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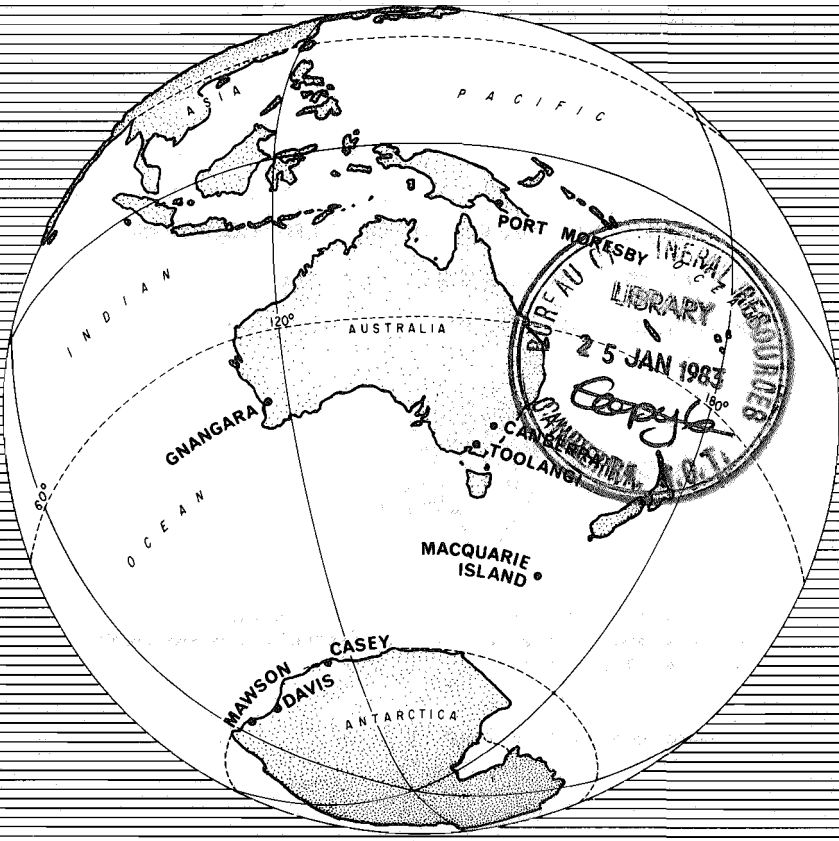
# GEOPHYSICAL OBSERVATORY REPORT

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MAGNETIC OBSERVATORIES

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VOLUME 30 NO 6
JUNE 1982
OF MINERAL RESOURCES, GEOLOGY & GEOPHYSICS

DEPARTMENT OF NATIONAL DEVELOPMENT AND ENERGY

MINISTER: Senator The Hon. J.L. Carrick

SECRETARY: A. Woods

BUREAU OF MINERAL RESOURCES, GEOLOGY & GEOPHYSICS

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ISSN 0433-5015


Published for the Bureau of Mineral Resources, Geology and Geophysics by the Australian Government Publishing Service.

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Printed by Union Offset Co. Pty. Ltd., Canberra.

CONTENTS




The observers at Casey and Davis are officers of the Antarctic Division (Department of Science and Technology) and their contributions are gratefully acknowledged: they and the BMR geophysicists at Macquarie Island and Mawson are members of the Australian National Antarctic Research Expeditions (ANARE).

The data from the Port Moresby geophysical observatory are contributed by the Geological Survey of Papua New Guinea.


The terminology used in this report is that accepted by international convention. The units of field intensity, nanotesla (nT), are those of the SI system. All times are in Universal Time. Should further information be required, apply to:


GEOMAGNETISM & SEISMOLOGY SUBSECTION
BUREAU OF MINERAL RESOURCES
P.O. BOX 378
CANBERRA CITY, A.C.T. 2601

## CONTRIBUTING OBSERVATORIES

| OBSERVATORY | OBSERVER IN CHARGE | GEOGRAPHIC | | GEOMAGNETIC | |
|---|---|---|---|---|---|
| | | LAT | LONG | LAT | LONG |
| PORT MORESBY | I.D. Ripper | 9°25'S | 147°09'E | -18.6° | 217.9° |
| GNANGARA | P.J. Gregson | 31°47'S | 115°57'E | -43.3° | 185.8° |
| CANBERRA | R.S. Smith | 35°19'S | 149°22'E | -44.0° | 224.7° |
| *TOOLANGI | R.S. Smith | 37°32'S | 145°28'E | -46.7° | 220.8° |
| MACQUARIE I | I.J. Ferguson | 54°30'S | 158°57'E | -61.1° | 243.1° |
| MAWSON | R.P. Silberstein | 67°36'S | 62°53'E | -73.1° | 102.9° |
| DAVIS | F.W. Menk | 68°35'S | 77°58'E | -76.7° | 119.9° |
| CASEY | N.I. Smith | 66°17'S | 110°32'E | -77.8° | 179.1° |

