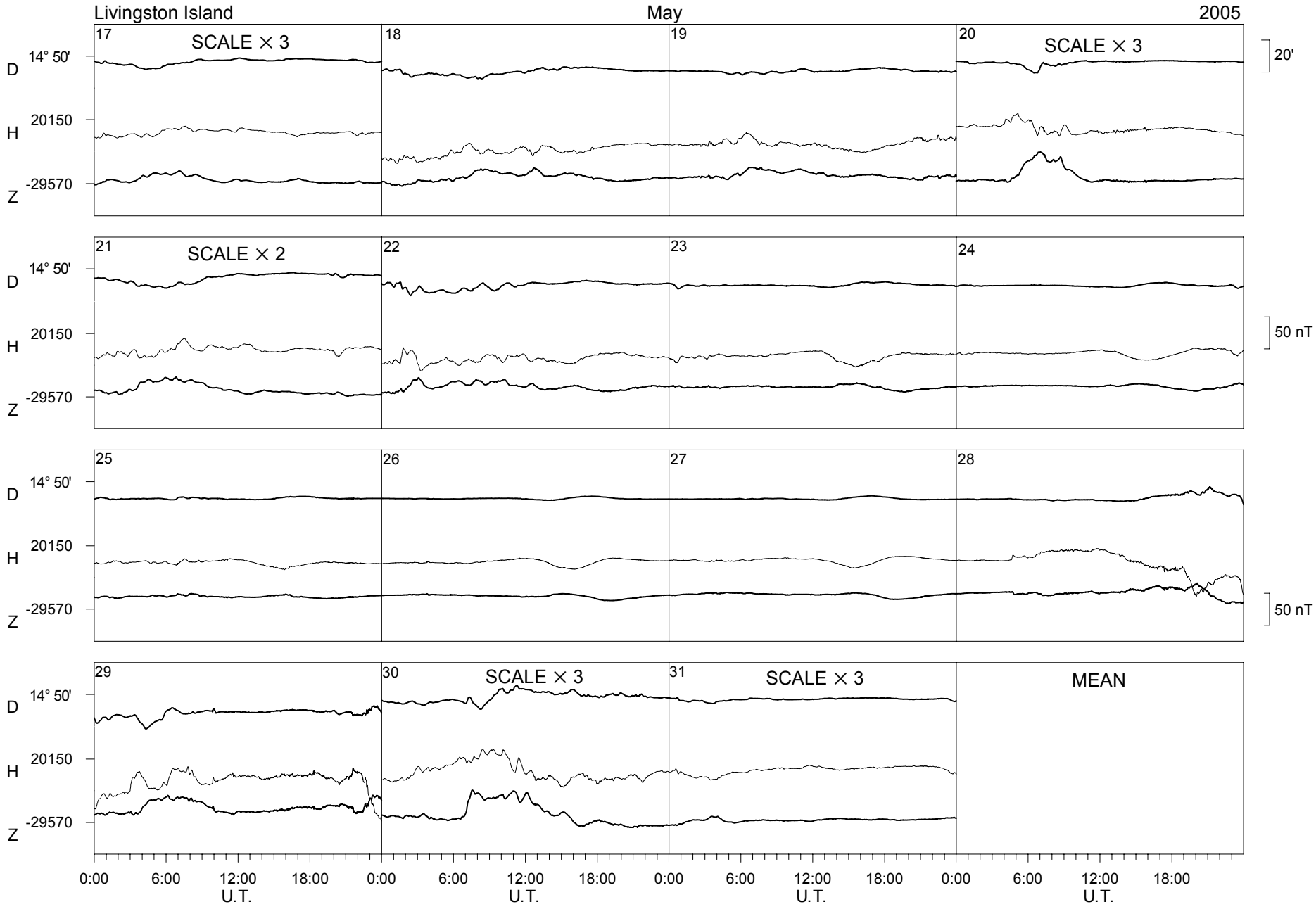

Livingston Island
March
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20150
-29570
20'
50 nT
SCALE × 2
0:00
6:00
12:00
18:00
U.T.

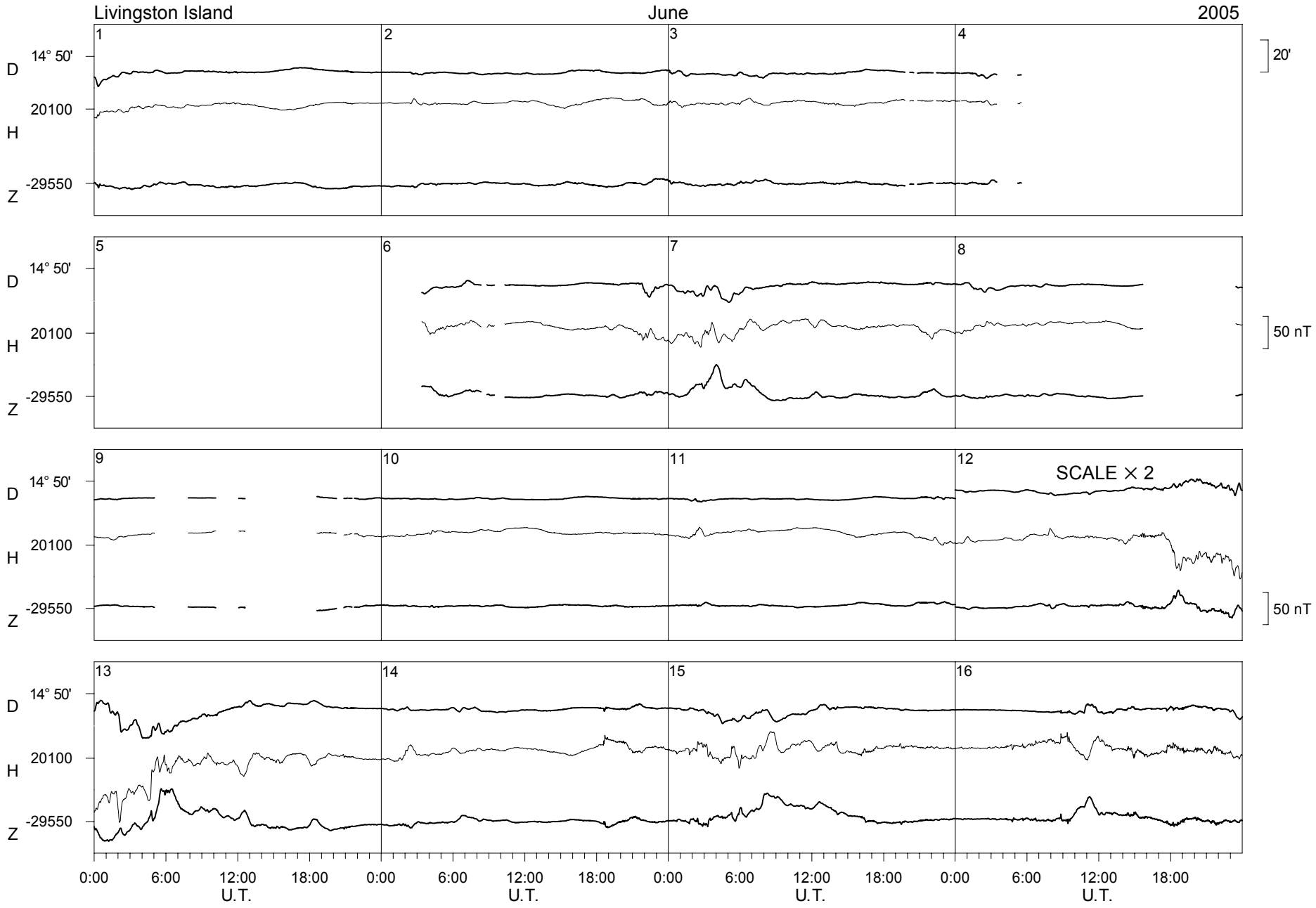

Livingston Island
March
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20150
-29570
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

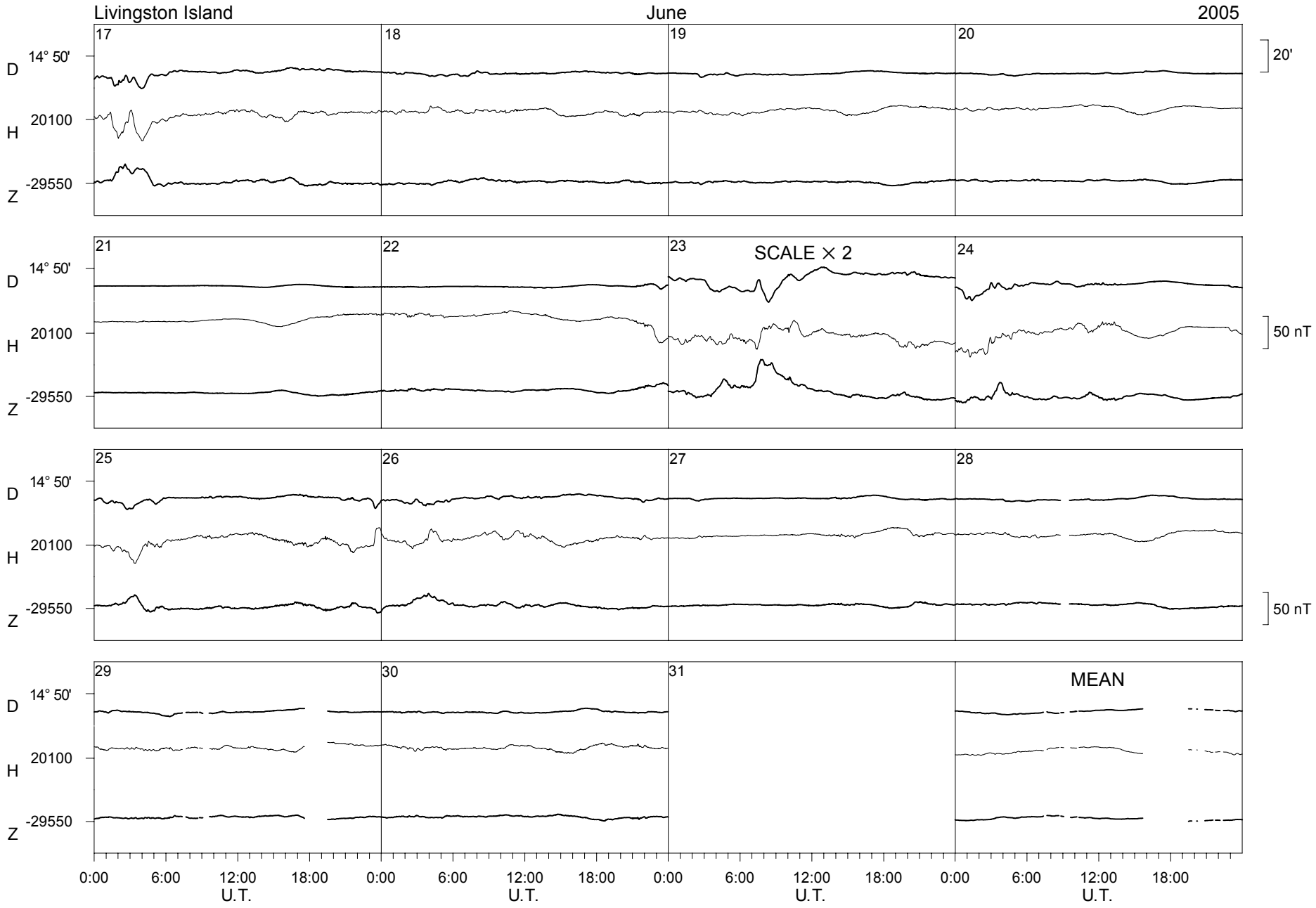

Livingston Island
April
2005
1
2
3
4
5
SCALE × 2
6
7
SCALE × 2
8
9
10
11
12
SCALE × 2
13
SCALE × 2
14
15
16
D
H
Z
14° 50'
20150
-29570
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

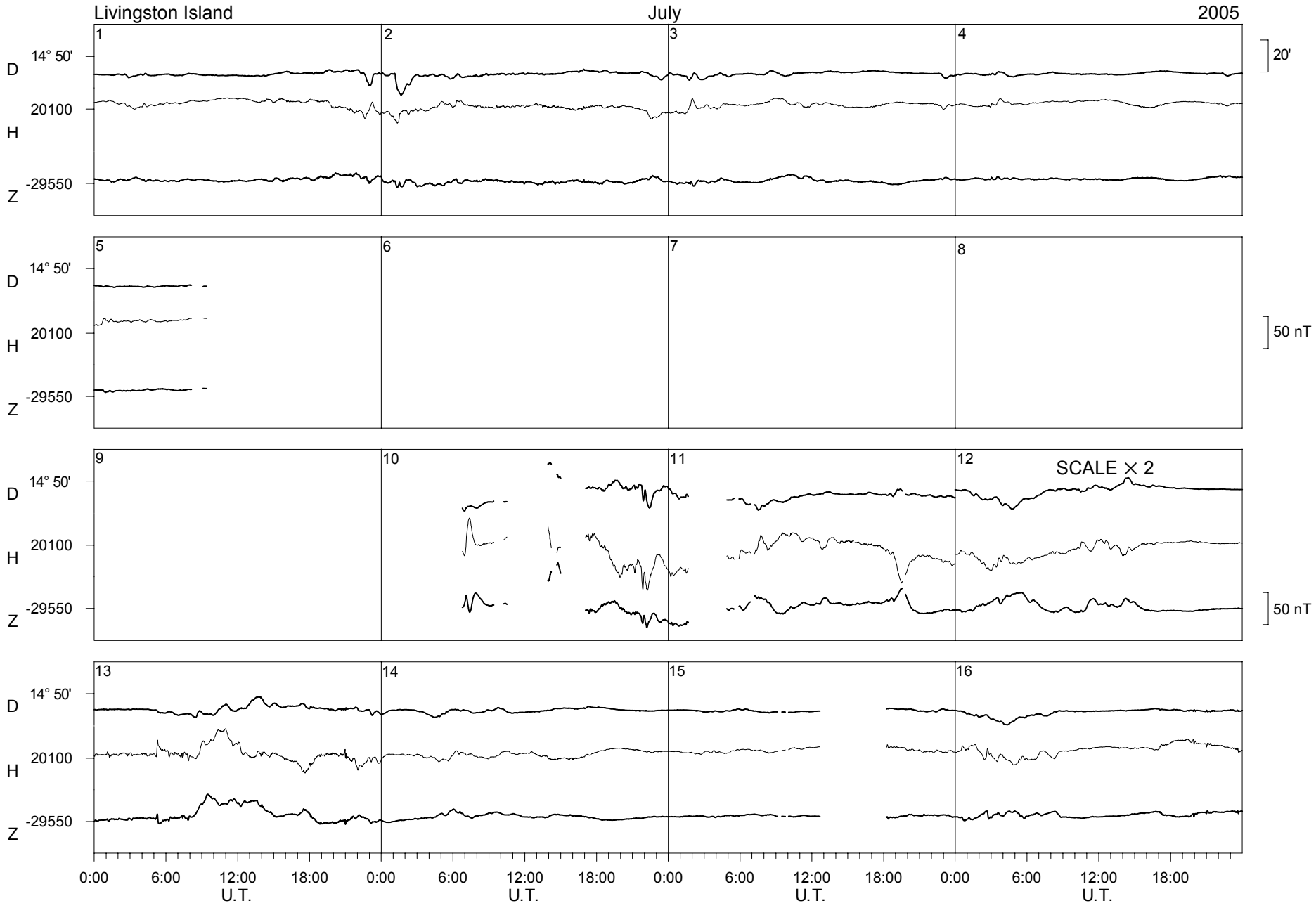

Livingston Island
April
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
D
H
Z
14° 50'
20150
-29570
20'
50 nT
50 nT
SCALE × 2
MEAN
0:00
6:00
12:00
18:00
U.T.

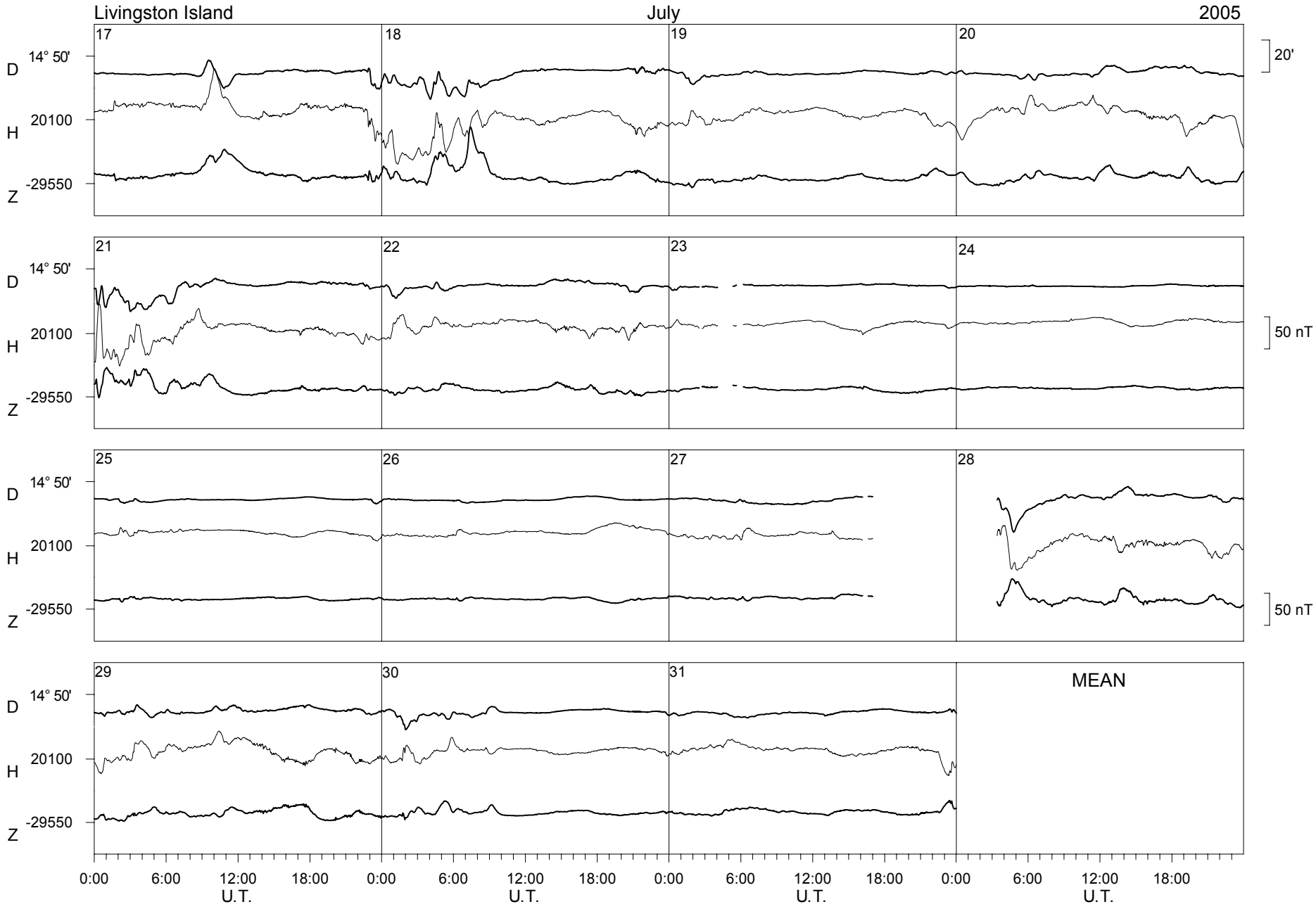

Livingston Island
May
2005
1
SCALE × 2
2
3
4
20'
D
H
Z
14° 50'
20150
-29570
5
6
7
8
SCALE × 2
50 nT
9
10
11
12
50 nT
13
SCALE × 2
14
15
SCALE × 9
16
SCALE × 9
0:00
6:00
12:00
18:00
U.T.

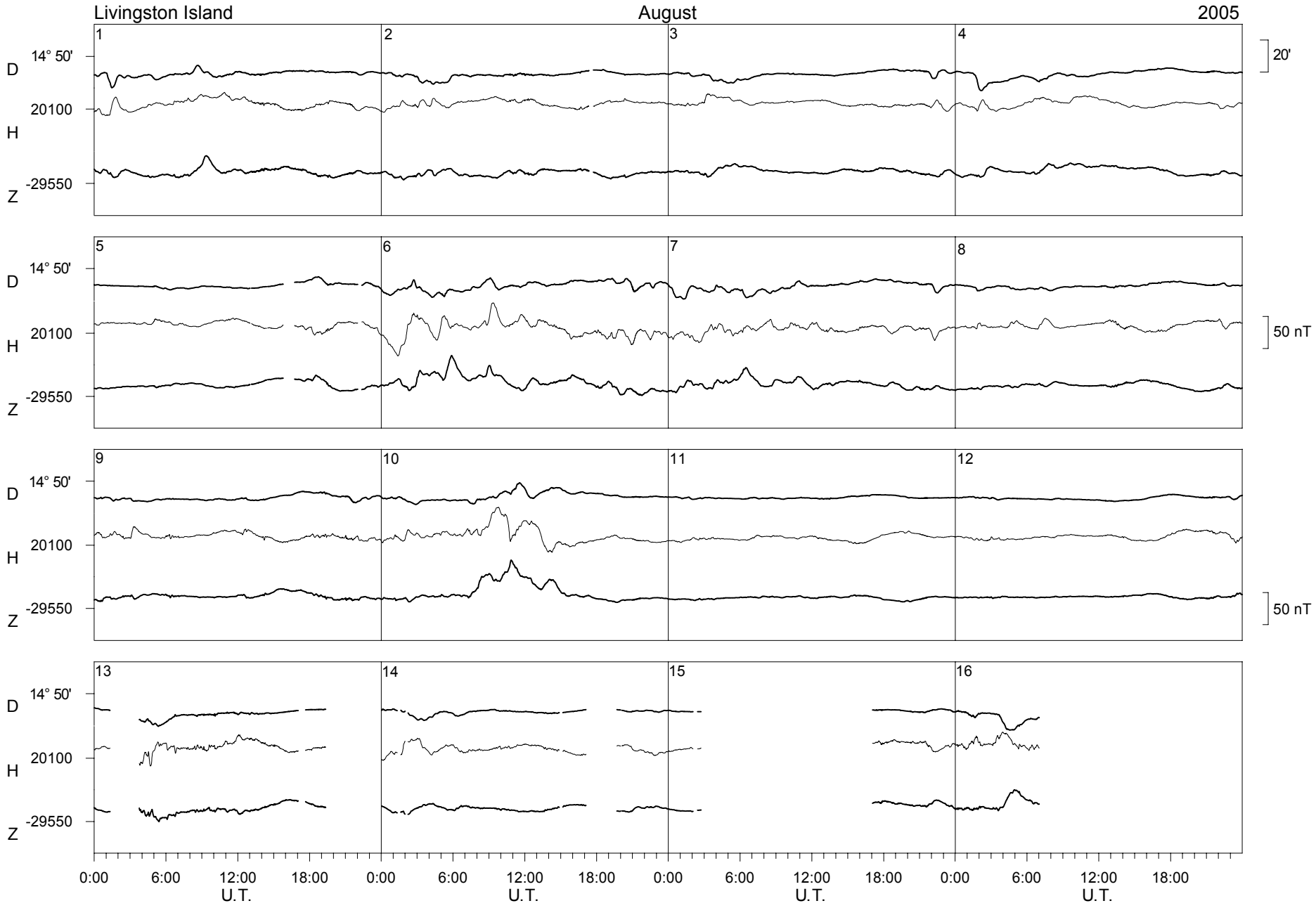

Livingston Island
May
2005
17
SCALE × 3
18
19
20
SCALE × 3
20'
D
H
Z
14° 50'
20150
-29570
21
SCALE × 2
22
23
24
50 nT
25
26
27
28
50 nT
29
30
SCALE × 3
31
SCALE × 3
MEAN
0:00
6:00
12:00
18:00
U.T.

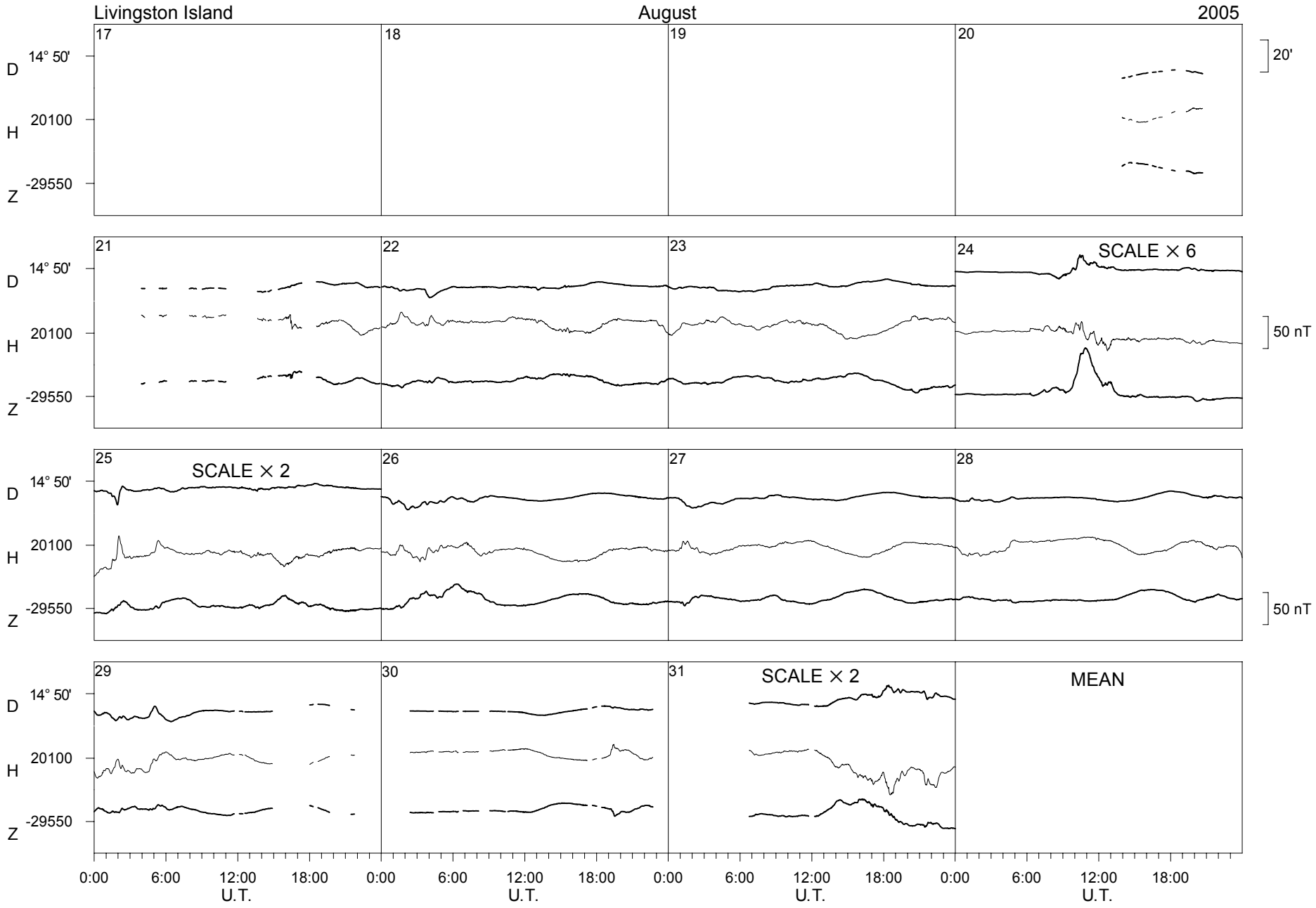

Livingston Island
June
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29550
20'
50 nT
SCALE × 2
0:00
6:00
12:00
18:00
U.T.

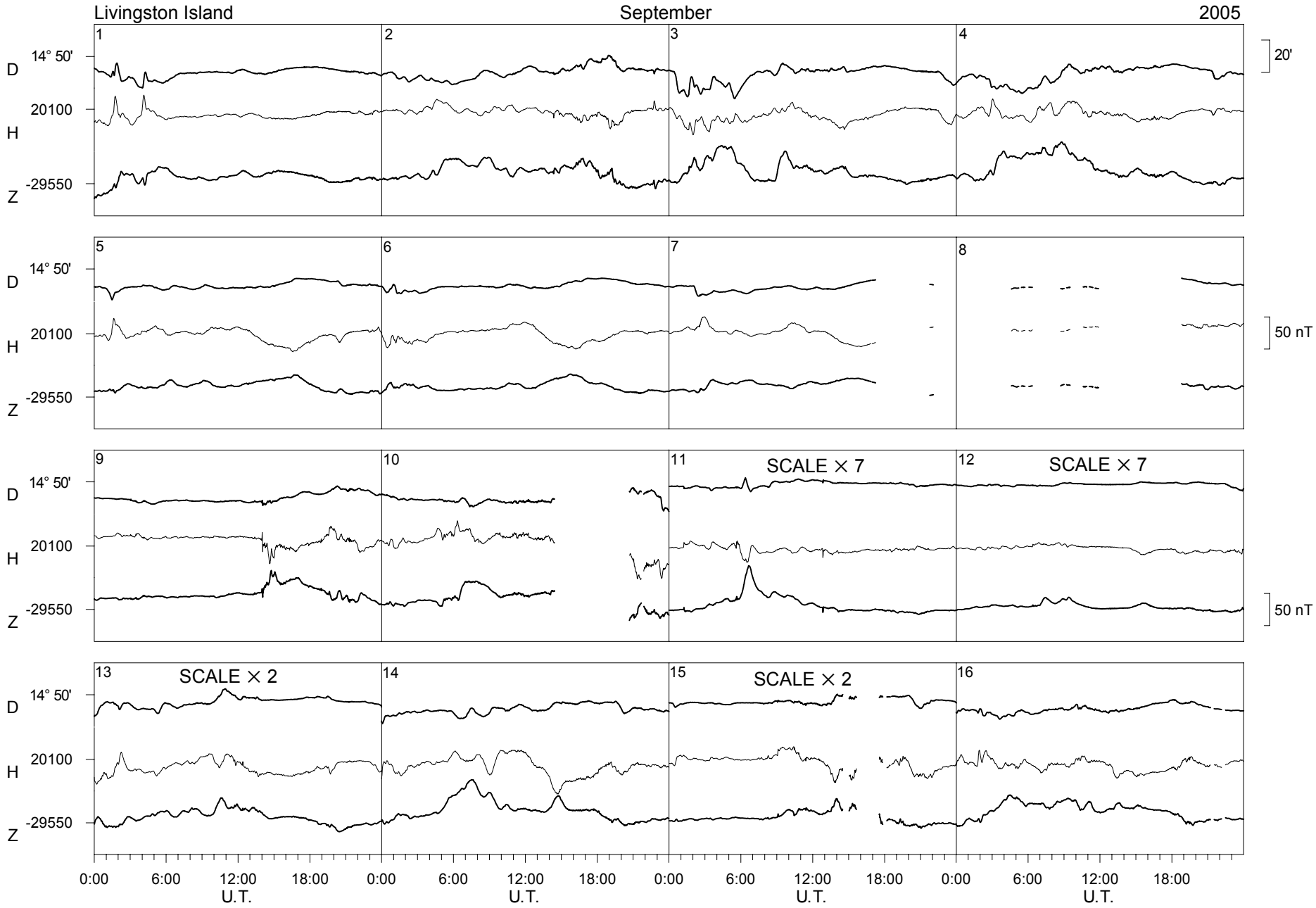

Livingston Island
June
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
D
H
Z
14° 50'
20100
-29550
20'
SCALE × 2
50 nT
50 nT
MEAN
0:00
6:00
12:00
18:00
U.T.

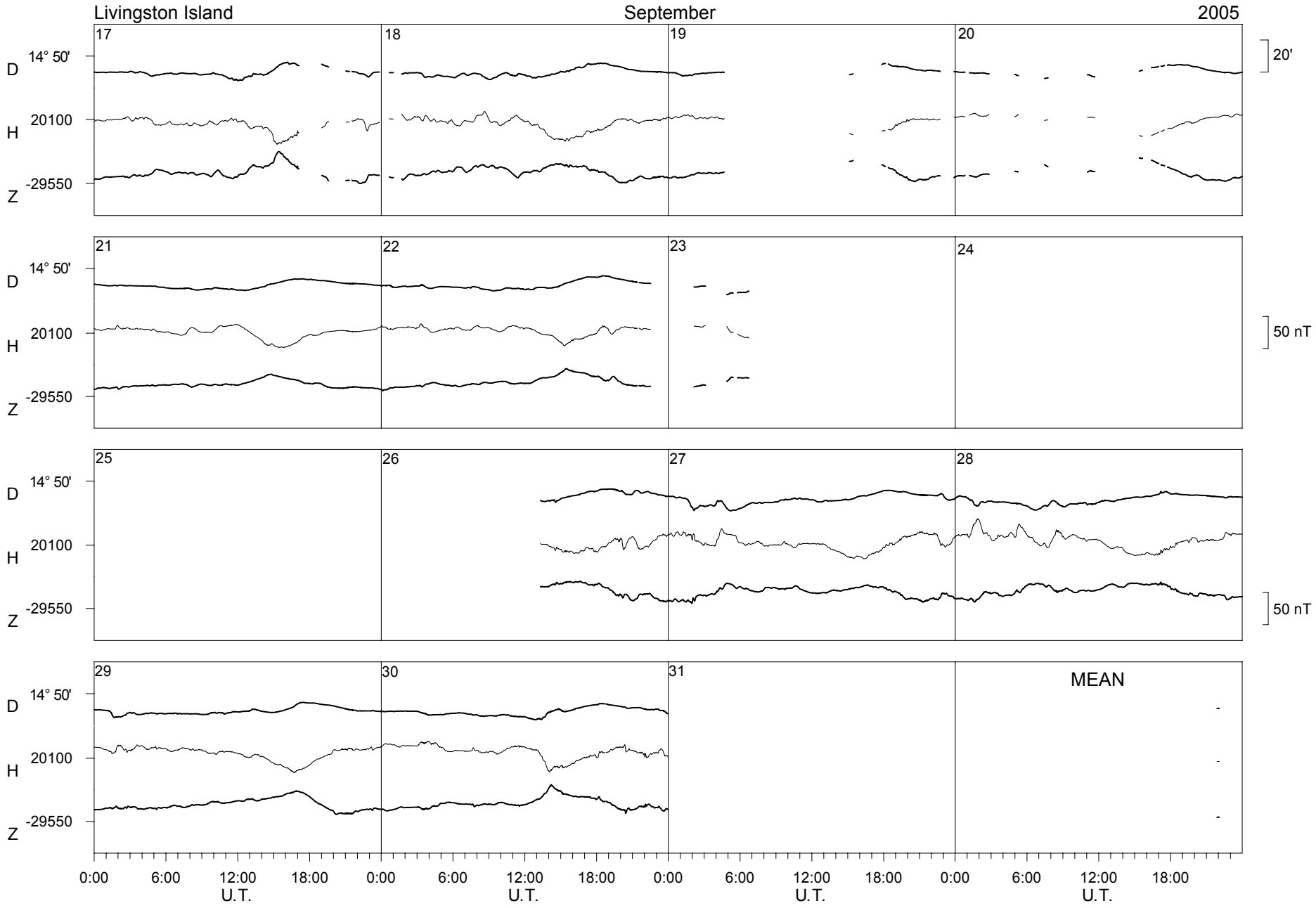

Livingston Island
July
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
SCALE × 2
0:00
6:00
12:00
18:00
U.T.

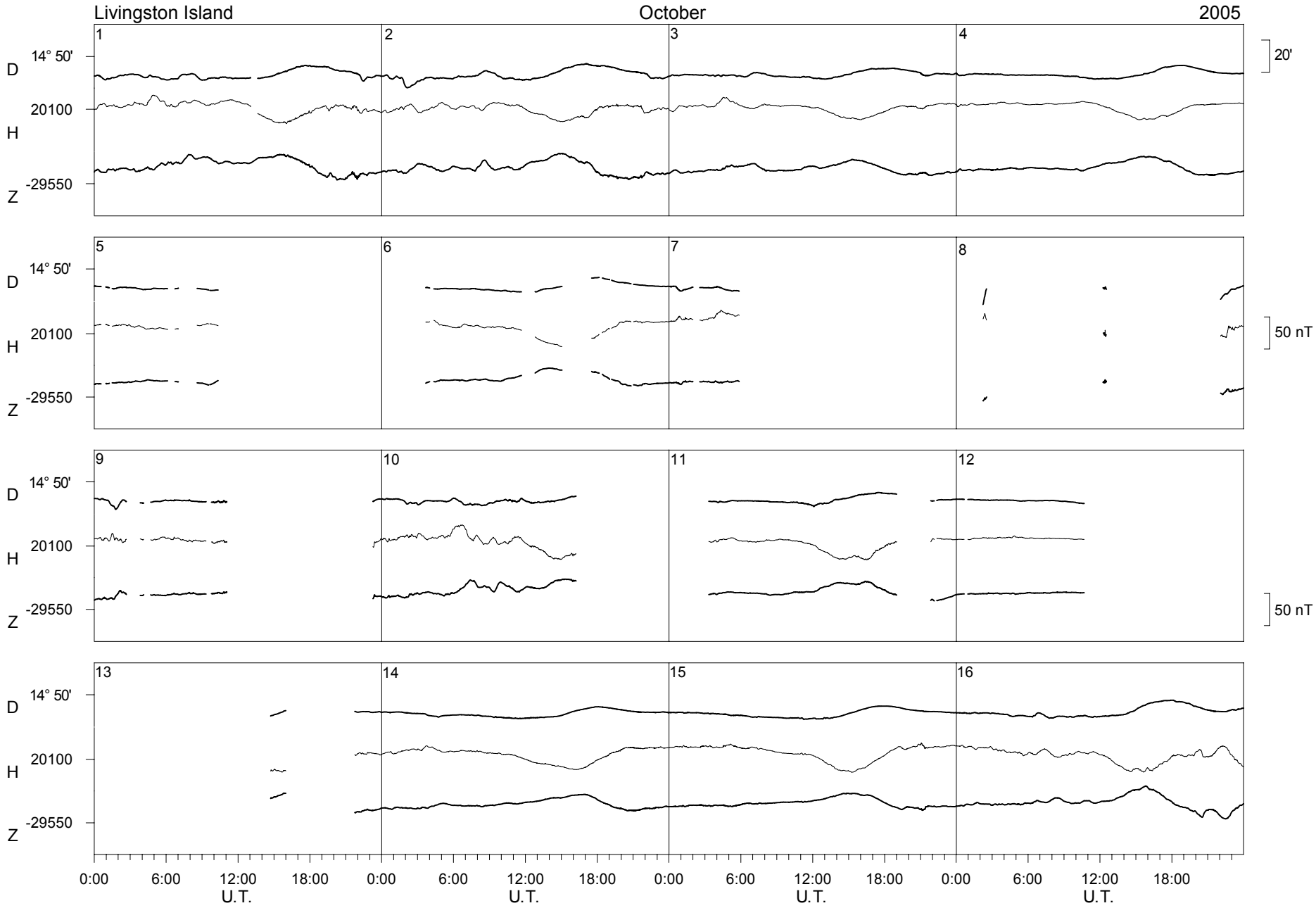

Livingston Island
July
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

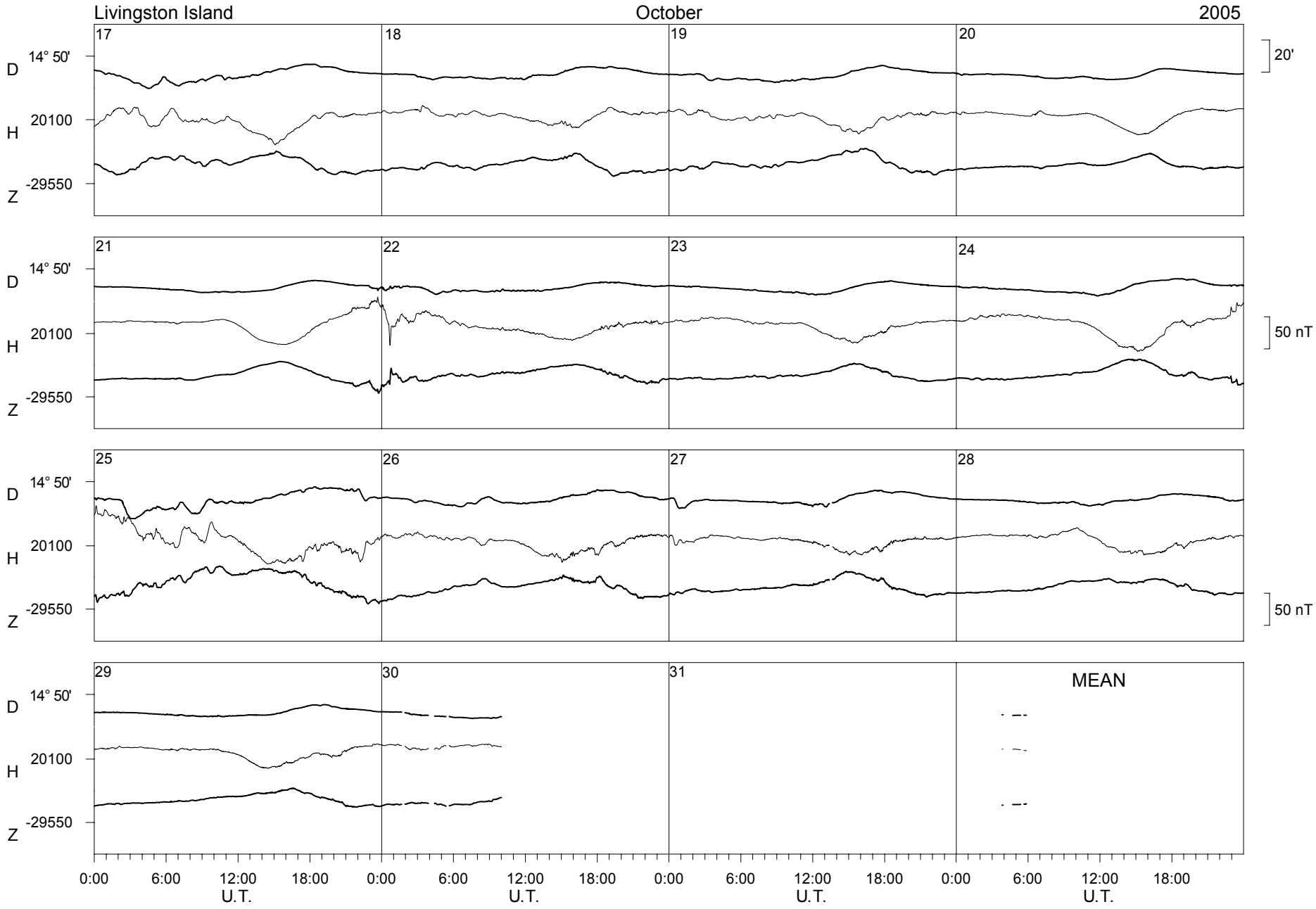

Livingston Island
August
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

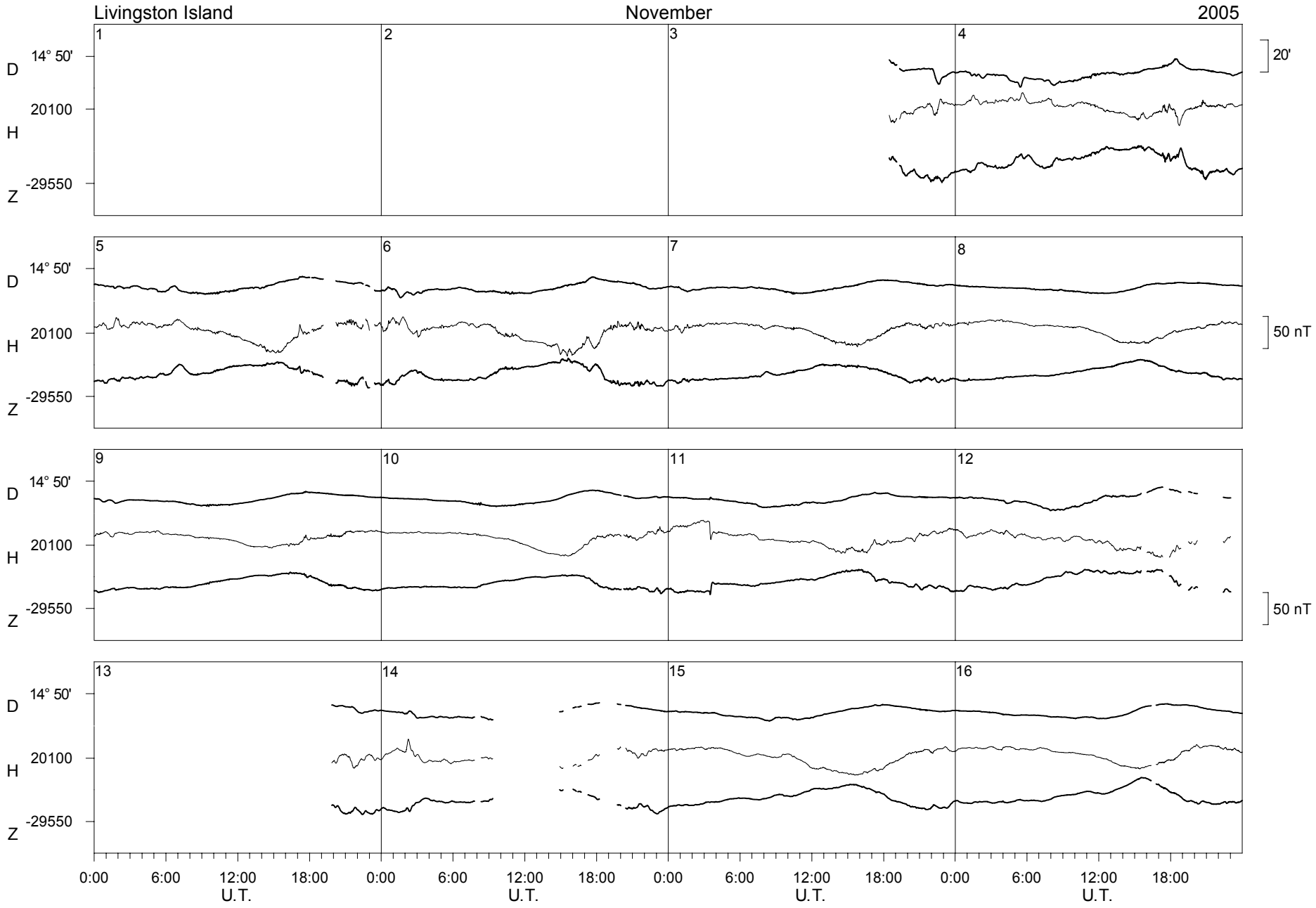

Livingston Island
August
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
SCALE × 6
SCALE × 2
SCALE × 2
MEAN
0:00
6:00
12:00
18:00
U.T.

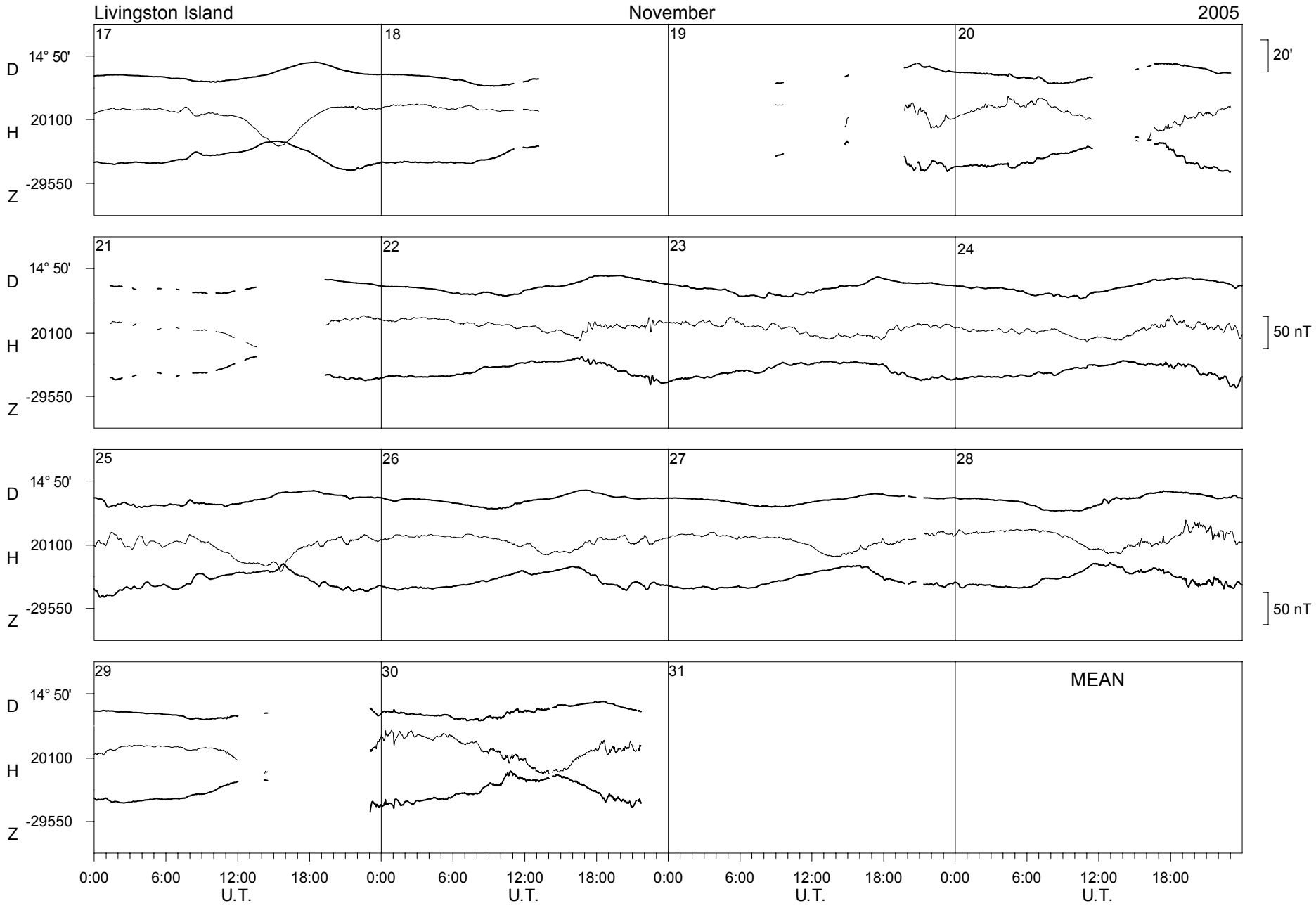

Livingston Island
September
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
SCALE × 7
SCALE × 7
SCALE × 2
SCALE × 2
0:00
6:00
12:00
18:00
U.T.

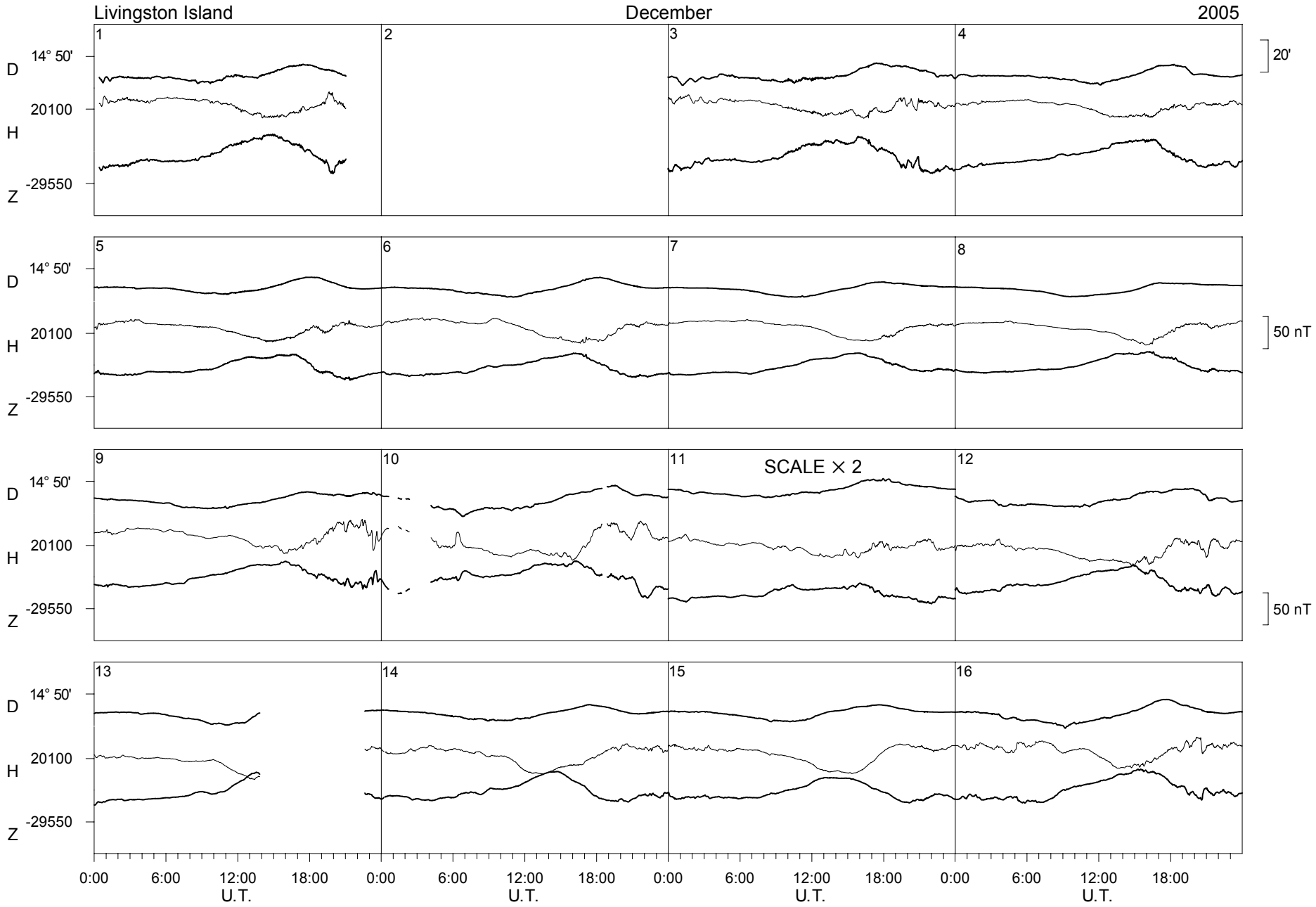

Livingston Island
September
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

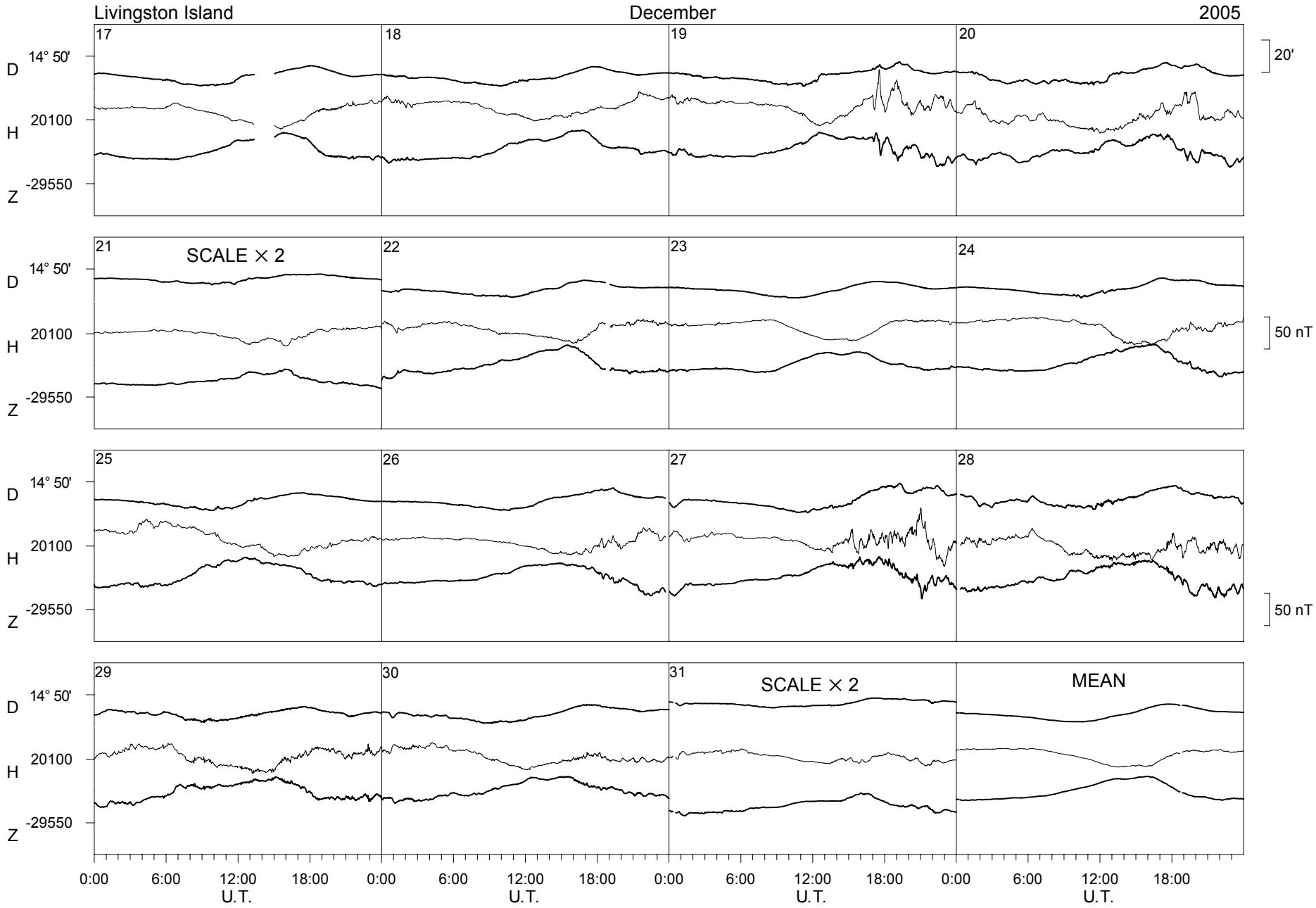

Livingston Island
October
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

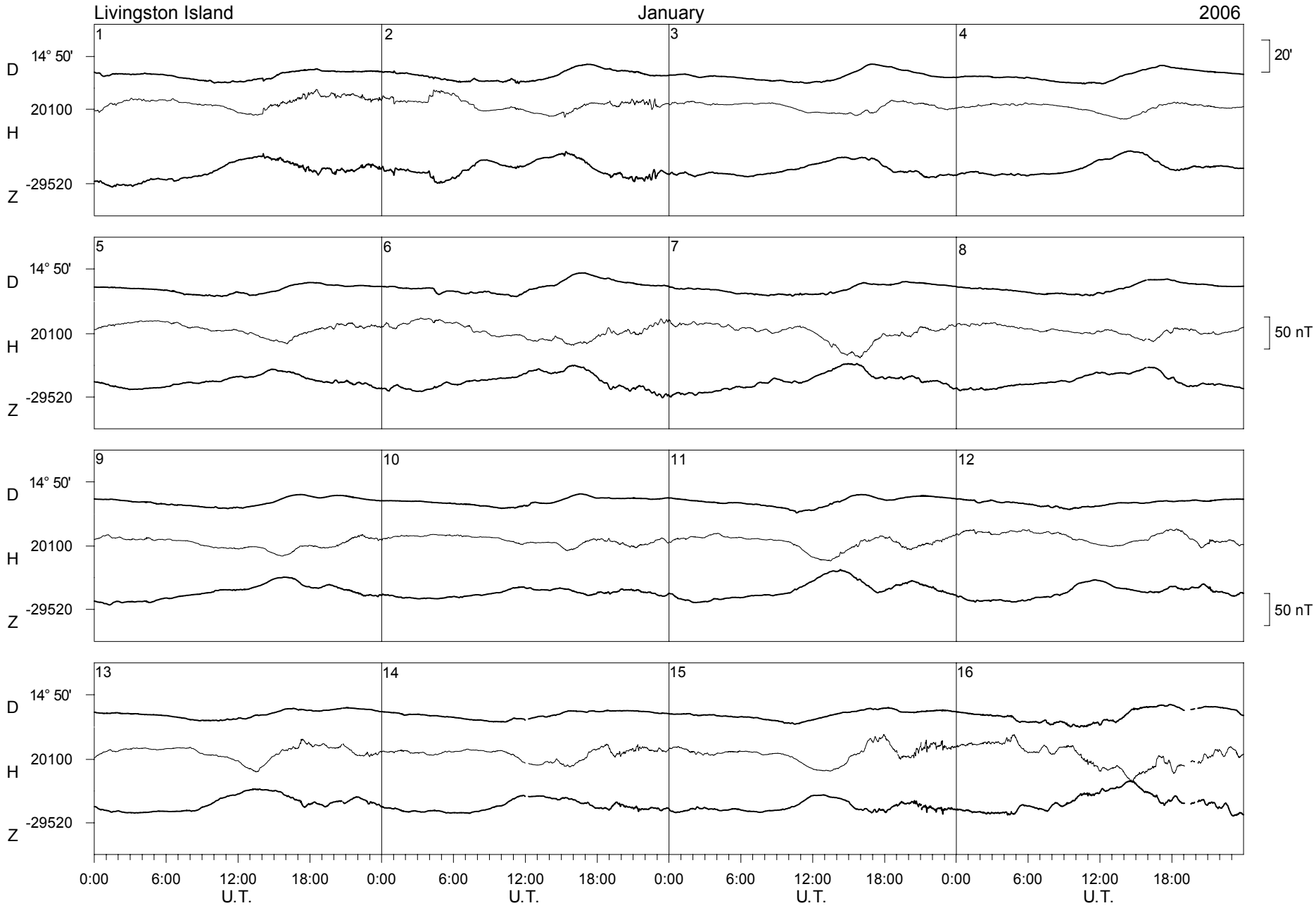

Livingston Island
October
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

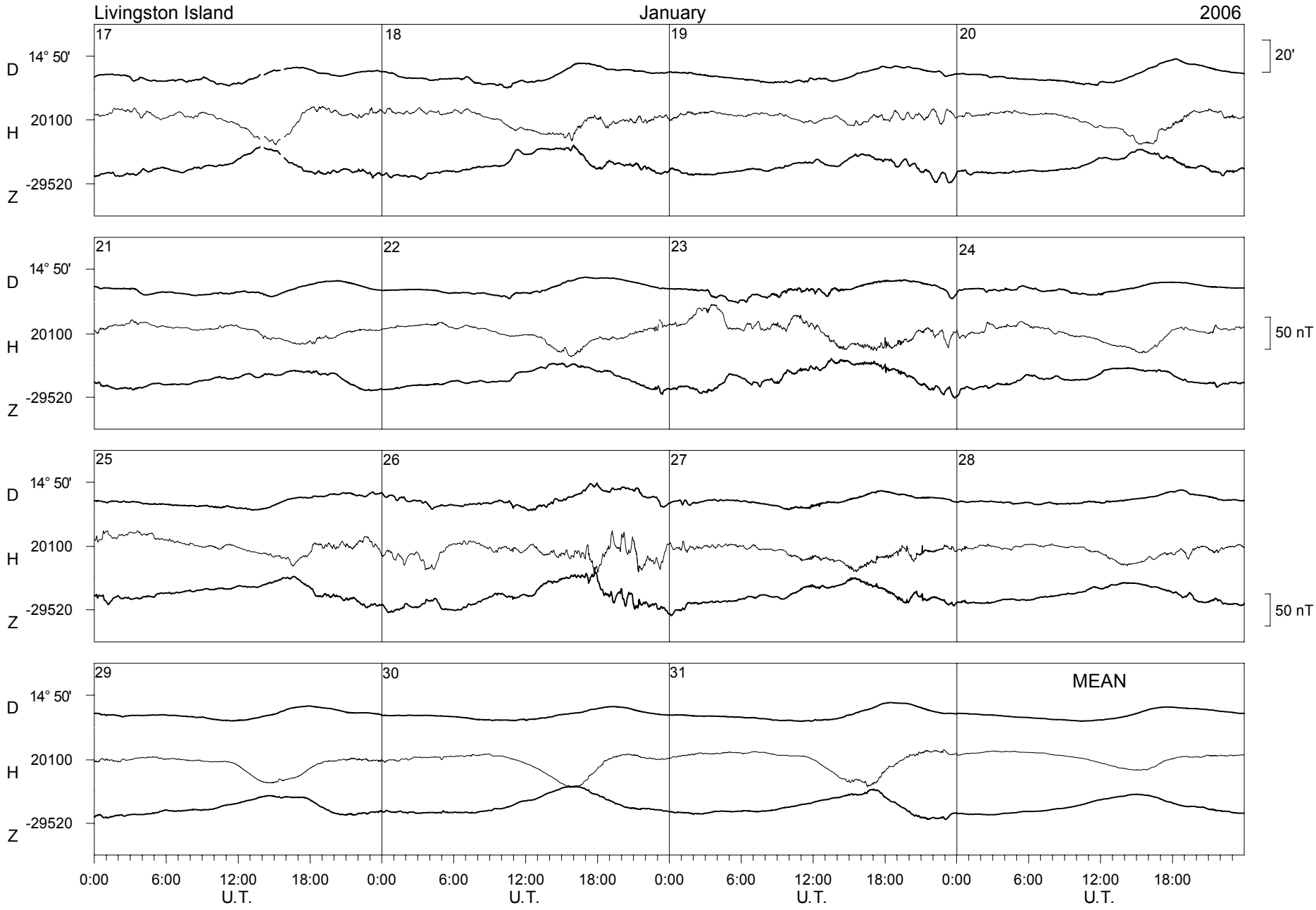

Livingston Island
November
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

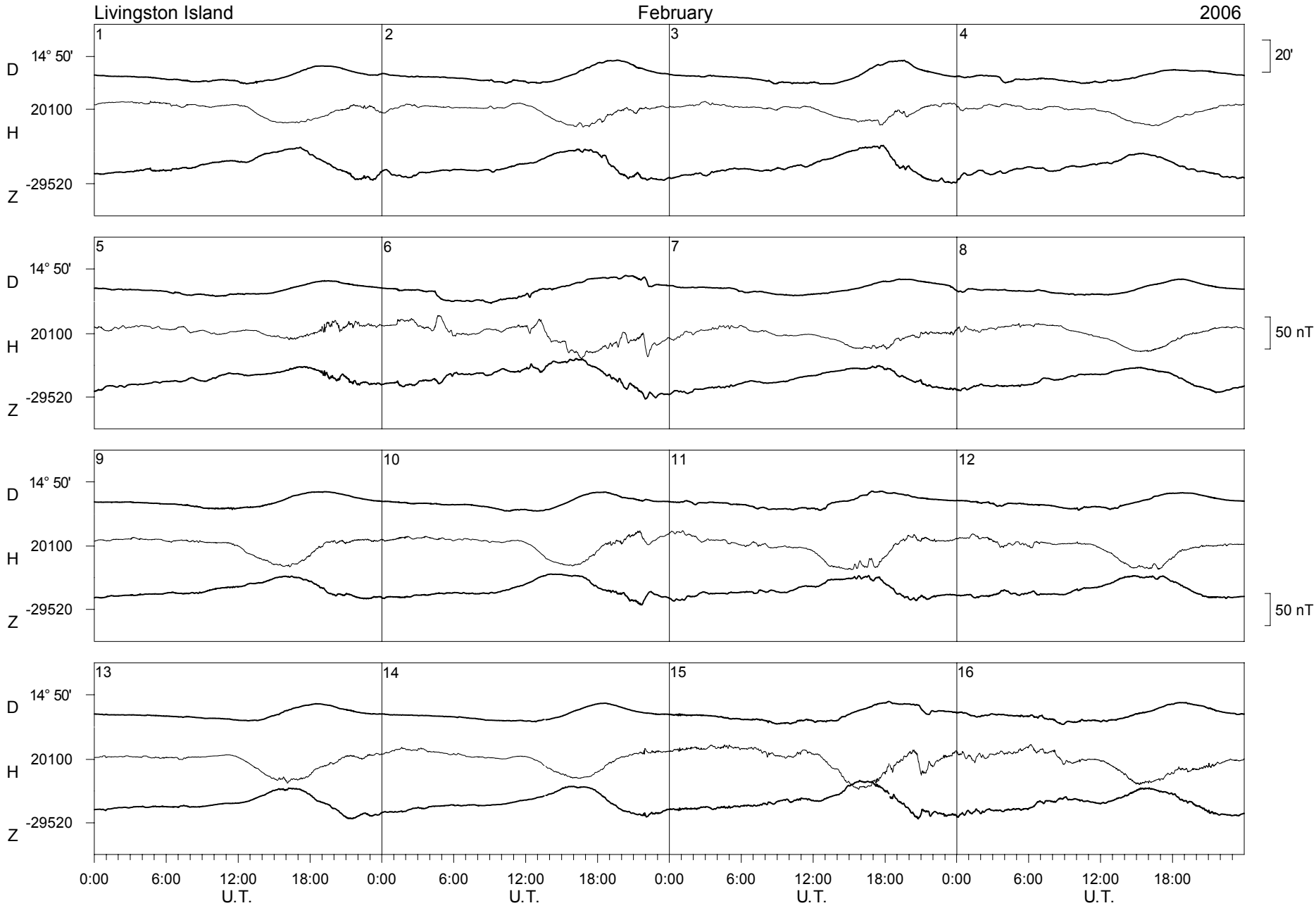

Livingston Island
November
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

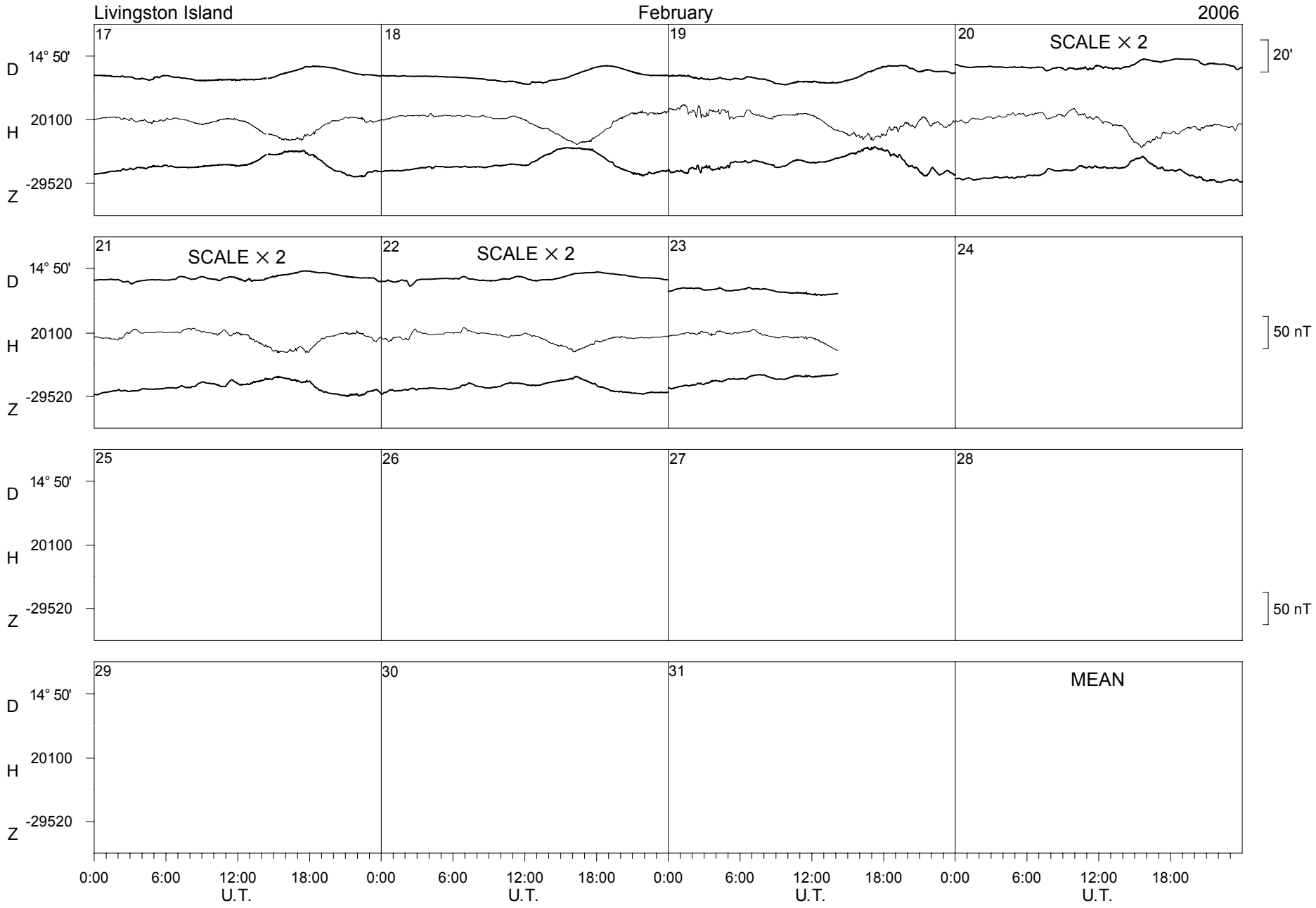

Livingston Island
December
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
SCALE × 2
0:00
6:00
12:00
18:00
U.T.

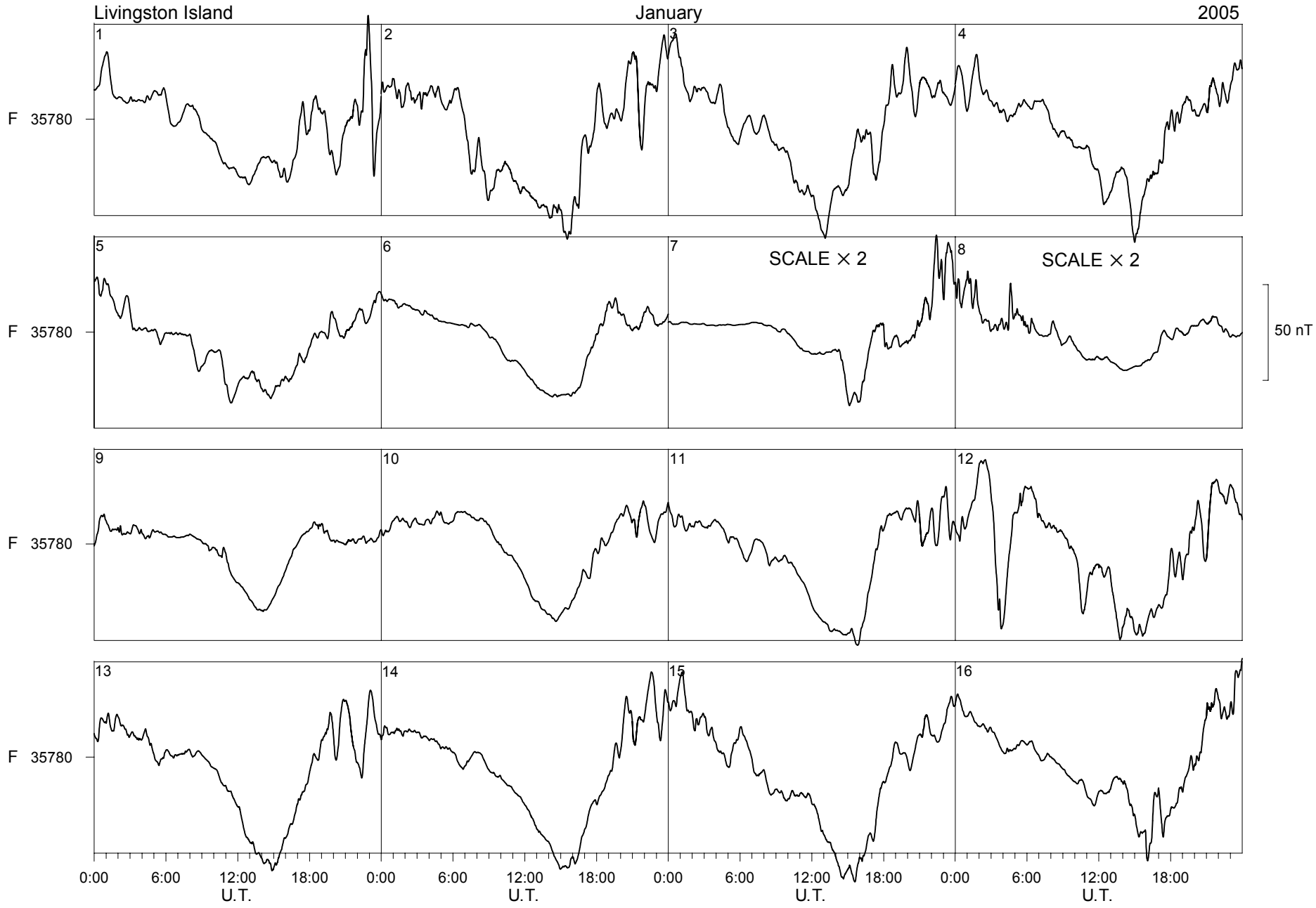

Livingston Island
December
2005
17
18
19
20
21
SCALE × 2
22
23
24
25
26
27
28
29
30
31
SCALE × 2
MEAN
D
H
Z
14° 50'
20100
-29550
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

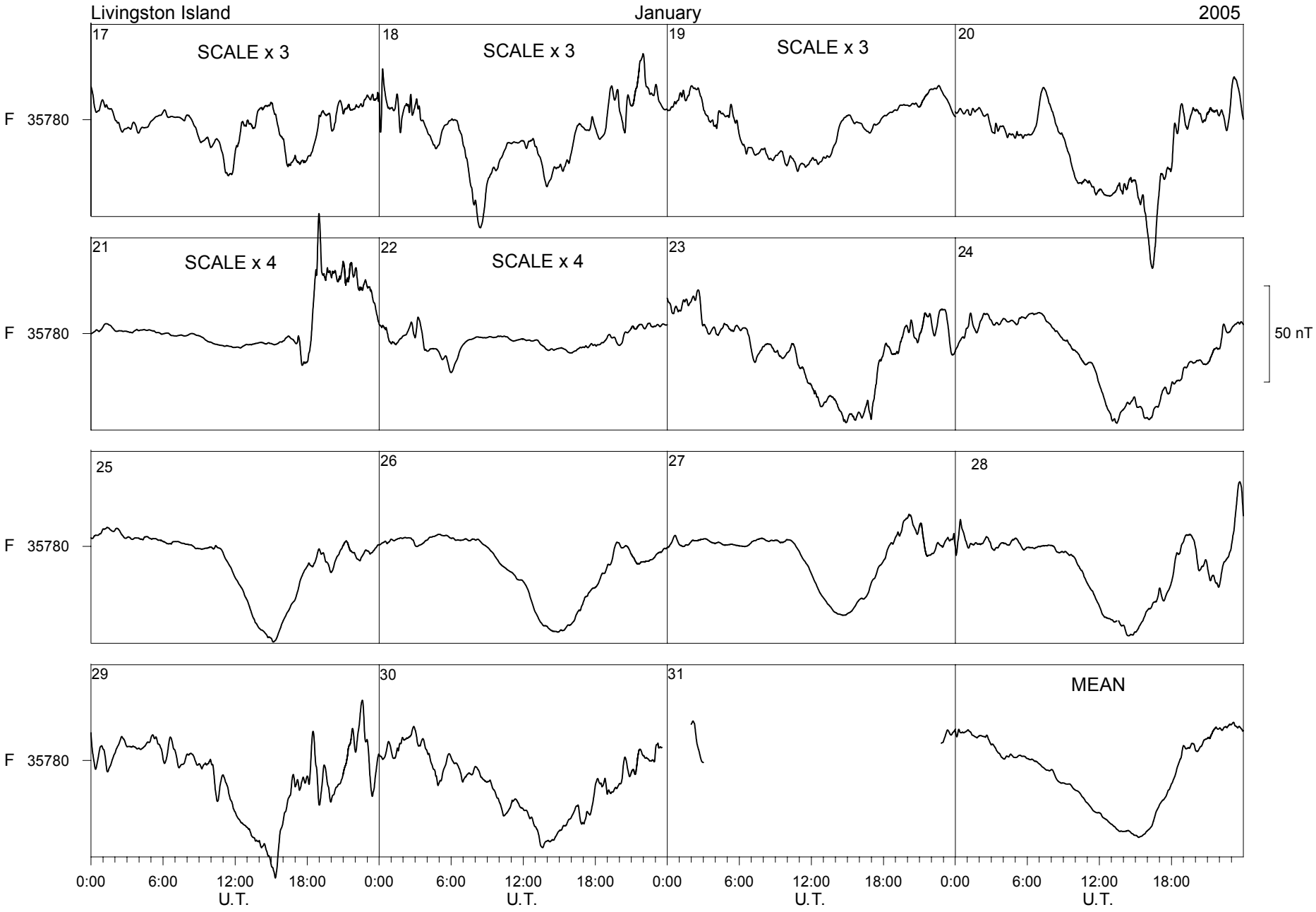

Livingston Island
January
2006
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29520
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

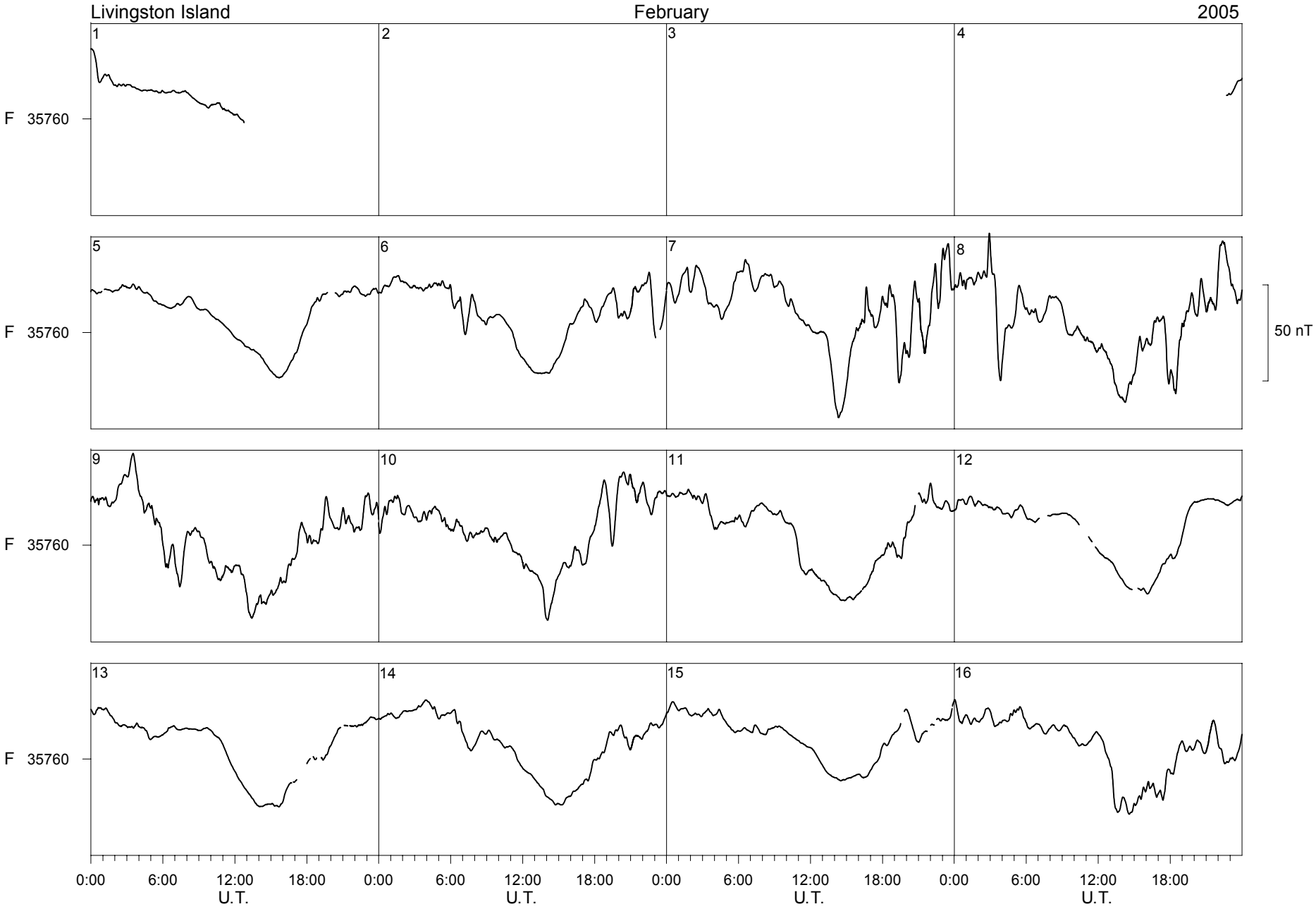

Livingston Island
January
2006
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20100
-29520
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

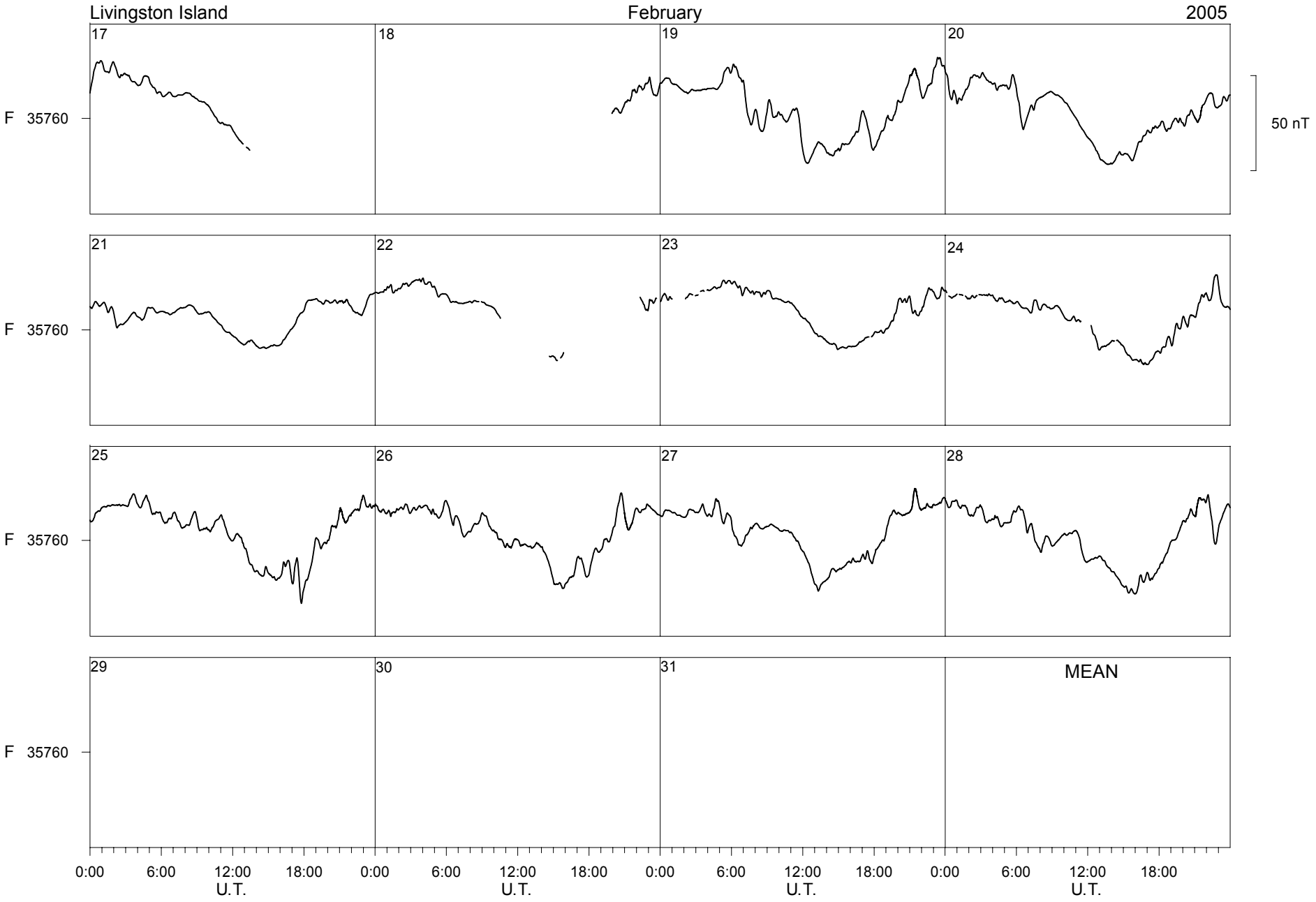

Livingston Island
February
2006
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
D
H
Z
14° 50'
20100
-29520
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

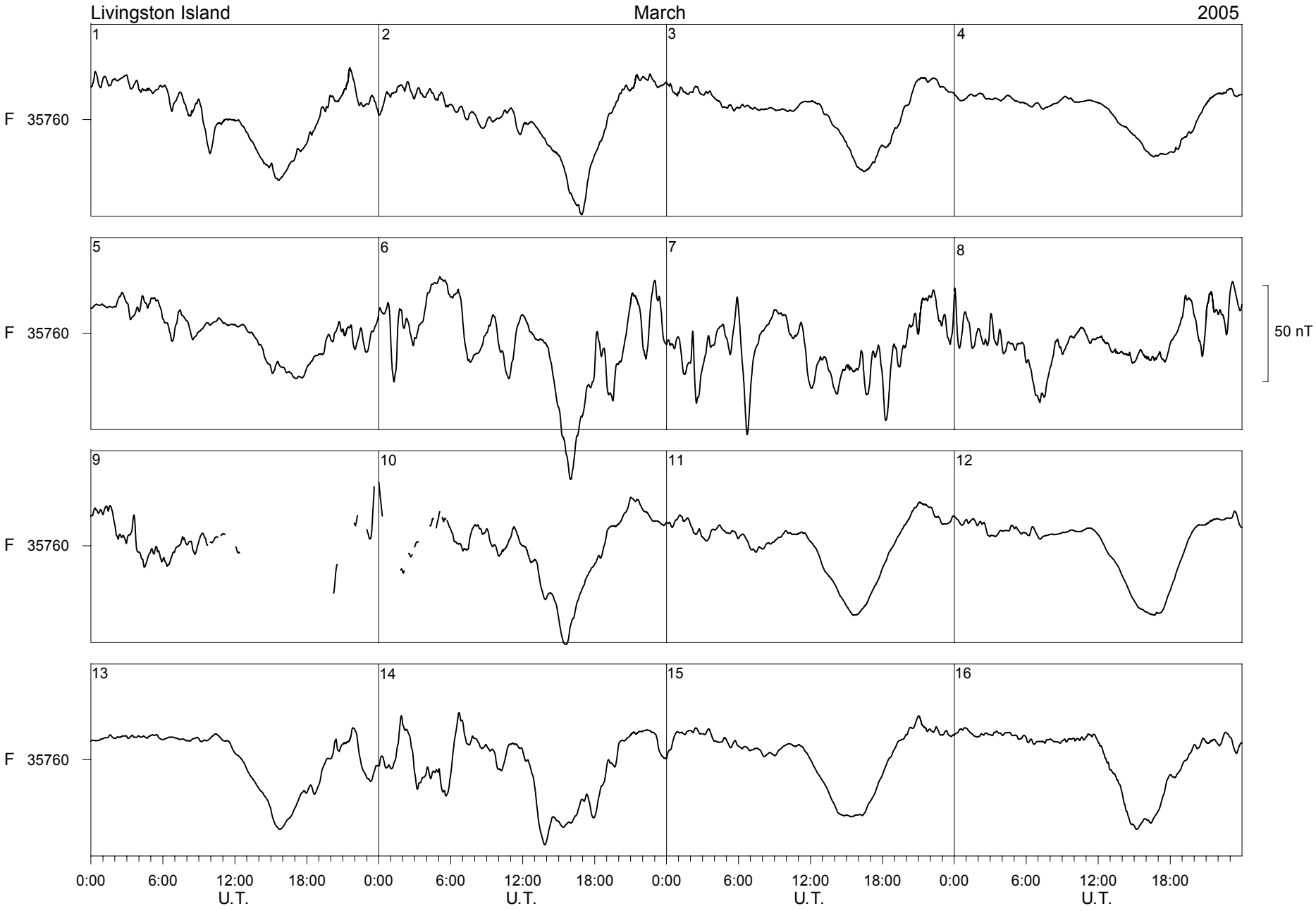

Livingston Island
February
2006
17
18
19
20
SCALE × 2
21
SCALE × 2
22
SCALE × 2
23
24
25
26
27
28
29
30
31
MEAN
D
H
Z
14° 50'
20100
-29520
20'
50 nT
50 nT
0:00
6:00
12:00
18:00
U.T.

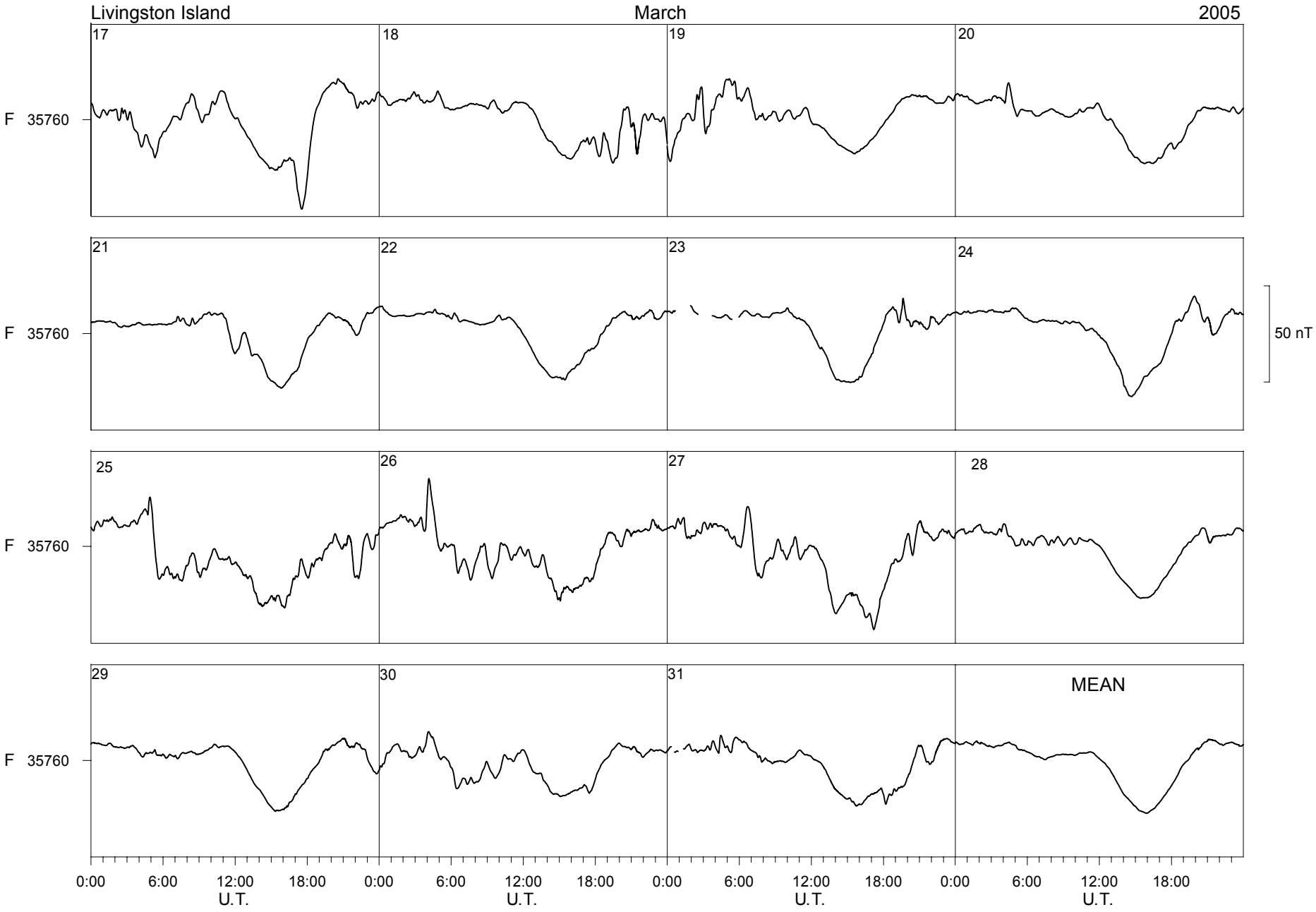

Livingston Island
January
2005
1
2
3
4
5
6
7
8
SCALE × 2
SCALE × 2
9
10
11
12
13
14
15
16
F 35780
F 35780
F 35780
F 35780
50 nT
0:00
6:00
12:00
18:00
U.T.

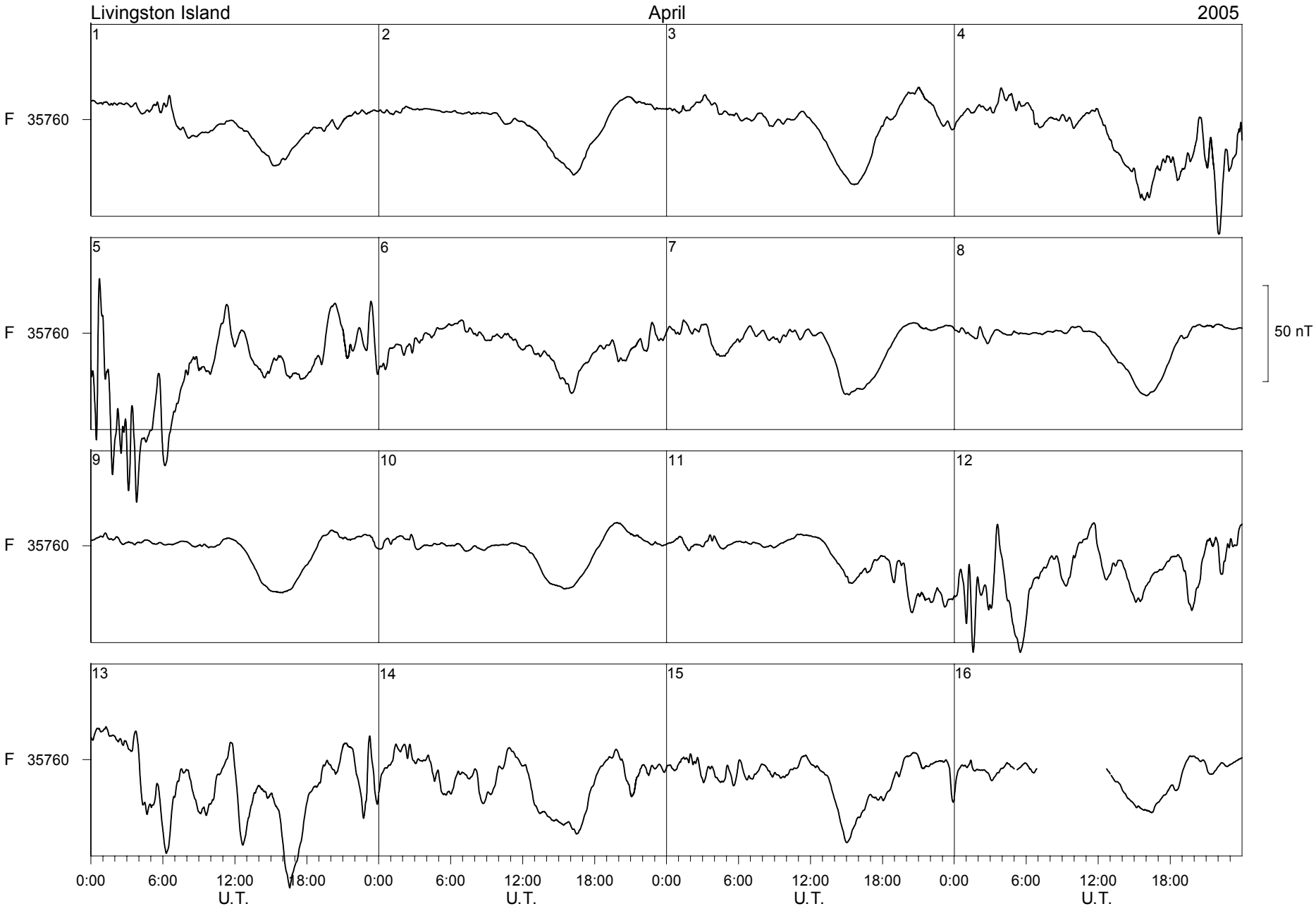

Livingston Island
January
2005
17
SCALE x 3
18
SCALE x 3
19
SCALE x 3
20
F 35780
21
SCALE x 4
22
SCALE x 4
23
24
F 35780
50 nT
25
26
27
28
F 35780
29
30
31
MEAN
F 35780
0:00
6:00
12:00
18:00
U.T.