## MAGNETO GRAPHS

| OBSERVATORY | TYPE | NOMINAL SCALE VALUES | | | | | |
|---|---|---|---|---|---|---|---|
| | | NORMAL | | | SENSITIVE | | |
| | | D | H | Z | D | H | Z |
| PORT MORESBY | La Cour | 0.5 | 3 | 4 | | | |
| GNANGARA | Eschenhagen | 1 | 3 | 6 | | | |
| TOOLANGI | La Cour | 1 | 5 | 5 | | | |
| MACQUARIE I | La Cour | 2.5 | 20 | 21 | | | |
| MAWSON | La Cour | 2.5 | 21 | 22 | 1 | 10 | 10 |
| CANBERRA | Elsec digital | D | F<br>0.1nT | I | | | |

Scale values are in minutes of arc/mm (D) and nT/mm (H,Z)

## MAGNETOMETERS

Absolute data are based on observations made with QHM'S BMZ's declinometers and proton precession magnetometers.

Errors in preliminary values are not likely to exceed 5 nT or 0.5 minutes.

*From 1 July 1979 Toolangi Observatory is only a variation observatory.

PORT MORESBY

MAGNETIC K-INDICES - JUNE 1982

Range for lower limit of K = 9 is 300 nT

| Day | K-Indices | | | | | | | | K-Sum |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 4 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 22 |
| 02 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | 1 | 18 |
| 03 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 13 |
| 04 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 13 |
| 05 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 11 |
| 06 | 5 | 4 | 4 | 2 | 3 | 1 | 2 | 2 | 23 |
| 07 | 2 | 4 | 4 | 4 | 2 | 2 | 1 | 2 | 21 |
| 08 | 1 | 1 | 3 | 1 | 2 | 2 | 2 | 2 | 14 |
| 09 | 5 | 3 | 3 | 2 | 3 | 1 | 1 | 2 | 20 |
| 10 | 3 | 5 | 5 | 4 | 4 | 5 | 1 | 2 | 29 |
| 11 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 22 |
| 12 | 3 | 3 | 2 | 1 | 4 | 4 | 4 | 3 | 24 |
| 13 | 3 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 27 |
| 14 | 2 | 3 | 3 | 4 | 2 | 2 | 3 | 2 | 21 |
| 15 | 2 | 2 | 4 | 3 | 3 | 2 | 2 | 2 | 20 |
| 16 | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 14 |
| 17 | 2 | 3 | 4 | 2 | 2 | 1 | 0 | 1 | 15 |
| 18 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 11 |
| 19 | 2 | 1 | 3 | 3 | 4 | 2 | 2 | 2 | 19 |
| 20 | 2 | 2 | 3 | 4 | 2 | 2 | 2 | 2 | 19 |
| 21 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 14 |
| 22 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 15 |
| 23 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 14 |
| 24 | 2 | 2 | 3 | 3 | 4 | 1 | 2 | 3 | 20 |
| 25 | 3 | 4 | 4 | 4 | 3 | 1 | 0 | 1 | 20 |
| 26 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 3 | 14 |
| 27 | 3 | 3 | 4 | 3 | 2 | 2 | 4 | 3 | 24 |
| 28 | 4 | 3 | 3 | 4 | 2 | 3 | 2 | 3 | 24 |
| 29 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 21 |
| 30 | 2 | 5 | 4 | 3 | 2 | 2 | 2 | 3 | 23 |