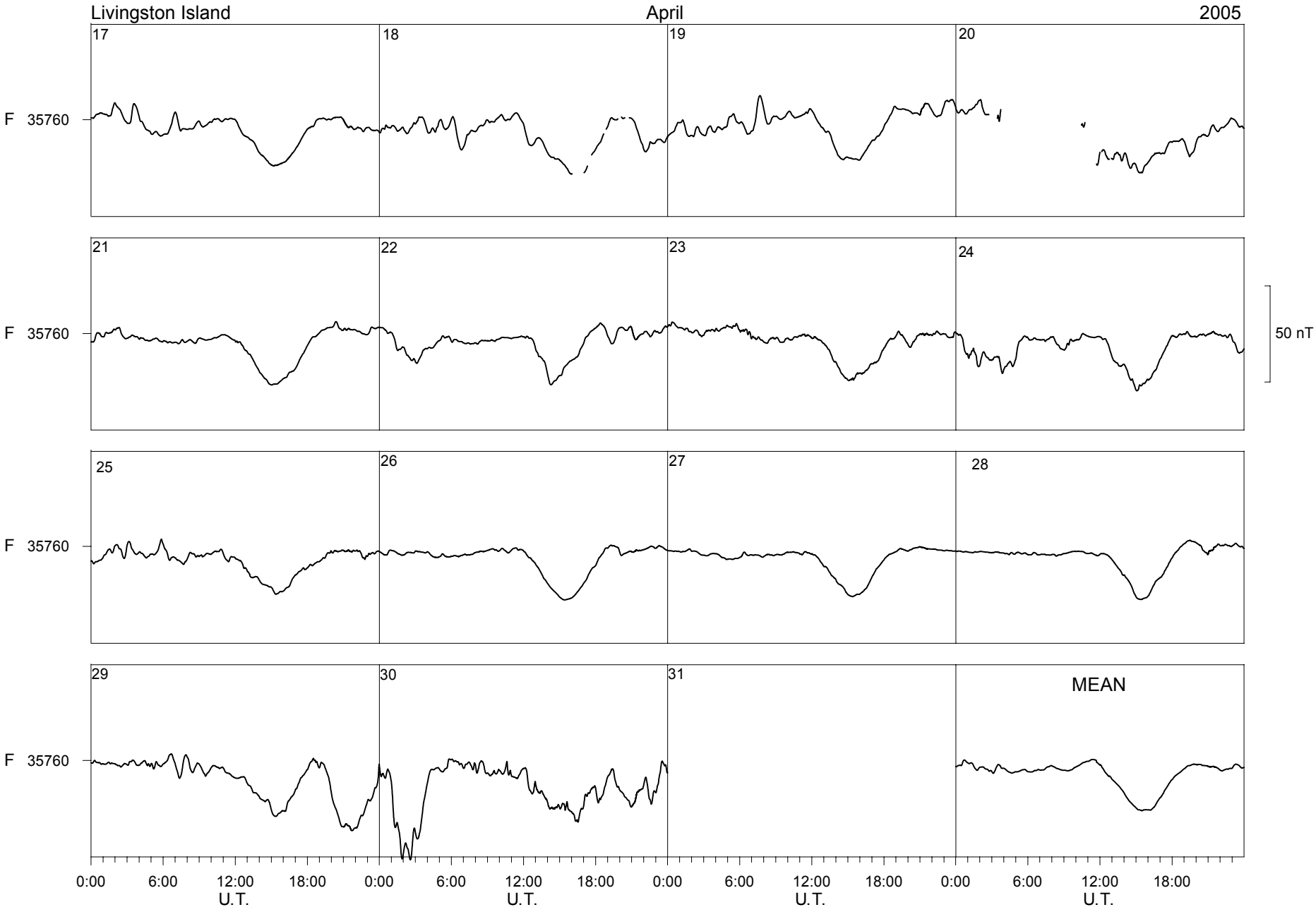

Livingston Island
February
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35760
50 nT
0:00
6:00
12:00
18:00
U.T.

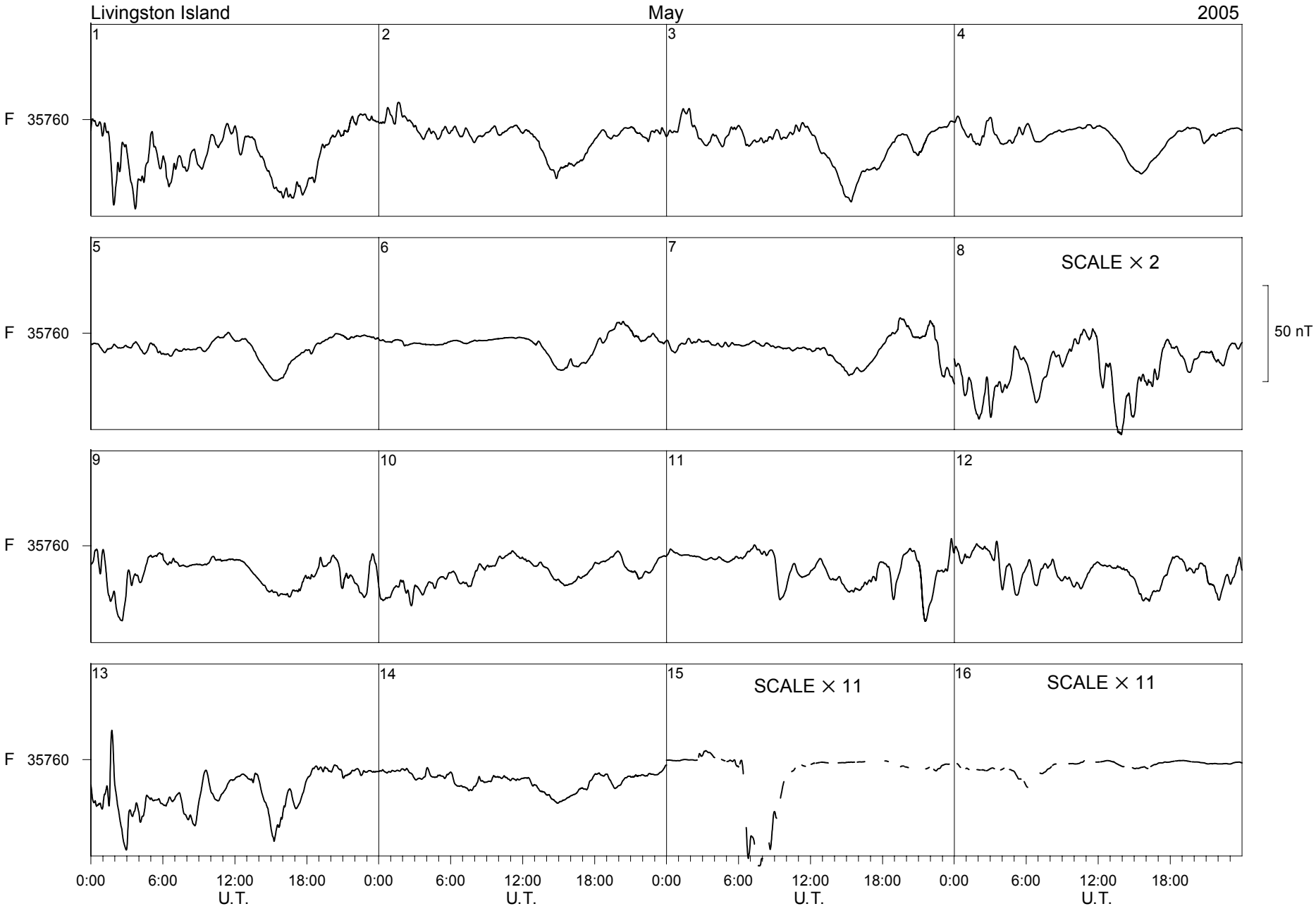

Livingston Island
February
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35760
50 nT
0:00
6:00
12:00
18:00
U.T.

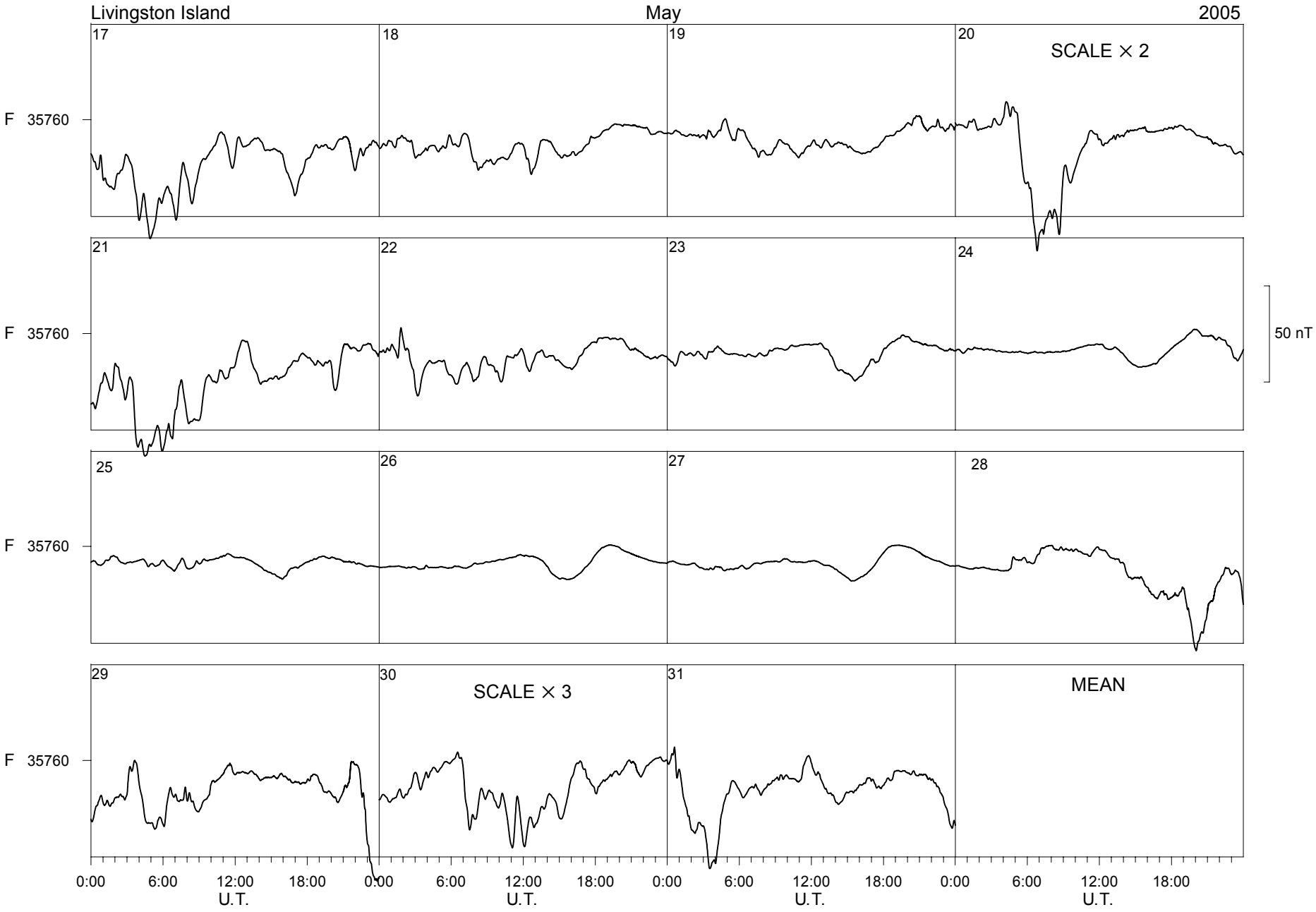

Livingston Island
March
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35760
F 35760
F 35760
F 35760
50 nT
0:00
6:00
12:00
18:00
U.T.

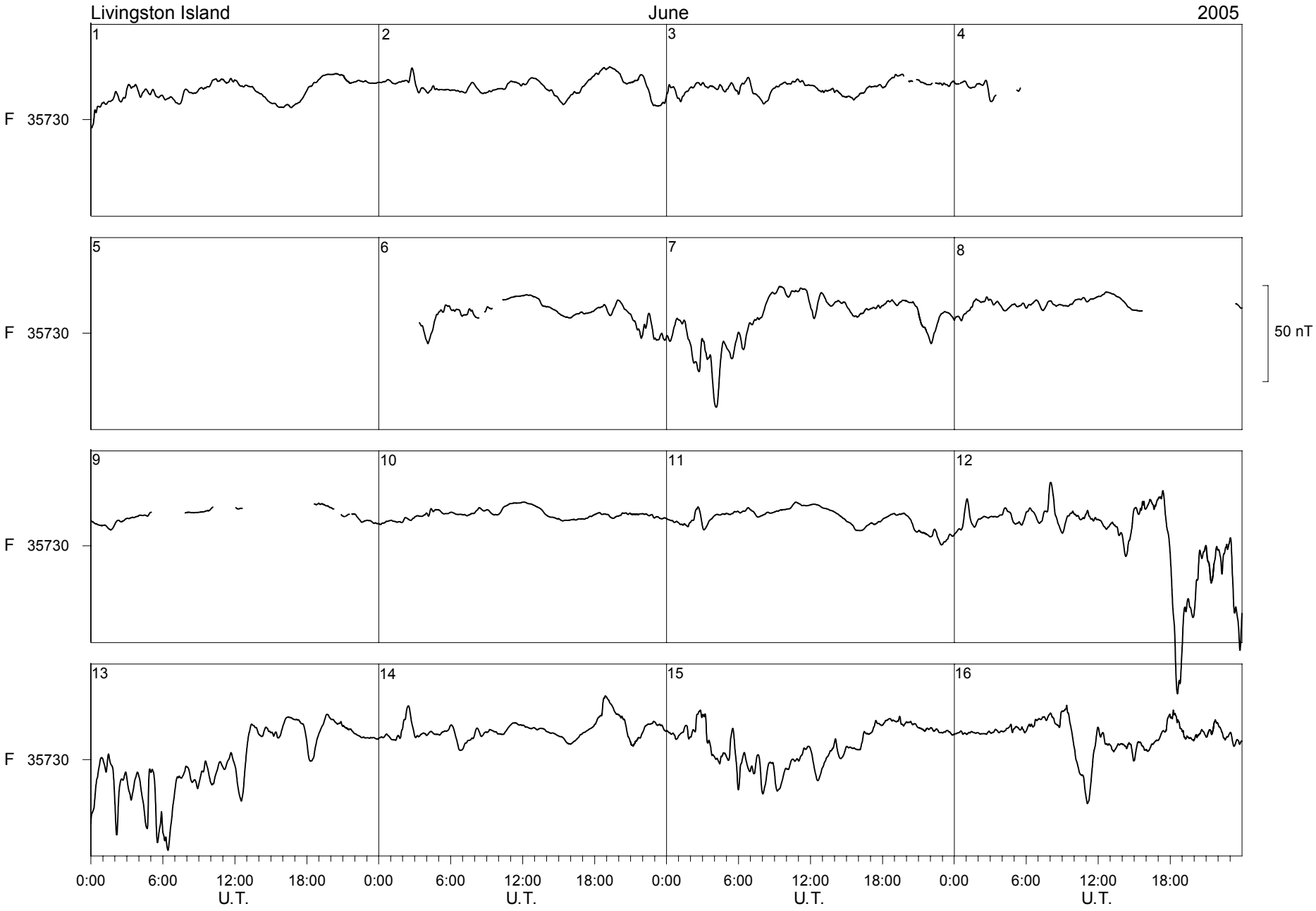

Livingston Island
March
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35760
F 35760
F 35760
F 35760
50 nT
0:00
6:00
12:00
18:00
U.T.

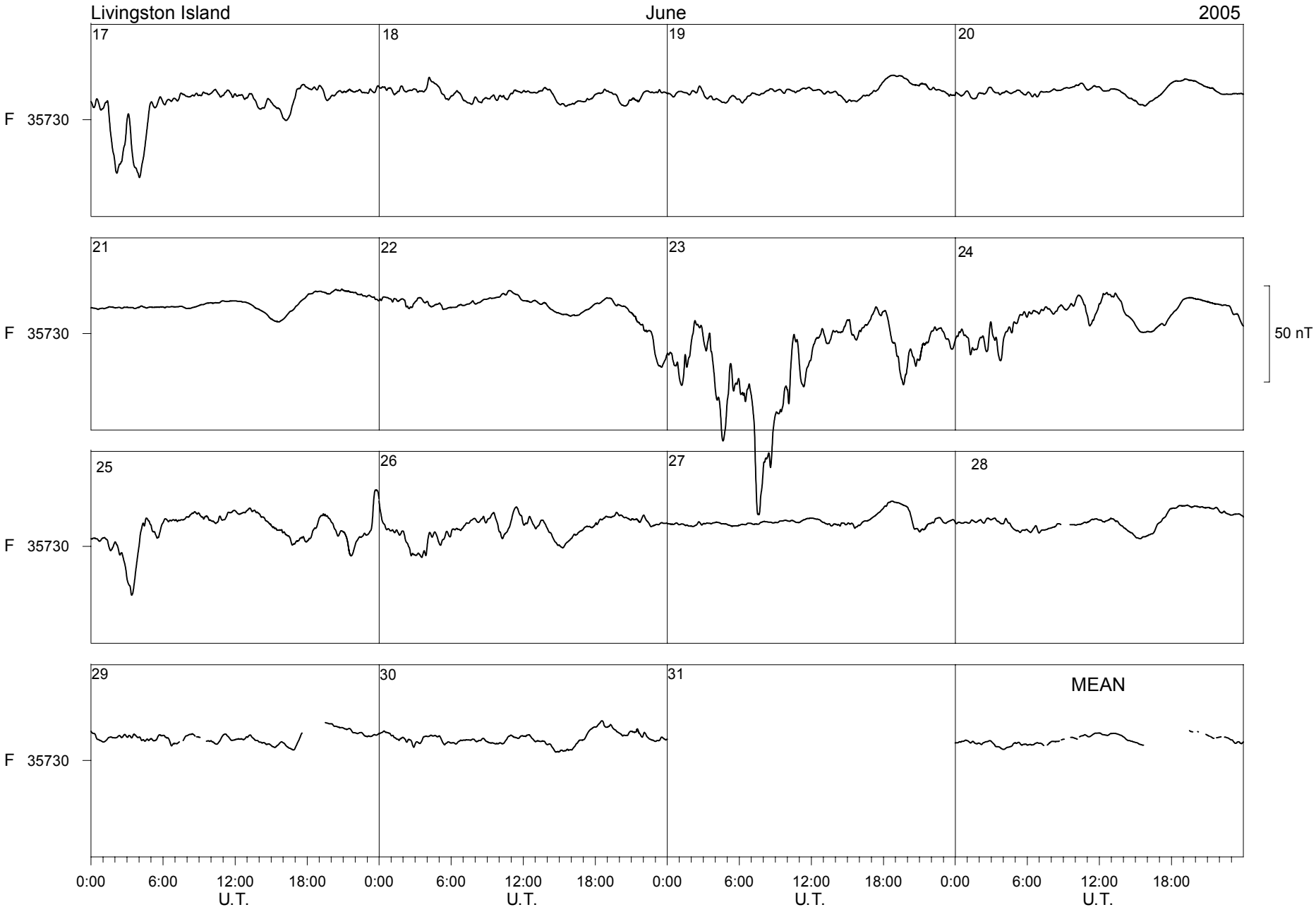

Livingston Island
April
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35760
F 35760
F 35760
F 35760
50 nT
0:00
6:00
12:00
18:00
U.T.

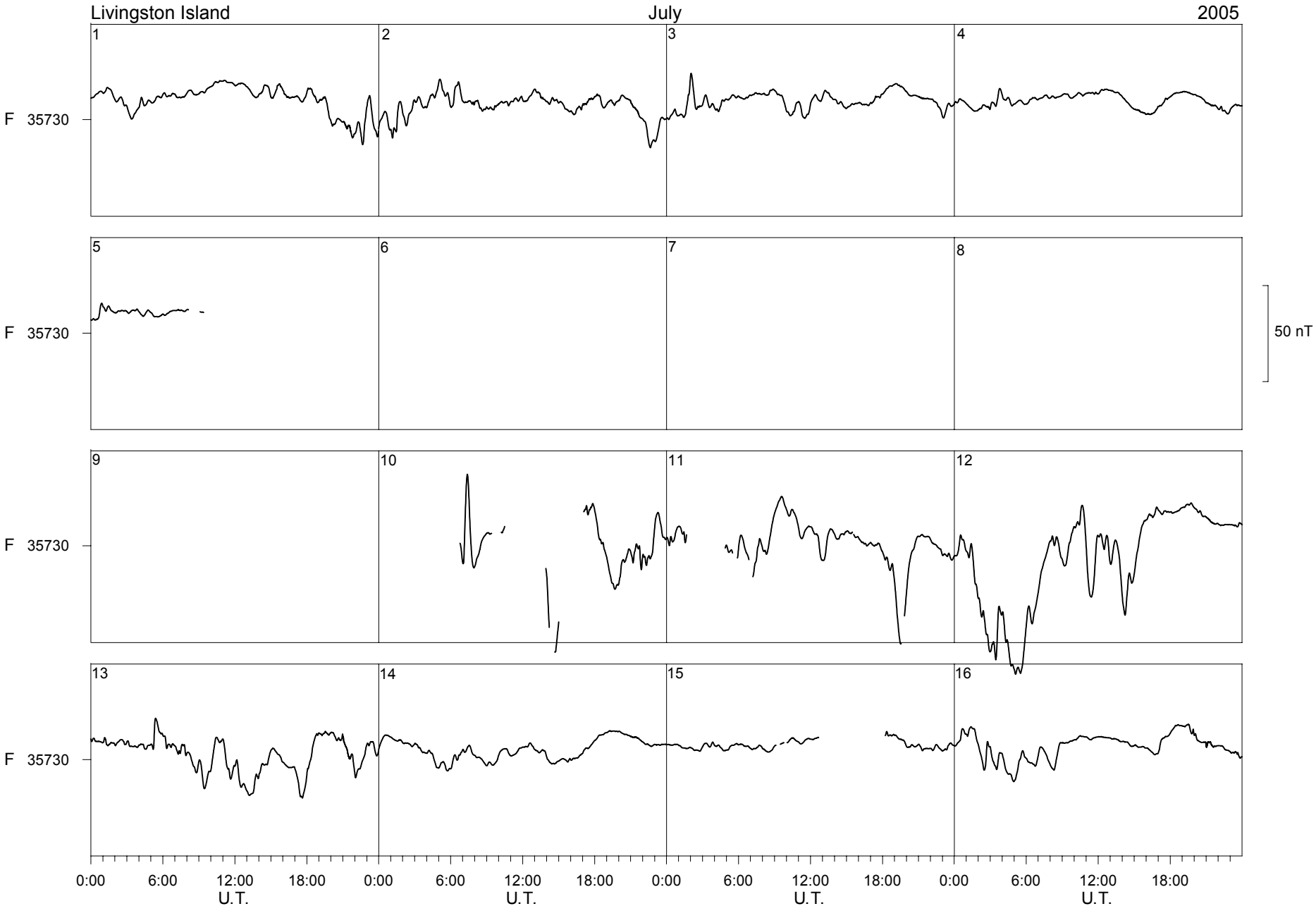

Livingston Island
April
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35760
F 35760
F 35760
F 35760
50 nT
0:00
6:00
12:00
18:00
U.T.

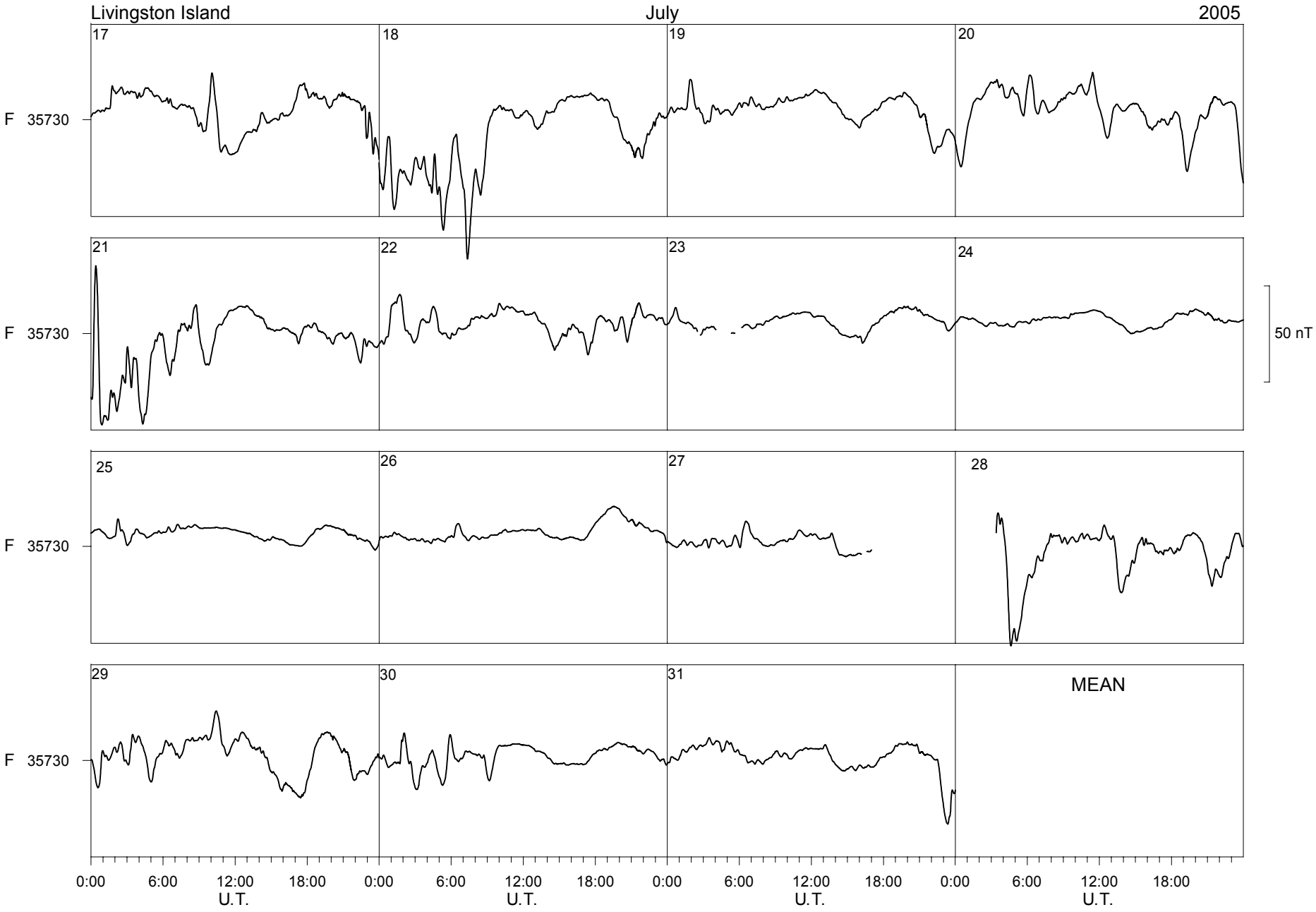

Livingston Island
May
2005
1
2
3
4
5
6
7
8
SCALE × 2
9
10
11
12
13
14
15
16
SCALE × 11
SCALE × 11
F 35760
F 35760
F 35760
F 35760
50 nT
0:00
6:00
12:00
18:00
U.T.

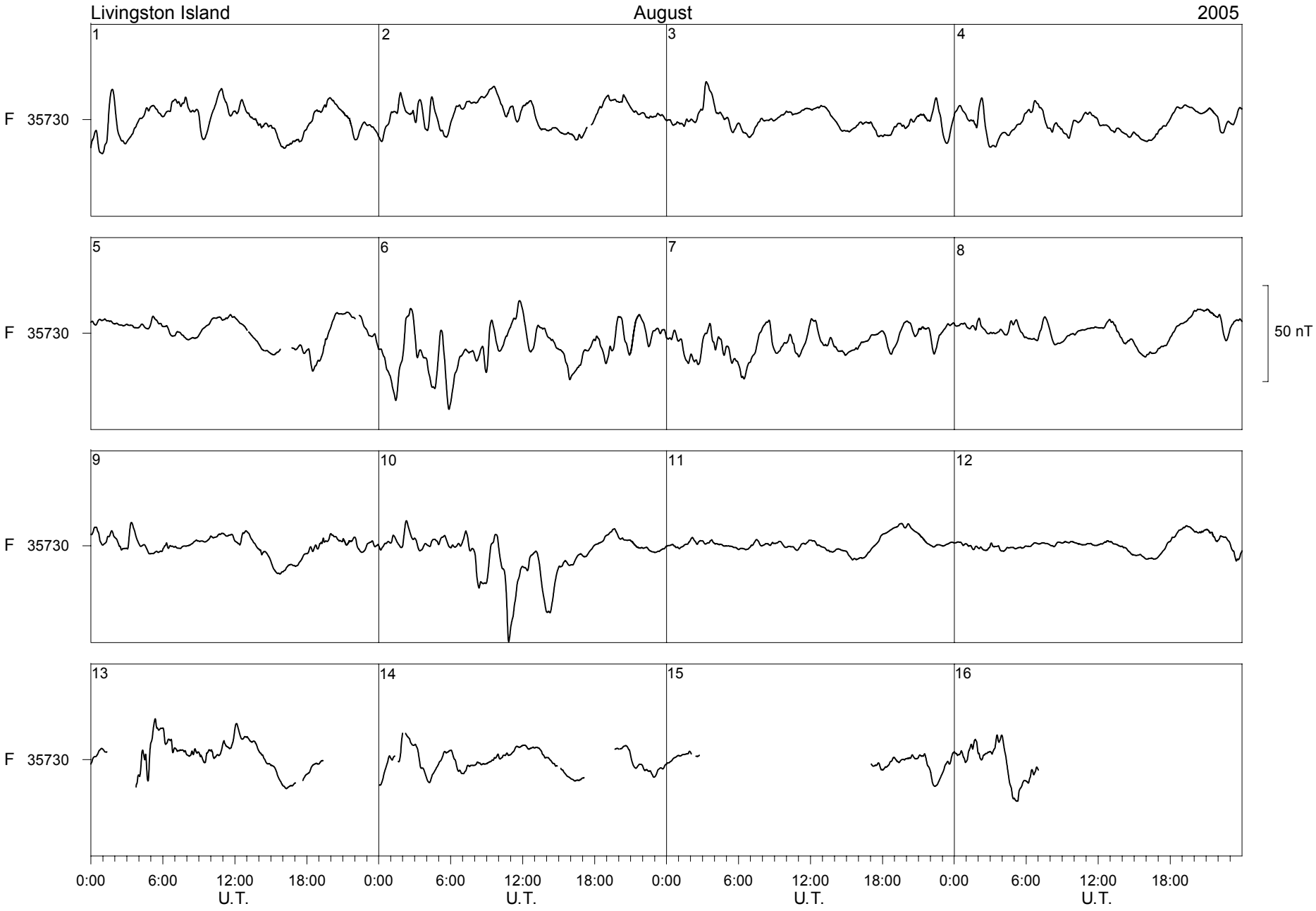

Livingston Island
May
2005
17
18
19
20
SCALE × 2
F 35760
21
22
23
24
F 35760
50 nT
25
26
27
28
F 35760
29
30
SCALE × 3
31
MEAN
F 35760
0:00
6:00
12:00
18:00
U.T.

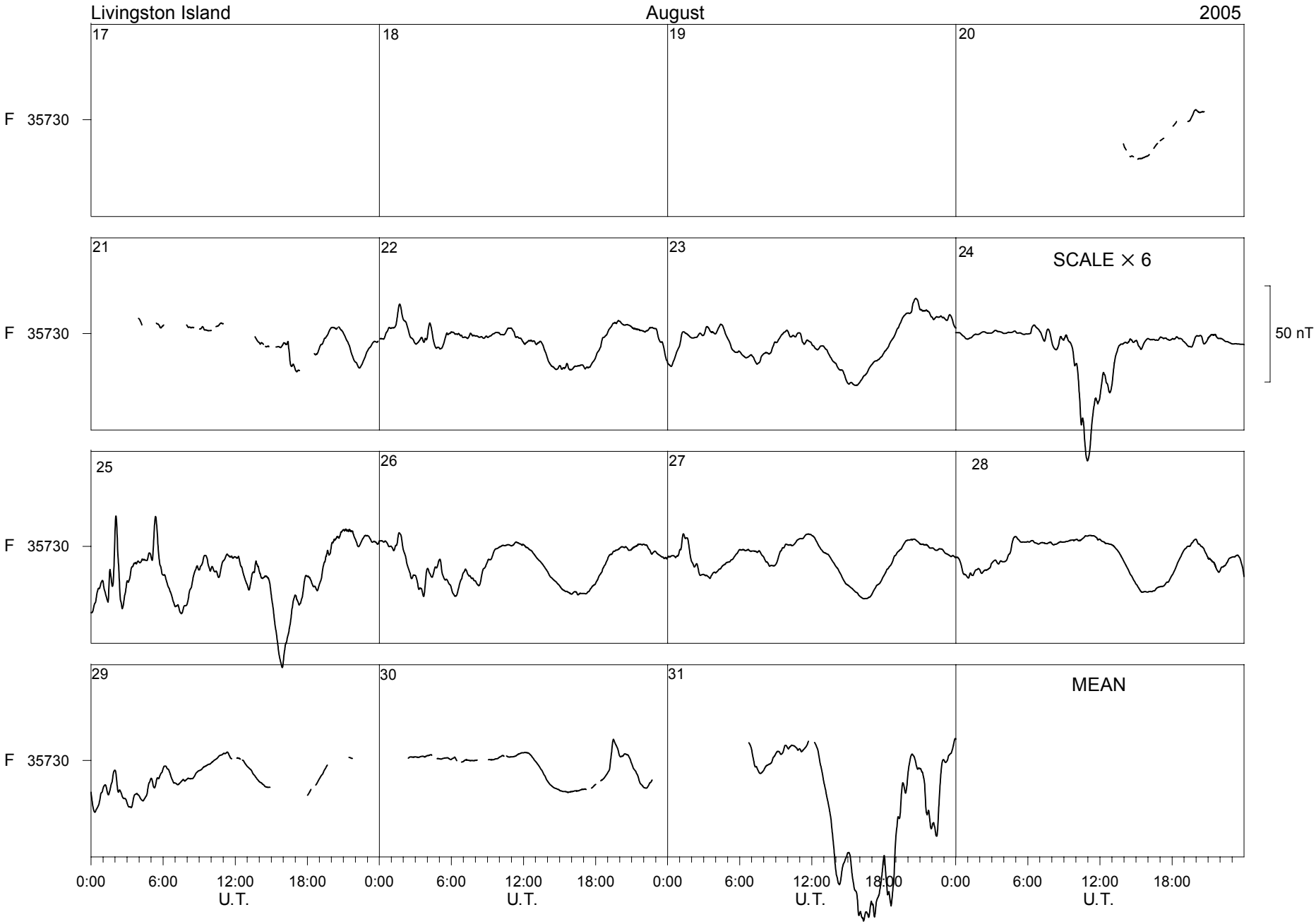

Livingston Island
June
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35730
F 35730
F 35730
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

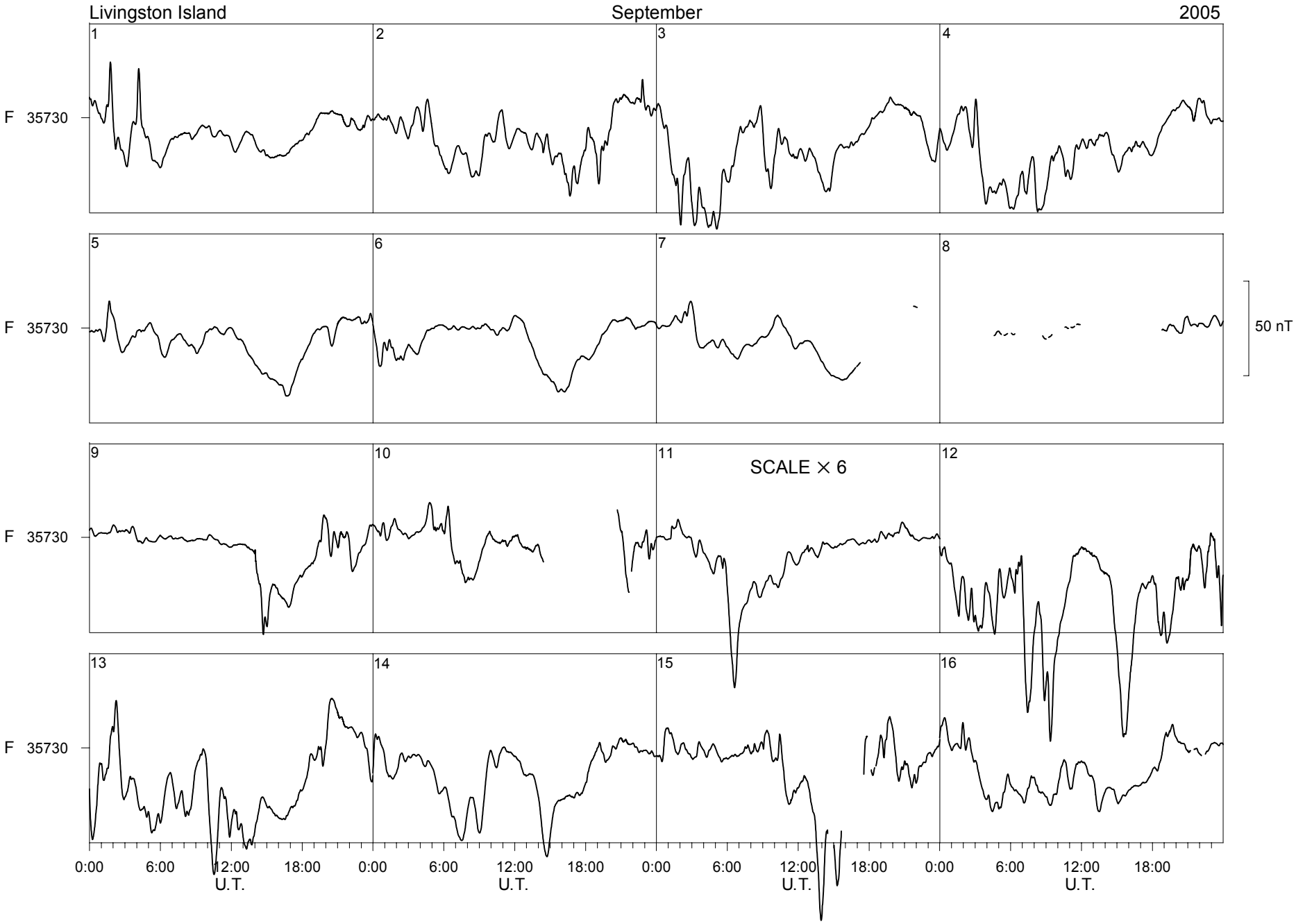

Livingston Island
June
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35730
F 35730
F 35730
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

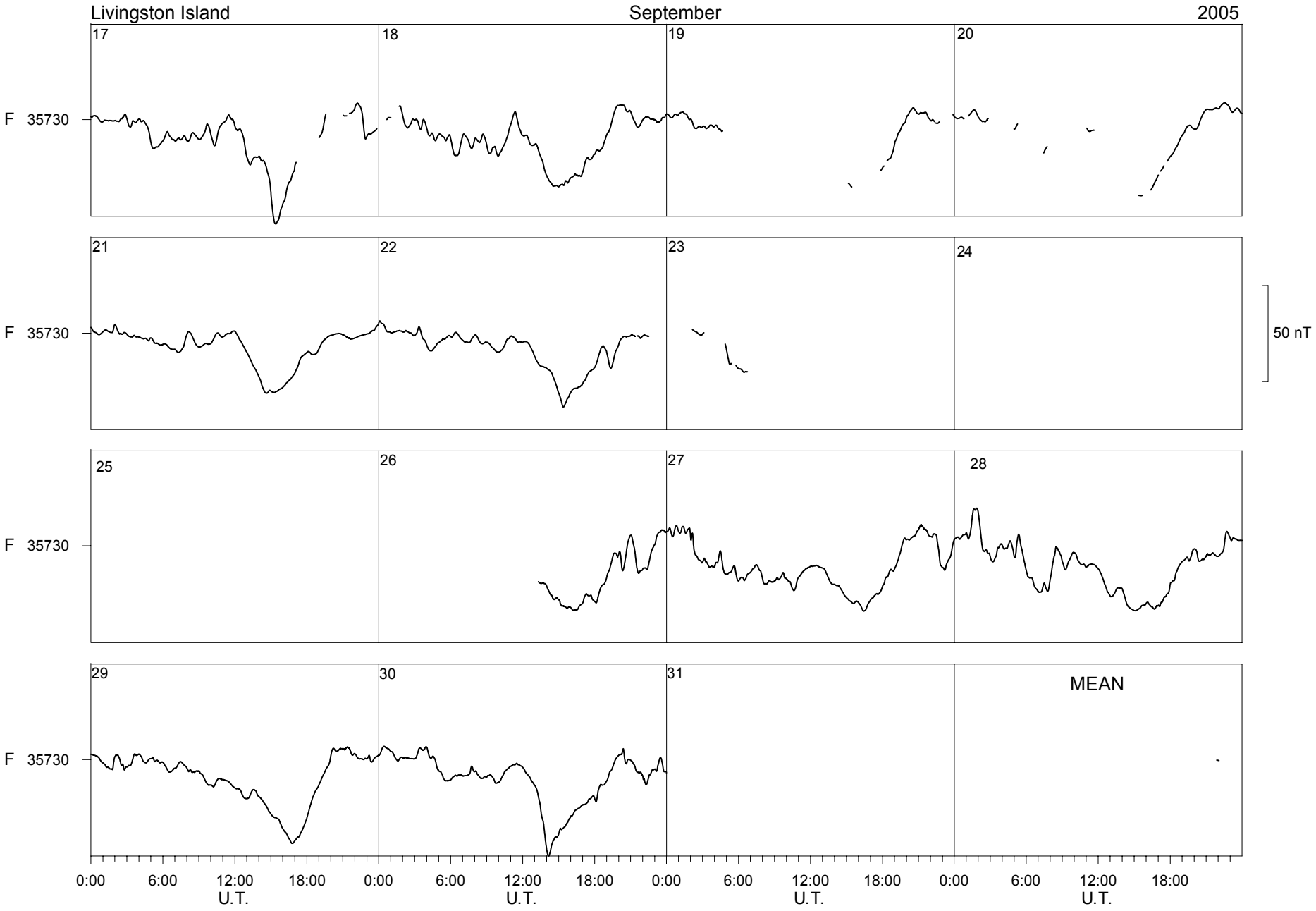

Livingston Island
July
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35730
F 35730
F 35730
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

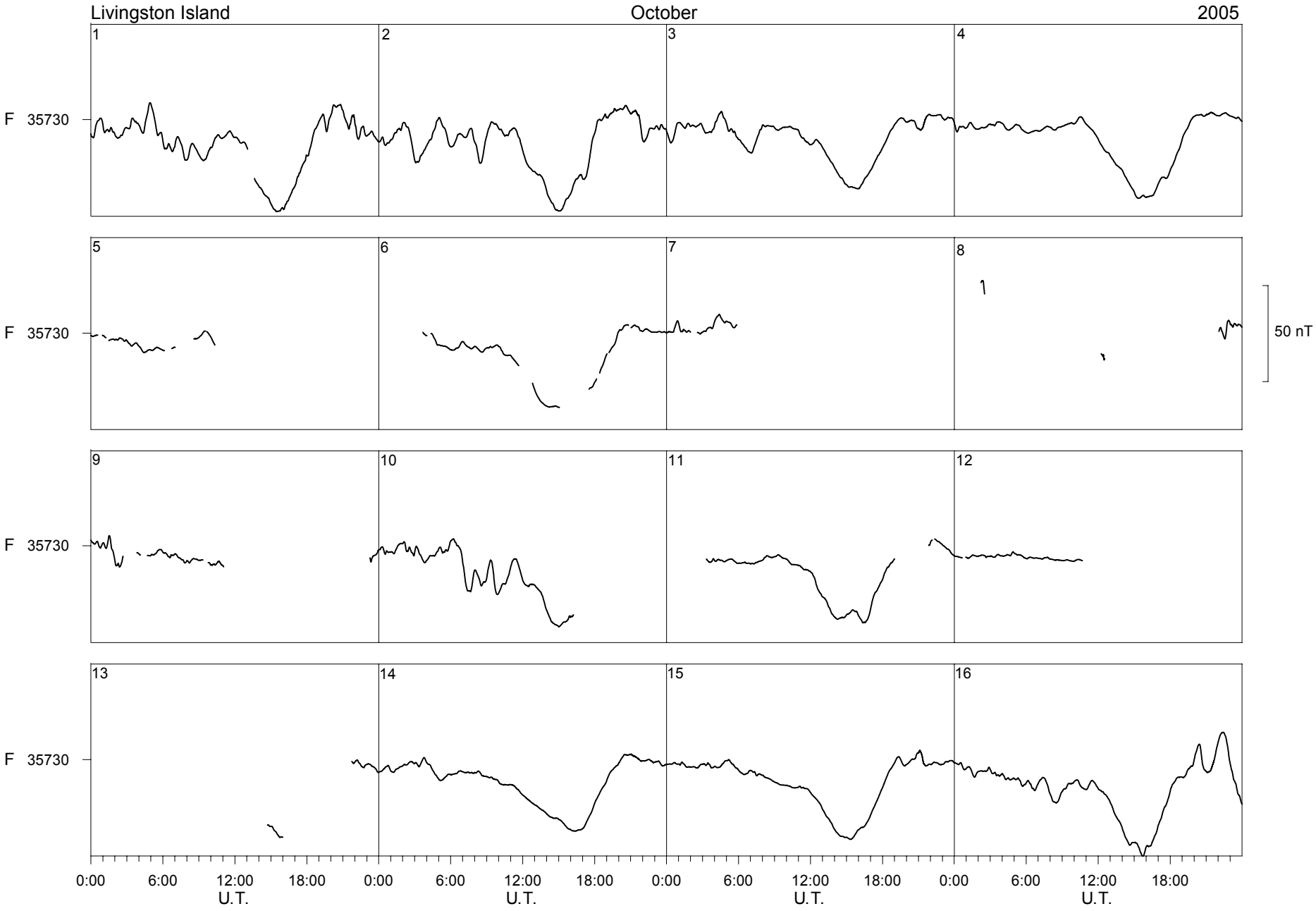

Livingston Island
July
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35730
F 35730
F 35730
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

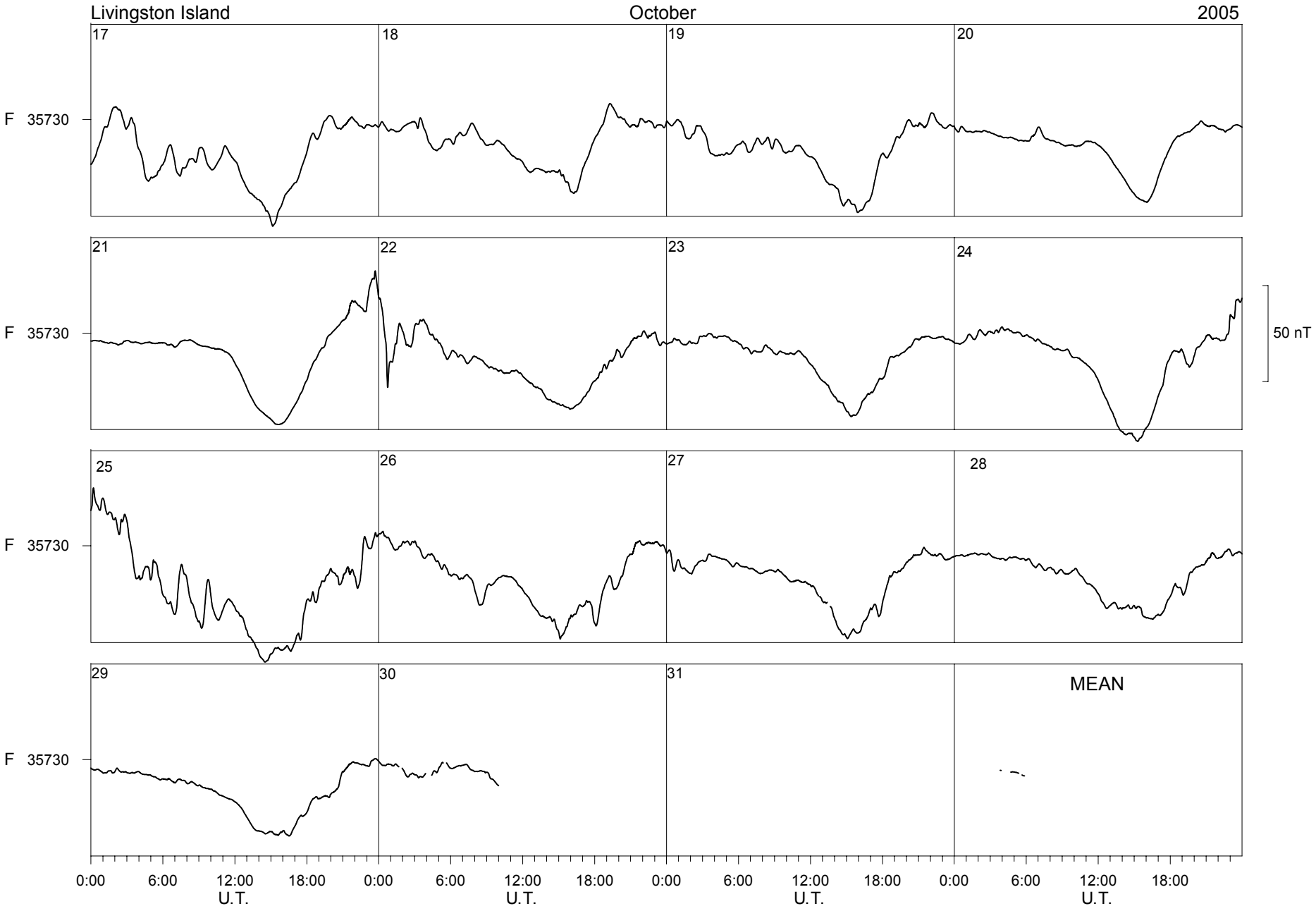

Livingston Island
August
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35730
F 35730
F 35730
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

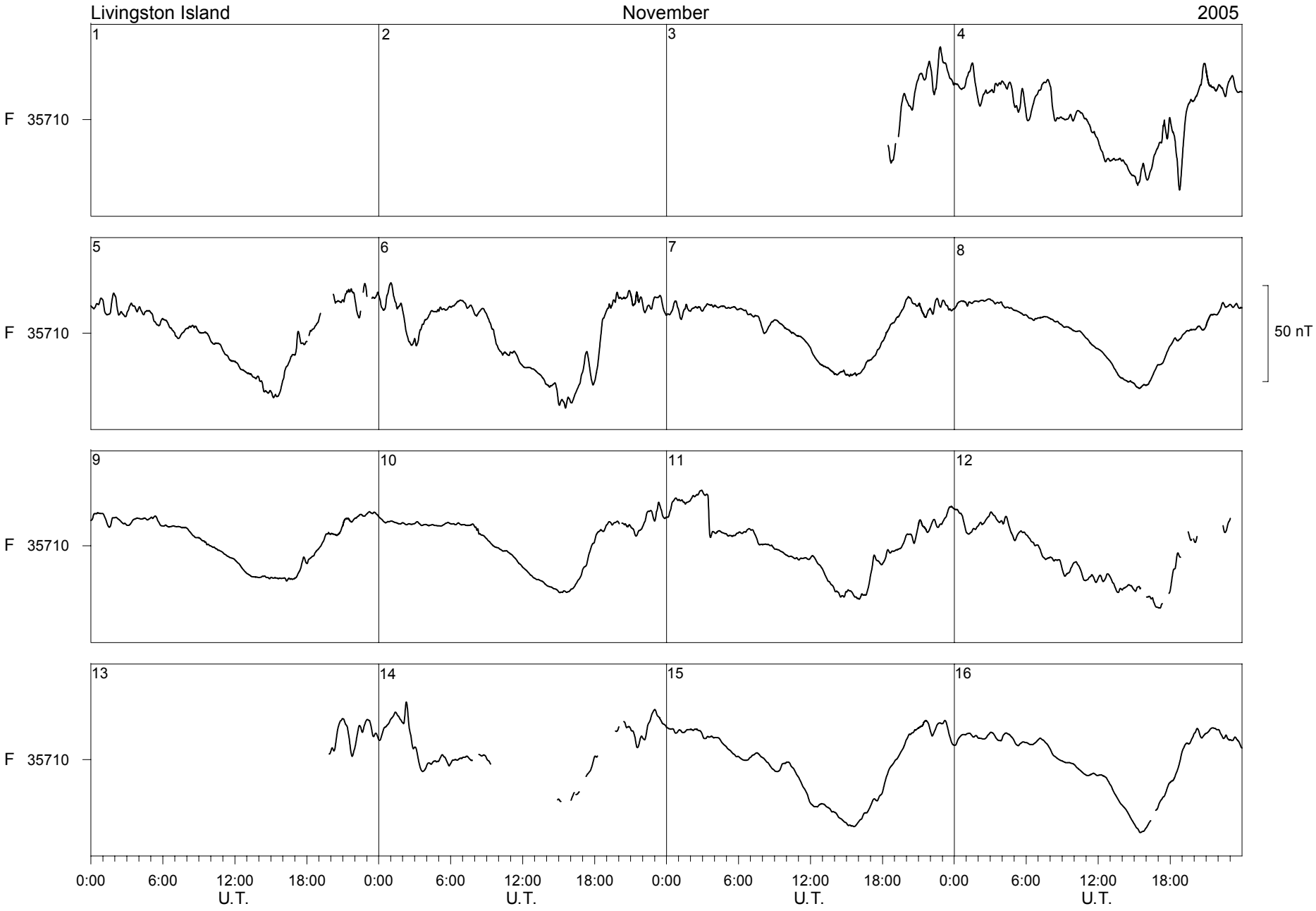

Livingston Island
August
2005
17
18
19
20
21
22
23
24
SCALE × 6
25
26
27
28
29
30
31
MEAN
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

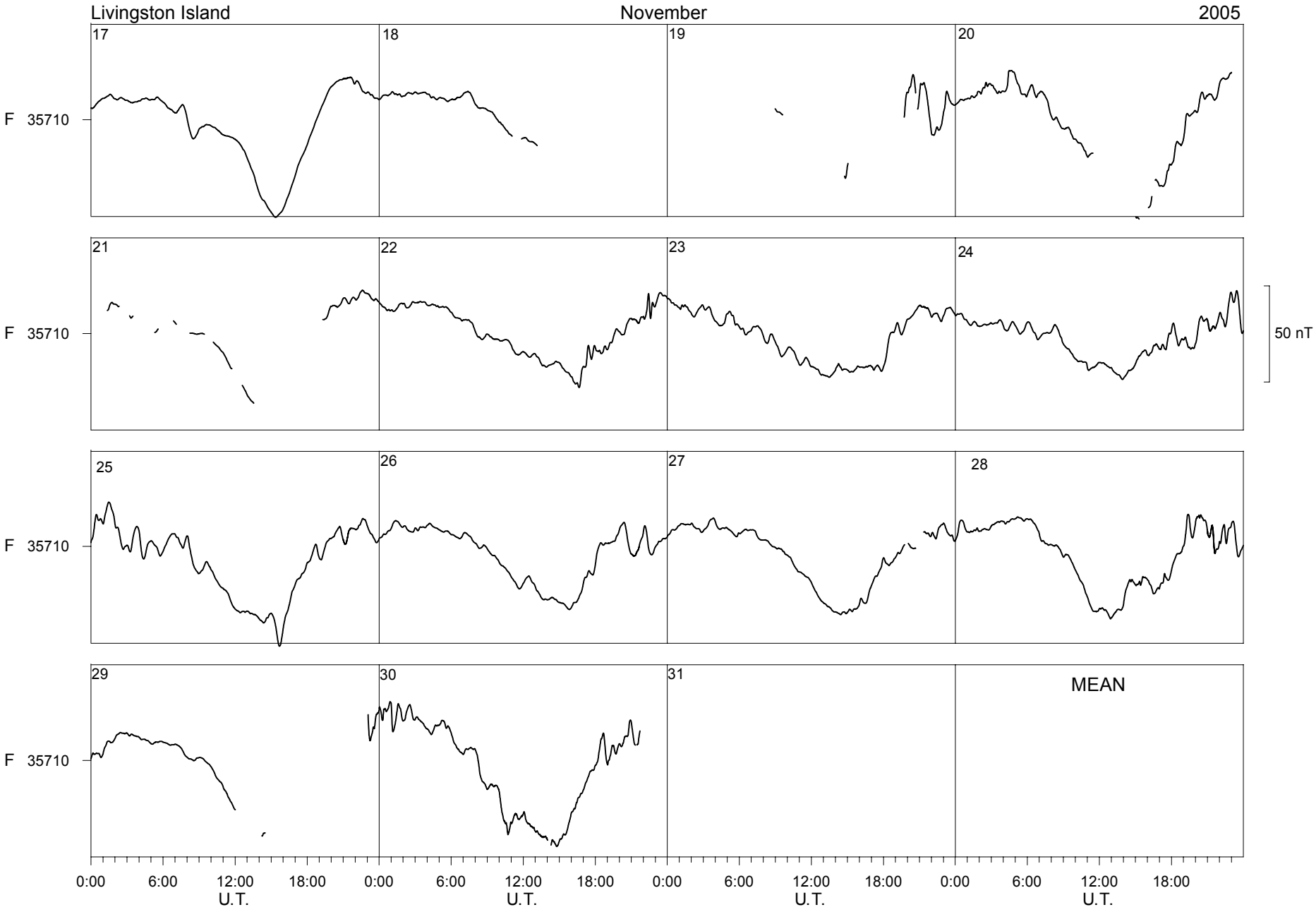

Livingston Island
September
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35730
F 35730
F 35730
F 35730
50 nT
SCALE × 6
0:00
6:00
12:00
18:00
U.T.

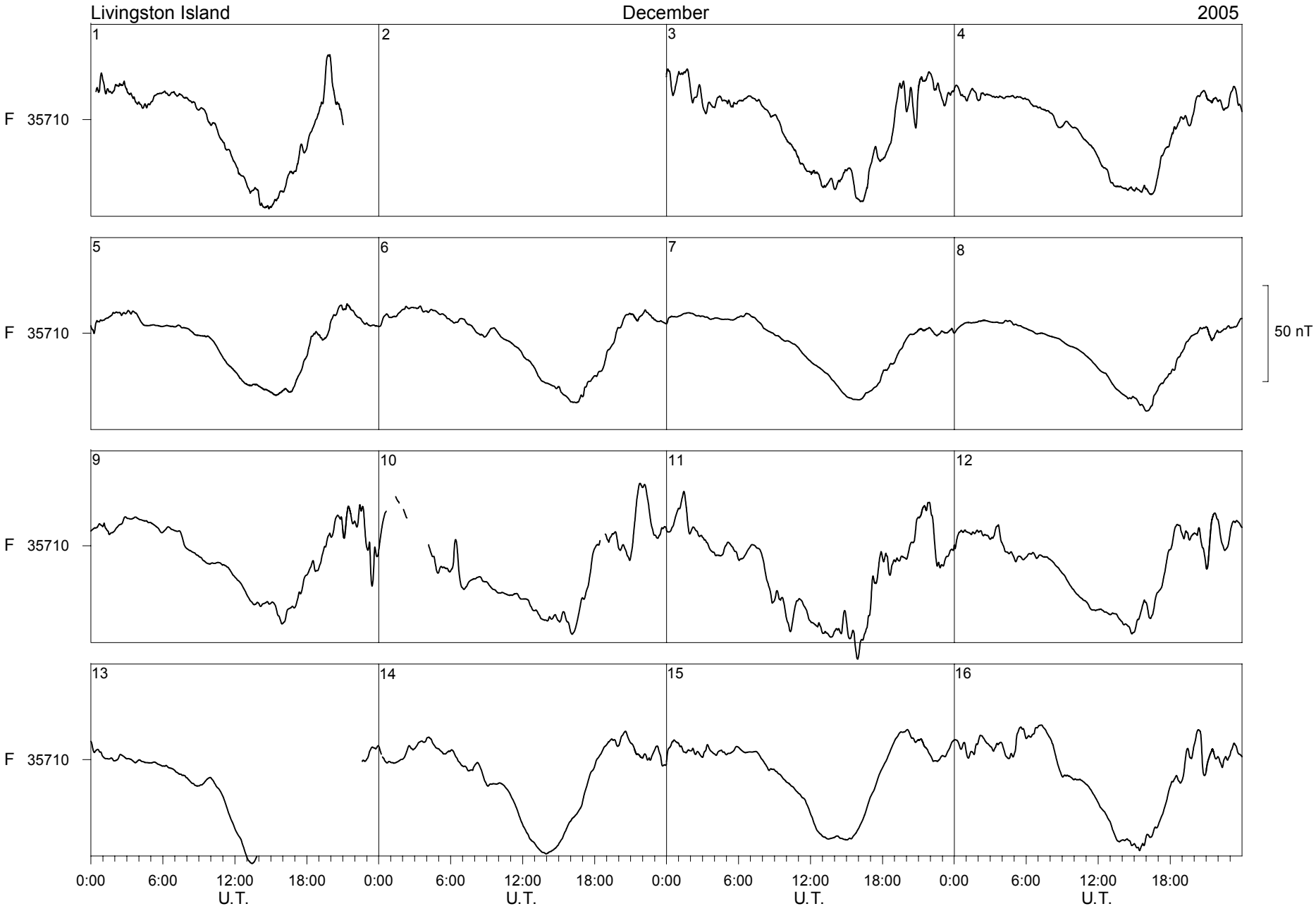

Livingston Island
September
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35730
F 35730
F 35730
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

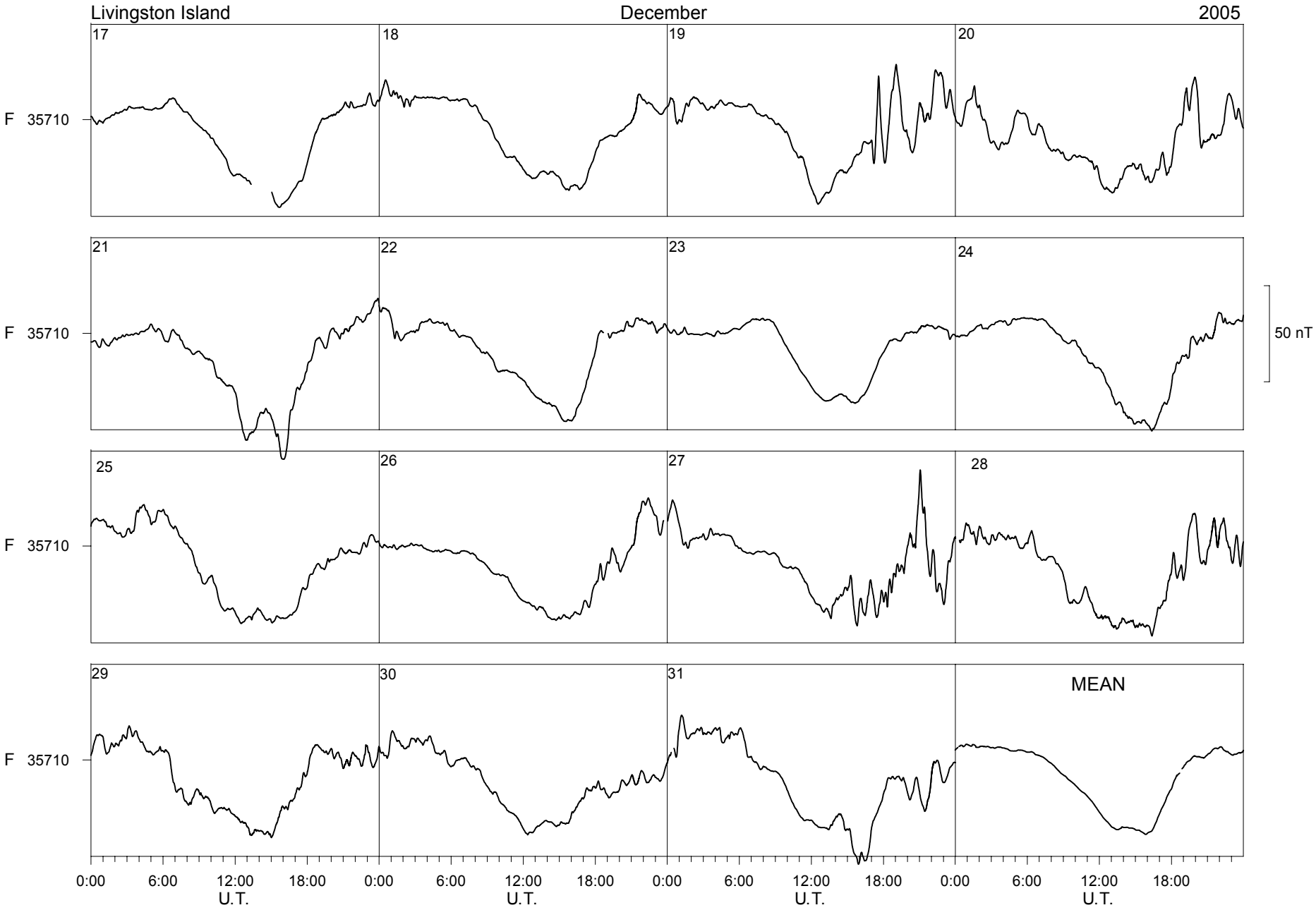

Livingston Island
October
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35730
F 35730
F 35730
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

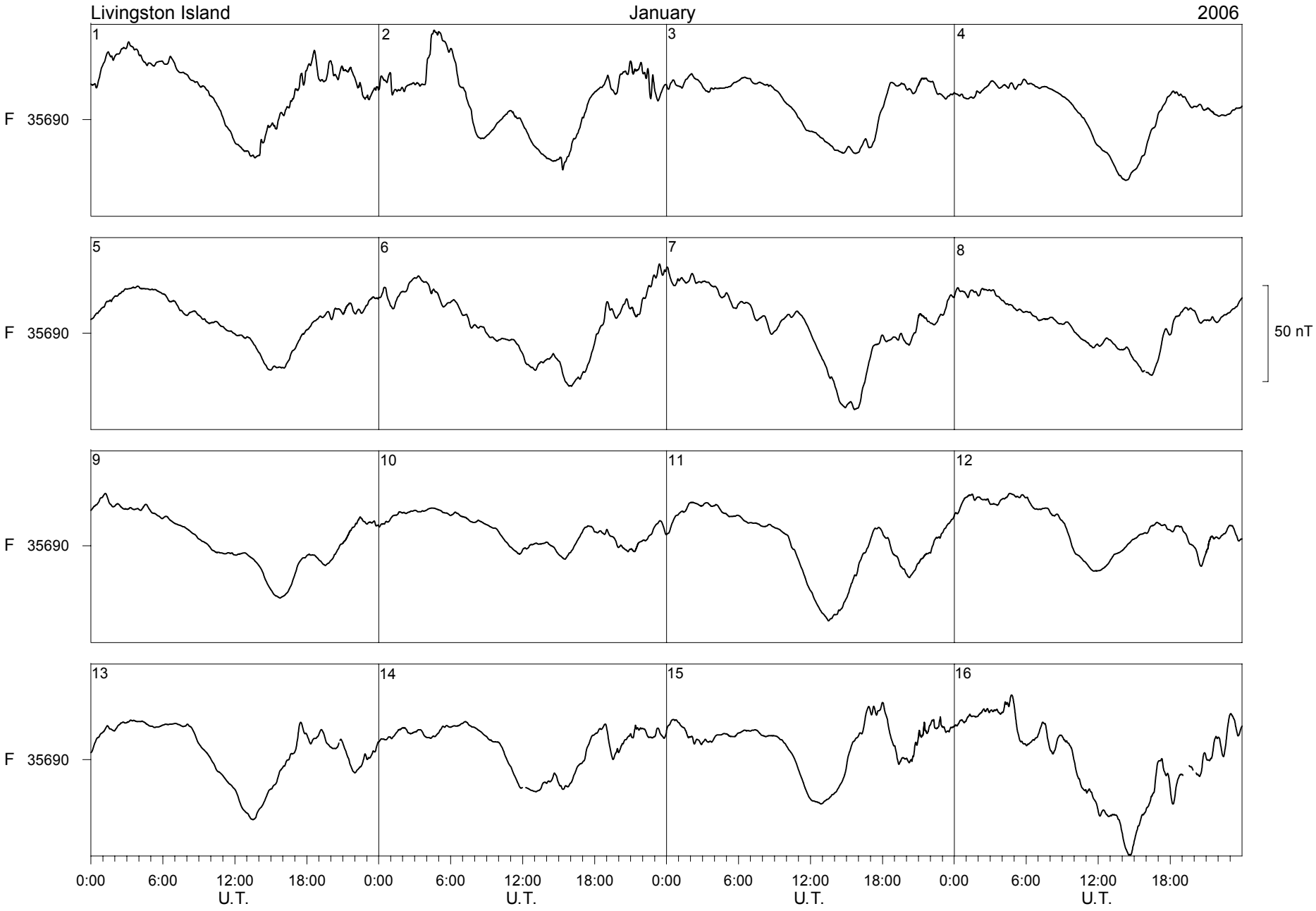

Livingston Island
October
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35730
F 35730
F 35730
F 35730
50 nT
0:00
6:00
12:00
18:00
U.T.

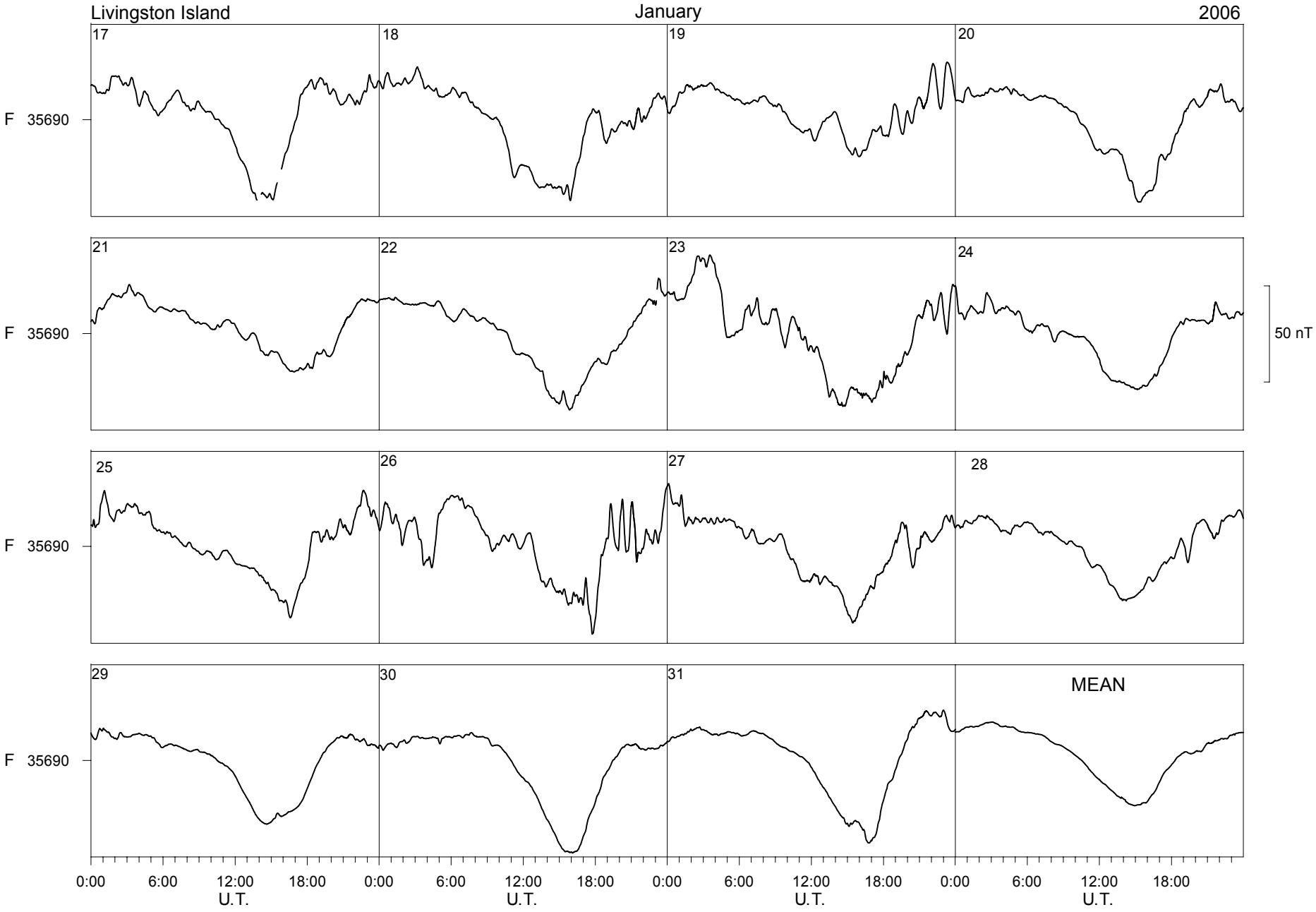

Livingston Island
November
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35710
F 35710
F 35710
F 35710
50 nT
0:00
6:00
12:00
18:00
0:00
6:00
12:00
18:00
0:00
6:00
12:00
18:00
0:00
6:00
12:00
18:00
U.T.
U.T.
U.T.
U.T.

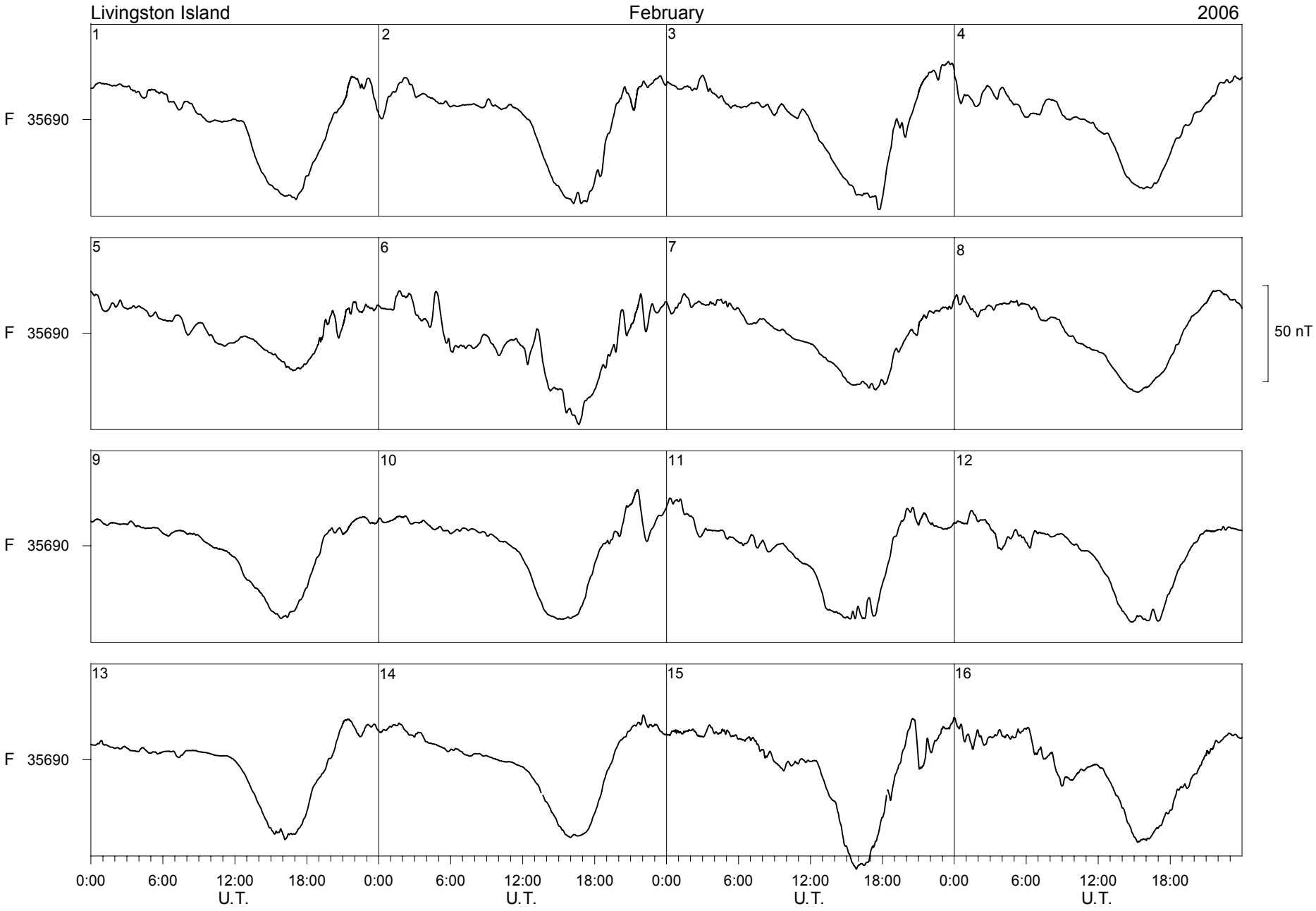

Livingston Island
November
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35710
F 35710
F 35710
F 35710
50 nT
0:00
6:00
12:00
18:00
U.T.

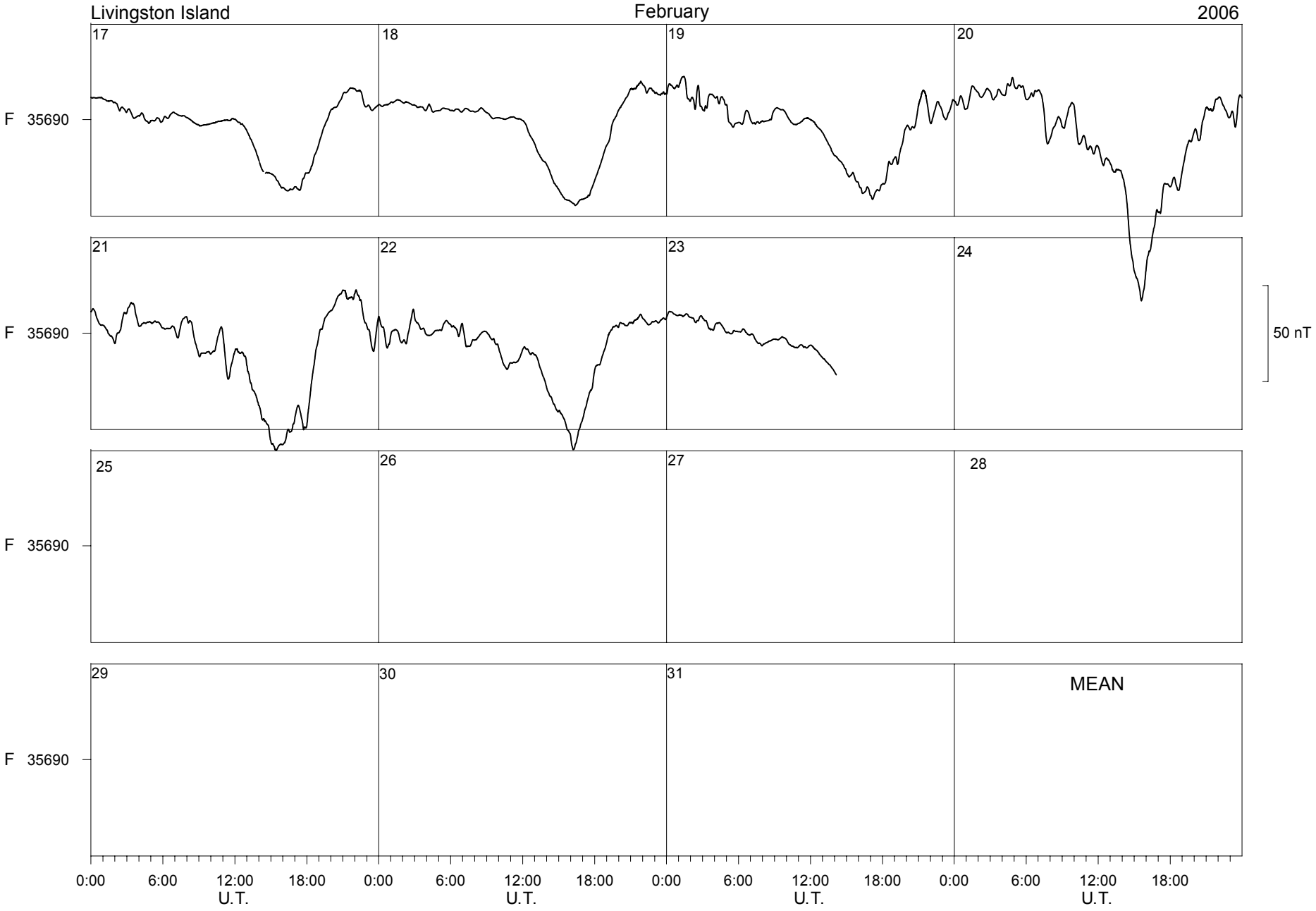

Livingston Island
December
2005
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35710
F 35710
F 35710
F 35710
50 nT
0:00
6:00
12:00
18:00
U.T.


Livingston Island
December
2005
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35710
50 nT
0:00
6:00
12:00
18:00
U.T.


Livingston Island
January
2006
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35690
F 35690
F 35690
F 35690
50 nT
0:00
6:00
12:00
18:00
U.T.


Livingston Island
January
2006
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35690
50 nT
0:00
6:00
12:00
18:00
U.T.


Livingston Island
February
2006
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
F 35690
F 35690
F 35690
F 35690
50 nT
0:00
6:00
12:00
18:00
U.T.


Livingston Island
February
2006
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
MEAN
F 35690
F 35690
F 35690
F 35690
50 nT
0:00
6:00
12:00
18:00
U.T.

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

JANUARY 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		414	419	425	421	411	381	348	348	348	348	346	343	367	413	421	432	448	482	523	543	490	453	436	444	417
2	D	431	414	359	373	377	368	378	367	399	386	373	364	386	403	437	479	497	494	464	458	463	484	451	447	419
3		372	426	436	429	384	365	372	354	350	364	384	387	416	467	496	481	506	521	493	468	449	433	435	437	426
4		432	410	412	400	416	403	385	375	369	349	359	366	380	413	428	465	471	472	474	436	425	417	400	395	410
5		376	394	408	404	387	386	377	372	383	372	360	394	416	418	444	472	477	471	464	455	448	437	440	424	416
6	Q	423	424	421	418	413	406	397	385	371	366	366	380	394	418	434	452	471	472	460	456	440	440	434	431	420
7		429	427	425	422	419	413	404	390	372	359	343	360	378	398	418	495	532	506	491	500	482	484	483	143	420
8		273	349	344	304	318	388	407	401	367	333	340	363	383	413	445	476	502	505	479	457	434	427	421	425	398
9	Q	429	432	428	422	419	412	403	392	377	369	361	377	395	422	450	472	474	459	433	412	407	406	413	420	416
10		424	424	417	414	408	404	396	390	376	371	366	368	382	401	429	461	485	487	467	445	434	426	403	409	416
11		415	421	420	417	410	422	376	371	385	364	353	354	359	387	425	462	489	484	466	449	443	437	433	445	416
12		435	437	426	320	360	376	388	372	342	356	375	407	403	437	438	476	492	497	507	476	460	428	407	407	418
13		416	425	421	400	400	400	379	378	367	362	358	359	377	411	452	489	518	520	482	475	431	433	401	412	419
14		428	432	431	433	425	409	385	373	368	358	358	371	385	403	425	457	484	495	483	461	462	449	439	440	423
15		425	418	427	403	412	391	397	365	373	388	394	395	405	415	436	458	475	483	472	462	436	422	414	408	420
16		413	416	407	404	405	408	394	383	373	366	366	380	396	394	418	444	473	482	479	473	460	448	452	441	420
17	D	400	374	383	385	384	405	391	387	353	328	345	345	419	414	383	407	460	561	527	525	494	480	456	454	419
18	D	427	418	357	391	342	404	420	425	394	434	449	401	407	459	505	543	503	500	491	501	511	500	446	446	445
19	D	448	346	267	274	280	254	270	316	402	476	496	505	548	484	491	504	528	524	491	476	452	436	414	422	421
20		437	444	443	441	438	431	420	390	380	381	373	374	411	430	441	479	506	505	500	476	463	459	430	432	437
21	D	426	415	425	428	429	424	401	387	370	379	380	385	402	417	426	455	472	491	522	577	612	721	651	599	466
22		562	472	440	364	455	445	400	423	416	412	409	418	422	434	438	475	496	498	487	491	474	446	436	431	448
23		439	417	413	411	412	413	413	412	393	396	388	381	387	398	423	444	469	470	474	457	448	419	393	418	420
24		428	425	415	421	422	421	413	407	401	394	373	375	392	409	434	458	482	484	473	464	458	443	427	421	427
25	Q	422	420	415	417	417	411	407	400	384	379	366	365	373	398	431	459	460	459	451	433	422	418	416	420	414
26	Q	423	421	420	416	416	412	407	396	387	375	371	374	388	400	414	433	449	459	446	436	427	414	409	410	413
27	Q	411	414	411	408	404	402	401	395	385	375	360	353	359	376	399	423	443	448	432	419	408	403	409	422	403
28		419	410	408	404	389	379	381	378	367	354	340	339	357	---	420	444	456	455	458	465	465	450	440	435	409
29		426	428	421	416	408	392	376	355	348	316	319	345	353	375	399	440	447	473	492	506	459	445	446	404	408
30		421	414	404	394	360	383	391	396	371	351	362	369	370	404	431	447	464	472	468	436	434	435	431	---	410
31		---	---	383	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	416	---
MEAN		421	416	407	398	397	397	389	383	376	372	371	377	394	413	434	463	481	488	478	470	456	450	435	422	420
MEAN	Q	422	422	419	416	414	409	403	394	381	373	365	370	382	403	425	448	459	459	445	431	421	416	416	421	413
MEAN	D	426	393	359	370	362	371	372	376	384	400	409	400	432	435	448	478	492	514	499	508	506	524	484	474	434

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

JANUARY 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

DAY		HOUR(UT) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
29		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

JANUARY 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
29		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

JANUARY 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		302	300	290	290	291	294	280	284	283	272	262	254	249	253	259	254	254	278	286	273	261	283	300	279	276
2	D	297	292	293	292	295	288	291	260	255	248	254	245	240	234	232	223	247	271	286	282	298	291	297	312	272
3		319	298	296	291	289	270	278	276	273	264	251	242	230	232	243	262	271	258	293	300	294	299	295	291	276
4		300	301	294	286	282	287	288	287	274	270	265	258	241	250	240	231	250	268	281	288	284	294	292	306	276
5		305	298	293	283	281	278	279	279	267	267	266	247	256	256	248	253	258	267	277	282	281	284	289	296	275
6	Q	297	294	293	290	287	285	284	283	282	276	267	263	256	249	247	247	252	270	286	294	285	284	289	285	277
7		288	289	288	287	287	287	288	289	285	281	271	260	257	259	246	210	241	284	268	269	277	302	346	351	280
8		322	322	292	286	297	294	284	276	279	270	257	252	252	245	241	246	255	275	279	281	289	292	282	276	277
9	Q	290	288	286	288	285	286	284	284	283	279	276	265	256	248	247	259	274	285	290	285	281	281	282	283	278
10		287	293	291	291	294	292	296	295	292	284	275	268	255	246	242	247	258	268	279	289	296	294	288	295	280
11		294	290	290	290	288	282	274	281	273	272	268	257	243	236	234	232	246	279	294	296	297	286	291	295	275
12		288	303	320	265	271	303	305	291	288	280	257	265	266	243	241	234	244	254	271	278	289	303	306	302	278
13		295	298	295	291	289	279	282	282	282	278	269	260	244	232	225	230	246	263	280	295	295	294	284	301	275
14		293	293	294	291	288	284	278	280	279	271	266	260	250	239	229	224	232	252	262	279	301	296	315	302	273
15		310	312	299	294	281	285	289	272	264	260	260	260	249	235	221	221	233	252	275	283	281	296	291	305	272
16		307	300	296	289	283	287	285	280	277	270	266	258	262	268	259	241	246	249	258	273	286	309	304	318	278
17	D	304	297	269	268	268	284	287	282	274	247	242	202	259	276	300	276	219	215	240	288	288	297	304	314	271
18	D	308	293	299	286	246	267	270	195	135	199	233	245	244	211	196	210	261	269	258	317	290	340	331	307	259
19	D	302	319	324	282	284	283	239	230	223	223	213	210	216	227	271	279	266	274	290	300	303	315	328	302	271
20		284	284	282	275	273	272	275	292	277	261	248	245	242	243	247	238	217	252	276	281	282	284	281	295	267
21	D	285	296	285	285	287	283	279	276	278	268	258	253	253	258	260	260	269	240	339	419	402	405	384	348	299
22		286	264	285	279	247	224	228	266	272	273	273	267	266	258	247	246	247	255	260	270	275	295	296	298	266
23		293	295	297	282	282	283	281	269	273	269	271	258	247	246	239	237	240	257	272	277	280	287	286	279	271
24		277	284	289	285	287	287	290	288	281	274	267	262	245	236	244	240	239	250	256	264	265	270	280	285	269
25	Q	286	289	287	284	284	284	282	282	280	279	279	270	259	244	235	234	247	262	272	273	274	279	275	278	272
26	Q	282	284	284	281	285	285	284	284	282	276	269	264	255	241	236	238	245	256	264	276	279	272	273	277	270
27	Q	283	281	283	283	281	281	280	283	283	283	281	272	259	249	245	248	255	267	279	289	292	281	279	283	275
28		285	281	283	280	282	281	279	280	278	276	267	255	244	---	235	241	250	256	274	285	271	263	271	301	269
29		283	280	289	287	288	290	285	279	281	278	268	263	248	241	234	231	261	268	278	267	266	286	297	274	272
30		284	285	293	289	276	277	277	273	272	265	254	258	251	239	240	247	252	254	268	265	274	279	281	---	268
31		---	---	290	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	294	---
MEAN		295	293	292	285	282	282	280	276	271	267	262	255	250	245	243	241	249	262	276	287	288	295	297	298	274
MEAN	Q	287	287	287	285	285	284	283	283	282	278	274	267	257	246	242	245	255	268	278	284	282	280	280	281	274
MEAN	D	299	299	294	282	276	281	273	249	233	237	240	231	242	241	252	250	252	254	283	321	316	329	329	317	274

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

FEBRUARY 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		398	394	405	405	402	397	393	389	383	382	370	369	---	---	---	---	---	---	---	---	---	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	413	---
5	Q	406	---	397	390	393	394	388	382	368	370	357	354	352	361	387	419	440	449	438	---	---	393	396	402	393
6		402	398	398	397	388	385	394	405	366	356	341	337	343	362	395	422	442	453	441	435	417	420	429	---	398
7	D	422	416	403	370	350	373	386	374	360	356	366	368	372	391	447	455	439	438	459	503	464	459	402	374	406
8	D	428	438	423	434	385	378	367	361	366	408	403	383	392	425	447	448	449	472	477	444	440	416	370	410	415
9	D	419	403	402	377	356	349	359	368	359	356	385	384	384	416	433	454	463	461	464	435	429	422	396	401	403
10	D	399	386	388	386	395	399	391	399	400	383	385	371	378	402	425	431	456	460	465	443	413	411	400	406	407
11		414	410	399	372	382	380	399	396	378	371	354	361	382	407	425	443	457	457	455	462	---	409	405	410	407
12		396	396	400	397	393	403	399	---	373	363	---	---	366	380	---	---	442	453	452	437	425	415	409	406	403
13	Q	399	394	399	395	394	396	392	385	380	370	357	347	357	375	399	429	---	---	---	---	---	---	414	413	397
14		410	413	406	394	362	369	370	370	365	353	348	351	370	387	407	428	451	472	469	462	455	441	426	418	404
15	Q	415	412	412	408	403	393	394	376	371	364	356	351	357	373	401	415	423	431	426	---	398	---	---	395	394
16		398	380	391	396	393	394	379	377	374	364	355	346	355	374	---	449	462	470	452	430	418	413	399	408	400
17		404	405	399	403	397	395	397	393	381	366	357	356	---	---	---	---	---	---	---	---	---	---	---	---	---
18	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	438	426	424	405	---
19		392	404	407	407	406	399	389	405	405	358	343	361	407	420	423	433	443	451	450	435	431	435	424	412	410
20		379	393	408	408	408	395	375	375	377	364	355	356	367	396	420	439	446	445	444	447	440	430	419	410	404
21		385	395	390	383	383	367	375	386	388	386	379	376	384	397	423	445	447	443	436	431	422	412	403	399	401
22		401	400	401	401	386	389	391	387	---	372	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	Q	397	---	---	---	386	383	381	378	368	365	362	358	359	370	381	388	399	---	412	409	414	409	406	401	387
24		---	---	---	385	382	378	370	373	368	363	358	---	---	375	---	389	418	433	444	449	446	434	419	422	396
25		400	403	398	392	384	379	371	368	371	351	340	354	357	364	381	396	424	439	444	441	431	431	424	417	394
26		402	372	375	390	375	369	369	368	377	366	368	371	369	369	383	401	410	430	445	441	439	424	407	405	393
27		399	400	397	395	390	363	355	381	382	370	368	363	363	385	400	411	418	432	437	438	423	415	405	402	396
28		402	400	389	392	388	374	363	366	367	357	360	356	373	378	393	414	435	452	457	445	434	422	400	397	396
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	405	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	437	427	398	399	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

FEBRUARY 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	148	---
5	Q	150	---	153	155	154	150	147	148	148	147	142	135	130	130	131	132	133	141	150	---	---	155	157	160	146
6		161	164	161	159	160	163	159	158	154	149	143	130	123	124	130	144	152	150	145	147	133	145	140	---	147
7	D	142	152	154	143	140	149	163	156	157	155	150	148	146	140	120	143	158	156	163	118	126	106	109	127	143
8	D	130	139	149	156	133	147	139	135	142	134	133	123	120	106	106	125	133	130	110	124	129	121	143	136	131
9	D	141	139	149	166	159	149	150	146	143	134	123	125	117	102	111	118	126	142	136	144	140	130	128	128	135
10	D	127	135	137	135	140	143	137	133	137	131	135	127	120	109	105	116	126	127	146	133	149	145	141	150	133
11		153	155	154	156	148	144	146	151	146	145	139	126	125	120	112	111	115	127	134	128	---	141	140	143	137
12		145	151	150	149	148	153	146	---	143	140	---	---	125	120	---	---	110	122	129	142	145	148	147	150	138
13	Q	152	151	147	148	147	144	147	145	145	146	144	135	127	120	117	116	---	---	---	---	---	---	150	153	140
14		154	156	159	163	165	164	160	146	146	145	142	139	133	127	123	121	126	136	143	148	142	141	142	143	144
15	Q	150	153	154	156	156	149	151	151	147	148	145	143	138	132	132	136	139	143	149	---	143	---	---	157	147
16		158	157	162	156	160	163	158	155	154	152	147	154	151	128	127	128	128	125	127	129	129	131	113	120	142
17		143	147	148	148	153	151	146	144	142	140	136	134	---	---	---	---	---	---	---	---	---	---	---	---	---
18	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	120	126	130	127	---
19		133	135	136	138	140	149	153	144	151	153	140	137	121	121	118	120	127	124	119	124	134	137	139	146	135
20		129	132	144	146	145	151	144	139	139	135	130	124	119	113	115	117	126	131	128	124	120	123	124	122	130
21		124	125	117	122	124	130	132	134	136	133	131	129	129	132	131	134	139	141	144	141	138	136	132	139	132
22		144	148	153	157	157	153	150	149	---	148	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	Q	146	---	---	---	154	159	160	158	156	156	154	151	148	145	140	137	137	---	141	146	157	150	157	158	150
24		---	---	---	159	157	155	153	153	152	151	147	---	---	137	---	129	129	132	136	143	146	151	154	148	147
25		147	154	156	159	158	153	148	147	148	146	150	151	144	132	124	121	128	123	129	135	141	144	149	150	143
26		147	144	150	151	153	152	151	141	145	145	139	139	138	137	130	118	119	124	130	134	145	139	145	146	140
27		147	148	151	152	154	152	139	143	145	142	141	135	123	114	119	123	126	130	135	145	147	153	152	155	140
28		157	155	153	151	151	153	155	156	148	141	139	132	129	127	120	113	117	122	132	139	144	148	132	142	140
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	155	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	133	126	130	134	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

FEBRUARY 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-64	---
5	Q	-68	---	-68	-68	-65	-62	-60	-62	-63	-58	-56	-54	-50	-45	-37	-28	-33	-44	-58	---	---	-65	-63	-62	-57
6		-63	-67	-65	-64	-66	-63	-55	-48	-49	-53	-55	-48	-40	-35	-35	-41	-52	-59	-59	-67	-65	-71	-76	---	-56
7	D	-73	-75	-75	-69	-63	-69	-75	-69	-73	-67	-59	-50	-46	-37	-16	-38	-49	-47	-56	-52	-67	-73	-99	-101	-62
8	D	-87	-83	-84	-49	-54	-65	-63	-65	-69	-56	-54	-53	-51	-41	-37	-48	-54	-52	-48	-74	-77	-81	-97	-77	-63
9	D	-77	-77	-81	-80	-63	-59	-36	-32	-56	-53	-44	-44	-48	-35	-35	-37	-44	-53	-55	-64	-62	-71	-74	-82	-57
10	D	-77	-81	-73	-70	-71	-62	-64	-59	-60	-61	-58	-53	-48	-44	-40	-52	-53	-57	-73	-71	-86	-80	-76	-75	-64
11		-72	-72	-69	-62	-57	-62	-60	-66	-68	-64	-60	-44	-41	-37	-35	-36	-40	-47	-52	-54	---	-78	-76	-71	-58
12		-72	-70	-68	-66	-63	-63	-61	---	-66	-68	---	---	-52	-47	---	---	-44	-49	-53	-67	-73	-73	-71	-70	-62
13	Q	-72	-71	-66	-64	-62	-60	-63	-64	-65	-64	-61	-53	-44	-37	-36	-37	---	---	---	---	---	---	-64	-66	-58
14		-66	-66	-67	-67	-65	-61	-61	-54	-60	-60	-57	-51	-45	-41	-35	-36	-39	-42	-50	-60	-62	-61	-67	-70	-56
15	Q	-75	-71	-68	-67	-66	-62	-60	-60	-62	-64	-60	-56	-53	-46	-42	-41	-40	-46	-55	---	-68	---	---	-65	-59
16		-65	-62	-62	-61	-62	-63	-58	-57	-59	-59	-54	-53	-49	-33	-28	-34	-39	-43	-58	-64	-64	-72	-69	-66	-56
17		-78	-76	-73	-68	-65	-61	-61	-61	-62	-60	-54	-49	---	---	---	---	---	---	---	---	---	---	---	---	---
18	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-68	-73	-76	-76	---
19		-78	-73	-69	-69	-68	-71	-69	-51	-39	-46	-49	-52	-37	-45	-42	-45	-50	-53	-52	-62	-69	-78	-69	-80	-59
20		-76	-69	-72	-70	-66	-64	-48	-58	-66	-67	-62	-54	-46	-40	-41	-41	-45	-49	-52	-58	-63	-65	-73	-73	-59
21		-76	-74	-69	-70	-69	-68	-66	-66	-66	-65	-63	-56	-50	-47	-44	-43	-46	-56	-64	-67	-69	-69	-66	-70	-62
22		-71	-70	-69	-69	-67	-64	-61	-60	---	-59	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	Q	-66	---	---	---	-66	-66	-63	-62	-61	-60	-58	-55	-48	-42	-40	-40	-42	---	-47	-51	-57	-54	-59	-60	-55
24		---	---	---	-59	-57	-57	-55	-55	-56	-55	-51	---	---	-41	---	-40	-37	-37	-42	-47	-52	-59	-66	-61	-52
25		-60	-61	-61	-62	-61	-59	-57	-56	-57	-53	-53	-49	-48	-41	-39	-39	-40	-36	-39	-51	-56	-62	-64	-65	-53
26		-64	-64	-63	-62	-61	-59	-58	-54	-56	-58	-51	-48	-48	-48	-43	-36	-41	-44	-47	-53	-66	-62	-66	-64	-55
27		-62	-60	-60	-60	-60	-56	-51	-53	-55	-57	-55	-52	-46	-39	-43	-45	-46	-45	-50	-60	-61	-65	-62	-63	-54
28		-62	-60	-59	-56	-54	-55	-55	-41	-43	-49	-54	-50	-45	-44	-39	-36	-38	-39	-45	-53	-62	-68	-66	-66	-52
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-63	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-72	-76	-84	-82	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