GNANGARA

MAGNETIC K-INDICES - JUNE 1982

Range for lower limit of K = 9 is 450 nT

| Day | K-Indices | | | | | | | | K-Sum |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 3 | 3 | 2 | 3 | 2 | 2 | 4 | 2 | 21 |
| 02 | 3 | 3 | 3 | 2 | 2 | 1 | 3 | 1 | 18 |
| 03 | 2 | 2 | 1 | 1 | 3 | 2 | 1 | 2 | 14 |
| 04 | 2 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 07 |
| 05 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 0 | 10 |
| 06 | 3 | 2 | 3 | 2 | 2 | 0 | 1 | 1 | 14 |
| 07 | 2 | 3 | 3 | 4 | 1 | 2 | 1 | 1 | 17 |
| 08 | 2 | 1 | 0 | 1 | 2 | 2 | 3 | 3 | 14 |
| 09 | 4 | 3 | 2 | 3 | 3 | 1 | 1 | 1 | 18 |
| 10 | 4 | 5 | 4 | 4 | 4 | 5 | 2 | 3 | 31 |
| 11 | 3 | 3 | 4 | 2 | 2 | 2 | 4 | 3 | 23 |
| 12 | 4 | 3 | 3 | 2 | 4 | 4 | 5 | 5 | 30 |
| 13 | 5 | 3 | 4 | 4 | 4 | 3 | 5 | 5 | 33 |
| 14 | 2 | 3 | 4 | 3 | 3 | 2 | 4 | 2 | 23 |
| 15 | 3 | 2 | 4 | 3 | 4 | 4 | 2 | 3 | 25 |
| 16 | 2 | 1 | 1 | 1 | 3 | 1 | 3 | 2 | 14 |
| 17 | 1 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 07 |
| 18 | 1 | 3 | 2 | 1 | 0 | 0 | 2 | 1 | 10 |
| 19 | 1 | 2 | 2 | 2 | 3 | 2 | 3 | 4 | 19 |
| 20 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 19 |
| 21 | 2 | 2 | 3 | 2 | 2 | 1 | 0 | 1 | 13 |
| 22 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 14 |
| 23 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 21 |
| 24 | 1 | 2 | 3 | 3 | 3 | 2 | 2 | 5 | 21 |
| 25 | 4 | 3 | 4 | 3 | 2 | 2 | 1 | 2 | 21 |
| 26 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 4 | 18 |
| 27 | 4 | 3 | 3 | 3 | 3 | 2 | 5 | 5 | 28 |
| 28 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 4 | 28 |
| 29 | 4 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 24 |
| 30 | 2 | 4 | 4 | 3 | 3 | 2 | 4 | 3 | 25 |

CANBERRA

MAGNETIC K-INDICES - JUNE 1982

Range for lower limit of K = 9 is 450 nT

| Day | K-Indices | | | | | | | | K-Sum |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 3 | 3 | 3 | 3 | 1 | 2 | 4 | 2 | 21 |
| 02 | 4 | 4 | 4 | 2 | 2 | 1 | 3 | 1 | 21 |
| 03 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 14 |
| 04 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 06 |
| 05 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 11 |
| 06 | 3 | 2 | 3 | 2 | 2 | 0 | 1 | 1 | 14 |
| 07 | 1 | 2 | 3 | 4 | 1 | 2 | 1 | 2 | 16 |
| 08 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 10 |
| 09 | 4 | 3 | 2 | 2 | 3 | 1 | 1 | 1 | 17 |
| 10 | 3 | 5 | 5 | 5 | 4 | 5 | 1 | 2 | 30 |
| 11 | 2 | 3 | 4 | 2 | 2 | 2 | 3 | 3 | 21 |
| 12 | 3 | 3 | 2 | 1 | 4 | 4 | 4 | 3 | 24 |
| 13 | 4 | 4 | 5 | 4 | 4 | 3 | 4 | 4 | 32 |
| 14 | 2 | 3 | 4 | 4 | 3 | 2 | 3 | 2 | 23 |
| 15 | 2 | 2 | 5 | 3 | 3 | 3 | 2 | 2 | 22 |
| 16 | 2 | 2 | 2 | 1 | 3 | 2 | 3 | 1 | 16 |
| 17 | 0 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 09 |
| 18 | 0 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 08 |
| 19 | 1 | 2 | 4 | 3 | 3 | 2 | 3 | 3 | 21 |
| 20 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 17 |
| 21 | 1 | 2 | 2 | 2 | 1 | 1 | 0 | 1 | 10 |
| 22 | - | - | 1 | 2 | 2 | 1 | 2 | 3 | -- |
| 23 | 3 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 16 |
| 24 | 1 | 2 | 3 | 3 | 3 | 0 | 3 | 5 | 20 |
| 25 | 4 | 4 | 4 | 4 | 3 | 1 | 0 | 0 | 20 |
| 26 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 3 | 19 |
| 27 | 2 | 2 | 3 | 2 | 3 | 1 | 5 | 4 | 22 |
| 28 | 3 | 2 | 3 | 4 | 3 | 4 | 2 | 3 | 24 |
| 29 | 3 | 1 | 2 | 4 | 1 | 3 | 2 | 3 | 19 |
| 30 | 2 | (3) | 3 | 4 | 3 | 3 | 3 | 3 | (24) |