FEBRUARY 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT)		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
DAY																										
1		287	281	277	277	275	274	274	274	271	267	267	264	---	---	---	---	---	---	---	---	---	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	277	---
5	Q	281	---	283	284	281	276	273	275	276	271	267	261	255	251	245	238	243	257	273	---	---	282	281	281	269
6		283	288	285	283	285	284	276	269	268	268	266	253	243	239	242	255	268	274	271	279	269	281	282	---	270
7	D	281	288	290	278	271	282	294	285	289	283	273	265	260	250	221	252	270	268	278	250	267	261	284	295	272
8	D	286	288	293	269	260	277	271	270	277	262	260	254	250	234	230	251	260	257	242	272	277	275	301	280	267
9	D	284	282	291	300	282	273	255	249	267	260	246	247	246	227	232	238	247	265	262	275	271	273	273	280	264
10	D	276	283	278	274	278	272	270	265	267	264	264	256	248	238	232	249	255	259	283	275	295	288	282	287	268
11		286	287	285	279	271	273	273	280	279	275	268	247	244	238	232	233	239	251	259	258	---	285	282	280	266
12		282	283	281	279	276	279	273	---	276	276	---	---	254	247	---	---	239	250	257	276	283	284	282	283	269
13	Q	285	284	278	277	275	272	275	276	275	276	272	260	248	239	236	236	---	---	---	---	---	---	278	281	267
14		282	282	285	288	287	283	281	268	272	272	267	261	253	246	238	238	244	252	262	273	272	270	276	279	268
15	Q	287	285	283	284	283	276	275	275	275	276	272	267	262	253	249	251	251	259	269	---	277	---	---	283	272
16		283	280	283	279	281	284	277	275	276	275	268	271	266	240	235	240	245	246	260	266	267	274	261	263	267
17		285	286	284	280	280	275	272	272	272	268	261	257	---	---	---	---	---	---	---	---	---	---	---	---	---
18	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	264	271	277	275	---
19		280	277	274	275	276	283	284	264	258	264	260	260	239	246	242	246	253	254	251	261	273	282	276	289	265
20		275	272	282	281	277	278	262	267	273	272	265	255	246	237	240	240	248	254	256	259	261	263	270	269	263
21		273	272	263	267	268	270	269	271	272	269	266	259	254	253	251	252	256	266	275	275	275	274	269	276	267
22		280	281	283	286	284	279	275	274	---	273	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	Q	277	---	---	---	282	285	283	280	279	278	275	271	263	257	252	251	252	---	259	265	276	270	278	279	271
24		---	---	---	278	276	275	272	272	272	271	266	---	---	252	---	247	243	246	252	259	266	274	282	274	266
25		273	278	278	281	280	275	271	270	271	266	269	266	261	249	243	241	246	239	246	259	267	272	277	279	265
26		276	275	277	277	277	275	273	265	269	270	261	258	258	257	250	237	241	247	252	260	276	270	276	276	265
27		275	273	275	276	277	272	261	265	267	267	265	260	247	237	243	247	249	251	258	272	274	280	278	280	265
28		280	278	275	272	270	272	273	262	259	260	264	256	250	248	240	234	238	242	252	263	273	280	270	274	262
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	280	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	275	274	283	284	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

MARCH 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		400	398	395	389	385	388	392	399	389	379	395	377	368	370	383	406	425	442	451	452	435	420	383	391	401
2		398	394	370	384	385	377	382	398	406	403	381	381	383	374	387	415	448	452	456	451	434	413	399	397	403
3		397	393	390	390	391	394	392	390	391	387	387	385	376	376	375	389	415	445	458	453	434	415	402	397	401
4	Q	396	395	393	393	392	392	392	391	391	384	380	378	371	373	376	387	404	416	425	430	425	414	405	401	396
5		397	398	391	387	383	356	354	367	355	363	367	372	375	372	376	389	405	421	441	458	472	461	458	410	397
6	D	391	280	356	368	379	393	404	352	342	358	386	402	392	394	407	435	474	473	501	501	459	457	320	359	399
7	D	379	372	337	335	336	342	379	348	365	364	370	398	414	416	423	425	449	478	475	463	458	413	414	375	397
8	D	355	343	363	300	330	365	356	348	397	404	403	405	401	402	408	419	438	449	442	454	426	412	392	385	392
9	D	379	348	367	369	369	342	349	375	390	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		---	---	---	---	---	---	362	392	406	411	405	397	382	387	399	431	443	448	452	443	421	397	395	397	---
11		387	385	379	374	373	396	392	401	412	401	395	386	379	385	394	413	435	449	453	449	436	416	401	399	404
12	Q	399	396	391	393	393	391	390	395	396	395	389	381	373	374	380	391	412	435	446	443	431	415	403	391	400
13		392	397	399	398	398	398	398	395	391	392	383	377	372	373	380	401	425	446	459	459	444	423	420	398	405
14		406	371	302	339	335	310	361	354	356	354	385	368	371	399	424	414	445	469	469	469	447	429	420	404	392
15		402	405	404	401	398	397	391	387	386	390	384	371	366	373	392	414	432	445	450	445	430	418	415	413	405
16		411	408	404	400	394	387	382	379	376	377	373	365	368	370	385	414	433	445	452	448	438	426	411	374	401
17		388	394	403	363	351	339	357	374	375	401	413	408	401	397	408	424	450	468	453	443	425	410	405	403	402
18		400	398	402	399	393	389	397	396	399	399	394	384	373	370	381	405	430	449	477	475	457	442	431	414	410
19		373	394	315	366	368	375	381	400	404	400	400	395	402	388	392	410	434	450	448	438	425	412	404	401	399
20	Q	399	398	398	398	386	392	395	395	391	395	396	386	379	374	388	406	428	445	449	442	428	412	408	406	404
21		401	400	402	401	401	400	402	401	396	392	383	391	395	380	386	419	444	454	448	436	421	409	400	402	407
22	Q	401	398	399	397	397	397	397	395	392	389	381	371	368	371	386	408	428	438	435	428	417	408	402	400	400
23	Q	---	---	---	---	394	---	391	389	389	384	377	366	358	361	384	417	445	453	448	432	414	409	407	402	---
24		395	396	395	392	386	375	381	382	378	372	362	354	348	350	385	409	430	441	442	434	429	417	409	403	394
25	D	396	390	392	390	383	317	321	361	371	374	369	356	357	362	393	423	439	458	457	450	441	431	385	416	393
26		416	400	395	390	362	376	375	397	425	435	406	409	402	396	393	405	428	442	446	441	428	417	412	405	408
27		400	390	385	378	382	383	388	395	409	398	393	384	367	376	387	410	442	462	462	451	414	408	407	406	403
28		405	393	387	390	381	391	395	397	396	395	389	376	367	369	381	398	419	432	435	430	420	410	410	405	399
29		401	399	396	392	384	387	391	391	388	389	386	378	368	366	381	402	417	427	434	429	418	408	406	399	397
30		393	396	382	389	378	359	390	374	381	379	383	371	374	378	393	410	426	436	437	429	416	408	405	402	395
31		---	---	395	371	376	388	383	381	401	395	387	377	368	371	382	400	417	433	443	439	421	411	399	406	397
MEAN		394	387	382	381	379	376	381	384	389	389	387	382	377	378	390	410	432	447	452	447	432	418	404	398	400
MEAN	Q	399	---	395	---	392	---	393	393	392	389	385	376	370	371	383	402	423	437	441	435	423	412	405	400	400
MEAN	D	380	347	363	352	359	352	362	357	373	377	384	---	---	---	---	---	---	---	---	---	---	---	---	379	392

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

MARCH 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		150	154	157	156	154	155	152	158	152	141	140	142	137	127	116	109	113	123	131	140	142	148	131	134	140
2		137	147	150	151	156	156	149	147	147	149	147	140	140	133	124	112	97	106	120	132	140	145	147	147	138
3		148	149	153	153	149	147	147	145	145	144	146	150	147	137	127	115	107	115	122	132	140	143	144	143	140
4	Q	142	146	146	147	148	147	146	146	148	149	150	151	146	140	133	127	125	130	131	135	141	146	149	150	142
5		152	152	157	150	156	162	150	155	145	145	151	150	149	146	136	130	125	122	129	134	133	121	106	105	140
6	D	117	98	116	120	142	151	158	145	141	149	130	142	143	136	121	86	83	103	121	93	109	118	86	107	121
7	D	94	93	98	107	117	130	134	146	136	133	124	122	114	112	105	111	109	117	91	107	116	122	120	110	115
8	D	120	117	117	134	122	126	130	115	129	123	124	121	117	111	110	114	112	112	121	132	106	119	111	129	120
9	D	135	141	130	144	132	139	130	132	130	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		---	---	---	---	---	---	132	131	140	139	135	139	126	110	97	76	86	99	110	122	128	132	131	133	---
11		135	139	134	135	144	145	140	131	132	134	136	135	125	111	98	90	96	107	117	126	136	138	135	137	127
12	Q	139	140	140	137	140	140	140	137	137	138	140	140	132	121	106	95	94	100	114	127	132	134	135	138	129
13		138	141	143	145	146	146	146	145	145	146	147	144	137	127	114	98	101	110	115	127	134	134	121	109	132
14		113	121	144	121	122	115	136	133	134	130	135	143	135	105	103	96	103	104	108	119	127	130	131	121	122
15		130	138	141	142	141	141	139	137	134	136	137	133	123	111	99	94	95	104	117	127	135	137	138	140	128
16		144	144	146	147	148	147	145	146	146	148	148	148	138	125	104	95	95	108	117	125	127	127	129	123	132
17		122	124	131	127	121	113	121	130	139	135	146	144	130	118	109	107	110	92	119	134	137	132	129	134	125
18		134	137	141	142	145	143	142	143	144	149	145	147	144	134	123	115	118	121	118	108	119	102	112	103	130
19		90	108	128	136	136	145	150	146	139	134	134	133	127	119	114	111	115	120	127	131	132	133	131	135	128
20	Q	139	137	139	141	146	139	138	139	137	136	139	141	134	125	115	110	109	111	109	116	122	123	124	125	129
21		127	128	128	130	131	133	134	137	137	140	140	131	130	118	110	105	106	114	122	126	126	124	126	135	127
22	Q	137	137	139	141	143	143	143	142	140	142	142	137	126	114	109	110	117	124	130	137	139	137	141	142	134
23	Q	---	---	---	---	146	---	149	148	149	151	148	142	131	119	111	111	118	131	143	141	138	138	138	143	---
24		145	147	149	149	151	150	147	147	146	145	143	140	133	123	110	113	119	127	140	148	143	138	145	146	139
25	D	147	151	151	153	160	144	134	137	144	131	128	123	119	114	107	109	112	121	121	124	125	117	109	123	129
26		134	139	142	144	165	148	145	136	139	134	140	141	133	123	106	100	103	107	120	126	126	130	135	135	131
27		139	137	138	146	149	141	153	141	137	138	134	130	125	108	97	100	93	94	109	115	115	121	124	127	125
28		131	135	136	138	140	136	137	138	137	136	135	132	126	118	109	104	106	114	123	129	133	131	134	138	129
29		140	141	142	143	140	141	139	140	141	142	145	143	136	125	115	110	113	121	130	137	141	139	138	125	134
30		132	138	135	141	154	147	142	137	134	133	139	140	137	129	120	118	122	124	135	139	138	135	136	137	135
31		---	---	140	145	148	149	149	144	145	145	144	144	140	131	123	117	118	122	117	119	129	126	132	139	135
MEAN		133	135	138	140	143	142	142	140	140	140	140	139	133	122	112	106	107	114	121	127	130	131	129	130	131
MEAN	Q	140	---	142	---	145	---	143	142	142	143	144	142	134	124	115	111	113	119	126	131	134	136	137	140	134
MEAN	D	123	120	122	132	134	138	137	135	136	134	128	---	---	---	---	---	---	---	---	---	---	---	---	116	123

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

MARCH 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-66	-64	-63	-61	-58	-58	-55	-50	-48	-43	-43	-48	-48	-43	-39	-36	-38	-42	-48	-57	-61	-68	-66	-64	-53
2		-62	-63	-61	-58	-54	-51	-50	-47	-42	-43	-49	-47	-47	-45	-42	-35	-25	-34	-50	-61	-68	-70	-71	-66	-52
3		-63	-61	-59	-56	-53	-52	-53	-52	-53	-52	-51	-53	-54	-52	-49	-44	-40	-43	-47	-55	-66	-72	-71	-66	-55
4	Q	-61	-60	-60	-57	-57	-55	-54	-53	-54	-56	-54	-54	-53	-50	-48	-44	-37	-34	-37	-44	-52	-59	-61	-59	-52
5		-59	-58	-60	-56	-57	-53	-45	-49	-46	-50	-49	-48	-48	-44	-38	-35	-35	-35	-40	-45	-55	-63	-68	-73	-50
6	D	-79	-71	-68	-69	-77	-73	-60	-34	-40	-49	-38	-46	-52	-48	-36	-16	-19	-38	-52	-49	-66	-82	-91	-84	-56
7	D	-74	-64	-51	-62	-67	-58	-22	-34	-59	-66	-60	-52	-43	-46	-43	-47	-44	-51	-49	-59	-70	-80	-79	-73	-56
8	D	-69	-65	-62	-53	-53	-50	-28	-30	-46	-54	-62	-58	-60	-57	-55	-53	-53	-54	-63	-74	-70	-82	-79	-80	-59
9	D	-74	-71	-62	-54	-47	-46	-47	-56	-55	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		---	---	---	---	---	---	-57	-58	-60	-52	-51	-56	-53	-47	-45	-36	-48	-59	-65	-74	-78	-83	-74	-69	---
11		-67	-67	-62	-59	-58	-54	-54	-53	-55	-59	-59	-59	-56	-50	-47	-41	-42	-49	-59	-67	-73	-76	-72	-67	-59
12	Q	-66	-64	-61	-59	-60	-59	-58	-57	-59	-59	-58	-59	-55	-51	-45	-41	-38	-39	-49	-61	-67	-69	-69	-68	-57
13		-63	-62	-61	-60	-60	-60	-59	-59	-59	-57	-59	-57	-51	-46	-43	-37	-39	-46	-47	-54	-61	-67	-64	-61	-56
14		-66	-70	-60	-49	-54	-49	-68	-68	-63	-59	-53	-56	-49	-31	-35	-39	-41	-45	-50	-62	-71	-73	-73	-68	-56
15		-67	-68	-67	-64	-61	-59	-58	-58	-57	-58	-61	-60	-54	-48	-44	-45	-48	-56	-64	-70	-73	-72	-68	-66	-60
16		-64	-63	-61	-61	-60	-59	-57	-56	-56	-57	-57	-59	-54	-48	-39	-39	-43	-51	-56	-62	-68	-70	-70	-70	-57
17		-66	-65	-59	-55	-49	-50	-59	-60	-62	-55	-58	-55	-53	-48	-43	-42	-44	-35	-57	-71	-75	-73	-67	-66	-57
18		-66	-63	-62	-61	-59	-57	-55	-56	-55	-52	-52	-55	-55	-49	-45	-43	-45	-49	-48	-49	-66	-66	-70	-73	-56
19		-66	-72	-68	-52	-69	-67	-58	-48	-52	-55	-56	-58	-54	-54	-51	-48	-50	-55	-60	-67	-70	-68	-66	-65	-60
20	Q	-65	-63	-62	-62	-60	-55	-54	-55	-56	-54	-55	-57	-56	-54	-48	-43	-44	-50	-55	-62	-68	-68	-66	-65	-57
21		-66	-65	-63	-62	-61	-60	-60	-60	-58	-61	-62	-56	-51	-53	-47	-41	-44	-51	-62	-69	-69	-66	-64	-67	-59
22	Q	-66	-62	-61	-61	-61	-59	-57	-56	-55	-56	-58	-57	-52	-47	-43	-43	-45	-49	-55	-60	-63	-61	-61	-59	-56
23	Q	---	---	---	---	-56	---	-56	-55	-54	-55	-56	-54	-50	-45	-39	-39	-43	-51	-60	-61	-58	-56	-58	-59	---
24		-59	-58	-57	-57	-57	-55	-53	-53	-53	-53	-52	-51	-48	-41	-33	-37	-41	-47	-56	-61	-61	-54	-57	-58	-52
25	D	-57	-58	-55	-55	-58	-41	-37	-33	-37	-42	-52	-52	-49	-42	-36	-37	-39	-48	-50	-57	-62	-64	-62	-65	-49
26		-66	-67	-64	-61	-55	-43	-38	-38	-47	-39	-48	-45	-47	-50	-48	-49	-49	-52	-60	-65	-65	-65	-65	-64	-54
27		-63	-62	-59	-59	-56	-53	-53	-38	-43	-49	-53	-53	-56	-45	-42	-46	-40	-39	-54	-61	-71	-72	-67	-66	-54
28		-65	-63	-62	-60	-57	-54	-54	-55	-55	-55	-57	-58	-54	-48	-45	-42	-43	-48	-53	-59	-63	-61	-60	-61	-55
29		-60	-58	-56	-56	-53	-53	-53	-53	-54	-54	-55	-55	-52	-47	-43	-39	-41	-46	-50	-56	-60	-60	-59	-55	-53
30		-55	-59	-56	-56	-52	-45	-35	-38	-45	-47	-50	-52	-50	-46	-43	-42	-43	-43	-49	-56	-60	-58	-57	-57	-50
31		---	---	-55	-55	-53	-54	-53	-50	-46	-45	-49	-51	-49	-44	-40	-39	-39	-42	-43	-47	-56	-61	-62	-62	-50
MEAN		-65	-64	-61	-58	-58	-55	-52	-50	-52	-53	-54	-54	-52	-47	-43	-41	-41	-46	-53	-60	-65	-68	-67	-66	-55
MEAN	Q	-64	---	-61	---	-59	---	-56	-55	-56	-56	-56	-56	-53	-49	-45	-42	-41	-45	-51	-58	-61	-63	-63	-62	-55
MEAN	D	-71	-66	-60	-59	-60	-53	-39	-38	-48	-54	-53	---	---	---	---	---	---	---	---	---	---	---	---	-77	-56

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

MARCH 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		280	280	281	278	275	276	272	271	265	256	255	260	258	248	238	231	236	244	254	266	271	280	269	269	263
2		269	275	276	274	273	270	266	263	258	260	263	258	258	253	244	233	216	229	249	265	275	280	281	278	261
3		276	274	275	273	268	266	267	266	266	265	265	269	268	261	253	241	234	241	248	261	274	281	280	275	264
4	Q	271	272	272	270	271	269	268	266	269	271	269	270	267	260	255	248	242	242	245	252	262	271	274	273	264
5		274	274	278	271	275	276	262	268	260	264	266	265	264	259	248	242	240	238	246	253	261	260	256	260	261
6	D	272	254	262	265	284	286	279	250	253	264	245	258	264	256	239	202	203	230	252	233	256	275	264	270	255
7	D	255	245	238	252	261	261	234	251	265	270	260	252	240	241	236	242	238	248	232	249	264	275	274	263	252
8	D	265	260	257	260	253	253	237	230	251	255	261	257	256	250	248	249	247	248	260	276	258	275	268	279	256
9	D	278	278	265	266	253	256	253	261	260	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		---	---	---	---	---	---	262	262	269	261	259	265	255	241	232	213	229	245	256	270	277	283	276	272	---
11		272	274	267	265	269	267	264	258	261	265	266	266	257	245	234	225	229	241	255	267	277	281	276	273	261
12	Q	273	273	270	266	269	268	267	265	266	268	268	268	260	251	238	228	225	229	246	262	270	273	274	274	260
13		270	272	272	272	272	272	271	271	271	270	272	268	260	250	241	227	229	241	245	257	266	271	261	253	260
14		258	266	271	249	253	246	273	271	268	263	260	267	257	226	227	226	233	237	243	259	270	274	275	265	256
15		269	274	275	273	270	268	266	265	263	265	268	265	254	243	232	231	233	245	259	270	277	278	275	273	262
16		275	274	273	274	273	272	269	270	269	270	271	272	263	250	232	226	229	243	253	262	268	269	271	267	262
17		264	264	263	258	249	246	257	263	269	262	271	267	257	247	238	235	239	221	254	275	279	275	268	271	258
18		270	270	271	271	271	268	266	268	267	268	265	269	267	256	247	241	244	249	247	242	262	253	262	259	260
19		246	260	268	260	274	277	273	263	262	262	262	264	257	252	246	243	246	253	262	270	272	272	269	271	262
20	Q	273	270	270	271	272	264	263	264	264	262	264	267	262	255	245	239	238	244	247	257	265	266	265	265	261
21		266	266	264	265	265	265	265	267	266	270	270	260	256	251	242	233	237	247	261	268	269	265	264	272	260
22	Q	272	269	269	270	271	270	268	266	265	267	268	264	254	244	238	238	244	251	259	267	270	268	271	269	262
23	Q	---	---	---	---	269	---	271	269	269	271	270	265	256	244	236	235	243	257	271	271	266	264	267	270	---
24		271	271	272	271	272	270	266	267	266	266	264	261	255	244	229	234	242	251	266	274	271	262	269	271	262
25	D	271	274	271	272	279	255	246	245	252	249	256	253	248	239	231	233	236	248	250	258	262	259	253	263	254
26		271	274	274	272	279	260	253	248	257	248	259	257	254	251	239	237	239	243	257	265	265	268	270	269	259
27		271	269	267	271	270	264	271	251	253	259	260	257	257	238	230	235	226	226	246	256	264	268	265	266	256
28		268	269	268	268	266	261	263	264	263	262	263	262	256	246	239	234	236	244	253	262	268	264	266	268	259
29		269	268	267	267	263	264	262	263	264	265	267	267	260	249	240	234	238	246	255	264	269	268	267	256	260
30		261	267	263	266	270	260	249	249	253	254	260	263	259	252	244	242	245	246	257	266	267	265	264	265	258
31		---	---	265	267	268	269	269	263	260	259	262	263	260	251	242	238	240	244	242	247	260	262	266	270	258
MEAN		269	269	268	267	269	266	263	261	263	263	264	263	258	248	239	234	235	242	252	261	268	270	269	268	260
MEAN	Q	272	---	270	---	270	---	267	266	267	268	268	267	260	251	242	238	238	245	253	262	267	269	270	270	262
MEAN	D	268	262	259	263	266	262	250	248	256	260	257	---	---	---	---	---	---	---	---	---	---	---	---	269	255

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

APRIL 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		402	399	395	392	390	389	393	371	384	386	388	379	373	374	387	405	418	426	430	426	414	407	401	401	397
2		395	385	394	395	394	392	388	387	386	387	386	378	367	367	382	403	422	430	432	423	407	399	398	397	396
3		395	388	390	387	392	388	380	391	381	385	386	377	366	367	385	410	428	440	440	421	405	396	400	399	396
4	D	393	397	396	385	368	381	385	388	390	384	381	364	355	365	383	416	450	483	508	483	454	346	424	390	403
5	D	228	291	284	311	323	385	326	328	390	423	419	413	399	410	404	403	418	434	444	422	420	378	358	315	372
6		331	373	364	376	390	400	405	403	395	390	393	400	401	402	404	423	433	437	441	439	421	414	376	377	400
7		387	387	377	365	371	395	413	408	403	404	403	405	394	385	391	410	430	446	448	437	420	411	406	400	404
8		390	387	371	386	390	392	393	394	403	399	391	382	374	370	378	398	423	439	439	426	413	406	404	403	398
9		396	380	371	369	377	387	389	390	389	392	390	382	368	364	379	401	423	438	435	424	412	407	404	403	395
10	Q	400	397	390	390	389	390	389	386	385	385	383	377	372	373	386	405	420	429	429	419	408	404	403	401	396
11		398	398	393	374	371	385	388	386	388	390	385	378	364	358	366	390	412	423	428	433	441	476	430	409	398
12	D	390	326	309	224	308	314	371	401	417	431	417	404	418	409	406	421	431	444	448	448	403	430	458	421	394
13	D	408	403	385	378	337	334	335	381	367	421	419	404	429	432	411	421	471	484	475	450	422	423	421	362	407
14		392	373	375	361	387	387	379	384	398	428	424	396	386	381	387	405	430	434	434	430	426	414	389	389	400
15		398	387	387	361	360	391	391	405	402	411	413	401	382	375	394	420	433	444	449	430	410	413	405	393	402
16		372	391	374	370	375	---	---	---	---	---	---	---	---	382	395	413	433	442	439	425	411	395	406	402	---
17		401	397	380	378	371	385	399	390	393	393	394	388	382	384	393	412	429	436	429	414	406	403	399	400	398
18		396	393	388	388	376	377	374	391	394	393	391	386	384	379	388	407	---	---	---	---	---	412	401	414	396
19		408	390	382	370	375	384	385	421	397	394	386	380	376	374	392	412	430	435	423	408	404	406	410	405	398
20		405	400	---	---	---	---	---	---	---	---	---	---	---	417	409	409	421	436	438	434	431	421	410	413	---
21	Q	408	404	398	398	398	397	397	395	395	396	397	393	385	384	393	411	427	437	431	417	405	400	396	395	402
22		388	380	391	384	391	397	392	391	392	392	387	383	373	368	392	411	425	428	425	410	406	410	401	403	397
23		398	396	395	392	389	385	385	385	389	389	388	383	377	377	390	412	428	432	421	413	404	401	399	399	397
24		394	371	354	344	378	399	398	393	389	398	397	392	381	382	392	409	424	426	427	415	407	404	400	392	395
25		401	400	375	367	385	390	386	381	382	386	388	392	387	389	392	411	422	424	421	412	408	403	395	386	395
26	Q	397	396	395	395	394	396	395	394	393	392	392	387	378	373	379	397	415	426	424	414	404	399	397	397	397
27	Q	398	396	395	393	392	392	389	389	392	394	392	386	380	379	386	402	421	426	420	411	405	401	400	398	397
28	Q	397	396	394	392	391	390	390	390	391	393	391	389	381	375	381	398	411	417	414	405	403	399	396	396	395
29		395	394	392	384	387	387	386	388	386	386	384	382	380	381	389	408	426	433	424	414	432	450	448	429	403
30	D	405	277	295	344	388	401	395	398	416	411	399	395	396	405	411	418	430	433	426	423	431	392	400	419	396
MEAN		389	382	376	371	377	385	386	390	392	398	395	389	383	383	391	409	427	437	436	425	415	407	404	397	398
MEAN	Q	400	398	394	394	393	393	392	391	391	392	391	386	379	377	385	402	419	427	424	413	405	401	398	397	398
MEAN	D	365	339	334	329	345	363	362	379	396	414	407	396	400	404	403	416	440	455	460	445	426	394	412	381	394

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

APRIL 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		140	142	144	144	143	147	159	145	137	135	135	135	131	127	120	114	118	125	130	131	130	134	135	137	135
2		138	139	143	143	144	144	144	145	145	146	141	140	135	129	119	112	110	120	126	135	141	142	142	142	136
3		142	141	146	150	146	145	143	146	143	142	142	141	132	122	112	104	106	122	131	137	144	143	136	131	135
4	D	135	140	143	147	152	150	146	142	146	146	143	144	137	126	120	108	111	121	110	108	107	76	65	76	125
5	D	94	109	89	122	75	95	96	98	100	102	108	119	113	104	96	102	97	96	103	112	123	100	107	120	103
6		105	109	107	116	120	126	132	134	135	132	132	127	125	119	115	105	107	116	121	117	108	111	113	115	119
7		122	126	127	127	117	121	132	137	134	131	133	132	127	118	101	97	101	106	115	124	126	125	126	128	122
8		127	124	126	129	129	131	131	131	134	135	136	133	127	116	106	98	100	110	122	126	129	131	132	133	125
9		135	137	137	137	139	138	137	138	137	137	138	139	134	123	114	111	115	124	133	140	140	140	142	140	134
10	Q	140	143	142	139	139	139	139	137	137	138	139	138	133	122	115	113	118	128	137	144	143	140	138	138	135
11		141	139	139	141	141	142	142	141	140	142	144	145	143	136	129	126	132	140	134	130	105	98	83	72	130
12	D	79	88	85	131	136	100	105	109	115	109	120	129	115	116	105	98	106	111	115	90	92	110	97	110	107
13	D	125	131	132	142	143	132	110	130	126	115	122	129	100	107	106	95	69	80	98	105	101	113	85	106	113
14		101	115	128	130	131	140	132	127	117	124	143	144	122	100	91	89	88	102	117	122	113	109	112	113	117
15		113	119	125	126	124	136	138	132	132	129	129	131	123	114	94	88	97	102	107	112	118	117	119	108	118
16		113	115	114	115	122	---	---	---	---	---	---	---	---	117	108	103	103	109	113	124	123	117	121	124	---
17		128	131	134	137	134	128	134	136	133	134	136	136	130	121	113	109	114	122	127	129	130	126	125	124	128
18		125	124	124	133	131	142	137	130	132	135	137	138	125	120	111	108	---	---	---	---	---	120	112	115	126
19		117	117	116	119	124	132	129	147	141	138	139	140	134	125	115	116	120	127	135	138	137	142	141	147	131
20		143	146	---	---	---	---	---	---	---	---	---	---	---	116	109	102	109	113	116	109	114	117	121	120	---
21	Q	123	126	128	127	126	127	127	127	129	130	132	131	124	114	105	104	109	116	124	128	130	131	131	135	124
22		134	128	121	119	123	128	127	128	129	130	132	131	129	117	108	115	121	131	133	129	134	131	133	135	127
23		139	138	137	139	140	141	139	137	137	138	139	139	136	129	118	115	118	122	130	132	130	133	135	135	133
24		130	121	121	120	123	136	134	132	131	132	135	135	131	120	113	108	115	126	132	131	132	133	132	125	127
25		126	131	132	135	131	136	144	133	133	134	136	133	129	119	113	111	114	119	122	125	127	128	127	129	128
26	Q	131	132	133	135	133	133	133	134	136	137	137	137	131	121	110	106	111	120	129	131	129	131	134	135	129
27	Q	135	137	137	137	135	134	136	135	136	137	138	136	130	121	112	109	115	124	130	131	132	133	133	134	131
28	Q	135	136	137	138	137	138	138	138	138	139	139	138	135	127	119	113	118	127	135	138	136	137	139	141	134
29		141	141	141	143	143	143	149	150	153	148	146	140	135	126	119	113	119	130	138	133	110	96	94	103	131
30	D	111	75	72	84	107	116	123	126	133	132	131	126	122	115	105	106	102	112	111	117	105	98	100	108	110
MEAN		126	127	127	131	131	133	133	134	134	133	135	135	128	120	111	107	109	117	123	125	124	122	120	123	125
MEAN	Q	133	135	135	135	134	134	135	134	135	136	137	136	131	121	112	109	114	123	131	135	134	134	135	137	131
MEAN	D	109	109	104	125	122	119	116	121	124	121	125	129	117	114	106	102	97	104	107	106	106	99	91	104	112

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

APRIL 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-60	-58	-56	-55	-52	-52	-45	-40	-41	-45	-48	-51	-50	-46	-42	-39	-43	-47	-49	-50	-53	-56	-57	-56	-50
2		-56	-54	-55	-53	-53	-51	-51	-50	-50	-49	-47	-48	-49	-47	-43	-40	-37	-44	-51	-58	-62	-60	-57	-55	-51
3		-54	-54	-55	-55	-51	-49	-47	-47	-46	-46	-48	-52	-50	-44	-37	-34	-39	-49	-55	-60	-64	-62	-56	-51	-50
4	D	-54	-55	-55	-54	-55	-51	-50	-45	-46	-45	-47	-52	-48	-39	-33	-27	-29	-35	-39	-45	-62	-61	-59	-76	-48
5	D	-66	-28	-23	18	-26	-35	-12	-42	-58	-52	-63	-70	-66	-57	-54	-59	-54	-52	-54	-64	-74	-67	-68	-62	-50
6		-54	-62	-62	-63	-63	-63	-61	-56	-51	-52	-53	-52	-50	-51	-49	-43	-42	-49	-53	-56	-55	-62	-64	-64	-55
7		-64	-63	-60	-58	-51	-54	-54	-52	-52	-52	-55	-54	-58	-56	-47	-42	-42	-47	-55	-62	-65	-63	-61	-62	-55
8		-60	-58	-57	-57	-56	-56	-56	-56	-55	-54	-55	-54	-52	-49	-48	-42	-40	-45	-54	-58	-61	-60	-59	-57	-54
9		-58	-57	-54	-53	-53	-52	-52	-53	-52	-51	-51	-54	-53	-49	-43	-40	-39	-43	-48	-56	-57	-54	-54	-52	-51
10	Q	-50	-52	-52	-49	-50	-50	-50	-49	-50	-51	-51	-52	-51	-47	-43	-41	-41	-46	-53	-59	-59	-55	-53	-51	-50
11		-52	-51	-50	-52	-49	-50	-50	-50	-49	-49	-51	-53	-52	-50	-44	-37	-38	-40	-41	-43	-38	-45	-57	-61	-48
12	D	-65	-46	-57	-45	-20	-17	-47	-56	-56	-51	-63	-66	-52	-54	-52	-46	-53	-56	-59	-55	-64	-73	-70	-75	-54
13	D	-76	-72	-66	-58	-23	-29	-25	-45	-40	-35	-46	-60	-39	-45	-52	-48	-27	-40	-59	-67	-72	-76	-65	-64	-51
14		-68	-71	-63	-55	-50	-30	-42	-48	-45	-43	-47	-48	-49	-45	-45	-44	-41	-50	-60	-64	-60	-57	-62	-62	-52
15		-63	-64	-56	-51	-48	-42	-44	-46	-48	-47	-50	-56	-56	-54	-42	-40	-49	-51	-52	-63	-67	-61	-62	-61	-53
16		-60	-62	-59	-57	-57	---	---	---	---	---	---	---	---	-51	-48	-44	-44	-48	-51	-60	-61	-58	-59	-59	---
17		-60	-60	-58	-55	-49	-48	-48	-48	-49	-50	-52	-52	-50	-47	-43	-42	-44	-49	-55	-57	-57	-55	-54	-54	-52
18		-54	-55	-54	-54	-49	-45	-42	-47	-51	-52	-52	-53	-47	-48	-46	-42	---	---	---	---	---	-55	-51	-53	-50
19		-58	-59	-58	-57	-55	-55	-51	-50	-49	-52	-53	-54	-52	-49	-43	-41	-43	-48	-55	-57	-56	-56	-52	-56	-52
20		-52	-53	---	---	---	---	---	---	---	---	---	---	---	-43	-44	-44	-48	-49	-52	-51	-56	-58	-59	-60	---
21	Q	-59	-59	-58	-56	-55	-54	-53	-53	-52	-52	-53	-53	-53	-50	-45	-43	-45	-51	-57	-60	-60	-58	-56	-56	-54
22		-55	-51	-48	-50	-53	-55	-53	-52	-52	-52	-52	-53	-54	-49	-41	-45	-49	-55	-58	-54	-57	-54	-55	-55	-52
23		-55	-53	-51	-52	-52	-53	-51	-48	-47	-47	-47	-49	-48	-45	-40	-38	-42	-46	-51	-53	-51	-53	-53	-51	-49
24		-51	-48	-47	-45	-42	-47	-50	-51	-49	-49	-51	-51	-50	-44	-40	-39	-42	-50	-54	-54	-54	-54	-53	-50	-49
25		-49	-52	-52	-51	-50	-50	-41	-45	-48	-48	-49	-47	-47	-45	-44	-41	-43	-48	-50	-53	-55	-54	-53	-53	-49
26	Q	-51	-51	-50	-49	-48	-48	-48	-48	-49	-49	-49	-50	-49	-45	-42	-39	-41	-46	-51	-55	-52	-52	-53	-52	-49
27	Q	-49	-49	-48	-46	-46	-45	-47	-47	-47	-47	-47	-48	-48	-46	-43	-40	-40	-47	-51	-53	-54	-53	-52	-50	-48
28	Q	-49	-48	-48	-47	-46	-46	-46	-45	-45	-46	-46	-46	-47	-45	-40	-35	-39	-44	-51	-54	-51	-50	-50	-49	-46
29		-47	-47	-45	-46	-45	-44	-44	-39	-37	-37	-41	-41	-42	-40	-38	-34	-38	-44	-49	-47	-36	-37	-45	-55	-42
30	D	-61	-52	-42	-52	-65	-61	-60	-56	-49	-47	-49	-50	-48	-46	-43	-43	-41	-49	-49	-54	-50	-56	-57	-63	-52
MEAN		-57	-55	-53	-50	-49	-48	-47	-49	-49	-48	-51	-52	-50	-48	-44	-41	-42	-47	-52	-56	-57	-57	-57	-58	-51
MEAN	Q	-52	-52	-51	-50	-49	-49	-49	-48	-49	-49	-49	-50	-50	-47	-42	-40	-41	-47	-53	-56	-55	-54	-53	-52	-49
MEAN	D	-64	-51	-49	-38	-38	-39	-39	-49	-50	-46	-54	-60	-50	-48	-47	-45	-41	-46	-52	-57	-64	-66	-64	-68	-51

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

APRIL 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		269	268	268	267	264	266	267	255	251	253	256	259	256	250	242	237	242	250	255	256	257	262	264	264	257
2		264	264	266	265	265	264	264	263	263	263	259	259	257	252	243	236	233	245	254	265	271	270	268	266	259
3		265	265	268	270	265	263	260	262	259	259	260	263	256	246	234	227	233	250	260	267	274	272	263	257	258
4	D	261	265	266	268	272	267	264	258	261	260	260	264	257	244	235	223	227	238	234	239	252	234	227	246	251
5	D	248	225	210	195	204	223	204	230	245	241	253	266	259	247	239	246	240	238	243	256	271	252	257	259	240
6		245	253	252	257	260	263	265	262	259	258	259	255	252	249	245	235	235	246	252	253	247	254	257	258	253
7		262	263	262	260	249	254	259	260	258	257	261	260	260	254	236	230	232	239	251	261	265	263	262	264	255
8		261	259	258	261	260	260	260	260	261	261	262	260	255	247	240	230	230	239	254	260	264	264	263	262	256
9		264	264	262	261	262	261	261	262	260	260	260	264	260	250	240	236	237	246	255	265	266	264	265	263	258
10	Q	261	264	264	259	261	261	260	258	259	260	261	261	257	248	240	238	241	250	261	270	269	265	262	261	258
11		262	261	260	263	260	261	262	261	260	261	264	266	264	258	249	242	247	252	250	249	231	233	234	231	253
12	D	238	228	235	251	233	211	238	248	252	244	260	267	248	251	242	233	244	249	254	237	245	262	253	264	245
13	D	274	274	270	268	240	239	223	251	244	234	248	263	229	238	243	234	202	219	244	255	257	266	243	253	246
14		253	264	264	259	256	244	250	252	244	246	260	261	250	233	229	227	224	239	255	262	254	249	255	256	249
15		256	260	258	254	250	252	254	253	254	252	255	260	256	249	228	223	235	240	244	255	263	257	259	252	251
16		254	256	254	252	257	---	---	---	---	---	---	---	---	249	240	235	234	241	246	259	260	254	257	259	---
17		262	264	264	263	257	253	256	257	256	258	260	260	255	248	240	237	241	250	257	260	261	257	255	255	255
18		255	256	255	259	255	257	252	252	257	260	261	262	250	248	240	236	---	---	---	---	---	254	246	249	253
19		255	255	254	254	256	261	255	265	260	261	262	264	259	251	241	240	244	252	262	265	264	267	263	269	257
20		264	267	---	---	---	---	---	---	---	---	---	---	---	241	238	234	241	245	249	244	251	255	258	258	---
21	Q	258	260	260	258	257	257	256	256	256	257	258	258	254	246	237	234	239	248	258	262	264	262	260	262	255
22		262	255	248	249	254	258	256	255	256	257	258	258	257	247	236	243	249	260	264	258	263	259	260	262	255
23		264	262	260	261	263	264	261	257	257	257	258	259	257	250	240	237	241	247	256	259	256	260	260	259	256
24		256	248	248	245	244	256	257	257	255	255	258	258	255	245	238	233	240	253	259	259	259	260	259	252	252
25		252	257	258	259	256	258	256	252	256	256	257	254	251	245	240	236	240	247	251	255	257	258	256	257	253
26	Q	257	257	257	257	255	255	255	256	257	258	258	259	254	246	237	233	237	246	256	260	257	258	259	259	253
27	Q	258	258	257	256	255	254	256	255	255	256	257	256	254	247	239	235	239	249	256	258	259	259	258	258	253
28	Q	257	257	257	257	256	256	256	256	256	257	257	256	255	249	240	233	240	248	258	262	259	259	260	260	254
29		259	258	258	259	258	258	261	257	257	255	257	253	251	245	239	232	239	250	259	254	233	225	231	244	250
30	D	253	225	215	230	255	257	259	258	256	253	254	252	249	243	236	236	232	244	243	251	241	242	244	254	245
MEAN		258	257	256	256	254	255	255	256	256	255	258	260	254	247	239	234	236	245	253	257	258	256	255	257	253
MEAN	Q	258	259	259	257	257	256	257	256	257	258	258	258	255	247	239	235	239	248	258	263	261	261	260	260	255
MEAN	D	255	243	239	243	241	239	238	249	252	246	255	262	248	244	239	235	229	237	244	248	253	251	245	255	245

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

MAY 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	D	386	372	309	301	359	329	330	397	392	423	424	415	420	406	422	433	448	456	438	434	421	394	376	395	395
2		390	387	387	390	397	399	397	401	402	398	397	393	391	391	398	410	425	429	426	419	407	410	398	398	402
3		390	371	364	379	374	381	366	390	395	409	443	419	393	391	397	417	434	440	432	422	411	404	402	398	401
4		384	386	385	368	382	394	378	393	396	394	392	388	384	383	387	407	418	423	419	409	403	400	399	397	395
5	Q	395	394	391	384	383	381	387	386	388	395	395	388	385	378	384	401	411	419	417	408	400	398	396	395	394
6		395	394	394	396	396	395	394	393	390	389	388	385	378	368	376	390	408	420	414	404	397	398	399	401	394
7		401	392	389	390	391	390	389	390	389	387	386	383	380	370	377	391	404	415	417	411	415	419	446	469	400
8	D	391	322	286	256	290	351	311	340	354	398	402	435	561	501	500	507	487	453	477	480	443	444	407	403	408
9		353	321	291	333	383	407	411	412	413	410	407	403	401	398	406	417	428	433	433	428	419	409	421	385	397
10		398	393	357	346	357	374	377	399	431	410	405	402	403	397	403	413	423	428	428	421	417	417	407	406	401
11		407	406	404	403	402	402	403	401	396	389	401	396	394	393	403	416	424	430	443	421	416	409	406	413	407
12		394	406	403	387	335	380	376	389	384	371	391	400	392	392	401	416	432	432	429	419	406	411	390	396	397
13		385	350	321	345	369	372	364	342	386	406	391	400	397	391	408	437	439	441	430	422	412	409	406	405	393
14		404	402	395	398	400	396	386	386	390	389	383	389	390	396	404	414	418	425	426	424	413	409	407	405	402
15	D	398	372	---	248	---	366	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	D	---	---	---	---	---	---	---	---	---	---	---	---	449	436	---	448	---	452	442	427	425	427	420	417	---
17		389	369	342	312	265	288	354	377	423	422	424	440	453	430	419	426	451	451	444	433	425	430	405	388	398
18		413	408	380	387	389	383	380	367	368	388	396	402	409	422	417	429	429	430	425	418	412	408	409	408	403
19		407	408	406	405	399	392	394	395	400	398	409	415	403	404	406	416	421	427	422	416	407	406	404	403	407
20		400	370	384	380	374	319	214	345	337	374	409	401	408	399	397	406	415	419	412	407	403	401	404	397	382
21		386	362	342	311	288	274	285	318	327	391	404	427	435	423	434	441	450	442	437	432	412	427	424	420	387
22		407	397	358	368	358	357	364	372	399	372	404	395	412	409	407	413	422	424	418	408	406	404	406	408	395
23		394	395	395	395	397	396	398	398	398	395	395	395	389	385	394	408	416	416	415	409	403	399	399	395	399
24	Q	397	395	394	395	396	397	398	397	397	394	391	389	389	384	389	402	412	414	406	399	395	393	395	387	396
25	Q	397	390	391	393	393	394	388	400	399	395	393	390	389	388	390	398	405	407	402	396	393	394	394	395	395
26	Q	394	393	393	394	392	391	392	394	395	396	396	393	389	385	385	395	404	408	404	396	392	390	390	390	394
27	Q	390	390	391	391	391	392	391	392	394	393	390	389	387	385	393	402	409	407	400	391	388	387	388	389	392
28		390	389	391	391	392	387	386	386	383	384	386	385	382	378	380	389	405	414	418	434	429	446	418	407	398
29		341	359	363	352	302	347	406	383	387	398	390	390	389	387	390	398	401	401	394	393	384	381	380	413	380
30	D	355	326	346	309	349	387	366	358	279	491	557	614	562	536	505	534	507	460	458	494	472	471	440	430	442
31		412	366	372	332	368	393	404	414	405	395	395	398	405	416	419	422	426	425	421	405	399	402	411	389	400
MEAN		391	379	367	360	367	373	365	372	382	397	407	408	411	405	408	421	428	428	425	420	411	410	404	404	398
MEAN	Q	395	392	392	391	391	391	391	394	395	395	393	390	388	384	388	400	408	411	406	398	394	392	393	391	394
MEAN	D	---	---	318	281	---	355	---	292	---	---	---	---	489	---	---	476	---	---	---	---	---	---	401	411	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

MAY 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	D	112	115	116	102	131	143	122	126	125	122	134	132	121	115	102	88	84	86	85	98	103	106	114	116	112
2		122	130	131	125	127	130	133	132	128	130	129	130	125	115	101	102	103	111	118	116	119	119	116	119	121
3		117	132	126	120	122	128	127	125	126	132	142	145	128	111	96	91	98	99	106	112	105	108	115	119	118
4		121	115	123	126	119	129	129	125	128	129	130	131	128	119	107	101	105	112	119	122	119	119	121	123	121
5	Q	122	121	122	123	122	124	121	124	125	127	133	135	132	125	114	109	116	121	124	128	131	131	133	133	125
6		132	133	132	132	132	133	134	134	135	137	138	138	135	129	121	120	122	127	134	140	143	140	141	139	133
7		134	136	136	136	135	135	135	135	135	134	134	135	132	125	119	115	116	124	134	143	141	142	135	109	131
8	D	59	36	43	67	70	108	90	90	109	101	117	122	111	50	31	38	37	60	65	44	57	58	53	71	70
9		82	78	72	98	94	101	100	101	102	103	107	108	108	102	94	90	90	93	98	105	103	97	91	106	97
10		88	88	80	84	90	99	103	102	109	108	111	112	111	110	104	99	100	104	109	112	109	104	105	112	102
11		117	118	119	119	119	120	123	130	135	120	122	116	119	111	106	102	103	109	108	111	115	88	98	108	114
12		111	116	120	119	116	109	110	115	121	114	109	116	115	113	111	101	101	108	115	110	109	97	96	102	111
13		88	109	91	104	97	110	115	119	111	130	117	112	111	107	97	88	99	99	111	113	113	113	114	115	108
14		117	119	118	117	120	120	116	114	119	122	122	121	120	113	106	104	107	111	115	110	111	113	114	116	115
15	D	118	124	---	171	---	138	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	D	---	---	---	---	---	---	---	---	---	---	---	---	90	75	---	45	---	71	82	80	75	68	65	70	---
17		71	73	74	78	76	89	107	112	100	102	100	98	107	100	94	91	79	80	87	88	90	88	84	90	90
18		88	87	89	85	89	96	101	108	100	98	98	105	99	107	103	99	99	103	107	110	111	112	111	111	101
19		111	110	111	111	116	115	126	115	110	114	111	110	111	106	103	100	100	104	110	113	119	118	120	120	112
20		117	122	118	123	153	154	117	96	94	97	83	96	90	94	100	104	106	110	113	109	103	96	91	80	107
21		77	85	87	87	78	90	102	126	100	108	107	104	114	103	93	93	100	103	100	98	87	105	107	105	98
22		104	112	119	97	104	109	103	107	112	114	111	116	109	109	106	103	108	115	118	119	118	115	113	113	111
23		108	113	113	114	116	115	115	115	116	118	120	122	122	114	105	99	104	108	115	119	119	118	118	117	114
24	Q	118	119	120	120	119	119	118	118	119	120	122	123	123	120	113	109	109	113	118	124	126	126	125	119	119
25	Q	122	125	124	125	125	124	122	126	125	126	127	129	127	122	118	114	117	120	123	124	124	123	122	122	123
26	Q	122	123	123	123	123	123	123	123	125	126	128	130	129	126	118	114	115	121	128	130	129	128	127	126	124
27	Q	127	127	127	126	126	126	127	129	130	130	129	129	128	125	120	116	119	126	132	133	133	130	129	127	127
28		127	127	127	126	129	132	134	141	142	143	142	143	142	136	127	122	116	114	113	94	79	93	101	96	123
29		86	92	96	123	109	106	127	131	120	111	117	124	123	122	119	123	124	124	127	120	115	126	116	68	115
30	D	49	51	75	102	104	118	147	145	176	180	154	114	78	58	51	37	74	55	49	58	64	59	76	91	90
31		91	76	64	57	70	86	90	98	102	107	105	115	113	104	99	104	109	108	111	115	116	116	110	89	98
MEAN		105	106	105	110	111	116	116	114	116	118	119	120	115	108	101	96	100	105	109	109	109	108	107	107	109
MEAN	Q	122	123	123	123	123	123	122	124	125	126	128	129	128	124	117	112	115	120	125	128	128	128	127	125	124
MEAN	D	---	---	80	102	---	116	---	84	---	---	---	---	89	---	---	52	---	---	---	---	---	---	68	81	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

MAY 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	D	-66	-46	-40	-34	-24	-27	-28	-31	-35	-37	-40	-48	-48	-53	-47	-41	-40	-42	-51	-61	-65	-68	-69	-65	-46
2		-62	-60	-55	-51	-50	-48	-47	-45	-47	-49	-49	-51	-51	-49	-44	-46	-47	-50	-56	-55	-57	-56	-55	-56	-52
3		-57	-58	-52	-49	-48	-51	-47	-46	-46	-45	-40	-41	-43	-44	-39	-36	-45	-47	-53	-58	-56	-56	-60	-61	-49
4		-59	-54	-53	-50	-49	-49	-48	-48	-50	-50	-51	-51	-52	-51	-46	-43	-47	-51	-54	-56	-54	-53	-54	-55	-51
5	Q	-54	-52	-53	-53	-51	-51	-49	-49	-49	-48	-51	-51	-51	-50	-45	-41	-45	-49	-50	-53	-54	-52	-52	-51	-50
6		-50	-49	-48	-48	-47	-48	-48	-48	-48	-48	-48	-48	-48	-49	-44	-41	-42	-42	-48	-52	-52	-47	-46	-45	-47
7		-44	-46	-47	-46	-45	-46	-46	-46	-45	-44	-44	-43	-45	-47	-44	-42	-43	-47	-51	-53	-49	-48	-46	-44	-46
8	D	-53	-43	-31	-24	-38	-44	-19	-24	-42	-49	-61	-59	-22	-13	-29	-54	-61	-82	-80	-74	-78	-77	-76	-81	-51
9		-81	-68	-55	-59	-66	-70	-66	-64	-63	-63	-64	-62	-61	-58	-55	-54	-53	-56	-59	-62	-62	-58	-54	-59	-61
10		-52	-59	-60	-60	-60	-58	-55	-52	-56	-59	-63	-62	-59	-58	-55	-53	-55	-57	-60	-62	-60	-56	-57	-61	-58
11		-61	-59	-57	-55	-55	-54	-55	-54	-49	-37	-45	-47	-52	-52	-50	-47	-50	-53	-53	-55	-62	-51	-56	-62	-53
12		-63	-62	-61	-55	-48	-47	-52	-52	-47	-46	-46	-52	-54	-54	-52	-46	-45	-50	-58	-56	-57	-54	-54	-60	-53
13		-58	-59	-43	-40	-48	-44	-40	-37	-32	-42	-41	-53	-59	-60	-53	-41	-52	-53	-62	-62	-62	-59	-59	-59	-51
14		-58	-57	-57	-53	-53	-53	-51	-49	-50	-49	-50	-50	-50	-48	-48	-49	-51	-54	-57	-55	-56	-58	-58	-58	-53
15	D	-60	-59	---	-73	---	-35	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	D	---	---	---	---	---	---	---	---	---	---	---	---	-73	-69	---	-59	---	-78	-80	-81	-75	-71	-72	-77	---
17		-69	-54	-63	-54	-33	-24	-25	-26	-33	-51	-63	-57	-56	-63	-64	-63	-55	-55	-65	-68	-68	-67	-65	-68	-55
18		-69	-72	-70	-65	-66	-64	-61	-55	-48	-51	-54	-57	-50	-55	-57	-54	-56	-60	-63	-66	-65	-64	-62	-61	-60
19		-61	-60	-59	-59	-61	-57	-49	-46	-49	-53	-49	-51	-54	-57	-59	-57	-56	-57	-60	-62	-63	-60	-59	-58	-57
20		-57	-56	-54	-57	-53	0	55	51	38	-10	-47	-61	-55	-59	-61	-62	-58	-58	-58	-57	-53	-51	-49	-48	-38
21		-52	-57	-56	-40	-20	-18	-13	-20	-22	-35	-44	-49	-58	-56	-51	-54	-55	-60	-59	-59	-60	-65	-63	-64	-47
22		-63	-61	-49	-49	-56	-50	-47	-49	-48	-46	-48	-53	-52	-58	-57	-54	-54	-59	-61	-60	-58	-55	-53	-53	-54
23		-53	-55	-55	-54	-55	-53	-53	-53	-54	-55	-55	-55	-55	-54	-50	-49	-51	-55	-59	-62	-60	-57	-56	-54	-55
24	Q	-53	-54	-53	-52	-52	-52	-52	-52	-52	-53	-53	-54	-52	-53	-51	-50	-51	-55	-58	-60	-59	-57	-54	-50	-53
25	Q	-51	-52	-51	-50	-50	-49	-49	-48	-47	-50	-51	-51	-51	-51	-49	-48	-49	-51	-53	-53	-53	-51	-50	-49	-50
26	Q	-48	-48	-47	-47	-47	-48	-48	-48	-49	-49	-50	-50	-50	-50	-47	-46	-48	-52	-56	-56	-54	-52	-50	-48	-50
27	Q	-48	-47	-46	-45	-45	-45	-45	-46	-46	-47	-47	-47	-47	-47	-46	-45	-46	-50	-54	-54	-53	-50	-48	-46	-48
28		-45	-45	-44	-44	-44	-46	-45	-48	-47	-45	-44	-44	-44	-43	-40	-40	-35	-37	-38	-36	-36	-51	-59	-60	-44
29		-57	-55	-56	-55	-39	-33	-32	-32	-36	-44	-53	-55	-53	-53	-52	-51	-48	-46	-48	-44	-43	-49	-48	-30	-46
30	D	-40	-44	-41	-39	-54	-57	-49	48	50	49	58	50	38	-8	-35	-36	-82	-71	-66	-79	-90	-88	-86	-85	-31
31		-82	-68	-59	-48	-58	-70	-63	-60	-60	-61	-61	-63	-59	-54	-52	-55	-57	-55	-57	-59	-58	-56	-53	-49	-59
MEAN		-58	-55	-53	-51	-49	-45	-36	-27	-35	-41	-47	-49	-50	-51	-50	-50	-52	-54	-58	-59	-59	-58	-58	-58	-50
MEAN	Q	-51	-51	-50	-50	-49	-49	-49	-49	-49	-49	-50	-51	-50	-50	-48	-46	-48	-51	-54	-55	-54	-52	-51	-49	-50
MEAN	D	---	---	-45	-45	---	-31	---	64	---	---	---	---	-37	---	---	-55	---	---	---	---	---	---	-75	-78	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

MAY 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	D	258	243	239	227	234	243	232	237	240	240	249	255	248	249	237	224	221	224	230	246	252	257	261	260	242
2		261	263	260	253	253	254	254	252	251	255	254	256	253	246	234	236	237	244	253	251	255	254	251	254	251
3		253	263	254	249	249	255	251	249	250	252	254	256	248	240	227	221	233	235	244	252	246	248	255	257	247
4		258	250	254	253	248	253	253	250	253	254	256	256	255	249	239	233	238	246	252	255	252	251	254	255	251
5	Q	254	252	253	254	251	252	249	251	252	252	257	259	256	252	242	236	243	249	252	256	259	258	259	258	252
6		256	256	254	255	254	255	256	255	256	257	257	258	257	253	245	242	244	247	256	262	264	258	258	256	255
7		252	255	256	255	254	254	254	255	254	252	252	252	251	250	244	240	242	249	258	265	260	260	255	238	252
8	D	218	196	190	198	211	238	207	211	236	238	257	258	221	179	182	206	212	242	243	226	238	237	234	248	222
9		253	241	226	244	248	255	252	250	250	251	253	253	252	246	239	235	235	239	245	251	250	243	237	249	246
10		233	239	235	237	240	244	244	241	249	250	255	255	252	250	245	240	242	247	251	255	251	245	247	253	246
11		257	255	254	253	253	253	255	258	257	238	247	245	250	246	241	237	240	246	245	248	256	232	242	253	248
12		255	257	259	253	246	240	246	248	247	242	240	248	250	249	246	236	235	243	254	249	249	239	239	247	247
13		238	250	227	232	235	239	238	238	229	248	241	247	252	251	238	224	240	240	254	255	255	253	254	254	243
14		254	254	254	251	252	252	248	245	249	250	251	250	249	244	240	239	243	247	252	248	249	252	252	254	249
15	D	256	259	---	297	---	247	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	D	---	---	---	---	---	---	---	---	---	---	---	---	252	239	---	214	---	244	253	252	245	238	237	243	---
17		238	226	234	230	211	211	221	225	224	240	249	243	247	249	246	244	230	231	243	246	248	245	242	247	236
18		247	249	248	242	245	247	248	247	236	238	240	247	238	246	246	241	243	249	253	257	257	257	254	253	247
19		253	252	252	252	256	252	252	244	243	248	244	244	247	248	248	245	243	246	251	255	260	257	257	256	250
20		254	256	251	257	271	227	161	152	162	203	226	245	237	242	247	250	247	250	253	249	243	237	233	226	232
21		227	235	236	223	201	206	208	228	215	230	237	240	253	245	235	237	242	248	246	245	239	253	253	252	235
22		251	254	248	235	245	243	237	241	243	242	242	249	244	250	248	243	245	254	257	257	255	251	248	248	247
23		245	250	249	249	252	249	249	249	250	252	253	254	254	250	241	237	241	247	254	258	256	254	253	251	250
24	Q	251	252	252	251	250	250	250	250	250	251	253	254	253	252	246	243	244	249	255	260	260	258	255	248	252
25	Q	251	253	252	252	252	251	250	251	250	252	254	255	254	252	248	245	247	250	253	254	254	252	251	250	251
26	Q	249	250	249	249	249	249	249	250	251	252	254	255	255	253	246	243	245	251	259	260	258	255	253	252	251
27	Q	252	251	250	248	249	248	249	251	252	253	252	252	252	250	246	243	246	252	259	260	259	255	252	250	251
28		249	249	249	248	250	253	253	259	259	258	257	257	257	253	245	242	235	235	235	224	215	235	247	244	246
29		236	238	241	255	234	228	238	241	238	239	250	256	254	253	251	252	250	249	251	245	241	252	245	204	243
30	D	201	205	216	230	243	254	264	182	198	202	180	163	153	180	198	191	250	230	222	239	251	246	254	262	217
31		259	239	225	212	228	247	243	245	248	251	250	257	253	243	240	244	249	247	250	254	253	252	246	231	244
MEAN		247	246	243	244	243	243	235	227	235	241	246	249	246	244	239	236	240	244	250	251	251	249	248	248	244
MEAN	Q	251	252	251	251	250	250	249	251	251	252	254	255	254	252	245	242	245	250	256	258	258	256	254	251	252
MEAN	D	---	---	223	235	---	231	---	135	---	---	---	---	221	---	---	215	---	---	---	---	---	---	241	251	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

JUNE 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		342	369	392	400	399	406	395	403	407	405	402	399	399	400	402	411	422	427	420	412	407	403	400	399	401
2		400	400	395	390	397	398	393	394	387	391	393	389	391	388	390	402	411	411	407	396	395	395	400	411	397
3		402	387	388	390	385	385	385	372	386	392	391	391	390	390	394	403	414	412	410	---	---	397	---	395	394
4	D	394	391	374	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6		---	---	---	---	378	384	391	414	---	---	---	397	395	393	393	397	405	410	407	401	406	402	350	389	---
7		379	354	339	378	330	325	371	377	389	396	403	406	410	405	403	409	413	413	408	403	401	408	409	403	389
8		404	387	368	370	386	393	392	395	393	397	401	401	397	392	392	---	---	---	---	---	---	---	---	---	---
9		386	386	390	393	394	---	---	---	394	394	---	---	---	---	---	---	---	---	---	395	---	---	387	393	---
10	Q	390	391	389	388	387	385	385	391	393	389	390	385	384	383	385	391	399	402	399	394	391	389	390	388	390
11		389	385	377	380	387	390	389	388	388	389	387	387	383	381	381	387	395	401	396	391	392	398	395	394	389
12	D	382	371	384	387	375	377	379	350	333	342	356	361	380	382	409	411	408	407	446	503	501	451	435	397	397
13	D	437	396	288	302	237	274	279	324	345	365	380	408	432	431	433	423	438	435	448	420	412	409	408	407	380
14		403	400	401	397	399	403	401	408	393	386	387	394	397	393	396	404	412	412	408	406	406	426	410	408	402
15		407	401	399	376	337	334	350	381	368	339	369	378	413	413	412	415	413	411	406	400	396	395	396	397	388
16	D	399	399	398	397	395	393	389	385	385	381	388	418	380	395	406	402	406	405	408	418	419	407	402	366	398
17		370	345	351	335	350	381	399	407	403	400	396	405	410	398	400	410	425	418	417	416	412	404	405	402	394
18		398	391	395	387	378	380	381	386	399	388	390	390	391	393	392	399	403	403	398	396	394	388	393	392	392
19		393	391	381	383	388	382	385	387	385	386	383	384	388	390	395	403	407	406	402	396	394	392	393	392	391
20	Q	393	391	386	385	381	381	389	390	390	391	392	390	394	390	394	400	404	407	398	393	391	391	391	391	392
21	Q	391	391	391	391	391	391	392	393	393	394	393	392	389	385	384	391	398	401	397	390	386	384	384	385	391
22		385	385	386	384	386	388	388	388	388	387	386	384	383	381	382	387	394	399	396	392	389	391	401	385	388
23	D	372	364	367	269	235	258	219	273	143	325	395	409	493	478	433	443	437	429	436	444	442	409	396	388	369
24		359	319	360	395	379	396	408	403	411	402	391	403	402	400	402	408	418	421	415	406	399	396	394	384	395
25		382	368	345	349	380	375	396	395	395	397	401	402	399	391	393	402	413	410	400	398	390	386	384	360	388
26		380	377	367	361	363	375	392	393	397	396	404	396	398	398	402	414	416	413	406	397	392	382	381	389	391
27	Q	391	390	380	388	391	392	391	392	393	393	392	392	391	393	392	397	407	409	398	387	386	383	388	386	392
28	Q	388	388	387	384	375	375	377	382	---	---	383	383	382	387	390	400	410	408	400	393	387	387	387	386	388
29		388	389	389	385	380	368	365	---	382	---	383	382	385	385	389	395	400	---	---	---	---	385	383	384	386	---
30		386	383	385	383	384	381	382	384	382	379	387	380	379	380	385	390	400	406	393	387	383	381	385	384	385
MEAN		389	382	377	375	370	373	376	---	378	---	---	393	397	396	397	---	---	---	---	---	---	---	---	---	391	---
MEAN	Q	391	390	387	387	385	385	387	389	391	---	390	388	388	388	389	396	404	405	398	391	388	387	388	387	390
MEAN	D	397	384	362	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

JUNE 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		88	95	96	104	104	109	105	106	108	109	113	114	112	108	103	99	99	104	110	114	116	113	114	114	107
2		114	114	117	112	112	113	112	115	114	114	116	118	118	115	107	105	111	118	124	126	121	122	115	110	115
3		115	108	113	112	112	113	121	114	111	117	119	119	116	113	110	109	113	115	118	---	---	119	---	119	115
4	D	119	117	117	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6		---	---	---	---	103	110	113	117	---	---	---	117	118	115	110	106	107	107	110	109	109	99	99	90	---
7		90	97	87	105	93	95	113	112	110	118	119	120	115	114	111	108	109	111	112	113	112	100	101	103	107
8		102	108	114	114	112	113	115	115	118	116	117	117	118	116	109	---	---	---	---	---	---	---	---	---	---
9		112	110	114	116	118	---	---	---	119	120	---	---	---	---	---	---	---	---	---	120	---	---	115	114	---
10	Q	114	114	116	118	121	121	121	121	124	122	125	127	127	123	119	117	118	119	120	119	119	119	118	117	120
11		115	113	121	116	120	122	124	122	122	124	126	127	127	124	120	115	115	117	120	120	115	110	106	104	119
12	D	108	114	114	116	120	117	131	134	129	125	124	125	121	118	115	129	128	126	52	53	66	61	60	20	105
13	D	30	40	30	50	51	91	87	97	91	101	92	92	80	104	100	96	106	104	93	104	104	102	99	98	85
14		98	98	114	105	106	110	111	112	114	113	113	116	115	112	109	106	108	115	124	127	121	110	117	116	112
15		111	112	118	108	98	105	100	110	134	113	120	126	115	121	112	109	110	115	119	118	118	117	116	116	114
16	D	116	116	116	117	118	119	122	127	127	128	107	118	124	115	112	109	106	113	117	112	113	113	109	103	116
17		103	96	87	89	82	98	103	107	107	109	111	113	114	111	105	102	102	112	111	109	110	112	111	112	105
18		113	112	113	111	119	113	113	111	115	113	113	115	116	117	112	106	106	109	113	111	107	108	112	112	112
19		112	112	113	110	108	110	109	111	114	116	117	118	117	115	110	108	110	115	120	122	120	120	119	117	114
20	Q	117	115	117	116	117	118	116	118	119	121	122	123	121	119	113	108	111	116	120	121	120	119	118	118	118
21	Q	118	118	118	118	119	119	118	119	119	121	122	123	122	119	114	111	115	121	125	126	129	130	130	130	121
22		131	130	128	130	128	126	127	128	129	131	134	133	130	129	124	121	119	121	124	125	123	117	109	88	124
23	D	84	73	90	79	70	87	77	78	120	115	127	94	108	102	96	91	94	98	90	63	64	64	74	68	88
24		73	69	75	92	96	103	100	101	106	107	113	105	114	112	101	94	94	98	106	110	110	109	109	103	100
25		99	96	92	79	101	100	108	110	114	113	113	116	117	118	113	108	104	102	103	110	102	94	97	114	105
26		110	106	100	105	119	107	109	112	117	119	111	120	115	111	103	99	103	107	110	113	112	111	111	111	110
27	Q	111	111	113	114	114	114	115	115	116	116	116	118	117	116	115	114	118	122	127	127	118	115	118	118	117
28	Q	117	118	118	118	116	113	114	113	---	---	116	118	118	116	110	106	108	115	121	123	123	123	121	120	117
29		115	115	115	115	113	114	114	---	117	---	116	118	116	117	114	113	111	---	---	---	---	123	122	120	---
30		121	118	115	115	117	114	115	116	116	114	118	120	118	115	112	109	112	118	122	121	118	119	117	116	116
MEAN		106	105	106	107	107	110	112	---	116	---	---	117	117	115	110	---	---	---	---	---	---	---	---	---	106
MEAN	Q	115	115	116	117	118	117	117	117	119	---	120	121	121	119	114	111	114	118	122	123	122	121	121	121	118
MEAN	D	91	92	93	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

JUNE 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-53	-55	-57	-58	-54	-50	-50	-49	-52	-54	-56	-55	-54	-54	-52	-50	-49	-50	-55	-58	-58	-55	-55	-54	-54
2		-54	-54	-55	-51	-51	-50	-50	-50	-49	-49	-50	-51	-52	-53	-52	-49	-50	-52	-54	-54	-50	-50	-48	-43	-51
3		-48	-50	-53	-53	-52	-51	-49	-46	-47	-51	-51	-50	-49	-50	-49	-48	-49	-51	-52	---	---	-50	---	-49	-50
4	D	-50	-49	-50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6		---	---	---	---	-41	-49	-45	-41	---	---	---	-52	-52	-50	-48	-46	-48	-48	-50	-49	-50	-45	-46	-44	---
7		-48	-46	-33	-20	-21	-34	-29	-40	-54	-56	-53	-52	-47	-50	-52	-48	-48	-49	-51	-51	-50	-43	-43	-50	-45
8		-49	-52	-51	-49	-48	-49	-49	-47	-46	-47	-50	-50	-52	-53	-51	---	---	---	---	---	---	---	---	---	---
9		-46	-45	-46	-47	-47	---	---	---	-48	-48	---	---	---	---	---	---	---	---	---	-52	---	---	-47	-45	---
10	Q	-45	-46	-46	-47	-47	-47	-46	-46	-46	-46	-47	-49	-48	-47	-45	-44	-45	-45	-47	-46	-47	-47	-47	-46	-46
11		-46	-45	-45	-43	-46	-46	-46	-45	-45	-46	-48	-48	-47	-46	-45	-43	-42	-43	-45	-46	-44	-41	-42	-42	-45
12	D	-47	-48	-49	-48	-47	-43	-40	-38	-42	-40	-42	-41	-39	-39	-34	-44	-47	-44	-10	-31	-50	-56	-63	-57	-43
13	D	-72	-77	-67	-58	-49	-17	-5	-32	-34	-32	-38	-45	-40	-56	-58	-59	-62	-59	-50	-62	-61	-58	-56	-55	-50
14		-56	-55	-57	-52	-52	-51	-46	-44	-48	-49	-49	-51	-50	-51	-50	-48	-48	-49	-54	-55	-48	-45	-50	-50	-50
15		-48	-49	-51	-49	-43	-42	-37	-28	-9	-18	-25	-28	-24	-28	-37	-42	-47	-51	-52	-51	-50	-48	-47	-46	-40
16	D	-46	-46	-46	-46	-47	-47	-47	-48	-47	-46	-28	-22	-37	-38	-40	-42	-45	-51	-54	-46	-47	-51	-50	-50	-44
17		-47	-41	-25	-30	-37	-52	-50	-50	-51	-50	-50	-48	-45	-46	-46	-46	-43	-52	-52	-50	-50	-50	-50	-51	-46
18		-51	-50	-50	-51	-50	-46	-47	-44	-43	-45	-46	-48	-47	-47	-47	-46	-47	-47	-49	-49	-46	-48	-50	-49	-48
19		-48	-49	-50	-48	-46	-47	-47	-49	-49	-47	-47	-47	-47	-47	-48	-47	-48	-50	-53	-52	-49	-48	-46	-45	-48
20	Q	-45	-45	-46	-46	-46	-45	-45	-46	-46	-46	-47	-45	-44	-46	-46	-44	-45	-48	-51	-50	-49	-46	-44	-44	-46
21	Q	-44	-44	-44	-44	-44	-44	-44	-44	-44	-45	-45	-45	-45	-45	-43	-41	-43	-46	-49	-48	-48	-46	-44	-42	-45
22		-41	-41	-39	-40	-39	-39	-39	-40	-41	-41	-42	-42	-40	-40	-38	-38	-39	-42	-44	-43	-41	-37	-34	-30	-40
23	D	-35	-37	-50	-43	-9	-19	-19	31	48	14	-7	-19	-31	-36	-46	-47	-50	-55	-51	-43	-50	-58	-61	-56	-30
24		-58	-53	-53	-39	-45	-49	-53	-54	-51	-52	-52	-47	-54	-54	-49	-46	-47	-49	-53	-55	-55	-53	-52	-49	-51
25		-46	-45	-41	-34	-53	-49	-51	-50	-51	-50	-48	-49	-49	-50	-48	-46	-43	-43	-47	-52	-49	-45	-48	-53	-48
26		-48	-45	-40	-32	-34	-41	-45	-47	-45	-45	-42	-48	-45	-46	-44	-42	-46	-48	-50	-51	-50	-49	-48	-47	-45
27	Q	-47	-46	-45	-45	-45	-44	-44	-44	-45	-45	-45	-45	-45	-44	-44	-44	-44	-46	-49	-48	-43	-42	-44	-44	-45
28	Q	-44	-44	-44	-44	-43	-41	-41	-42	---	---	-43	-45	-44	-45	-43	-42	-44	-49	-51	-50	-49	-48	-47	-47	-45
29		-44	-44	-45	-45	-44	-45	-43	---	-45	---	-41	-42	-43	-43	-41	-41	-41	---	---	---	-46	-45	-43	-42	---
30		-44	-42	-42	-43	-44	-42	-42	-42	-42	-41	-40	-41	-42	-42	-40	-41	-43	-46	-48	-46	-44	-45	-43	-43	-43
MEAN		-48	-48	-47	-44	-44	-44	-43	---	-41	---	---	-45	-45	-46	-46	---	---	---	---	---	---	---	---	-47	---
MEAN	Q	-45	-45	-45	-45	-45	-44	-44	-44	-45	---	-45	-46	-46	-45	-44	-43	-44	-47	-49	-49	-47	-46	-45	-45	-45
MEAN	D	-50	-51	-52	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

JUNE 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		234	239	242	247	244	243	241	241	244	247	250	250	248	246	241	237	237	240	248	253	253	250	250	249	245
2		250	249	252	246	246	245	245	247	245	245	247	249	250	249	244	240	244	250	255	256	250	251	245	238	247
3		245	243	248	247	246	247	249	243	242	248	249	249	246	245	243	241	245	247	249	---	---	249	---	249	247
4	D	249	247	248	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6		---	---	---	---	232	243	242	241	---	---	---	249	250	246	243	239	240	241	244	242	243	234	234	228	---
7		231	233	217	216	210	222	228	237	247	253	251	251	244	246	246	240	241	243	246	246	245	233	233	240	238
8		238	244	247	246	243	244	245	244	245	245	248	248	250	249	244	---	---	---	---	---	---	---	---	---	---
9		241	240	243	245	246	---	---	---	247	248	---	---	---	---	---	---	---	---	---	251	---	---	244	242	---
10	Q	242	243	244	246	248	247	247	246	249	247	250	252	252	249	245	243	244	245	247	245	247	246	246	245	246
11		243	241	246	242	246	247	248	246	247	248	251	251	251	249	245	240	239	242	245	246	241	236	235	234	244
12	D	240	245	245	245	247	242	247	247	248	244	245	245	241	239	233	249	252	248	179	196	219	221	226	199	235
13	D	217	227	213	217	210	205	194	221	220	224	223	229	218	245	244	243	251	248	234	250	249	246	242	241	230
14		242	242	252	243	244	245	241	240	244	245	245	248	247	246	244	240	241	246	255	257	248	240	248	247	245
15		243	244	249	242	231	234	227	226	223	219	228	234	225	232	234	236	241	248	250	249	249	246	245	244	237
16	D	244	244	244	245	246	246	248	252	251	251	224	225	241	237	236	236	237	246	251	242	243	246	243	240	242
17		238	228	210	215	218	239	240	242	243	243	244	244	242	241	238	236	233	247	246	243	244	245	245	245	238
18		246	245	245	245	249	242	243	239	240	241	242	244	244	245	243	238	239	241	244	243	238	241	244	244	243
19		243	244	245	242	240	241	241	243	245	245	245	246	245	244	242	240	242	246	252	252	249	248	246	243	245
20	Q	243	242	245	244	244	244	243	244	245	247	248	247	245	245	241	238	240	246	250	251	248	246	243	243	245
21	Q	243	243	243	243	244	244	244	244	244	245	246	247	247	244	240	237	241	247	251	251	252	252	250	249	245
22		248	247	245	247	245	244	244	246	247	248	251	250	247	246	242	240	240	243	247	247	243	237	230	215	243
23	D	216	212	233	221	188	205	200	159	169	193	217	209	227	228	232	231	234	241	233	211	217	225	232	226	215
24		230	223	227	224	232	239	241	243	242	244	247	238	249	248	238	232	232	236	243	248	247	246	245	239	239
25		234	231	226	213	241	238	244	244	247	245	243	247	247	249	244	239	234	233	238	245	238	231	235	248	239
26		242	238	230	226	235	234	239	243	244	245	237	247	243	242	234	231	237	240	244	246	245	244	242	242	240
27	Q	242	241	241	242	242	241	242	242	243	243	243	244	244	242	241	241	243	247	252	252	243	240	244	243	243
28	Q	242	243	244	243	242	238	239	239	---	---	242	244	243	243	238	235	238	246	250	251	250	250	247	246	243
29		242	241	242	243	241	242	240	---	243	---	240	242	241	242	239	238	237	---	---	---	248	246	244	243	---
30		244	242	240	240	243	240	240	241	240	239	240	242	242	240	236	235	239	245	249	247	244	244	242	241	241
MEAN		240	239	239	237	237	239	238	---	240	---	---	243	243	244	240	---	---	---	---	---	---	---	---	239	---
MEAN	Q	243	242	243	244	244	243	243	243	244	---	246	247	246	244	241	239	241	246	250	250	248	247	246	245	245
MEAN	D	233	235	236	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

JULY 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		385	384	381	378	383	384	383	384	388	382	379	380	378	377	382	395	397	393	395	405	404	410	381	372	387
2		386	305	345	378	381	372	375	374	380	386	388	390	391	388	389	399	407	408	406	398	394	397	385	366	383
3		388	369	371	372	385	382	390	387	400	384	389	397	398	404	400	399	406	407	402	396	393	391	389	372	390
4		386	390	383	394	379	381	387	392	395	389	388	388	387	385	387	394	402	406	401	395	392	392	386	390	390
5	Q	391	387	388	388	387	388	390	393	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	D	---	---	---	---	---	---	---	337	353	---	---	---	---	---	---	---	---	457	452	490	455	454	388	454	---
11		422	---	---	---	---	---	---	---	366	372	396	413	416	427	417	417	422	418	414	---	416	409	403	402	---
12	D	390	345	277	268	186	241	294	368	394	400	386	429	414	435	508	453	438	429	414	411	403	401	401	398	378
13	D	400	401	401	402	400	385	379	371	370	372	402	404	411	467	434	423	421	424	411	404	400	408	395	380	403
14		384	398	397	382	357	385	397	386	387	402	390	381	386	392	403	409	407	414	412	402	396	393	392	395	394
15		397	397	392	387	389	398	399	388	383	---	385	388	---	---	---	---	---	---	---	403	398	389	394	397	---
16		388	367	358	331	315	349	366	366	387	391	389	390	391	394	394	397	404	399	398	393	392	391	393	394	381
17		394	392	389	387	384	386	388	389	380	441	349	350	387	389	404	408	414	408	410	405	396	405	412	319	391
18		357	338	318	327	324	291	277	324	320	350	371	402	410	414	417	416	412	413	412	412	420	415	400	415	373
19		402	365	352	375	381	386	399	402	388	385	386	390	387	390	394	403	409	407	401	393	388	399	400	393	391
20		398	393	390	386	382	367	370	382	382	387	388	383	430	430	403	409	430	430	431	429	400	395	387	380	398
21		327	344	310	265	264	327	310	404	396	414	430	409	399	394	397	406	418	413	411	414	410	404	401	383	377
22		378	343	381	388	392	371	392	399	404	401	396	394	395	408	430	429	423	415	408	404	380	370	394	391	395
23		376	387	---	388	---	---	---	396	397	397	397	395	395	394	398	403	402	405	405	400	395	395	395	385	395
24	Q	390	393	394	393	390	392	393	391	392	392	391	390	388	388	392	395	396	403	402	398	394	394	394	394	393
25	Q	392	388	373	381	372	378	386	390	388	386	386	387	385	384	388	393	397	402	401	393	389	387	389	373	387
26		389	388	385	382	383	382	377	369	371	376	384	383	383	383	387	398	405	408	403	393	385	385	386	390	387
27		392	395	393	386	381	375	372	362	361	359	359	365	377	382	395	403	---	---	---	---	---	---	---	---	---
28	D	---	---	---	---	265	278	342	372	395	405	411	401	397	430	452	416	413	414	418	401	401	407	378	395	---
29		379	387	386	411	375	382	389	384	384	395	411	422	402	394	399	405	419	428	418	403	396	404	393	382	398
30		400	353	320	369	376	363	380	365	385	412	387	385	384	384	391	400	404	405	408	402	394	392	392	387	385
31		374	378	390	386	379	362	358	370	380	383	386	385	379	375	390	394	399	407	406	396	389	386	388	398	385
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

JULY 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		117	117	111	103	109	111	114	115	119	120	124	125	124	118	120	121	118	117	120	115	104	97	90	100	114
2		90	83	95	97	105	112	114	108	105	104	106	107	109	108	105	102	100	106	106	105	106	100	85	88	102
3		92	97	107	105	108	110	109	112	120	122	112	107	112	113	107	104	104	108	114	116	113	113	109	107	109
4		111	107	107	116	115	112	114	116	118	117	119	120	121	119	112	106	105	111	116	118	117	114	110	113	114
5	Q	116	119	119	120	120	119	120	121	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	D	---	---	---	---	---	---	---	117	101	---	---	---	---	---	---	---	---	114	99	67	64	62	53	75	---
11		57	---	---	---	---	---	---	---	99	114	117	109	104	106	105	105	101	99	88	---	76	83	78	72	---
12	D	75	67	35	41	52	45	58	67	75	80	97	94	108	90	80	99	105	107	108	111	109	105	104	105	84
13	D	105	106	107	106	106	113	107	104	105	125	141	128	111	105	106	104	96	83	98	106	106	98	91	97	106
14		104	106	105	103	99	99	109	105	101	103	110	107	108	103	98	100	100	106	112	115	115	112	110	111	106
15		110	109	107	110	109	111	114	112	109	---	115	116	---	---	---	---	---	---	---	116	113	110	111	110	---
16		113	118	106	101	96	97	99	109	105	112	114	116	118	117	116	116	114	120	127	128	123	121	118	114	113
17		114	118	123	123	125	124	123	122	120	141	154	121	105	103	108	107	111	123	120	118	121	120	113	83	118
18		69	41	41	48	82	65	89	96	97	110	106	101	99	94	99	105	108	113	113	107	94	82	86	93	89
19		94	98	105	96	99	102	112	116	112	112	113	116	119	115	108	104	104	108	112	115	113	104	91	94	107
20		76	98	109	117	115	115	130	120	116	122	126	129	116	119	113	111	104	103	102	82	93	104	105	86	109
21		96	68	68	102	75	90	91	112	129	112	113	115	115	112	106	103	105	105	108	103	100	98	90	92	100
22		95	124	106	108	119	115	112	113	116	117	121	121	120	117	107	109	107	99	108	106	101	111	112	111	111
23		116	114	---	113	---	---	---	113	114	117	119	121	119	115	109	105	103	110	115	118	119	117	115	111	114
24	Q	117	117	116	116	116	117	118	119	120	121	123	125	124	119	113	112	113	117	121	123	122	120	118	118	119
25	Q	120	117	122	120	122	122	123	124	125	124	125	125	124	122	119	118	115	115	121	124	122	119	116	111	121
26		116	117	116	115	115	115	122	120	118	119	122	123	122	122	120	119	119	124	131	135	132	129	126	123	122
27		116	115	112	114	113	113	123	119	115	116	119	121	119	119	112	111	---	---	---	---	---	---	---	---	---
28	D	---	---	---	---	90	68	85	97	107	115	117	110	111	99	101	106	104	102	103	108	103	86	87	99	---
29		87	98	101	118	116	109	121	115	119	123	136	128	132	124	115	103	99	94	104	115	112	102	96	99	111
30		99	102	109	98	111	120	117	114	114	112	116	116	116	113	108	108	110	111	115	117	118	116	116	110	112
31		109	114	116	119	123	128	121	116	116	116	115	117	116	112	105	107	108	111	115	118	118	114	104	83	113
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

JULY 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-44	-46	-44	-42	-45	-46	-46	-44	-44	-45	-47	-46	-46	-44	-45	-44	-42	-42	-42	-40	-36	-36	-41	-42	-43
2		-47	-52	-47	-53	-51	-50	-47	-46	-45	-45	-47	-48	-48	-50	-48	-47	-46	-48	-48	-47	-49	-45	-41	-45	-47
3		-49	-49	-48	-47	-44	-47	-48	-48	-44	-39	-38	-40	-45	-47	-45	-46	-47	-48	-51	-50	-47	-45	-43	-42	-46
4		-44	-42	-43	-42	-42	-43	-43	-43	-42	-43	-43	-43	-44	-44	-42	-41	-41	-44	-45	-45	-43	-40	-39	-40	-43
5	Q	-40	-42	-41	-41	-39	-38	-40	-40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	D	---	---	---	---	---	---	---	-39	-38	---	---	---	---	---	---	---	---	-54	-46	-42	-55	-61	-67	-69	---
11		-75	---	---	---	---	---	---	---	-44	-57	-48	-43	-42	-39	-43	-44	-41	-41	-37	---	-51	-58	-55	-53	---
12	D	-57	-51	-36	-25	-10	-4	-28	-52	-58	-52	-59	-27	-37	-41	-25	-45	-57	-57	-57	-58	-55	-52	-51	-50	-43
13	D	-48	-47	-47	-45	-45	-48	-45	-44	-35	-14	-21	-18	-21	-20	-33	-42	-39	-35	-48	-52	-50	-46	-44	-50	-39
14		-51	-49	-47	-45	-42	-37	-35	-43	-40	-36	-39	-40	-43	-43	-40	-40	-41	-44	-47	-48	-46	-45	-43	-42	-43
15		-43	-42	-42	-43	-42	-41	-40	-40	-40	---	-42	-41	---	---	---	---	---	---	---	-42	-40	-40	-40	-41	---
16		-45	-45	-39	-40	-36	-40	-39	-38	-38	-43	-44	-43	-42	-41	-40	-37	-35	-39	-42	-41	-37	-35	-35	-34	-40
17		-36	-39	-42	-41	-40	-38	-36	-34	-32	-12	-6	-6	-22	-32	-35	-37	-37	-44	-42	-39	-40	-40	-38	-41	-34
18		-33	-38	-45	-47	-14	-13	-26	16	-7	-37	-42	-42	-44	-42	-47	-50	-49	-47	-44	-40	-32	-32	-41	-47	-35
19		-50	-52	-46	-45	-46	-45	-43	-39	-40	-44	-44	-44	-45	-43	-40	-36	-38	-42	-45	-45	-42	-35	-29	-36	-42
20		-35	-49	-51	-51	-46	-40	-36	-35	-38	-41	-42	-41	-25	-34	-39	-39	-34	-37	-39	-30	-44	-48	-48	-42	-40
21		-29	-16	-27	-18	-14	-42	-29	-33	-30	-18	-31	-43	-46	-46	-43	-40	-38	-36	-39	-37	-38	-40	-36	-38	-34
22		-41	-44	-37	-39	-38	-29	-33	-38	-40	-41	-42	-41	-39	-36	-30	-34	-38	-35	-44	-42	-43	-47	-43	-41	-39
23		-40	-38	---	-35	---	---	---	-36	-39	-39	-39	-39	-38	-37	-34	-35	-36	-40	-43	-44	-43	-41	-38	-37	-38
24	Q	-38	-37	-35	-35	-34	-36	-36	-37	-37	-37	-38	-37	-36	-34	-33	-34	-35	-35	-38	-38	-38	-37	-36	-36	-36
25	Q	-37	-35	-35	-33	-32	-34	-35	-36	-36	-35	-35	-34	-33	-32	-31	-33	-32	-31	-34	-36	-36	-35	-34	-33	-34
26		-35	-36	-34	-34	-34	-34	-35	-32	-33	-34	-35	-35	-35	-35	-32	-33	-32	-33	-38	-40	-37	-35	-33	-32	-34
27		-30	-32	-33	-34	-34	-34	-35	-32	-30	-32	-33	-34	-33	-33	-28	-28	---	---	---	---	---	---	---	---	---
28	D	---	---	---	---	-14	-18	-35	-40	-41	-34	-34	-39	-41	-29	-24	-38	-37	-36	-36	-41	-40	-31	-39	-46	---
29		-42	-45	-45	-37	-32	-33	-36	-36	-40	-39	-38	-28	-34	-33	-32	-26	-24	-24	-39	-46	-43	-37	-35	-39	-36
30		-41	-40	-35	-32	-33	-22	-31	-35	-32	-29	-39	-39	-38	-37	-34	-33	-31	-33	-37	-38	-38	-36	-35	-34	-35
31		-35	-37	-38	-38	-34	-29	-28	-28	-31	-33	-33	-36	-37	-37	-31	-31	-31	-32	-35	-38	-38	-35	-32	-22	-33
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

JULY 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		243	245	240	233	239	241	243	242	244	245	249	249	248	244	246	245	242	241	243	238	229	225	225	231	240
2		230	230	233	239	242	245	243	239	237	236	239	240	242	242	240	237	235	240	240	239	241	234	222	227	237
3		232	236	241	239	237	242	241	243	244	242	235	234	241	243	238	238	238	241	246	247	243	241	238	236	240
4		239	236	236	241	240	239	240	242	242	242	243	244	245	244	239	234	234	239	243	244	241	238	235	237	240
5	Q	239	242	241	242	240	239	241	242	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	D	---	---	---	---	---	---	---	239	229	---	---	---	---	---	---	---	---	249	235	213	222	226	225	240	---
11		234	---	---	---	---	---	---	---	233	252	246	237	234	233	235	236	232	230	221	---	225	235	230	225	---
12	D	230	221	190	184	178	169	196	221	231	228	243	216	232	225	207	233	246	248	248	251	247	243	241	241	224
13	D	240	239	239	237	237	244	239	235	229	222	237	228	220	216	228	233	227	216	235	244	242	234	228	237	233
14		241	240	238	236	231	227	231	235	230	228	234	234	237	234	229	230	231	237	242	245	243	241	238	238	235
15		238	236	235	238	236	237	237	236	235	---	240	240	---	---	---	---	---	---	---	241	237	236	236	237	---
16		241	244	233	230	224	228	229	233	231	239	242	241	242	240	238	237	234	240	247	247	240	238	236	233	237
17		234	239	245	244	245	242	239	237	234	230	232	214	218	224	230	231	234	246	243	239	241	241	236	221	235
18		207	195	201	207	198	188	212	181	201	233	236	232	232	228	235	241	242	243	241	234	220	213	223	231	220
19		235	239	238	232	235	235	238	238	236	240	240	242	244	241	234	229	231	236	241	243	239	228	215	223	235
20		213	236	244	249	244	239	243	237	238	243	246	246	227	236	237	235	227	229	230	212	230	239	239	223	235
21		219	192	201	213	194	226	216	231	237	218	230	240	244	241	235	232	231	230	234	229	228	229	221	224	225
22		228	247	230	234	239	229	231	235	238	240	244	242	240	236	226	230	232	225	238	234	233	241	239	237	235
23		239	236	---	233	---	---	---	234	237	239	240	241	239	236	230	228	228	236	241	243	243	240	237	233	236
24	Q	238	237	235	235	234	236	237	238	238	239	241	242	240	236	231	231	233	235	240	241	241	238	236	236	237
25	Q	238	235	238	235	236	237	238	240	240	239	240	239	238	236	233	234	231	231	237	240	239	237	234	230	237
26		235	236	234	233	233	234	238	235	234	236	238	238	238	238	235	234	234	237	245	250	245	242	239	237	237
27		231	232	231	233	232	232	238	234	230	233	235	236	235	235	226	226	---	---	---	---	---	---	---	---	---
28	D	---	---	---	---	202	194	218	228	235	233	235	234	237	220	217	231	230	228	228	236	231	215	221	234	---
29		224	233	235	237	232	229	238	235	241	242	248	236	242	238	232	220	216	213	231	244	239	229	223	229	233
30		230	231	231	222	231	226	232	234	231	228	238	238	237	234	229	228	228	231	235	238	238	236	235	230	232
31		230	235	237	239	238	237	231	229	231	233	233	236	236	234	226	226	227	229	234	238	238	233	225	205	232
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

AUGUST 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		387	341	374	370	380	362	385	389	420	394	374	391	397	385	392	400	408	407	407	402	400	400	391	399	390
2		395	378	382	345	334	346	382	378	383	379	382	387	383	384	381	388	399	---	411	398	387	387	386	390	382
3		394	390	379	368	345	342	356	377	388	392	389	387	385	380	384	391	400	410	416	411	411	402	386	400	387
4		400	379	308	338	352	373	361	360	389	383	374	380	394	399	399	409	416	423	421	408	401	404	399	397	386
5		397	393	391	389	388	382	373	377	382	389	386	381	378	---	388	---	---	419	441	410	407	402	---	392	394
6	D	345	366	395	365	336	352	359	374	405	401	387	390	411	401	399	411	425	420	426	422	420	376	399	411	392
7		351	342	378	361	377	364	336	356	356	373	398	398	393	396	402	410	421	431	426	416	410	402	369	394	386
8		396	382	374	389	383	370	374	374	374	385	389	387	388	387	392	393	406	415	419	411	402	397	400	394	391
9		394	387	389	378	374	384	388	387	385	381	387	382	389	380	390	405	416	432	427	420	404	384	387	403	394
10		393	393	366	374	381	381	380	369	387	403	429	468	409	431	456	433	426	424	418	409	400	400	402	401	405
11	Q	399	394	390	395	392	391	390	393	393	389	393	395	391	390	396	404	408	414	412	405	395	393	394	396	396
12	Q	397	399	394	388	391	390	388	386	388	387	384	382	378	375	379	384	399	411	414	406	398	398	399	395	392
13	D	403	---	---	---	325	307	346	366	366	368	374	379	377	375	377	381	390	---	400	---	---	---	---	---	---
14		399	---	---	339	368	384	365	386	394	397	391	387	385	380	---	---	393	---	---	---	390	391	392	390	---
15		390	388	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	397	398	395	387	387	401	395	---
16		387	364	377	363	283	308	342	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21		---	---	---	---	---	---	---	---	---	376	---	---	---	---	---	---	392	---	---	407	402	408	393	385	---
22		385	370	367	363	337	374	384	383	385	383	384	386	383	376	377	387	392	408	414	405	396	392	389	391	384
23		378	384	383	381	363	359	359	362	377	391	394	398	404	390	389	404	417	424	430	417	403	394	390	391	391
24	D	378	375	377	366	366	363	339	301	193	354	798	681	546	493	443	448	469	454	456	515	454	427	428	418	435
25	D	379	317	390	380	394	410	376	408	423	425	427	424	415	398	406	421	428	446	462	446	428	419	405	404	410
26		390	363	332	355	367	384	391	374	395	404	397	388	379	376	383	392	406	420	424	419	409	401	392	389	389
27		394	355	339	361	361	383	391	393	405	406	398	390	385	382	382	398	412	423	428	420	407	398	395	393	392
28	Q	376	383	379	373	390	391	394	395	397	398	395	389	379	373	377	391	411	430	433	419	402	403	401	397	395
29		373	354	348	351	364	379	332	356	382	394	394	---	---	386	387	---	---	---	---	---	---	---	---	---	---
30	Q	---	---	---	390	---	389	---	389	---	390	---	384	372	366	374	387	398	---	---	414	403	400	---	---	---
31	D	---	---	---	---	---	---	---	373	385	377	357	---	---	363	427	433	480	467	555	530	518	478	471	447	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	380	391	---	---	---	410	399	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	364	354	385	469	452	421	406	410	419	438	---	460	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

AUGUST 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		93	106	100	97	108	113	113	119	125	129	132	126	124	115	113	106	98	99	108	115	116	108	102	101	111
2		99	111	109	114	116	107	116	118	122	127	121	118	121	111	107	103	101	---	114	118	120	116	115	115	114
3		111	110	112	131	128	122	114	113	115	116	117	119	120	118	110	108	111	108	106	109	110	109	113	101	114
4		112	103	111	98	101	109	120	125	117	118	129	128	121	115	107	104	105	110	115	115	113	113	105	110	113
5		115	116	116	115	115	120	115	114	111	115	120	122	120	---	108	---	---	109	103	104	116	117	---	106	114
6	D	88	74	117	120	98	118	112	109	114	136	113	123	114	118	111	101	95	101	98	98	96	99	98	100	106
7		96	98	90	107	109	101	108	108	116	107	113	109	112	105	103	104	110	111	104	108	108	107	98	108	106
8		110	110	112	110	113	115	108	119	110	110	112	115	118	115	110	105	103	105	112	115	119	120	113	117	112
9		116	117	113	122	116	112	114	113	115	116	121	122	121	117	112	106	107	112	114	115	113	111	108	110	114
10		109	111	119	114	116	119	116	121	123	151	134	127	135	109	98	100	103	106	110	114	111	108	106	105	115
11	Q	107	107	110	110	110	109	109	114	114	113	111	113	112	109	107	104	105	113	118	120	119	115	113	113	111
12	Q	113	110	108	110	109	110	112	113	114	116	115	114	115	114	110	107	108	113	120	124	122	121	119	109	114
13	D	116	---	---	---	101	121	116	115	116	116	119	125	132	129	121	116	110	---	116	---	---	---	---	---	---
14		103	---	---	120	110	119	113	111	113	116	116	120	121	118	---	---	105	---	---	---	120	112	108	108	---
15		112	115	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	124	126	126	125	123	112	120	---
16		119	126	122	130	132	119	117	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21		---	---	---	---	---	---	---	---	---	126	---	---	---	---	---	---	118	---	---	117	120	110	100	107	---
22		112	124	119	114	120	117	118	118	117	119	122	124	121	117	107	104	103	102	112	121	121	119	120	110	116
23		101	114	114	119	123	116	112	107	112	118	118	116	114	108	97	92	96	99	107	116	124	123	122	121	112
24	D	107	105	115	122	121	117	135	147	137	121	150	60	-7	39	43	37	46	48	48	21	6	28	17	7	74
25	D	18	43	82	62	69	98	86	73	72	78	74	80	73	67	70	45	50	64	66	75	85	89	86	89	71
26		87	93	86	82	92	98	98	97	86	91	94	94	91	84	77	75	75	77	86	93	94	96	94	91	89
27		92	101	92	87	90	95	99	100	98	103	104	106	103	96	90	85	81	87	94	102	104	102	101	98	96
28	Q	90	86	85	90	99	106	105	107	108	110	111	112	108	103	93	86	88	92	100	106	104	97	98	95	99
29		74	85	84	80	83	103	103	99	97	99	104	---	---	96	92	---	---	---	---	---	---	---	---	---	---
30	Q	---	---	---	110	---	110	---	110	---	112	---	114	113	107	101	99	97	---	---	113	112	102	---	---	---
31	D	---	---	---	---	---	---	---	111	114	120	122	---	---	94	76	59	39	33	9	44	66	37	29	61	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	103	98	---	---	---	116	115	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	111	111	114	115	101	85	89	84	72	68	---	67	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