TOOLANGI

MAGNETIC K-INDICES - JUNE 1982

Range for lower limit of K = 9 is 500 nT

| Day | K-Indices | | | | | | | | K-Sum |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 4 | 3 | 3 | 3 | 1 | 2 | 4 | 3 | 23 |
| 02 | 3 | 3 | 4 | 2 | 2 | 1 | 3 | 1 | 19 |
| 03 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 14 |
| 04 | 2 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 08 |
| 05 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 09 |
| 06 | 3 | 2 | 3 | 2 | 1 | 0 | 1 | 1 | 13 |
| 07 | 1 | 3 | 2 | 4 | 2 | 2 | 1 | 2 | 17 |
| 08 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 10 |
| 09 | 4 | 3 | 2 | 2 | 3 | 0 | 0 | 1 | 15 |
| 10 | 2 | 4 | 4 | 4 | 5 | 5 | 1 | 2 | 27 |
| 11 | 3 | 3 | 4 | 2 | 2 | 3 | 3 | 3 | 23 |
| 12 | 3 | 3 | 3 | 1 | 4 | 4 | 4 | 4 | 26 |
| 13 | 4 | 3 | 5 | 4 | 4 | 3 | 4 | 4 | 31 |
| 14 | 2 | 3 | 5 | 4 | 3 | 2 | 4 | 3 | 26 |
| 15 | 2 | 2 | 5 | 3 | 4 | 3 | 2 | 2 | 23 |
| 16 | 2 | 1 | 1 | 1 | 3 | 2 | 3 | 1 | 14 |
| 17 | 1 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 10 |
| 18 | 0 | 2 | 2 | 1 | 1 | 0 | 1 | 0 | 07 |
| 19 | 1 | 1 | 4 | 3 | 3 | 2 | 3 | 3 | 20 |
| 20 | 2 | 1 | 3 | 4 | 2 | 2 | 3 | 2 | 19 |
| 21 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 1 | 12 |
| 22 | 0 | 1 | 1 | 3 | 2 | 2 | 2 | 3 | 14 |
| 23 | 2 | 2 | 4 | 2 | 2 | 2 | 1 | 2 | 17 |
| 24 | 1 | 2 | 3 | 3 | 2 | 1 | 3 | 5 | 20 |
| 25 | 3 | 4 | 4 | 3 | 3 | 1 | 0 | 0 | 18 |
| 26 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 21 |
| 27 | 3 | 2 | 4 | 3 | 3 | 1 | 5 | 5 | 26 |
| 28 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 27 |
| 29 | 3 | 2 | 2 | 4 | 2 | 3 | 3 | 3 | 22 |
| 30 | 2 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 25 |

MACQUARIE ISLAND

MAGNETIC K-INDICES - JUNE 1982

Range for lower limit of K = 9 is 1500 nT

| Day | K-Indices | | | | | | | | K-Sum |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 5 | 4 | 3 | 6 | 3 | 4 | 4 | 4 | 33 |
| 02 | 4 | 4 | 4 | 4 | 3 | 2 | 3 | 2 | 26 |
| 03 | 3 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 16 |
| 04 | 2 | 2 | 1 | 0 | 1 | 2 | 0 | 1 | 09 |
| 05 | (2) | 1 | 1 | 3 | 3 | 2 | 0 | 0 | (12) |
| 06 | 3 | 3 | 5 | 3 | 3 | 0 | 1 | 1 | 19 |
| 07 | 1 | 4 | 5 | 6 | 4 | 4 | 1 | 2 | 27 |
| 08 | 1 | 0 | 0 | 0 | 5 | 5 | 2 | 2 | 15 |
| 09 | 4 | 3 | 2 | 3 | 4 | 1 | 0 | (0) | (17) |
| 10 | 4 | 5 | 6 | 6 | 6 | 6 | 2 | 3 | 38 |
| 11 | 3 | 5 | 5 | 4 | 4 | 4 | 4 | (3) | (32) |
| 12 | 4 | 4 | 3 | 2 | 6 | 6 | 6 | 5 | 36 |
| 13 | 5 | 5 | 6 | 6 | 5 | 5 | 5 | 4 | 41 |
| 14 | 3 | (5) | 6 | 6 | 5 | 4 | 5 | 3 | (37) |
| 15 | - | 3 | 6 | 5 | 5 | 5 | 3 | 3 | -- |
| 16 | 3 | 2 | 2 | 3 | 5 | 2 | 2 | 1 | 20 |
| 17 | 1 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 11 |
| 18 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 06 |
| 19 | 1 | 2 | 5 | 4 | 5 | 4 | 4 | 4 | 29 |
| 20 | 3 | 3 | 5 | 5 | 4 | 3 | 2 | 2 | 27 |
| 21 | 1 | 2 | 5 | 4 | 4 | 2 | 0 | 0 | 18 |
| 22 | 1 | 1 | 3 | 4 | 3 | 3 | 3 | 2 | 20 |
| 23 | 3 | 4 | 5 | 4 | 4 | 4 | 2 | 1 | 27 |
| 24 | 2 | 1 | 3 | 5 | 5 | 1 | 2 | 4 | 23 |
| 25 | 4 | 4 | 4 | 5 | 4 | 3 | 1 | 0 | 25 |
| 26 | 1 | 2 | 2 | 4 | 5 | 6 | 5 | 4 | 29 |
| 27 | 5 | 5 | 5 | 4 | 5 | 2 | 4 | 5 | 35 |
| 28 | 4 | 4 | 4 | 6 | 5 | 5 | 4 | 3 | 35 |
| 29 | 4 | 2 | 2 | 4 | 2 | 5 | 3 | 3 | 25 |
| 30 | 4 | 6 | 5 | 6 | 6 | 4 | 5 | 3 | 39 |

MAWSON

MAGNETIC K-INDICES - JUNE 1982

Range for lower limit of K = 9 is 1500 nT

| Day | K-Indices | | | | | | | | K-Sum |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 6 | 4 | 5 | 3 | 3 | 4 | 6 | 5 | 36 |
| 02 | 6 | 6 | 5 | 4 | 3 | 2 | 5 | 4 | 35 |
| 03 | 5 | 4 | 5 | 2 | 2 | 3 | 3 | 6 | 30 |
| 04 | 5 | 4 | 3 | 2 | 1 | 1 | 4 | 5 | 25 |
| 05 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 2 | 17 |
| 06 | 4 | 4 | 5 | 4 | 2 | 2 | 2 | 2 | 25 |
| 07 | 5 | 5 | 6 | 4 | 3 | 2 | 2 | 1 | 28 |
| 08 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 5 | 20 |
| 09 | 4 | 5 | 3 | 3 | 3 | 2 | 1 | 1 | 22 |
| 10 | 3 | 8 | 5 | 4 | 4 | 6 | 2 | 5 | 37 |
| 11 | 5 | 6 | 5 | 4 | 4 | 5 | 5 | 7 | 41 |
| 12 | 6 | 4 | 5 | 3 | 5 | 4 | 5 | 7 | 39 |
| 13 | 7 | 7 | 6 | 5 | 8 | 5 | 6 | 6 | 50 |
| 14 | 4 | 5 | 6 | 5 | 3 | 2 | 6 | 4 | 35 |
| 15 | 3 | 4 | 6 | 4 | 3 | 7 | 5 | 5 | 37 |
| 16 | 5 | 3 | 3 | 2 | 2 | 3 | 5 | 4 | 27 |
| 17 | 2 | 3 | 4 | 3 | 3 | 2 | 1 | 0 | 18 |
| 18 | 1 | 4 | 5 | 2 | 1 | 2 | 3 | 2 | 20 |
| 19 | 2 | 3 | 4 | 3 | 4 | 4 | 3 | 6 | 29 |
| 20 | 6 | 4 | 4 | 4 | 3 | 3 | 6 | 4 | 34 |
| 21 | 4 | 3 | 4 | 4 | 3 | 1 | 3 | 6 | 28 |
| 22 | 4 | 3 | 3 | 3 | 2 | 3 | 4 | 6 | 28 |
| 23 | 5 | 4 | 4 | 3 | 3 | 3 | 2 | 5 | 29 |
| 24 | 4 | 2 | 3 | 3 | 2 | 0 | 3 | 7 | 24 |
| 25 | 6 | 5 | 4 | 3 | 2 | 1 | 4 | 3 | 28 |
| 26 | 1 | 3 | 4 | 4 | 3 | 5 | 5 | 7 | 32 |
| 27 | 6 | 4 | 4 | 4 | 4 | 2 | 6 | 7 | 37 |
| 28 | 7 | 6 | 6 | 4 | 3 | 5 | 4 | 6 | 41 |
| 29 | 5 | 3 | 4 | 3 | 4 | 3 | 3 | 7 | 32 |
| 30 | 6 | 4 | 5 | 5 | 3 | 3 | 4 | 6 | 36 |