AUGUST 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-31	-36	-31	-34	-39	-37	-38	-38	-29	-13	-30	-30	-31	-31	-28	-26	-26	-29	-36	-39	-38	-34	-32	-34	-32
2		-34	-41	-39	-34	-33	-28	-35	-38	-38	-40	-33	-31	-35	-29	-29	-30	-29	---	-38	-41	-38	-34	-32	-32	-34
3		-31	-32	-34	-36	-25	-21	-23	-27	-30	-32	-33	-33	-34	-33	-29	-29	-31	-27	-27	-30	-32	-35	-37	-31	-30
4		-38	-37	-33	-27	-31	-32	-34	-25	-24	-20	-20	-24	-22	-24	-26	-26	-25	-29	-36	-38	-36	-36	-32	-35	-30
5		-37	-37	-35	-34	-34	-34	-31	-30	-30	-33	-36	-35	-33	---	-24	---	---	-24	-21	-30	-40	-40	---	-33	-32
6	D	-31	-27	-35	-14	-14	-7	-7	-23	-16	-13	-27	-38	-27	-30	-28	-23	-21	-30	-33	-35	-42	-45	-40	-41	-27
7		-41	-30	-31	-35	-27	-25	-11	-27	-32	-26	-25	-28	-36	-31	-27	-26	-28	-32	-30	-35	-38	-38	-35	-39	-31
8		-39	-38	-35	-34	-34	-33	-31	-32	-28	-31	-33	-33	-33	-33	-29	-25	-26	-30	-34	-39	-42	-39	-33	-36	-33
9		-37	-34	-32	-32	-28	-28	-31	-31	-32	-32	-32	-32	-30	-32	-27	-20	-22	-23	-28	-33	-36	-36	-33	-35	-31
10		-35	-35	-36	-31	-31	-30	-29	-28	-3	-3	10	8	-6	-15	-11	-28	-30	-32	-36	-39	-37	-35	-34	-34	-24
11	Q	-36	-36	-36	-35	-34	-33	-32	-32	-32	-32	-31	-33	-33	-32	-33	-30	-30	-33	-37	-39	-38	-34	-32	-32	-34
12	Q	-33	-33	-33	-33	-32	-32	-33	-33	-32	-31	-31	-31	-32	-32	-30	-29	-27	-29	-33	-35	-34	-33	-32	-29	-32
13	D	-32	---	---	---	-37	-45	-40	-35	-33	-32	-31	-33	-35	-32	-26	-20	-17	---	-25	---	---	---	---	---	---
14		-30	---	---	-25	-24	-30	-28	-27	-29	-30	-31	-34	-34	-33	---	---	-24	---	---	---	-34	-29	-27	-28	---
15		-32	-33	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-20	-19	-22	-25	-25	-18	-25	---
16		-30	-30	-28	-30	-11	-8	-19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21		---	---	---	---	---	---	---	---	---	-25	---	---	---	---	---	---	-15	---	---	-26	-30	-25	-23	-29	---
22		-32	-34	-28	-26	-24	-25	-27	-26	-26	-27	-27	-22	-20	-21	-15	-16	-17	-19	-25	-31	-32	-30	-29	-27	-25
23		-23	-29	-29	-29	-27	-20	-18	-19	-22	-27	-27	-25	-22	-21	-18	-14	-18	-24	-29	-37	-42	-38	-35	-34	-26
24	D	-30	-27	-34	-32	-31	-29	-33	-3	24	19	300	254	77	-6	-49	-44	-55	-57	-56	-55	-84	-79	-68	-64	-7
25	D	-64	-55	-34	-52	-54	-40	-24	-20	-38	-45	-43	-47	-45	-44	-41	-20	-24	-35	-40	-47	-56	-57	-53	-51	-43
26		-51	-48	-37	-28	-31	-23	-15	-24	-31	-42	-45	-46	-44	-40	-35	-30	-28	-28	-34	-41	-43	-43	-43	-40	-36
27		-40	-41	-32	-31	-34	-37	-38	-36	-31	-35	-40	-42	-40	-36	-29	-23	-21	-25	-32	-38	-41	-39	-37	-36	-35
28	Q	-34	-33	-36	-38	-38	-40	-39	-38	-37	-37	-38	-38	-37	-35	-29	-22	-21	-23	-30	-37	-37	-31	-31	-35	-34
29		-31	-35	-31	-28	-31	-26	-30	-28	-32	-37	-39	---	---	-34	-30	---	---	---	---	---	---	---	---	---	---
30	Q	---	---	---	-36	---	-35	---	-33	---	-33	---	-34	-35	-29	-23	-21	-23	---	---	-36	-35	-29	---	---	---
31	D	---	---	---	---	---	---	---	-28	-29	-33	-34	---	---	-9	13	8	14	-2	-26	-53	-62	-59	-61	-71	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-27	-25	---	---	---	-36	-35	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	-22	-18	-21	33	24	-11	-24	-26	-20	-20	---	-36	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

AUGUST 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

DAY		HOUR(UT) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		218	231	222	223	233	235	235	239	235	224	240	236	236	231	227	222	217	221	231	237	237	229	225	225	230
2		224	237	234	233	233	224	235	238	241	245	236	233	238	227	225	223	221	---	236	240	240	234	232	232	233
3		229	228	231	244	233	227	224	226	230	232	233	235	236	234	226	225	228	224	222	227	229	231	235	223	230
4		235	229	230	218	223	229	236	231	226	224	230	232	227	224	222	221	220	227	235	237	234	234	226	231	228
5		236	236	234	234	233	236	231	229	227	233	238	238	235	---	221	---	---	222	215	224	239	240	---	228	231
6	D	216	205	236	220	207	213	210	220	218	228	226	241	227	232	226	216	211	222	223	225	229	234	229	231	223
7		228	220	217	230	224	218	210	224	232	222	224	225	233	225	221	221	226	230	224	230	232	232	225	234	225
8		234	233	233	231	232	232	227	234	226	228	231	233	234	232	226	220	220	224	232	237	242	240	232	236	231
9		236	234	230	236	229	227	230	229	231	233	235	235	234	233	226	217	219	223	228	233	234	232	229	231	230
10		230	232	237	230	232	233	230	232	213	228	208	206	221	214	204	220	223	227	232	237	233	230	228	228	225
11	Q	230	230	233	232	231	229	228	231	231	231	229	231	231	228	228	224	225	231	238	240	239	233	230	231	231
12	Q	231	230	228	229	229	229	231	231	231	232	231	231	232	231	227	225	223	228	236	239	237	236	234	226	231
13	D	233	---	---	---	228	246	239	235	233	232	233	238	244	239	230	223	216	---	226	---	---	---	---	---	---
14		224	---	---	229	222	232	228	226	228	230	232	236	236	234	---	---	220	---	---	---	236	227	224	225	---
15		230	233	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	227	228	230	231	230	219	229	---
16		232	236	232	238	224	214	222	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21		---	---	---	---	---	---	---	---	---	232	---	---	---	---	---	---	219	---	---	228	233	223	215	224	---
22		230	238	231	226	228	227	230	229	228	230	231	229	226	223	213	212	213	214	225	235	235	232	232	224	227
23		217	229	229	231	232	222	219	217	221	229	229	226	223	219	210	204	209	217	225	237	244	241	238	237	225
24	D	225	222	233	236	234	230	244	226	198	193	-23	-35	73	167	205	198	211	214	214	198	214	222	207	197	188
25	D	204	210	214	218	224	229	208	198	212	221	218	225	219	215	213	183	188	206	211	221	235	238	233	233	216
26		232	232	219	210	218	214	208	215	215	226	230	231	228	221	213	207	206	208	217	227	229	230	229	225	220
27		225	231	218	215	219	224	228	227	221	227	232	235	231	224	215	207	203	210	220	230	233	230	228	225	223
28	Q	219	216	218	222	228	233	232	232	232	233	234	235	232	227	216	207	207	211	222	231	229	221	221	223	224
29		208	217	214	209	213	220	224	219	222	227	231	---	---	223	217	---	---	---	---	---	---	---	---	---	---
30	Q	---	---	---	232	---	231	---	230	---	231	---	233	233	225	216	214	214	---	---	234	232	222	---	---	---
31	D	---	---	---	---	---	---	---	226	229	235	237	---	---	201	173	167	151	161	167	209	229	211	207	234	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	221	216	---	---	---	236	234	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	221	218	222	178	178	197	211	209	197	196	---	208	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

SEPTEMBER 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		408	401	364	335	352	340	365	394	397	401	401	400	412	395	394	412	426	432	432	425	412	405	396	391	395
2	D	395	370	354	365	349	337	336	357	402	391	379	407	433	405	397	416	436	471	479	462	418	419	411	415	400
3		361	295	299	325	329	275	350	399	399	435	410	415	412	415	419	410	426	437	436	425	410	405	396	338	384
4		363	379	359	308	302	279	304	352	368	434	406	419	433	405	417	429	432	442	448	432	420	385	387	392	387
5		386	346	378	389	395	376	387	384	377	394	380	382	383	387	389	404	428	439	436	426	410	402	399	397	395
6		374	363	362	355	381	390	390	392	391	387	398	398	384	381	389	412	426	440	441	434	420	406	404	394	396
7		392	394	351	350	358	364	352	372	381	390	386	375	381	375	386	406	423	---	---	---	---	---	---	---	---
8	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	434	418	410	408	401	---
9		397	394	392	377	370	373	383	383	380	380	376	380	376	375	370	391	407	434	425	437	461	450	449	424	399
10		414	394	389	386	388	380	384	357	377	383	371	375	376	378	---	---	---	---	---	---	---	---	437	358	---
11	D	316	262	299	217	257	254	332	285	406	504	570	562	565	499	466	451	444	455	443	438	350	341	391	376	395
12	D	344	333	364	365	327	368	347	338	390	450	422	402	390	394	407	484	464	457	456	453	478	432	393	205	394
13	D	322	389	368	329	317	321	359	358	384	384	491	503	453	449	428	427	435	453	463	455	414	406	404	380	404
14		358	378	392	396	399	398	360	395	371	414	408	431	409	403	442	448	448	455	449	447	397	414	409	398	409
15	D	370	390	393	389	377	385	393	391	397	414	407	384	374	404	---	---	---	---	---	473	401	377	426	416	---
16		402	401	385	364	371	396	382	402	411	413	424	408	394	399	408	422	442	454	456	451	434	---	---	401	410
17		399	399	400	400	387	385	391	392	388	388	384	359	360	384	393	442	454	---	---	---	---	---	385	---	---
18		---	---	395	382	375	372	379	387	375	367	389	383	371	373	390	406	427	448	454	440	422	409	403	400	398
19		394	379	389	396	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	434	419	411	---	---	---
20	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	445	441	426	409	399	395	---
21	Q	398	393	394	392	391	385	376	376	369	372	377	370	365	376	396	415	431	434	429	422	412	406	404	397	395
22		393	386	389	390	381	386	382	383	374	363	376	374	372	381	383	409	432	447	452	441	427	---	---	---	397
23		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26		---	---	---	---	---	---	---	---	---	---	---	---	---	---	378	399	415	434	446	446	423	432	427	410	---
27		401	380	335	346	360	319	346	363	366	378	388	387	374	377	381	392	410	427	440	433	419	412	413	387	385
28		402	367	369	369	365	354	327	343	362	350	360	358	375	379	393	400	409	428	419	413	411	405	399	401	382
29		398	372	365	374	376	375	376	374	372	373	379	383	388	397	385	389	414	442	438	429	414	398	392	391	391
30		389	390	390	378	367	372	378	370	361	362	365	356	344	352	395	392	410	426	435	426	413	410	401	392	386
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	350	349	356	333	325	333	353	346	396	429	454	452	443	430	432	446	---	---	462	456	412	395	405	358	400

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

SEPTEMBER 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		70	88	82	74	105	83	79	82	82	85	85	88	86	87	79	78	78	82	87	93	94	92	91	93	85
2	D	97	95	94	99	114	111	94	96	89	102	104	97	103	95	92	88	78	82	84	64	88	97	103	100	94
3		91	60	69	64	76	77	73	84	93	97	107	90	81	72	59	73	79	87	97	101	102	100	91	71	83
4		82	96	97	99	81	82	82	106	94	116	101	89	91	86	81	74	77	79	87	96	99	95	97	96	91
5		97	105	100	99	106	108	100	103	100	105	109	108	107	96	85	80	75	82	92	98	93	103	105	105	98
6		88	91	87	89	97	103	103	104	105	107	111	116	114	99	86	80	80	89	90	99	104	104	102	104	98
7		103	108	115	112	103	103	99	99	102	107	115	106	104	98	87	81	82	---	---	---	---	---	---	---	---
8	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	114	111	112	113	115	---
9		114	116	117	117	112	113	114	114	113	114	114	114	114	112	93	98	95	101	106	120	115	108	94	104	110
10		106	103	106	109	120	117	126	119	107	117	114	117	114	113	---	---	---	---	---	---	---	---	71	66	---
11	D	77	117	109	100	81	106	-14	41	33	66	36	59	51	28	26	34	55	52	50	59	72	65	64	75	60
12	D	70	68	70	78	80	89	109	112	119	104	89	90	87	80	66	15	42	61	38	25	31	46	37	39	69
13	D	39	57	92	67	60	62	83	88	95	112	90	104	80	57	56	52	49	57	69	70	88	93	95	76	75
14		92	78	88	94	94	100	105	100	95	95	112	113	98	83	54	64	68	73	87	86	83	92	90	89	89
15	D	95	105	100	101	104	100	99	102	107	132	127	101	98	60	---	---	---	---	---	97	59	48	67	79	---
16		99	96	105	91	91	93	89	86	92	91	101	97	93	77	80	76	79	82	89	100	93	---	---	98	91
17		98	100	102	101	101	92	94	92	92	94	95	99	95	88	84	64	72	---	---	---	---	---	---	95	---
18		---	---	101	103	98	97	93	98	108	95	97	102	94	84	70	69	73	81	86	97	100	96	99	101	93
19		103	106	103	103	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	95	100	100	---	---	---
20	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	90	95	99	103	106	107	---
21	Q	106	108	108	107	106	103	100	100	106	102	110	113	108	95	83	78	82	93	97	102	104	103	104	107	101
22		108	108	109	110	103	107	108	107	110	105	108	110	107	99	93	84	91	97	108	103	109	---	---	---	104
23		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26		---	---	---	---	---	---	---	---	---	---	---	---	---	---	95	90	89	94	96	107	105	100	102	115	---
27		117	117	106	100	117	113	102	104	100	102	99	102	102	96	87	81	82	90	101	110	116	119	111	103	103
28		116	127	122	112	116	124	109	100	117	113	111	109	102	96	88	85	86	92	101	108	108	108	114	117	107
29		116	111	115	117	116	116	112	115	113	109	109	110	104	104	98	89	81	84	96	105	113	114	114	116	107
30		121	119	120	124	122	112	112	112	110	109	114	118	115	99	84	88	97	103	108	115	115	109	106	109	110
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	76	88	93	89	88	94	74	88	89	103	89	90	84	64	60	47	---	---	64	63	68	70	73	74	77

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

SEPTEMBER 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-68	-58	-35	-43	-38	-26	-33	-40	-41	-43	-41	-38	-32	-38	-34	-30	-32	-36	-39	-46	-47	-44	-42	-42	-40
2	D	-42	-40	-39	-40	-32	-13	-13	-22	-13	-22	-31	-29	-30	-28	-30	-23	-17	-21	-36	-42	-54	-55	-51	-46	-32
3		-47	-31	-20	-7	8	-5	-30	-45	-45	-10	-21	-24	-30	-30	-25	-38	-37	-39	-43	-47	-47	-44	-41	-37	-31
4		-37	-42	-38	-14	-6	-7	-2	0	9	1	-12	-22	-31	-36	-34	-31	-37	-35	-35	-45	-49	-49	-47	-41	-27
5		-40	-40	-33	-33	-35	-33	-26	-33	-29	-27	-34	-33	-30	-26	-23	-21	-17	-23	-34	-41	-40	-44	-43	-41	-33
6		-34	-33	-31	-34	-38	-40	-38	-37	-37	-36	-31	-31	-36	-29	-22	-17	-18	-28	-30	-37	-42	-43	-40	-41	-33
7		-39	-40	-40	-28	-28	-28	-24	-28	-30	-33	-34	-28	-28	-27	-22	-21	-23	---	---	---	---	---	---	---	---
8	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-31	-33	-34	-34	-35	---
9		-34	-33	-34	-33	-30	-30	-31	-30	-29	-29	-30	-26	-26	-25	-8	-5	-3	-9	-17	-26	-29	-35	-29	-38	-26
10		-42	-43	-39	-36	-39	-35	-24	-7	-11	-25	-28	-26	-28	-25	---	---	---	---	---	---	---	---	-55	-59	---
11	D	-56	-62	-43	1	47	57	307	181	114	105	74	11	-14	-34	-62	-56	-60	-52	-65	-78	-89	-79	-59	-59	1
12	D	-49	-28	-17	-6	-9	-19	-11	52	36	58	-2	-34	-40	-36	-27	10	-20	-37	-37	-38	-58	-66	-68	-62	-21
13	D	-45	-62	-45	-39	-28	-18	-24	-16	-9	-25	13	0	-7	-9	-32	-32	-31	-36	-47	-56	-72	-61	-54	-51	-33
14		-48	-38	-41	-39	-35	-17	-1	13	-5	-17	-26	-29	-30	-32	-15	-26	-30	-30	-39	-46	-52	-49	-46	-45	-30
15	D	-43	-40	-39	-37	-36	-34	-36	-37	-35	-21	-14	-9	-19	-5	---	---	---	---	---	-52	-58	-59	-52	-52	---
16		-52	-46	-38	-25	-10	-17	-20	-24	-19	-14	-24	-27	-31	-23	-27	-25	-29	-32	-38	-50	-48	---	---	-44	-31
17		-42	-40	-39	-38	-36	-29	-34	-33	-35	-36	-34	-41	-34	-23	-22	-5	-18	---	---	---	---	---	---	-46	---
18		---	---	-37	-36	-31	-31	-26	-28	-23	-24	-28	-37	-31	-27	-20	-21	-23	-27	-32	-43	-47	-41	-42	-40	-32
19		-41	-39	-34	-34	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-37	-45	-43	---	---	---
20	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-30	-38	-40	-44	-45	-41	---
21	Q	-37	-37	-36	-34	-33	-32	-31	-31	-33	-32	-31	-31	-30	-24	-17	-19	-23	-28	-29	-34	-37	-35	-36	-37	-31
22		-38	-35	-34	-32	-29	-32	-33	-31	-29	-28	-28	-30	-28	-21	-17	-9	-12	-17	-22	-22	-31	---	---	---	-27
23		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26		---	---	---	---	---	---	---	---	---	---	---	---	---	---	-12	-9	-9	-12	-15	-25	-32	-32	-29	-38	---
27		-38	-39	-32	-28	-17	-15	-19	-23	-18	-19	-17	-23	-26	-23	-22	-18	-15	-16	-21	-30	-35	-38	-33	-30	-25
28		-35	-37	-27	-27	-29	-21	-12	-13	-22	-21	-23	-22	-16	-14	-12	-11	-12	-13	-22	-27	-28	-29	-32	-32	-22
29		-31	-28	-28	-28	-29	-29	-26	-27	-24	-22	-20	-19	-17	-16	-14	-10	-4	-6	-18	-29	-37	-36	-32	-30	-23
30		-32	-29	-28	-29	-26	-21	-22	-24	-23	-22	-22	-24	-20	-9	2	-7	-11	-12	-16	-25	-32	-28	-26	-30	-22
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	-47	-46	-37	-24	-12	-5	44	32	19	19	8	-12	-22	-23	-33	-22	---	---	-46	-53	-66	-64	-57	-54	-23

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

SEPTEMBER 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		236	238	216	218	231	209	212	220	221	224	222	221	215	221	213	209	211	216	222	231	233	229	226	228	222
2	D	230	227	225	229	231	214	204	212	201	216	225	219	223	217	217	209	198	204	218	211	235	240	241	234	220
3		230	200	196	182	177	188	206	225	230	203	218	211	211	206	195	213	216	221	230	237	237	233	226	212	213
4		217	229	226	208	191	192	189	200	186	205	207	209	217	219	214	208	215	214	219	231	237	234	234	229	214
5		229	233	224	223	229	228	218	226	221	222	230	228	226	217	208	203	197	206	220	230	226	235	235	234	223
6		218	219	215	218	226	231	230	230	230	231	228	231	234	220	206	199	200	213	216	226	234	234	231	233	223
7		231	234	238	227	222	222	216	220	223	228	234	223	223	218	208	203	206	---	---	---	---	---	---	---	---
8	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	230	231	232	232	234	---
9		232	233	234	234	228	228	230	230	228	229	230	226	226	224	199	200	197	205	214	229	229	230	218	231	224
10		235	234	233	232	240	236	232	213	210	227	228	228	227	224	---	---	---	---	---	---	---	---	226	226	---
11	D	230	257	238	196	147	153	-121	14	65	91	100	164	181	184	207	206	221	213	223	238	254	242	225	232	173
12	D	220	202	195	189	193	206	211	160	177	151	192	219	223	216	199	141	180	205	193	186	206	221	218	213	197
13	D	200	224	229	211	198	190	207	204	201	225	181	199	192	180	199	197	194	202	218	226	250	244	238	226	210
14		232	216	224	226	222	211	200	186	198	208	225	228	221	214	184	198	204	206	222	227	230	233	229	227	215
15	D	230	233	229	228	229	225	226	229	230	232	224	205	212	178	---	---	---	---	---	238	222	216	221	228	---
16		239	232	231	212	200	207	207	208	208	203	218	217	219	203	208	204	209	213	222	238	232	---	---	232	217
17		231	229	230	228	227	216	221	220	221	223	222	230	222	209	206	181	196	---	---	---	---	---	---	232	---
18		---	---	228	228	222	221	215	219	220	214	218	229	219	211	197	197	201	209	215	230	236	229	231	230	219
19		232	233	227	226	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	224	234	233	---	---	---
20	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	216	225	229	235	237	235	---
21	Q	230	231	231	228	227	225	223	222	227	224	228	230	226	214	201	200	205	216	220	226	230	228	229	232	223
22		233	231	230	229	222	227	229	226	226	223	224	227	224	214	207	195	202	209	219	217	228	---	---	---	221
23		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26		---	---	---	---	---	---	---	---	---	---	---	---	---	---	204	199	198	203	207	222	226	223	222	236	---
27		238	238	227	220	221	216	214	218	211	214	210	217	219	214	207	201	198	205	215	227	235	238	230	223	219
28		235	242	231	226	230	228	212	208	224	222	222	220	211	206	200	198	199	203	216	224	224	225	231	233	220
29		231	227	229	230	230	229	225	227	224	220	218	218	213	212	207	199	190	193	209	224	235	235	231	231	220
30		235	231	231	234	231	221	221	223	222	220	223	227	221	204	186	196	204	209	214	226	231	225	221	227	220
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	222	229	223	211	200	198	145	164	175	183	184	201	206	195	201	185	---	---	214	220	234	233	229	227	204

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

OCTOBER 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		371	365	383	385	373	364	357	382	376	359	367	364	363	---	372	394	421	440	437	430	411	400	365	374	384
2	D	372	360	317	356	364	362	371	375	400	388	363	355	358	371	398	428	447	447	440	427	409	399	372	366	385
3		380	385	383	381	381	380	379	396	380	375	369	370	361	363	379	398	416	423	424	417	405	383	391	389	388
4		384	390	389	388	383	383	383	383	380	376	369	360	360	361	372	386	405	431	442	436	419	402	394	392	390
5		---	---	385	380	374	378	---	---	---	370	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6		---	---	---	---	---	378	376	376	371	366	363	---	---	372	383	---	---	---	---	---	---	401	395	392	---
7		384	374	---	384	378	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	344	382	---
9		392	356	---	---	---	379	384	383	378	---	375	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		392	388	367	373	381	382	379	358	357	374	384	384	372	374	381	398	---	---	---	---	---	---	---	---	---
11		---	---	---	---	374	381	381	380	376	373	371	361	359	375	393	410	423	430	426	---	---	---	---	389	---
12	Q	---	388	385	385	385	381	382	383	380	375	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	387	---	---	---	---	---	---	393	391	---
14	Q	390	391	384	379	365	370	374	372	367	361	355	352	355	359	364	382	404	419	422	412	400	392	390	390	381
15	Q	389	388	386	382	378	371	366	361	359	355	354	350	351	355	370	393	415	427	427	415	402	396	393	389	382
16		386	385	385	381	370	368	372	366	362	362	367	362	366	372	389	426	452	463	458	441	415	398	397	409	394
17	D	404	387	366	333	307	344	334	330	344	358	372	363	371	383	401	418	430	446	444	433	420	403	396	392	382
18		389	388	384	367	359	368	367	368	361	361	363	359	373	382	385	410	429	433	429	429	421	407	394	388	388
19		385	385	386	355	356	358	356	352	341	344	349	357	360	367	382	408	425	437	431	420	411	402	397	395	382
20	Q	387	386	388	386	385	381	374	364	362	366	372	363	356	356	363	382	410	422	417	410	404	398	393	389	384
21		388	388	387	384	380	375	370	367	357	353	356	356	356	360	367	383	403	419	427	421	410	399	396	379	383
22		377	388	389	378	349	358	364	364	358	361	366	364	364	366	374	383	397	410	415	415	409	399	392	393	381
23	Q	393	389	389	384	379	375	369	364	357	356	353	345	341	348	366	388	406	416	422	414	406	399	393	390	381
24		386	384	382	375	373	370	365	358	356	353	350	337	342	361	391	412	425	430	438	433	419	402	397	397	385
25	D	392	390	341	276	318	333	331	349	305	372	370	370	368	379	397	416	433	446	460	459	454	446	409	399	384
26		400	394	381	379	369	354	347	363	393	385	368	364	367	374	387	407	416	433	445	440	433	414	401	389	392
27		372	351	381	385	383	381	376	374	371	365	368	357	356	---	394	420	433	442	433	435	426	410	400	393	391
28		389	387	386	384	382	375	369	365	368	370	358	353	363	379	383	388	402	418	422	418	412	404	388	382	385
29		387	388	386	384	380	375	372	368	364	363	363	365	369	371	372	384	405	421	432	431	416	408	403	394	388
30		390	---	377	370	---	---	355	352	353	354	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	390	388	387	383	378	376	373	369	365	363	360	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

OCTOBER 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		108	108	107	113	119	123	108	116	118	111	117	120	113	---	78	69	74	87	99	104	109	104	96	96	104
2	D	95	102	107	96	107	109	104	106	103	114	111	107	93	86	75	74	82	89	105	108	108	104	96	102	99
3		100	107	109	107	122	115	104	106	110	108	109	106	102	92	81	78	80	89	100	107	105	106	112	113	103
4		109	112	112	115	114	113	111	112	112	114	117	114	105	94	85	77	78	85	94	107	111	112	113	114	105
5		---	---	114	112	108	108	---	---	---	115	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6		---	---	---	---	---	112	111	113	111	111	109	---	---	88	83	---	---	---	---	---	---	119	119	119	---
7		122	123	---	125	134	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	101	110	---
9		111	112	---	---	---	112	112	109	108	---	107	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		110	113	116	115	113	117	131	115	107	108	106	112	100	91	81	84	---	---	---	---	---	---	---	---	---
11		---	---	---	---	110	111	107	107	109	110	108	104	96	86	80	83	80	94	103	---	---	---	---	111	---
12	Q	---	111	113	113	114	113	112	112	112	111	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	82	---	---	---	---	---	---	109	109	---
14	Q	110	112	115	117	116	112	113	113	111	110	108	104	97	93	90	86	85	93	103	112	118	117	118	118	107
15	Q	120	120	120	120	120	121	118	117	114	110	109	108	102	90	83	82	89	101	113	118	120	120	120	121	111
16		120	118	119	115	112	109	110	113	105	108	111	110	104	91	83	83	86	97	106	106	109	110	117	97	106
17	D	96	112	115	115	96	96	113	99	98	98	97	101	89	79	71	66	81	94	104	110	106	108	108	111	98
18		112	112	115	118	109	107	108	111	108	108	108	103	99	95	93	93	90	102	113	116	110	110	110	112	107
19		115	111	113	107	100	101	102	103	105	107	108	108	101	92	86	82	85	99	102	107	109	109	111	111	103
20	Q	110	110	112	110	109	106	109	110	107	107	109	108	100	90	82	77	84	97	108	114	117	116	114	117	105
21		118	118	119	120	119	118	117	118	118	120	122	118	108	94	87	83	86	96	110	120	127	136	141	149	115
22		121	122	122	133	129	120	116	111	109	108	106	106	101	98	93	91	93	101	109	113	114	117	118	117	111
23	Q	120	120	122	125	124	123	119	116	117	116	116	114	105	96	92	87	95	100	109	112	116	118	120	121	113
24		120	124	127	129	129	128	127	124	122	121	118	110	97	83	78	75	85	104	118	114	119	123	127	142	114
25	D	152	148	141	126	116	115	102	121	117	121	118	114	102	87	74	75	78	86	97	103	96	92	91	108	107
26		116	114	118	116	114	111	111	112	104	109	109	105	95	85	85	81	90	93	97	102	109	114	116	116	105
27		109	106	110	115	115	113	111	109	111	112	109	107	103	---	90	88	90	95	104	108	111	111	111	111	106
28		114	116	117	116	116	116	115	115	119	124	123	113	101	93	90	89	88	94	101	103	109	111	114	115	109
29		116	117	118	118	117	115	115	116	115	115	113	110	102	91	87	90	95	102	108	106	107	117	120	122	110
30		122	---	117	115	---	---	121	121	123	121	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	114	115	116	117	117	115	114	114	112	111	111	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

OCTOBER 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-30	-28	-26	-29	-27	-21	-17	-12	-9	-10	-16	-17	-17	---	-8	-5	-8	-17	-28	-37	-42	-37	-35	-33	-22
2	D	-30	-31	-27	-20	-27	-27	-25	-27	-18	-26	-25	-26	-17	-13	-5	-5	-14	-22	-36	-39	-41	-39	-34	-34	-25
3		-31	-32	-30	-28	-26	-22	-21	-23	-30	-29	-28	-24	-24	-22	-17	-13	-16	-23	-30	-35	-35	-34	-34	-32	-27
4		-29	-28	-28	-28	-26	-26	-25	-26	-26	-28	-28	-24	-18	-16	-12	-8	-8	-14	-21	-31	-36	-36	-34	-32	-24
5		---	---	-27	-26	-24	-25	---	---	---	-29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6		---	---	---	---	---	-23	-23	-23	-23	-24	-22	---	---	-6	-6	---	---	---	---	---	---	-31	-29	-28	---
7		-28	-26	---	-26	-26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-42	-38	---
9		-34	-32	---	---	---	-28	-27	-26	-26	---	-24	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		-31	-30	-28	-24	-25	-26	-20	-7	-15	-16	-13	-20	-16	-16	-6	-3	---	---	---	---	---	---	---	---	---
11		---	---	---	---	-24	-23	-24	-25	-27	-26	-24	-23	-19	-12	-9	-10	-7	-16	-24	---	---	---	---	-30	---
12	Q	---	-26	-25	-25	-25	-25	-24	-24	-23	-23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-7	---	---	---	---	---	---	---	-31	-29	---
14	Q	-27	-26	-27	-27	-23	-21	-23	-23	-24	-22	-19	-19	-17	-14	-11	-9	-6	-9	-18	-26	-30	-29	-27	-25	-21
15	Q	-24	-23	-22	-23	-23	-23	-20	-20	-19	-18	-17	-17	-14	-10	-5	-4	-7	-13	-23	-27	-26	-26	-24	-24	-19
16		-23	-20	-21	-21	-21	-20	-17	-17	-12	-18	-17	-18	-16	-11	-2	5	1	-11	-22	-29	-36	-31	-41	-26	-19
17	D	-23	-32	-33	-25	-12	-9	-10	-9	-16	-18	-14	-19	-13	-7	-4	-3	-8	-13	-25	-31	-33	-34	-31	-29	-19
18		-28	-25	-27	-25	-17	-21	-23	-26	-23	-20	-18	-14	-10	-12	-12	-8	-5	-17	-27	-36	-32	-31	-32	-28	-22
19		-28	-26	-25	-19	-18	-20	-22	-23	-22	-19	-16	-15	-12	-6	-2	1	4	-7	-18	-26	-31	-32	-33	-28	-19
20	Q	-27	-26	-25	-24	-23	-23	-24	-24	-22	-19	-18	-21	-21	-17	-12	-6	-5	-16	-23	-23	-26	-25	-24	-25	-21
21		-23	-22	-21	-21	-21	-21	-21	-22	-22	-19	-15	-14	-9	-2	2	5	2	-5	-13	-20	-25	-30	-29	-37	-17
22		-25	-20	-20	-24	-19	-15	-16	-16	-17	-13	-11	-12	-9	-6	-2	0	1	-3	-9	-15	-19	-25	-27	-23	-15
23	Q	-22	-21	-20	-22	-21	-20	-18	-18	-19	-17	-16	-16	-13	-9	-2	2	-2	-7	-14	-19	-23	-25	-24	-22	-16
24		-20	-21	-22	-22	-22	-20	-19	-17	-15	-14	-12	-10	-4	4	8	8	1	-10	-16	-13	-19	-22	-20	-28	-14
25	D	-32	-29	-27	-16	-13	-13	-3	-3	8	11	15	5	6	11	13	8	9	2	-9	-17	-23	-29	-34	-38	-8
26		-36	-30	-30	-26	-24	-19	-14	-12	-4	-11	-15	-14	-10	-7	-3	-1	-6	-7	-6	-15	-21	-30	-30	-30	-17
27		-25	-22	-20	-23	-22	-20	-19	-18	-17	-15	-12	-13	-9	---	6	7	1	-4	-14	-20	-25	-29	-27	-25	-15
28		-25	-24	-23	-22	-21	-21	-19	-16	-12	-7	-6	-6	-3	-7	-8	-7	-3	-5	-12	-16	-22	-26	-26	-25	-15
29		-23	-21	-20	-20	-19	-18	-17	-16	-15	-12	-10	-9	-8	-5	-4	-1	2	-3	-8	-13	-18	-25	-24	-24	-14
30		-22	---	-20	-19	---	---	-22	-21	-17	-14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	-25	-24	-24	-24	-23	-22	-22	-22	-21	-20	-19	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

OCTOBER 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		226	224	222	228	229	227	215	216	214	211	220	222	219	---	191	183	189	204	220	229	236	230	223	222	217
2	D	218	223	223	211	223	224	220	222	213	227	223	222	207	200	186	186	198	208	229	234	236	231	223	226	217
3		222	227	227	224	231	224	216	219	227	225	226	220	218	210	200	195	199	209	221	230	228	229	232	230	220
4		226	227	226	228	226	226	224	225	225	228	230	224	215	207	198	190	191	200	211	226	232	233	233	231	220
5		---	---	227	224	221	222	---	---	---	230	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6		---	---	---	---	---	223	223	223	222	223	220	---	---	195	192	---	---	---	---	---	---	233	231	231	---
7		232	232	---	232	237	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	232	234	---
9		231	230	---	---	---	227	225	223	223	---	221	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10		228	229	228	225	225	228	230	211	213	214	211	220	210	205	191	190	---	---	---	---	---	---	---	---	---
11		---	---	---	---	222	222	221	221	224	224	221	218	210	199	193	196	192	206	219	---	---	---	---	228	---
12	Q	---	224	225	225	225	225	224	224	223	222	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	192	---	---	---	---	---	---	228	226	---
14	Q	225	225	228	229	225	221	223	223	223	220	217	215	209	204	200	196	193	200	213	224	232	231	229	228	218
15	Q	228	227	226	227	227	228	223	223	220	217	216	215	209	199	191	190	196	208	222	229	230	230	228	229	218
16		227	224	224	223	220	218	217	218	210	216	217	217	212	201	188	184	188	204	219	224	232	228	240	217	215
17	D	213	230	232	225	205	202	213	204	209	211	207	213	202	191	184	180	193	204	220	228	227	229	227	227	212
18		226	224	228	227	216	218	221	225	221	218	216	210	204	204	203	199	195	212	226	235	229	228	229	227	218
19		228	224	225	217	212	214	216	217	218	217	214	213	207	198	190	186	185	202	213	222	228	228	230	226	214
20	Q	225	224	224	222	221	219	221	222	218	217	217	218	214	205	196	189	192	208	220	224	228	227	225	227	217
21		226	225	225	226	225	225	224	225	226	223	222	219	209	196	188	183	187	199	213	225	233	242	244	255	219
22		229	226	226	236	229	220	219	216	216	212	210	210	205	200	195	192	193	200	210	217	221	228	229	226	215
23	Q	226	225	226	229	228	227	223	220	222	220	220	218	210	202	194	188	195	203	213	219	225	228	228	227	217
24		225	228	230	231	232	230	227	225	222	220	216	211	198	184	178	176	188	207	220	216	224	228	228	243	216
25	D	252	248	242	224	216	216	200	211	200	199	195	200	193	180	171	176	177	188	203	213	214	216	220	232	208
26		235	229	232	227	224	218	214	213	202	211	214	211	203	194	191	186	196	199	200	211	219	230	231	230	213
27		223	218	220	224	224	221	219	217	217	216	212	211	206	---	186	185	190	197	210	218	224	227	225	223	213
28		225	226	226	224	223	223	221	219	217	216	215	209	200	199	198	196	193	198	208	212	220	224	226	226	214
29		225	224	224	223	222	221	219	219	218	216	213	210	205	196	192	192	192	200	208	211	216	227	228	229	214
30		228	---	223	221	---	---	226	226	224	220	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	226	225	226	226	225	224	223	222	221	219	218	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

NOVEMBER 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	417	421	366	389	---
4	D	402	387	377	383	359	339	358	350	330	342	358	379	393	392	392	406	422	439	465	426	416	406	395	388	388
5		397	386	382	388	374	360	379	356	348	343	351	360	375	380	391	414	430	445	---	---	---	409	---	---	387
6	D	371	343	345	357	370	370	378	367	356	356	348	347	349	364	375	394	408	436	431	419	411	399	377	380	377
7		385	364	369	379	383	381	381	380	373	361	348	347	358	370	382	393	412	425	426	419	410	400	393	398	385
8	Q	393	387	385	381	379	377	372	368	366	360	354	348	346	351	366	386	403	406	411	410	409	404	397	394	381
9		381	373	375	381	378	375	372	362	352	348	351	354	363	376	389	404	420	427	427	421	414	410	404	398	386
10	Q	395	391	388	386	379	376	373	362	353	344	346	353	361	369	382	408	429	440	435	420	---	393	398	399	387
11		397	394	388	388	381	372	362	347	338	344	350	363	364	368	380	402	416	423	418	404	401	399	398	396	383
12		395	396	391	382	368	372	357	331	320	331	348	373	403	404	405	---	444	---	---	---	---	---	---	---	---
13	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	422	412	383	394	---
14		390	382	376	350	354	351	353	---	---	---	---	---	---	---	---	---	---	---	---	---	---	413	402	391	---
15		389	386	381	379	367	358	353	347	335	350	341	344	359	377	392	406	416	427	427	418	408	398	390	391	381
16	Q	392	390	385	378	367	365	365	360	354	350	350	350	345	356	376	408	---	434	428	427	414	400	392	381	382
17	Q	378	382	382	378	373	371	362	357	344	341	342	351	361	372	386	410	433	454	460	445	419	401	389	385	386
18		385	384	380	376	369	359	351	332	317	314	321	---	351	---	---	---	---	---	---	---	---	---	---	---	---
19		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	436	418	403	---
20		398	395	390	383	380	365	362	347	330	335	352	---	---	---	---	---	---	454	448	437	425	404	395	---	---
21		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	423	413	408	398	---
22		389	387	383	377	370	355	343	339	348	341	332	345	372	386	389	397	417	444	454	455	448	433	421	408	389
23		398	387	375	375	368	346	329	326	336	330	334	345	362	376	388	393	411	442	429	414	409	410	404	395	378
24		389	381	378	379	371	358	336	341	333	325	320	346	359	377	389	405	425	430	438	440	431	424	411	390	382
25		385	344	358	342	342	347	352	354	366	357	350	352	365	380	395	424	429	435	436	420	410	396	398	397	381
26		385	380	388	385	378	369	358	345	334	328	335	361	378	386	395	417	438	436	419	401	398	390	392	392	383
27	Q	393	391	387	382	376	364	354	344	341	340	349	362	374	382	388	399	413	419	409	---	---	---	391	394	381
28		390	390	386	381	376	368	347	321	314	316	318	339	368	389	392	401	424	433	430	424	416	400	394	401	380
29		392	390	385	382	377	373	367	355	344	340	347	356	---	---	---	---	---	---	---	---	---	---	---	380	---
30	D	386	383	372	367	363	363	343	337	341	351	371	392	390	401	---	425	430	442	447	430	409	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	390	388	386	381	375	371	365	358	352	347	348	353	357	366	379	402	420	431	429	422	---	399	393	391	384
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	415	408	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

NOVEMBER 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	95	107	104	113	---
4	D	111	124	115	118	122	127	115	120	109	108	115	109	98	92	85	81	86	100	84	98	109	107	108	109	106
5		112	112	112	116	115	111	116	115	107	104	102	97	90	83	74	72	88	102	---	---	---	117	---	---	104
6	D	112	120	106	103	109	111	115	114	113	107	97	94	87	84	79	70	75	85	96	111	113	111	106	106	101
7		108	107	112	115	115	116	114	111	109	110	108	106	98	90	85	82	86	94	105	112	114	110	113	113	106
8	Q	116	117	120	120	119	116	112	112	111	110	109	104	98	88	85	85	89	95	103	106	109	113	117	116	107
9		118	117	119	119	121	120	117	116	113	112	110	108	102	98	97	100	101	108	111	114	115	121	122	122	112
10	Q	120	120	120	120	119	119	119	117	116	112	110	104	97	90	86	84	92	106	114	116	---	111	119	122	110
11		127	130	136	127	119	116	117	112	109	107	105	105	104	95	90	93	92	103	105	107	111	117	120	124	111
12		120	115	120	121	118	116	112	110	111	109	111	107	105	95	93	---	86	---	---	---	---	---	---	---	---
13	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	101	95	99	100	---
14		106	113	114	97	95	95	95	---	---	---	---	---	---	---	---	---	---	---	---	---	---	105	110	112	---
15		114	114	116	115	115	110	104	106	103	104	102	92	84	82	77	74	77	82	91	100	109	112	113	113	100
16	Q	115	116	116	115	117	114	114	115	110	109	107	104	99	91	86	85	---	95	102	113	118	119	115	112	108
17	Q	113	117	116	115	116	116	113	116	108	110	108	106	100	85	69	60	72	92	107	117	120	119	118	117	105
18		121	123	123	123	120	117	118	120	116	115	114	---	115	---	---	---	---	---	---	---	---	---	---	---	---
19		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	107	90	102	---
20		107	114	121	120	128	122	127	130	117	111	105	---	---	---	---	---	---	86	92	103	108	109	118	---	---
21		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	121	122	126	123	---
22		120	121	123	124	123	121	116	116	113	114	113	109	111	104	103	100	95	110	111	111	111	111	114	117	113
23		117	116	116	116	113	121	112	111	111	109	107	99	95	92	96	96	97	93	103	108	112	113	111	112	107
24		108	104	104	105	104	102	103	104	105	97	91	92	93	90	96	105	110	115	120	112	115	109	109	103	104
25		103	114	103	105	105	101	103	107	111	103	93	83	72	71	69	67	83	97	102	105	110	106	113	108	97
26		110	115	114	115	115	114	112	116	113	110	106	99	99	87	89	89	96	104	110	110	110	106	106	109	106
27	Q	115	117	115	118	115	112	112	112	112	111	107	102	92	83	84	90	97	104	102	---	---	---	119	117	107
28		120	119	120	122	123	124	124	122	118	112	102	94	90	88	97	103	102	105	114	127	131	120	118	109	113
29		107	113	118	120	119	119	118	115	114	116	113	104	---	---	---	---	---	---	---	---	---	---	---	121	---
30	D	137	134	137	135	132	136	127	124	114	112	100	101	88	78	---	85	101	111	118	113	117	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	116	117	117	118	117	116	114	115	111	110	108	104	97	88	82	81	88	98	105	112	---	116	118	117	107
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	107	106	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

NOVEMBER 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-33	-41	-43	-37	---
4	D	-29	-27	-20	-24	-21	-8	-13	-24	-14	-11	-9	-3	5	4	4	6	3	-7	-5	-21	-33	-32	-30	-31	-14
5		-26	-24	-22	-21	-20	-16	-10	-5	-15	-13	-8	-3	-1	-1	1	3	-5	-9	---	---	---	-29	---	---	-14
6	D	-29	-23	-11	-15	-23	-24	-24	-24	-21	-13	-6	-6	-3	0	4	7	3	-5	-14	-28	-30	-30	-29	-31	-16
7		-26	-25	-24	-23	-22	-21	-20	-18	-13	-15	-11	-8	-2	-1	-1	-2	-4	-8	-14	-21	-26	-23	-25	-24	-16
8	Q	-24	-24	-23	-22	-19	-18	-17	-18	-16	-13	-10	-6	-4	0	4	7	4	-4	-10	-13	-13	-17	-21	-22	-13
9		-23	-20	-19	-18	-19	-18	-17	-17	-14	-10	-7	-4	-2	2	2	4	6	3	-3	-11	-14	-18	-20	-21	-11
10	Q	-18	-17	-16	-16	-16	-16	-17	-17	-13	-9	-6	-4	-1	-1	1	2	2	-5	-16	-20	---	-18	-22	-22	-12
11		-22	-23	-23	-18	-11	-12	-14	-13	-10	-8	-5	-4	-3	2	7	10	8	-4	-7	-11	-15	-17	-16	-21	-10
12		-22	-15	-18	-19	-16	-12	-10	-3	1	6	7	9	7	6	5	---	9	---	---	---	---	---	---	---	---
13	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-31	-34	-35	-35	---
14		-31	-34	-28	-16	-17	-19	-19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-26	-31	-33	---
15		-25	-24	-23	-20	-18	-14	-14	-15	-12	-8	-9	-3	2	2	5	8	3	-4	-14	-20	-27	-30	-27	-24	-13
16	Q	-19	-20	-19	-20	-19	-17	-17	-17	-11	-8	-5	-4	-6	0	9	18	---	2	-7	-17	-20	-22	-20	-19	-11
17	Q	-17	-19	-18	-17	-18	-18	-15	-11	-2	-5	-4	-1	1	8	15	16	11	3	-6	-18	-26	-28	-24	-19	-9
18		-17	-17	-16	-17	-17	-17	-17	-18	-13	-9	-1	---	7	---	---	---	---	---	---	---	---	---	---	---	---
19		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-26	-17	-26	---
20		-23	-21	-22	-21	-22	-20	-15	-9	-3	-1	4	---	---	---	---	---	---	11	-3	-15	-22	-25	-30	---	---
21		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-20	-22	-23	-22	---
22		-19	-18	-18	-19	-18	-18	-15	-13	-5	-4	-3	2	4	4	5	7	10	5	2	-6	-12	-17	-22	-27	-8
23		-24	-21	-19	-19	-14	-11	-10	-12	-5	2	1	1	3	5	3	4	2	1	-8	-14	-21	-23	-20	-22	-9
24		-22	-19	-19	-19	-18	-17	-16	-13	-14	-7	-5	-1	-1	3	5	1	1	0	-1	-1	-12	-15	-23	-30	-10
25		-28	-28	-19	-18	-12	-14	-18	-15	0	-1	0	4	6	7	9	14	9	0	-10	-12	-18	-20	-21	-17	-8
26		-17	-20	-17	-18	-18	-16	-14	-11	-7	-4	2	7	5	6	9	14	14	4	-9	-13	-17	-10	-14	-13	-7
27	Q	-16	-18	-17	-18	-18	-16	-17	-15	-10	-6	-1	4	8	11	15	17	14	4	-5	---	---	---	-13	-12	-6
28		-14	-13	-13	-16	-16	-17	-14	-4	-3	0	8	18	18	17	7	8	11	8	0	-8	-12	-6	-12	-13	-3
29		-15	-18	-20	-18	-16	-15	-14	-13	-8	-5	3	10	---	---	---	---	---	---	---	---	---	---	---	-24	---
30	D	-23	-21	-20	-17	-14	-14	-6	-6	1	9	21	20	15	16	---	18	11	1	-11	-13	-20	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	-19	-20	-19	-18	-18	-17	-17	-16	-10	-8	-5	-2	0	4	9	12	8	0	-9	-15	---	-20	-20	-19	-10
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-29	-32	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

NOVEMBER 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	221	234	235	234	---
4	D	227	232	222	227	227	218	216	228	214	211	213	205	192	189	185	181	186	203	192	213	229	228	226	227	212
5		225	224	221	223	221	216	214	209	213	210	204	197	192	188	182	179	194	205	---	---	---	231	---	---	210
6	D	227	227	209	211	221	223	226	224	221	211	200	198	192	188	182	174	180	192	206	226	229	227	224	226	210
7		223	221	223	224	224	223	222	218	213	215	210	206	197	191	189	188	193	200	212	221	226	221	224	224	213
8	Q	226	226	227	226	223	221	218	218	216	213	210	204	199	190	185	182	188	197	206	211	213	219	224	224	211
9		226	223	223	223	224	223	220	220	216	212	208	204	199	194	194	193	193	199	205	214	217	223	226	227	213
10	Q	223	222	221	221	221	221	221	221	217	211	207	203	196	192	188	186	191	205	217	222	---	218	225	227	212
11		231	233	237	227	217	216	217	214	210	207	204	203	202	192	185	185	186	201	206	210	215	220	221	227	211
12		226	218	223	225	220	216	212	205	203	197	197	193	194	189	189	---	181	---	---	---	---	---	---	---	---
13	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	222	222	225	226	---
14		225	232	227	208	209	210	210	---	---	---	---	---	---	---	---	---	---	---	---	---	---	221	228	231	---
15		225	225	225	222	220	214	210	212	208	206	206	195	186	185	180	176	181	190	203	214	224	228	226	224	208
16	Q	221	223	222	222	223	218	219	219	211	208	205	202	201	191	182	174	---	192	204	219	224	226	222	220	210
17	Q	218	222	221	219	221	221	216	215	203	207	205	201	196	182	167	161	172	189	205	221	230	231	227	222	207
18		222	223	223	224	222	221	221	223	216	213	205	---	199	---	---	---	---	---	---	---	---	---	---	---	---
19		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	222	205	220	---
20		220	222	227	225	231	226	225	221	209	204	196	---	---	---	---	---	---	180	195	211	220	223	232	---	---
21		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	225	228	230	228	---
22		223	224	225	226	225	223	218	216	208	208	206	200	199	195	194	191	186	198	201	208	213	217	223	229	211
23		226	223	222	222	216	218	211	213	207	201	200	195	191	188	192	191	193	192	205	213	220	223	219	222	208
24		219	215	215	216	214	212	212	210	211	201	196	193	194	189	190	199	202	205	209	204	215	214	221	224	207
25		221	228	214	214	209	209	213	213	203	199	192	184	176	175	172	166	180	195	206	209	217	216	222	215	202
26		216	222	219	220	220	218	215	215	210	205	198	190	192	184	183	179	183	195	210	213	217	209	211	213	206
27	Q	218	221	219	222	220	217	218	216	212	208	201	195	185	178	175	177	183	196	202	---	---	---	218	217	205
28		220	218	219	222	223	224	222	212	209	203	191	178	176	176	189	192	188	193	205	219	224	213	217	212	206
29		213	219	224	223	221	219	219	216	211	210	201	190	---	---	---	---	---	---	---	---	---	---	---	228	---
30	D	236	233	234	230	226	228	217	216	204	197	180	180	178	171	---	173	189	202	216	214	222	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	221	223	222	222	221	220	218	218	212	209	206	201	195	187	180	176	183	196	207	216	---	222	223	222	209
MEAN	D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	225	227	---	---	---