JUNE 1982

PRINCIPAL MAGNETIC STORMS

| OBSERVATORY | COMMENCEMENT | | | | SSC AMPLITUDES | | | MAX 3h INDEX K | | RANGES | | | UT END | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | d | h | min | TYPE | D(') | H(nT) | Z(nT) | d (3h-PERIOD) | K | D(') | H(nT) | Z(nT) | d | h |
| PORT MORESBY | 09 | 00 | 40 | ssc* | -0.6* | +44 | +35 | 10(2,3,6) | 5 | 5 | 200 | 80 | 10 | 18 |
| GNANGARA | 09 | 00 | 40 | ssc* | -7.5* | +16 | -25* | 10(2,6) | 5 | 16 | 140 | 90 | 10 | 20 |
| | 12 | 14 | 43 | ssc | +3.6 | +41 | +25 | 12(7,8) | 5 | 21 | 100 | 100 | 14 | 02 |
| | | | | | | | | 13(1,7,8) | | | | | | |
| CANBERRA | 10 | 01 | 58 | ssc | + 1 | + 9 | + 2 | 10(2,3,4,6) | 5 | 19 | 140 | 60 | 12 | 08 |
| | 12 | 14 | 42 | ssc | + 2 | +45 | 0 | 13(3) | 5 | 20 | 120 | 50 | 15 | 19 |
| | | | | | | | | 15(3) | | | | | | |

JUNE 1982

PRELIMINARY MONTHLY MEAN VALUES

| OBSERVATORY | H | D | Z | F |
|---|---|---|---|---|
| | nT | o ' | nT | nT |
| PORT MORESBY | 35931 | 06 31.7E | -23704 | 43046 |
| GNANGARA | 23321 | 03 19.4W | -53708 | 58553 |
| CANBERRA | 23752 | 12 14.5E | -53765 | 58778 |
| MACQUARIE I | 12678 | 28 49.1E | -63713 | 64962 |
| MAWSON | 18421 | 63 23.0W | -46618 | 50126 |
| DAVIS | 16552 | 76 30.0W | -52581 | 55125 |
| CASEY | 9628 | 90 20.0W | -64399 | 65115 |

The values are derived from magnetograms for selected quiet days except at Davis and Casey where they are derived from semi-weekly absolute measurements.

SUDDEN COMMENCEMENTS AND OTHER RAPID VARIATIONS

| OBSERVATORY | DAY | TYPE AND QUALITY | TIME | SENSE AND AMPLITUDE OF CHIEF MOVEMENT | | |
|---|---|---|---|---|---|---|
| | | | | H(nT) | D(nT) | Z(nT) |
| PORT MORESBY | 06 | ssc*B | 0244 | +38 | - 5* | +35 |
| | 09 | ssc*B | 0040 | +44 | - 6* | +35 |
| | 12 | ssc*B | 1442 | +35 | + 5* | +31 |
| GNANGARA | 09 | ssc*B | 0040 | +16 | -50* | -25 |
| | 12 | ssc B | 1443 | +41 | +25 | +25 |
| CANBERRA | 09 | ssc*B | 0041 | +31* | -24* | +13 |
| | 10 | ssc B | 0158 | + 9 | + 7 | + 2 |
| | 12 | ssc B | 1442 | +45 | +17 | 0 |



R81/75 (12) Cat. No. 82 2474 7