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

DECEMBER 2005 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	D	---	362	370	365	364	369	365	354	342	339	351	376	374	370	391	416	438	446	434	415	393	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		364	340	355	363	382	374	365	359	349	343	345	358	361	365	377	400	433	454	441	439	424	407	382	377	382
4		380	377	378	378	377	377	374	367	360	354	341	330	334	354	372	396	426	442	442	412	388	380	373	376	379
5		384	384	383	378	379	379	375	364	353	347	344	347	357	365	380	400	424	442	445	424	399	379	374	377	383
6	Q	382	382	379	378	374	369	357	349	345	336	327	328	347	361	375	393	416	438	442	424	403	388	380	380	377
7	Q	382	380	379	379	374	371	365	354	339	329	324	327	339	357	371	384	404	415	412	407	399	393	389	386	373
8	Q	384	383	379	377	375	369	362	353	338	327	328	334	341	348	359	379	403	410	408	407	402	399	398	395	373
9		391	386	382	379	373	364	357	338	335	331	334	341	356	364	377	394	414	431	427	417	415	411	425	420	382
10		---	---	---	---	---	326	301	306	329	330	327	332	344	362	380	411	426	439	---	468	436	413	414	403	---
11	D	399	375	359	353	344	328	314	321	306	323	344	365	364	391	414	460	512	519	511	475	453	437	422	407	396
12		389	374	379	364	350	350	356	351	345	343	346	354	377	384	395	424	435	433	449	452	433	389	390	374	385
13		382	385	385	381	378	375	362	350	340	319	313	312	322	---	---	---	---	---	---	---	---	---	---	397	---
14		397	392	388	383	375	365	356	343	341	336	335	345	353	373	387	399	417	430	421	404	385	376	381	389	378
15	Q	390	388	388	385	377	368	358	348	334	331	330	339	365	388	398	414	423	430	423	408	395	388	386	386	381
16		387	387	380	369	348	338	336	323	310	304	320	334	349	363	383	408	442	463	446	422	401	385	379	386	373
17		392	387	377	370	361	354	347	327	320	320	323	337	376	---	---	402	419	433	436	415	392	375	378	384	374
18		381	375	364	368	365	357	341	335	327	318	325	344	353	358	365	387	410	432	426	406	395	384	390	395	371
19		394	387	374	368	363	363	358	349	336	327	327	325	366	388	393	401	409	430	433	453	418	398	394	403	381
20	D	399	396	368	346	333	349	334	338	349	343	332	334	351	394	396	413	431	453	434	441	435	398	380	379	380
21		382	384	376	374	366	345	343	332	323	319	324	326	361	386	391	416	430	431	434	425	411	392	382	374	376
22		360	366	373	367	362	357	347	340	333	333	329	331	352	371	379	406	424	426	---	394	387	384	384	385	370
23	Q	385	380	376	374	368	365	357	344	331	326	321	327	343	361	376	398	415	421	418	411	395	380	377	381	372
24		386	385	380	376	371	363	353	345	339	337	330	343	359	371	379	398	429	439	430	430	423	405	399	396	382
25		388	387	383	376	368	361	352	341	337	325	334	338	364	390	397	412	425	428	421	412	405	392	382	377	379
26		377	376	375	373	370	362	355	347	339	328	325	335	350	381	400	409	421	438	449	448	421	405	400	---	383
27	D	354	386	386	383	375	369	363	354	345	329	314	315	329	342	350	383	430	457	471	462	436	459	458	418	386
28	D	---	388	354	366	382	382	395	363	348	349	343	345	371	381	401	420	449	465	465	432	424	407	403	390	393
29		384	404	395	388	382	381	381	352	341	340	340	348	363	375	390	401	414	422	411	394	385	368	382	389	380
30		382	382	375	370	367	362	351	341	326	328	331	337	355	366	382	406	429	436	426	416	410	398	401	407	378
31		---	380	386	385	382	376	363	346	335	344	349	352	361	362	372	402	440	450	443	440	427	420	406	411	388
MEAN		384	381	377	373	368	362	355	344	337	332	332	339	355	370	383	405	427	440	437	426	410	397	393	391	379
MEAN	Q	385	383	380	378	374	368	360	349	337	330	326	331	347	363	376	394	412	423	420	411	399	390	386	386	375
MEAN	D	---	381	367	363	360	359	354	346	338	336	337	347	358	376	391	418	452	468	463	445	428	---	---	---	387

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

DECEMBER 2005 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	D	---	118	124	121	118	125	126	124	121	120	115	109	96	89	82	84	90	99	106	126	114	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		121	128	121	116	123	120	120	119	113	107	100	95	90	88	91	92	84	97	98	119	111	117	110	106	108
4		112	114	117	118	120	121	119	115	112	112	107	98	87	82	83	85	85	99	107	103	113	111	112	115	106
5		113	116	119	121	116	114	114	113	111	110	107	102	97	93	88	90	94	102	109	104	114	115	111	111	108
6	Q	117	119	122	123	123	120	117	116	116	122	118	111	105	96	93	89	87	90	91	101	112	113	116	114	110
7	Q	116	118	119	119	120	119	121	119	115	114	113	112	107	100	94	90	89	91	96	105	111	113	113	114	110
8	Q	115	117	117	117	118	116	114	112	109	107	107	105	102	98	91	85	87	97	107	114	115	111	113	117	108
9		121	120	123	126	126	123	123	120	115	112	114	115	109	100	98	94	92	100	107	120	132	132	130	109	115
10		---	---	---	---	---	98	108	97	94	86	84	87	92	88	85	84	87	111	---	131	117	129	121	111	---
11	D	117	124	116	107	101	104	103	106	92	94	88	82	68	64	73	69	79	103	94	93	102	115	93	92	95
12		99	100	101	104	98	94	95	95	92	85	79	76	77	76	72	76	76	90	107	105	98	102	98	107	92
13		103	102	103	101	101	101	99	96	96	97	94	83	73	---	---	---	---	---	---	---	---	---	---	117	---
14		110	108	112	117	117	113	114	110	107	104	102	89	78	77	83	88	90	99	109	116	120	116	116	115	104
15	Q	120	116	114	116	113	114	114	112	107	105	101	96	85	80	79	78	87	103	117	122	119	117	113	118	106
16		119	118	121	117	111	122	122	126	115	111	115	110	99	87	87	90	97	108	115	122	123	120	119	122	112
17		118	118	119	120	118	118	124	122	116	112	108	100	98	---	---	88	93	101	112	116	119	124	125	128	113
18		132	128	123	127	128	129	128	126	120	113	109	107	101	101	105	106	111	115	119	119	126	138	137	133	120
19		132	131	131	126	128	127	127	124	123	121	113	104	93	97	106	118	132	139	138	135	117	120	135	121	122
20	D	115	123	106	97	97	106	102	104	98	91	87	84	83	86	95	105	110	117	123	137	109	102	109	107	104
21		104	104	105	106	109	110	109	108	104	103	94	88	74	73	84	74	76	92	109	112	115	116	118	122	100
22		116	106	110	114	117	118	115	112	107	103	101	100	98	96	93	88	89	101	---	113	115	120	119	116	107
23	Q	114	114	113	115	116	117	119	121	121	116	108	100	94	91	91	90	97	108	118	121	120	120	120	118	111
24		117	120	120	122	122	124	125	124	121	120	117	114	108	93	85	86	86	92	106	111	108	109	114	118	111
25		125	123	120	127	137	135	134	130	127	119	112	104	99	101	92	86	85	92	98	99	105	109	109	113	112
26		110	111	112	113	112	111	111	112	109	107	105	102	98	94	89	88	89	95	104	106	103	118	123	---	106
27	D	120	110	115	118	119	116	112	113	113	110	108	102	95	96	106	105	109	110	114	112	129	120	86	95	110
28	D	---	107	106	111	113	114	120	109	102	88	90	85	83	83	84	87	87	99	102	105	94	100	100	93	99
29		108	107	114	121	118	118	120	104	100	98	90	89	86	82	82	94	101	107	117	116	109	106	111	112	105
30		114	120	119	120	122	118	114	112	105	99	93	87	86	91	94	98	102	107	104	98	99	99	98	99	104
31		---	119	121	124	124	127	126	116	112	109	100	94	90	90	100	95	96	111	117	108	98	84	93	95	106
MEAN		115	116	116	117	116	116	116	114	110	107	103	98	92	89	89	90	93	103	110	113	113	114	113	112	107
MEAN	Q	116	117	117	118	118	117	117	116	114	113	109	105	99	93	90	86	89	98	106	113	116	115	115	116	109
MEAN	D	---	116	113	111	110	113	113	111	105	101	97	92	85	84	88	90	95	106	108	115	109	---	---	---	103

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

DECEMBER 2005 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	D	---	-22	-22	-16	-13	-14	-15	-14	-12	-6	1	10	15	20	26	22	14	6	-6	-22	-19	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		-26	-26	-17	-13	-13	-13	-15	-16	-12	-7	2	10	12	16	15	17	19	5	-1	-19	-17	-30	-30	-26	-8
4		-26	-22	-20	-18	-17	-15	-13	-12	-6	-5	-3	0	5	13	16	18	18	5	-6	-14	-22	-21	-17	-20	-8
5		-13	-15	-16	-15	-11	-11	-11	-11	-9	-7	-2	5	11	12	11	15	16	9	-6	-12	-20	-21	-17	-13	-6
6	Q	-13	-15	-17	-16	-14	-13	-12	-11	-4	-2	-1	1	5	9	12	16	17	9	0	-9	-16	-18	-17	-14	-5
7	Q	-15	-15	-14	-12	-12	-12	-13	-11	-7	-4	0	6	9	11	15	18	16	10	3	-2	-8	-9	-7	-8	-3
8	Q	-10	-11	-12	-11	-11	-9	-8	-7	-7	-4	0	5	11	17	18	18	18	12	8	-1	-8	-8	-9	-10	-1
9		-13	-12	-14	-15	-14	-11	-11	-8	-2	2	4	9	14	19	19	21	20	12	3	-1	-8	-10	-12	-1	0
10		---	---	---	---	---	-3	1	5	1	1	3	7	15	20	19	19	22	12	---	0	-1	-18	-26	-17	---
11	D	-18	-23	-14	-12	-11	-12	-8	-11	3	14	20	11	12	15	16	22	25	4	-9	-13	-19	-29	-20	-16	-3
12		-24	-24	-22	-21	-14	-12	-13	-13	-9	-4	2	7	10	12	16	11	7	-6	-19	-19	-21	-23	-20	-25	-9
13		-20	-15	-15	-15	-14	-13	-12	-10	-4	-4	-4	5	17	---	---	---	---	---	---	---	---	---	---	-11	---
14		-10	-9	-13	-15	-15	-12	-8	-4	-4	2	2	8	17	25	29	22	11	-3	-14	-17	-16	-10	-7	-8	-2
15	Q	-11	-12	-11	-11	-11	-12	-12	-11	-6	-3	2	7	16	20	19	17	9	0	-7	-17	-17	-13	-7	-10	-3
16		-13	-9	-14	-13	-12	-17	-17	-17	-7	2	7	11	16	23	27	31	28	20	7	-1	-8	-4	-3	-7	1
17		-3	-5	-8	-10	-11	-11	-11	-9	-5	0	6	14	18	---	---	28	28	22	7	-5	-7	-9	-8	-9	1
18		-13	-12	-11	-12	-11	-10	-9	-9	-5	1	11	15	19	18	22	30	34	26	11	7	7	1	0	1	5
19		-1	0	-7	-6	-7	-7	-6	-4	-1	4	10	17	28	26	21	22	22	16	10	-1	7	-6	-18	-13	4
20	D	-6	-14	-9	-2	-7	-16	-9	-2	3	2	-2	2	15	16	10	19	26	24	8	-6	-6	-4	-14	-15	1
21		-7	-8	-10	-11	-12	-11	-8	-6	-2	0	5	9	21	27	23	31	28	10	2	-3	-6	-8	-13	-18	1
22		-20	-11	-9	-11	-12	-9	-6	-5	0	4	8	11	17	23	25	30	24	10	---	-7	-10	-10	-10	-8	1
23	Q	-8	-7	-6	-5	-5	-6	-9	-10	-9	-3	5	12	18	19	17	20	18	9	3	1	-3	-7	-6	-4	1
24		-3	-5	-6	-8	-8	-9	-8	-7	-2	3	6	14	18	23	27	30	32	22	8	1	-7	-12	-15	-11	4
25		-15	-13	-10	-11	-13	-11	-9	-2	9	18	21	26	30	28	23	20	17	10	-1	-5	-7	-6	-8	-12	3
26		-9	-8	-8	-7	-5	-5	-5	-4	0	5	7	15	19	20	22	20	19	14	4	-5	-5	-17	-26	---	1
27	D	-25	-12	-11	-11	-10	-8	-4	-3	-3	1	3	8	17	21	19	22	25	26	20	5	-4	-14	-5	-7	2
28	D	---	-20	-17	-15	-12	-7	-4	-2	-4	7	9	12	17	22	21	25	24	13	-1	-18	-16	-22	-23	-17	-2
29		-23	-19	-19	-19	-12	-9	-1	8	7	6	8	9	13	17	17	19	12	4	-9	-11	-12	-11	-10	-9	-2
30		-12	-16	-13	-14	-10	-6	-5	-6	-3	3	9	12	20	18	20	22	14	8	4	4	-2	-5	-6	-7	1
31		---	-23	-20	-17	-15	-14	-9	-3	-2	2	11	17	18	19	21	35	40	24	9	2	1	-1	-16	-12	2
MEAN		-14	-14	-13	-12	-11	-11	-9	-7	-3	1	5	10	16	19	19	22	21	12	1	-6	-9	-12	-13	-12	-1
MEAN	Q	-11	-12	-12	-11	-11	-11	-11	-10	-7	-3	1	6	12	15	16	18	16	8	1	-6	-10	-11	-9	-9	-2
MEAN	D	---	-18	-15	-11	-11	-11	-8	-6	-3	4	6	9	15	19	18	22	23	15	2	-11	-13	---	---	---	-1

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

DECEMBER 2005 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	D	---	225	228	221	217	222	224	222	218	213	204	193	182	174	165	169	179	191	205	229	221	---	---	---	---
2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3		230	234	223	216	220	218	221	220	214	207	196	185	181	177	179	178	173	191	196	223	217	231	227	222	207
4		224	223	222	222	222	221	218	215	209	207	203	195	185	176	174	174	174	192	206	210	222	220	218	222	206
5		215	219	220	221	215	214	214	213	210	208	203	194	187	183	181	179	181	191	207	209	221	223	217	214	206
6	Q	217	220	223	223	222	219	216	215	209	211	207	203	196	187	183	178	175	184	191	205	217	219	220	216	206
7	Q	218	220	219	218	218	217	219	217	211	208	205	199	193	188	181	176	178	183	192	201	209	212	210	211	204
8	Q	213	216	216	216	216	214	211	209	208	204	201	195	189	182	177	173	174	185	194	206	212	210	212	214	202
9		220	218	222	224	223	219	219	215	207	202	201	198	190	181	180	176	176	187	198	209	222	223	224	203	206
10		---	---	---	---	---	198	200	190	193	188	185	184	180	173	172	172	171	193	---	215	207	228	230	217	---
11	D	221	229	217	210	206	209	205	209	190	182	173	178	169	164	169	161	165	195	201	203	213	229	209	205	196
12		215	217	216	216	207	203	205	204	200	191	184	178	176	174	168	174	178	196	217	215	213	217	212	222	200
13		215	210	211	210	209	208	206	202	198	199	196	182	168	---	---	---	---	---	---	---	---	---	---	215	---
14		211	209	214	219	219	214	211	205	204	197	196	184	171	163	163	172	182	199	213	219	222	214	212	212	201
15	Q	218	215	214	215	214	215	214	213	206	202	196	189	175	169	169	170	182	198	212	223	222	217	210	215	203
16		218	214	220	217	213	223	223	226	211	201	199	193	183	171	168	165	172	185	199	211	216	211	210	215	203
17		209	211	214	216	216	216	220	216	210	204	196	185	181	---	---	167	170	179	198	210	214	218	217	220	204
18		226	223	219	221	221	221	220	219	213	203	192	188	181	182	182	175	175	184	198	202	206	217	218	214	204
19		216	215	220	216	218	218	217	214	211	206	196	185	169	174	183	188	197	206	210	218	200	213	231	219	206
20	D	211	221	208	197	201	213	205	201	194	190	191	187	175	176	185	183	181	186	203	223	206	201	214	213	198
21		205	205	208	209	212	212	208	206	200	198	190	183	165	160	169	156	160	184	201	206	210	213	217	224	196
22		222	210	210	214	216	214	210	208	201	195	190	188	182	175	172	165	171	189	---	210	213	216	215	213	200
23	Q	211	211	209	209	210	212	215	217	217	208	197	187	179	176	178	175	180	194	205	208	211	214	213	210	202
24		209	212	213	216	216	218	217	216	210	206	201	194	186	174	166	164	162	174	193	202	207	212	217	216	200
25		223	221	216	221	229	225	223	215	204	193	186	177	172	175	173	172	174	184	197	200	205	207	208	214	201
26		210	210	210	210	208	208	207	207	202	197	194	185	180	177	172	173	175	183	195	204	203	221	231	---	199
27	D	229	213	214	216	216	213	207	207	206	201	199	191	180	177	185	181	182	181	188	200	217	220	193	200	201
28	D	---	217	214	215	214	211	212	204	201	184	184	178	173	169	171	169	170	185	199	214	207	215	216	207	197
29		220	216	220	224	217	214	209	193	191	191	184	184	178	173	172	178	187	198	214	215	212	210	211	211	201
30		214	221	218	220	218	212	209	209	202	193	185	180	173	177	177	178	186	194	195	192	198	201	200	202	198
31		---	226	225	224	223	223	219	208	205	200	187	179	176	176	179	165	161	183	199	200	195	189	206	204	198
MEAN		217	217	217	216	215	215	214	211	205	200	194	187	179	175	175	173	175	189	201	210	212	215	215	213	202
MEAN	Q	215	216	216	216	216	215	215	214	210	207	201	194	186	180	178	174	178	189	199	209	214	214	213	213	204
MEAN	D	---	221	216	212	211	214	211	208	202	194	190	185	176	172	175	173	175	188	199	214	213	---	---	---	200

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

JANUARY 2006 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		388	386	390	388	391	387	377	364	354	346	337	340	344	356	359	389	404	413	417	408	405	404	406	407	382
2		402	396	389	378	365	353	342	349	345	345	348	341	345	358	378	414	442	447	427	414	408	398	382	379	381
3		384	385	371	376	374	369	361	353	348	347	339	335	340	349	372	403	440	446	433	415	401	384	372	368	378
4	Q	372	375	374	368	370	367	362	351	341	335	332	334	336	366	391	412	431	439	426	418	409	402	397	391	379
5		387	385	381	378	375	370	362	346	339	335	332	346	348	340	354	371	398	411	414	402	397	393	396	391	373
6		390	384	378	380	362	360	354	350	357	347	337	338	372	390	402	442	473	463	443	429	416	404	397	396	390
7		381	378	375	372	363	350	347	340	337	341	339	342	344	349	365	393	410	404	403	417	415	410	401	395	374
8		386	380	377	373	367	359	349	344	347	342	339	342	354	373	391	---	433	434	421	409	405	397	392	391	380
9	Q	391	389	382	375	372	363	357	353	347	340	337	337	340	351	365	389	413	417	404	407	414	405	393	384	376
10	Q	382	380	379	376	370	366	361	357	349	340	337	344	362	366	374	399	421	408	399	396	397	396	392	396	377
11		395	386	379	372	366	369	363	357	347	336	317	321	334	360	385	414	416	396	387	399	409	411	405	398	376
12		390	379	378	375	372	365	355	346	341	332	341	345	356	367	369	367	374	379	379	383	381	383	390	391	368
13		386	385	383	380	375	372	364	352	341	339	340	346	352	368	378	398	412	405	399	404	413	416	410	400	380
14		391	382	376	374	368	361	354	344	339	332	337	350	---	364	373	394	396	396	397	399	400	397	390	383	373
15		379	380	372	373	366	362	360	352	341	329	320	334	352	371	387	396	409	411	414	394	391	397	401	398	375
16	D	388	379	373	367	361	332	329	327	326	311	303	319	336	341	393	417	425	434	422	---	---	424	415	392	371
17		382	386	380	356	353	345	349	348	352	356	328	324	339	---	---	---	427	426	403	389	378	391	405	408	375
18	D	399	375	364	360	353	359	361	352	328	325	312	342	341	351	380	422	454	449	429	416	415	407	396	397	379
19		399	396	386	377	369	362	354	345	337	340	343	350	359	350	357	384	406	427	433	432	425	410	399	382	380
20		390	387	378	372	364	358	354	351	348	339	329	326	338	345	372	404	437	467	475	452	440	420	405	396	385
21		384	380	378	368	342	355	354	346	338	343	350	351	359	355	336	346	373	395	413	424	425	411	390	372	370
22		369	371	373	372	366	353	353	350	349	337	328	351	355	367	393	423	443	446	445	441	427	411	393	380	383
23	D	377	374	369	343	327	299	315	336	335	351	374	370	363	359	371	384	406	422	426	429	422	406	388	338	370
24		370	378	369	369	373	389	376	364	372	358	346	341	355	367	379	396	413	418	417	410	398	389	385	383	380
25		380	378	376	375	364	363	358	354	351	350	344	344	335	328	341	371	397	403	409	418	427	425	416	430	377
26	D	415	399	382	373	344	355	353	362	367	377	371	349	330	353	382	399	430	477	452	455	460	437	405	360	391
27	D	379	369	374	387	386	385	377	368	357	339	339	342	361	374	379	400	422	441	434	421	406	403	400	385	385
28		377	378	379	375	370	370	364	369	365	366	372	376	375	382	391	400	411	433	446	430	416	400	388	387	388
29		382	376	369	373	374	376	373	368	363	356	345	341	345	357	373	394	419	429	427	417	403	390	389	383	380
30	Q	373	373	373	373	371	367	362	353	346	344	343	346	349	358	371	383	392	409	422	427	418	400	387	378	376
31	Q	376	374	369	369	367	363	359	355	347	342	340	339	344	348	364	387	409	437	452	449	434	410	391	385	380
MEAN		385	381	377	373	366	361	357	352	347	343	339	342	349	359	375	397	417	425	422	417	412	404	396	388	378
MEAN	Q	379	378	376	372	370	365	360	354	346	340	338	340	346	358	373	394	413	422	421	419	414	403	392	387	378
MEAN	D	392	379	372	366	354	346	347	349	343	340	340	344	346	356	381	404	428	445	433	---	425	415	401	374	379

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

JANUARY 2006 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		98	112	119	124	120	121	121	116	112	110	108	99	90	87	103	112	119	130	139	132	132	134	126	123	116
2		127	118	118	118	139	138	126	111	97	98	102	100	93	88	86	91	104	113	113	110	117	117	113	110	110
3		114	116	116	111	111	112	114	113	114	110	102	93	92	91	90	88	94	100	117	118	114	112	104	101	106
4	Q	104	107	110	112	111	112	112	111	108	104	100	94	86	79	80	91	103	112	115	112	109	106	103	104	104
5		110	114	116	119	120	120	118	113	110	107	105	106	102	98	91	88	91	101	106	109	114	114	111	112	108
6		113	113	119	124	121	118	115	108	103	96	97	98	90	91	92	86	85	89	100	102	103	102	112	119	104
7		115	115	116	116	113	108	109	105	103	106	110	108	97	85	71	67	73	93	98	98	101	109	106	112	101
8		115	114	116	115	112	109	106	105	106	103	101	102	105	102	97	---	91	102	107	107	101	100	102	107	105
9	Q	113	114	112	110	111	110	110	108	105	100	97	96	97	98	93	86	91	100	99	98	102	111	115	111	104
10	Q	112	115	116	116	118	117	116	115	114	113	108	104	105	106	104	95	100	109	110	106	101	100	105	109	109
11		109	113	114	117	116	113	112	111	110	108	102	89	80	79	89	100	109	114	111	100	97	103	108	115	105
12		121	123	121	119	123	124	122	121	120	114	109	104	100	101	106	109	116	123	125	113	102	107	108	104	114
13		108	113	115	117	117	116	117	118	114	107	105	101	90	83	97	111	117	126	122	121	120	113	107	109	111
14		112	113	111	110	108	112	113	115	113	113	110	101	---	94	96	90	97	112	120	109	113	118	115	114	108
15		119	115	110	108	111	112	112	110	108	108	101	90	83	83	90	107	122	133	123	105	109	120	122	119	109
16	D	122	124	126	126	132	119	111	116	115	119	104	91	85	86	71	78	91	97	86	---	---	109	112	110	106
17		107	113	115	112	110	103	107	108	107	110	101	96	87	---	---	---	85	110	118	116	110	107	108	114	103
18	D	114	111	112	114	112	110	114	113	106	101	91	86	83	78	78	74	89	103	96	96	99	100	100	105	99
19		104	110	110	112	110	107	107	110	108	108	101	97	98	104	99	93	99	105	105	106	106	107	104	111	105
20		107	107	109	111	113	111	108	110	108	103	98	91	88	86	75	63	69	86	97	110	113	114	106	104	99
21		106	113	115	119	116	112	110	110	107	108	110	113	109	104	94	92	87	85	90	94	99	104	106	106	105
22		109	112	113	115	116	113	110	112	108	103	98	98	98	90	76	71	74	89	93	93	97	104	108	115	101
23	D	115	120	137	142	126	108	111	112	111	111	126	117	107	91	78	84	80	79	82	88	98	106	100	94	105
24		98	102	111	111	113	117	111	108	102	98	96	93	86	81	77	71	80	97	108	107	103	107	107	110	100
25		114	116	119	122	119	111	109	104	102	100	98	101	95	90	87	83	76	84	101	101	101	100	111	99	102
26	D	89	81	87	74	74	98	105	106	101	94	97	93	100	89	88	87	88	78	82	104	103	76	78	84	90
27	D	98	98	98	100	102	102	98	97	95	93	84	80	82	79	74	64	72	81	86	95	84	93	95	97	89
28		96	98	101	98	97	101	102	101	100	99	98	92	85	75	72	77	82	88	92	89	99	93	98	101	93
29		99	99	99	102	104	103	102	100	99	97	97	95	84	71	64	67	71	80	92	98	100	101	100	99	93
30	Q	99	100	102	104	104	105	106	107	108	106	104	98	90	81	69	60	61	77	95	105	108	105	102	101	96
31	Q	105	108	110	110	111	111	111	112	109	107	106	104	95	82	70	67	62	71	89	101	108	113	114	110	99
MEAN		109	111	113	113	113	112	111	110	107	105	102	98	93	88	85	84	90	99	104	105	105	107	107	107	103
MEAN	Q	107	109	110	110	111	111	111	111	109	106	103	99	95	89	83	80	84	94	102	104	106	107	108	107	102
MEAN	D	108	107	112	111	109	108	108	109	105	104	100	94	91	85	78	77	84	88	86	---	97	97	97	98	98

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

JANUARY 2006 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-17	-23	-22	-21	-15	-13	-14	-11	-8	-4	4	14	19	22	21	18	12	5	-1	3	0	1	7	7	-1
2		2	2	0	-2	-14	-15	-5	6	17	13	8	7	13	20	24	27	20	7	-3	-5	-10	-12	-8	-2	4
3		-4	-4	-7	-3	-4	-6	-8	-6	-4	0	3	8	12	17	21	20	20	14	2	-1	-1	-8	-8	-6	2
4	Q	-4	-2	-4	-6	-6	-6	-6	-5	-4	-1	5	14	19	25	31	28	18	7	2	5	6	7	7	5	6
5		3	-2	-6	-8	-6	-5	-2	2	2	4	5	11	12	13	21	21	18	12	6	3	4	2	1	-5	5
6		-7	-4	-9	-10	-5	2	1	5	7	9	10	14	21	21	18	25	28	19	4	-4	-7	-4	-12	-17	4
7		-16	-14	-14	-12	-8	-5	-5	1	6	6	3	6	15	22	30	31	21	11	10	10	11	4	4	-3	5
8		-8	-7	-8	-6	-2	0	1	3	5	5	12	17	17	18	18	---	26	13	5	-2	0	0	-1	-5	5
9	Q	-9	-10	-9	-8	-8	-4	-2	1	3	6	10	11	11	16	23	30	29	18	14	17	13	9	3	2	7
10	Q	2	-1	-2	-3	-3	-1	0	2	3	6	10	14	12	10	12	11	6	3	6	7	11	9	6	2	5
11		1	-6	-9	-6	-4	-2	0	2	2	4	10	20	30	39	40	31	19	8	13	20	23	17	10	4	11
12		-2	-7	-6	-6	-8	-7	-3	-1	3	10	22	25	22	14	11	8	7	12	14	13	17	10	5	3	7
13		2	-2	-3	-4	-3	-2	-2	-1	0	8	17	23	29	33	31	28	19	9	10	8	13	17	16	10	11
14		3	0	-2	-2	-1	-4	-4	-4	0	5	12	21	---	21	18	18	13	7	3	8	6	2	3	2	6
15		-2	0	3	2	0	1	-1	-3	-1	1	6	17	23	21	17	5	0	-1	3	10	11	4	1	2	5
16	D	0	-3	-4	-4	-5	5	4	1	9	12	24	25	32	36	44	33	23	12	17	---	---	9	4	-7	12
17		-6	-4	-6	-4	1	5	2	0	5	8	9	13	24	---	---	---	12	2	-2	-3	1	0	0	-5	5
18	D	-7	-7	-8	-9	-2	0	0	4	7	8	14	30	29	35	35	35	30	10	8	13	10	8	2	-2	10
19		2	-4	-5	-5	-3	-1	2	3	2	6	12	13	15	9	13	24	25	18	15	13	8	-2	-10	-13	6
20		0	-3	-2	-3	-2	0	1	0	2	4	8	16	20	19	27	33	27	22	14	6	7	0	-2	2	8
21		1	-5	-6	-6	-1	1	0	1	4	8	11	10	15	13	16	16	21	20	19	17	12	0	-8	-8	6
22		-7	-5	-2	-1	0	3	5	4	5	5	6	19	22	27	32	31	29	25	21	16	8	1	-6	-9	10
23	D	-6	-4	-10	-9	5	15	5	3	6	13	20	25	25	35	37	33	34	31	24	18	7	-3	-8	-13	12
24		-8	-6	-4	0	2	11	13	9	11	7	8	13	23	25	26	23	22	20	11	5	2	1	2	3	9
25		0	-5	-1	-2	1	5	6	9	10	12	13	14	17	16	21	27	30	21	5	2	-1	-3	-13	-13	7
26	D	-20	-18	-15	-10	-7	-20	-19	-12	-4	4	1	1	4	19	25	31	33	33	10	2	-1	-12	-12	-20	0
27	D	-24	-13	-9	-8	-7	-6	-1	1	1	-2	7	16	16	16	21	28	21	15	6	-6	2	-3	-3	-11	2
28		-8	-9	-9	-6	-4	-5	-3	0	3	5	8	14	16	20	22	20	16	11	4	1	-8	-5	-10	-12	3
29		-9	-9	-7	-6	-5	-2	0	0	1	2	6	10	14	19	23	21	21	20	11	1	-6	-6	-4	-2	4
30	Q	-2	-2	-3	-4	-3	-3	-3	-3	-1	2	6	13	17	24	31	37	37	29	20	12	5	3	2	0	9
31	Q	-3	-4	-5	-3	-1	-1	-1	-1	0	4	7	11	15	19	23	25	29	29	16	4	-7	-12	-12	-8	5
MEAN		-5	-6	-6	-6	-4	-2	-1	0	3	5	10	15	19	22	25	25	21	15	9	7	5	1	-1	-4	6
MEAN	Q	-3	-4	-5	-5	-4	-3	-2	-1	0	3	8	12	15	19	24	26	24	17	12	9	6	3	1	0	6
MEAN	D	-11	-9	-9	-8	-4	-1	-2	-1	4	7	13	19	21	28	32	32	28	20	13	---	6	0	-3	-10	7

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

JANUARY 2006 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		210	222	225	228	220	219	220	215	210	206	198	185	176	172	181	189	197	209	220	213	215	215	206	204	206
2		211	205	207	209	230	230	216	198	181	185	192	192	182	173	169	169	182	198	207	207	214	217	211	204	200
3		208	209	211	205	206	208	211	209	208	202	195	187	182	177	173	174	177	185	205	208	205	210	206	202	199
4	Q	203	202	206	208	208	208	208	207	204	200	193	182	174	164	160	168	184	198	204	199	197	194	192	195	194
5		200	206	211	214	213	212	208	202	201	197	195	191	189	185	175	172	177	187	195	199	201	203	202	208	198
6		210	207	215	218	213	206	205	197	193	188	187	184	174	174	177	168	166	175	194	201	204	201	213	222	195
7		218	217	218	216	211	206	206	199	194	195	200	196	183	170	155	152	164	184	187	187	188	198	197	206	194
8		212	211	212	210	205	202	200	197	196	194	188	184	186	183	180	---	170	187	197	203	197	197	199	204	195
9	Q	212	213	210	209	210	206	204	200	196	192	187	186	186	183	174	164	168	182	185	181	187	196	203	202	193
10	Q	202	206	208	208	209	207	206	204	202	199	193	187	190	191	189	185	192	199	197	194	189	190	195	201	198
11		201	209	212	211	209	206	203	201	200	198	190	174	161	153	157	171	186	198	192	181	176	184	193	201	190
12		210	215	214	212	216	216	211	209	206	196	184	178	179	186	191	195	200	200	199	194	184	193	197	196	199
13		200	206	208	210	209	207	208	208	205	195	185	178	167	161	169	180	190	204	201	201	197	190	187	194	194
14		201	204	205	204	202	207	208	208	204	200	193	180	---	176	180	176	184	197	206	195	199	205	203	203	197
15		209	205	200	200	203	203	205	205	202	200	192	177	168	170	178	197	210	216	208	191	193	205	208	206	198
16	D	209	212	215	215	219	203	200	205	198	198	179	171	162	160	144	157	173	185	175	---	---	195	200	208	190
17		206	208	210	207	201	194	199	202	197	195	190	183	170	---	---	---	178	200	209	208	202	201	201	209	194
18	D	210	208	211	212	206	203	204	201	194	191	180	164	164	156	155	153	166	190	187	184	188	190	195	201	188
19		197	206	207	208	204	201	199	200	199	196	187	184	183	192	185	173	175	184	187	189	194	202	207	213	195
20		201	203	204	205	206	203	201	202	199	195	189	178	173	173	160	149	157	171	183	197	199	205	202	197	190
21		200	208	210	212	207	203	202	202	197	195	193	196	189	188	180	179	172	172	176	180	186	199	207	207	194
22		208	207	205	206	205	202	198	200	197	194	190	180	178	169	157	155	158	170	175	180	188	198	206	212	189
23	D	210	211	226	228	208	189	199	201	198	192	195	186	180	163	154	161	158	160	167	176	190	203	203	204	190
24		202	202	206	203	202	198	192	194	189	190	188	182	170	165	163	162	167	178	193	197	197	200	199	200	189
25		204	210	208	211	207	199	196	192	190	187	185	186	180	178	172	165	158	170	193	195	198	199	213	207	192
26	D	207	201	201	191	188	212	215	210	201	191	194	192	194	175	170	164	163	157	179	198	199	194	195	204	191
27	D	215	207	203	203	204	202	197	194	193	194	182	172	173	172	165	153	164	173	184	198	186	195	196	204	189
28		201	203	205	201	198	201	201	197	195	192	188	180	175	166	163	167	174	182	189	190	203	197	204	207	191
29		204	204	203	203	203	200	198	197	195	194	190	186	176	165	158	161	163	169	183	195	201	202	200	198	189
30	Q	197	198	201	202	202	201	202	203	202	199	194	185	177	166	153	144	144	160	177	190	197	197	196	198	187
31	Q	202	204	206	204	204	204	203	205	202	197	194	190	181	171	161	158	151	156	178	193	207	214	214	208	192
MEAN		206	208	209	209	207	205	204	202	198	195	190	183	177	172	168	167	173	184	191	194	196	200	202	204	194
MEAN	Q	203	205	206	206	206	205	205	204	201	197	192	186	182	175	168	164	168	179	188	191	195	198	200	201	193
MEAN	D	210	208	211	210	205	202	203	202	197	193	186	177	175	165	157	158	165	173	178	---	190	195	198	204	190

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — DECLINATION EAST

FEBRUARY 2006 — D = 14 DEGREES PLUS TABULAR QUANTITIES (UNITS 0.1 MINUTES)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		380	375	374	371	369	361	355	349	342	345	352	349	333	338	349	362	386	415	437	439	428	406	390	385	375
2		387	378	373	372	371	367	363	356	349	343	339	347	336	337	350	375	405	439	465	474	461	428	406	393	384
3		383	378	375	378	373	369	364	354	339	337	333	334	332	329	343	368	409	445	466	470	434	407	390	376	379
4		372	376	379	365	344	356	358	360	352	343	333	338	344	351	362	380	397	412	414	410	409	401	393	384	372
5		379	373	372	370	367	363	353	342	340	337	332	342	344	345	348	362	382	401	419	425	417	403	393	386	371
6	D	378	370	369	363	344	303	301	302	300	299	314	326	347	374	380	397	416	439	444	446	455	443	402	399	371
7		391	384	385	383	381	373	356	358	347	339	335	339	346	354	364	377	395	416	425	435	430	418	407	387	380
8		363	373	370	370	365	362	364	359	349	343	341	342	341	347	362	385	403	420	435	426	406	390	381	376	374
9	Q	373	373	373	371	367	364	361	355	345	334	333	334	339	344	358	379	407	426	435	436	425	408	392	381	376
10		376	371	365	365	362	357	357	355	346	333	320	326	321	322	342	372	406	428	434	418	398	386	382	377	367
11		373	376	366	371	368	359	352	337	330	330	330	335	329	361	378	394	424	438	430	421	404	394	388	383	374
12		382	374	369	353	364	362	356	354	343	333	335	344	336	342	364	382	405	424	430	428	415	399	387	381	373
13	Q	377	374	374	373	371	368	364	361	358	352	351	345	339	340	357	383	411	430	441	434	415	399	385	380	378
14	Q	376	373	372	370	366	363	359	352	344	339	337	338	334	---	356	380	409	433	445	432	410	392	382	378	374
15	D	374	373	372	368	358	349	345	344	328	322	328	341	334	337	360	392	417	443	449	442	436	390	397	393	374
16		387	366	372	376	370	367	364	353	327	329	337	338	338	347	367	387	406	433	448	443	428	405	388	380	377
17		379	375	371	361	355	372	372	363	351	348	352	352	353	354	---	382	404	426	435	431	416	397	385	379	378
18	Q	377	376	374	374	373	370	367	363	356	348	341	334	331	337	351	366	393	419	437	434	413	392	381	379	374
19		378	376	362	356	360	357	364	360	344	325	334	340	337	333	340	359	392	421	437	440	417	410	404	399	373
20	D	378	363	368	365	361	361	357	339	352	342	346	355	362	347	373	442	443	437	463	462	422	405	395	357	383
21	D	360	363	341	331	357	358	364	392	378	381	366	391	359	354	378	414	437	466	456	444	417	395	384	364	385
22	D	343	344	319	365	371	376	383	373	353	352	372	396	362	358	371	408	441	450	449	431	413	391	383	369	382
23		367	378	375	368	371	364	375	373	366	353	348	345	337	338	---	---	---	---	---	---	---	---	---	---	---
24		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	367	362	354	358	358	350	350	350	342	339	345	362	353	354	372	411	431	447	452	445	428	405	392	376	379

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — HORIZONTAL INTENSITY

FEBRUARY 2006 — H = 20000 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		113	116	117	116	114	115	111	107	110	106	108	110	107	92	76	69	69	72	78	88	98	106	105	99	100
2		96	106	110	107	106	105	104	103	103	104	107	113	106	90	75	64	62	65	78	92	99	98	103	106	96
3		105	108	113	113	110	106	105	104	101	104	104	106	97	87	79	74	73	69	84	91	93	107	110	113	98
4		101	101	109	109	110	104	100	104	105	100	100	99	94	83	71	66	62	70	82	89	96	103	109	110	95
5		109	107	110	112	111	109	107	109	104	103	100	103	105	104	98	95	93	97	102	113	112	115	114	113	106
6	D	113	119	120	111	117	108	99	99	105	106	108	112	110	110	88	79	67	71	77	85	94	93	77	88	98
7		93	101	104	107	111	111	108	104	101	97	97	99	96	92	86	78	78	80	83	93	96	101	101	102	97
8		108	105	107	110	113	114	114	114	112	105	101	97	92	85	76	73	75	82	92	100	103	108	110	110	100
9	Q	109	109	111	112	110	110	108	109	107	106	105	103	93	83	75	70	70	79	94	105	107	108	110	108	100
10		109	112	113	114	112	111	110	110	108	107	107	108	100	85	74	70	72	84	100	106	113	118	106	116	103
11		122	119	110	110	108	104	102	103	99	99	98	95	84	69	65	68	72	73	94	109	113	111	108	109	98
12		113	115	112	103	103	103	103	105	103	104	104	101	92	80	68	67	67	74	89	96	99	100	102	103	96
13	Q	104	104	105	104	104	103	103	101	104	104	106	106	98	86	74	69	67	71	84	92	99	105	103	108	96
14	Q	111	116	115	115	111	109	107	104	103	102	102	105	101	---	81	74	71	75	87	99	106	110	112	112	101
15	D	114	117	117	119	119	119	117	115	108	104	107	112	105	89	73	57	58	71	87	101	105	85	98	108	100
16		107	103	105	110	110	116	116	112	104	95	99	100	94	83	69	63	66	74	83	83	87	92	97	99	94
17		102	104	101	99	97	98	101	100	95	94	99	101	97	87	---	72	69	72	81	94	100	103	100	98	93
18	Q	101	105	106	106	106	106	106	105	105	102	103	103	95	87	79	69	63	68	80	95	106	111	110	111	97
19		116	118	112	111	113	104	110	107	103	107	108	109	102	89	81	76	73	73	83	89	92	99	94	92	98
20	D	94	101	105	108	114	116	117	113	112	124	118	106	94	83	55	22	36	54	59	73	74	82	79	79	88
21	D	86	83	92	107	102	103	103	109	111	102	102	98	96	76	57	43	45	49	64	88	97	100	96	82	87
22	D	80	85	96	101	96	101	106	107	100	96	90	94	95	83	65	55	48	64	76	86	86	85	86	89	86
23		97	100	100	99	102	100	103	102	95	94	93	93	89	79	---	---	---	---	---	---	---	---	---	---	---
24		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	98	101	106	109	110	109	108	109	107	106	105	104	100	88	68	51	51	62	73	87	91	89	87	89	92

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — VERTICAL INTENSITY

FEBRUARY 2006 — Z =-29500 nT PLUS TABULAR QUANTITIES (UNITS nT)

HOUR(UT) DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		-4	-3	-2	0	2	1	2	5	7	12	15	16	14	20	28	31	35	33	22	12	2	-8	-11	-9	9
2		-1	-8	-8	-2	0	1	2	1	2	1	5	10	13	20	28	31	33	32	22	3	-8	-8	-12	-13	6
3		-10	-6	-5	-3	1	4	3	1	2	4	8	8	15	20	27	33	37	39	23	6	-1	-12	-15	-18	7
4		-8	-3	-3	-3	0	5	5	2	2	7	8	11	13	17	25	27	24	18	9	3	-1	-4	-9	-10	6
5		-8	-3	-2	0	1	4	5	6	8	7	13	17	15	15	17	20	25	27	23	14	11	5	2	1	9
6	D	2	0	0	6	5	13	17	16	16	19	22	21	27	25	35	37	39	30	19	9	-2	-11	-18	-15	13
7		-12	-13	-8	-5	-4	-1	4	4	2	4	9	13	16	20	23	25	25	27	22	12	5	-1	-5	-7	7
8		-8	-3	-2	-2	-2	-1	2	9	8	12	15	16	17	22	25	26	22	19	11	2	-5	-11	-10	-5	7
9	Q	-1	1	2	3	4	4	6	5	6	9	13	15	17	21	25	31	31	27	19	7	3	2	-3	-1	10
10		-1	-1	1	2	4	5	6	5	5	7	11	17	24	32	35	33	32	22	11	7	-1	-9	4	0	11
11		-5	-2	4	5	5	6	7	8	9	7	12	16	18	26	28	30	30	27	14	1	-4	-2	2	3	10
12		2	0	1	6	6	4	6	4	4	7	12	14	19	27	32	31	30	29	20	10	2	-1	-1	0	11
13	Q	1	2	4	5	5	6	5	6	5	7	10	11	13	19	27	32	33	29	17	8	-4	-12	-7	-8	9
14	Q	-3	-2	2	3	6	7	7	8	7	8	11	14	17	---	29	36	36	33	21	7	-3	-7	-7	-2	10
15	D	1	2	3	3	4	5	7	8	11	15	15	17	15	21	30	42	44	37	23	9	-7	-4	-5	-8	12
16		-6	-3	-1	-1	1	2	8	13	16	18	15	12	12	18	26	33	32	28	20	12	3	-5	-7	-8	10
17		-4	-1	1	4	5	7	7	5	6	8	9	9	9	15	---	27	31	29	22	8	-1	-8	-7	-1	8
18	Q	0	0	2	5	6	6	6	6	6	8	9	9	12	22	31	36	35	33	22	10	0	-5	-4	-1	11
19		-1	0	4	4	5	12	14	15	10	7	15	14	13	16	22	28	34	35	28	19	6	-4	-2	-3	12
20	D	-6	-7	-5	-2	-2	0	4	15	20	21	30	31	29	28	40	59	38	23	21	8	-5	-12	-14	-12	13
21	D	-11	-4	-2	-1	3	4	7	10	15	22	14	25	18	26	34	40	33	26	11	-8	-14	-15	-12	-2	9
22	D	-5	-1	3	5	6	4	9	18	9	9	20	21	16	19	27	33	38	24	9	-3	-7	-11	-8	-7	9
23		-6	-3	-1	3	5	8	9	14	10	7	11	12	12	13	---	---	---	---	---	---	---	---	---	---	---
24		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	-4	-2	0	2	3	5	9	13	14	17	20	23	21	24	33	42	39	28	16	3	-7	-11	-11	-9	11

LIVINGSTON ISLAND MAGNETIC OBSERVATORY — TOTAL INTENSITY

FEBRUARY 2006 — F = 35500 nT PLUS TABULAR QUANTITIES (UNITS nT)

DAY		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1		208	208	208	206	203	205	201	197	197	191	189	189	189	175	160	153	150	153	167	180	194	207	209	204	189
2		195	206	209	203	201	198	197	198	197	198	196	196	189	175	160	151	149	151	166	190	203	202	208	211	190
3		208	207	208	207	201	197	197	198	196	196	192	193	183	172	162	155	151	148	169	186	194	210	214	219	190
4		204	200	204	204	202	195	193	197	198	191	191	188	183	174	160	155	156	165	179	188	195	202	209	211	189
5		208	203	205	203	202	199	197	197	192	193	186	184	187	187	182	178	172	172	179	192	194	201	203	203	193
6	D	203	208	209	198	202	191	183	183	186	184	183	186	180	182	161	155	146	156	169	181	195	202	199	203	185
7		203	208	205	205	206	204	198	196	195	192	188	186	182	176	170	164	164	163	169	183	190	198	202	204	190
8		208	202	202	204	206	205	203	197	197	190	185	182	178	170	162	160	164	171	183	195	203	210	210	206	191
9	Q	203	201	201	201	199	199	196	198	196	192	189	186	179	170	162	154	155	162	178	194	198	200	204	202	188
10		203	204	203	202	200	198	198	199	197	195	192	188	177	161	153	152	155	170	188	194	205	214	197	206	190
11		213	209	199	198	197	194	192	192	189	191	186	181	174	158	154	154	157	159	182	201	207	204	200	200	187
12		202	205	203	194	193	196	194	196	195	193	189	185	177	163	153	153	153	158	174	186	195	198	199	199	185
13	Q	198	197	196	195	195	194	194	193	195	194	192	191	185	174	160	153	151	156	173	185	199	210	204	207	187
14	Q	205	208	204	203	198	196	195	192	193	191	189	188	183	---	162	152	151	155	172	191	202	208	209	205	189
15	D	204	204	204	205	204	203	201	198	192	187	188	189	187	173	157	138	136	150	170	190	206	191	200	207	187
16		206	201	200	203	202	204	199	193	186	180	184	187	183	172	158	148	151	159	171	178	187	196	201	202	185
17		201	200	196	193	191	190	192	192	189	187	189	190	188	177	---	158	154	157	168	187	198	205	202	196	186
18	Q	198	200	198	196	195	195	195	195	195	192	191	191	184	171	160	150	147	152	167	186	200	207	206	203	186
19		207	207	200	200	200	189	191	188	190	195	189	190	187	177	168	160	153	152	164	175	187	200	195	194	186
20	D	199	203	204	203	207	206	203	192	187	193	182	175	170	164	138	104	129	151	157	175	186	197	196	195	180
21	D	198	190	194	202	195	195	193	194	190	180	186	175	180	162	144	131	138	146	168	196	207	209	205	189	182
22	D	190	190	192	193	190	194	192	186	189	187	175	176	181	172	155	144	136	157	177	192	195	197	196	197	181
23		200	199	197	194	194	191	191	186	186	187	184	183	181	174	---	---	---	---	---	---	---	---	---	---	---
24		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
28		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	Q	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	D	199	199	200	200	200	198	194	190	189	186	183	180	180	170	151	134	137	152	168	187	198	199	199	198	183