

HXUS 1 BOU 201300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 110A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 20 APR 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 19/1200Z TO 20/1200Z: SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS. REGION 3696 (S18W38) DEVELOPED A STRONG POSITIVE-POLARITY SPOT WITHIN ITS LEADER PENUMBRA (A DELTA CONFIGURATION) AND THEN PRODUCED AN M2/1B PARALLEL RIBBON FLARE MAXING ON 19 APRIL AT 1812 UT. THIS EVENT HAD A MODERATE RADIO SIGNATURE INCLUDING A BURST OF 260 FLUX UNITS AT 2695 MHZ AND CAUSED A SHORT WAVE FADE TO 15 MHZ. NO HIGH-ENERGY PROTONS HAVE BEEN DETECTED AT 1 AU FROM THIS EVENT. RECENT OBSERVATORY REPORTS INDICATE THAT 3696 HAS SINCE STABILIZED AND NO LONGER APPEARS THREATENING. INSTEAD, ATTENTION IS FOCUSED ON THE NORTHEAST LIMB WHERE AS MANY AS 5 SEPARATE REGIONS MAY BE PACKED INTO AN AREA EXTENDING FROM N02 TO N20 AND WITHIN 30 DEGREES OF THE LIMB. PORTIONS OF THIS AREA ARE FLUCTUATING AND SUBFLARES HAVE BEEN ATTRIBUTED TO 3702 (N12E67) AND 3701 (N06E63). REGION 3703 (N18E62) IS REPORTED TO BE GROWING AND HAS AN ARCH FILAMENT SYSTEM. HOWEVER, THE ARRIVAL OF THESE REGIONS HAS NOT SIGNIFICANTLY INCREASED THE LEVEL OF THE 10.7 CM INTEGRATED SOLAR FLUX. A NEW REGION IS DEVELOPING NEAR N22E30. ALL OTHER REGIONS ARE STABLE AND THE LIMBS ARE REPORTED TO BE QUIET.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE LOW BUT WITH THE POSSIBILITY OF A REPEAT PERFORMANCE OF M-CLASS ACTIVITY FROM REGION 3696.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED TO ACTIVE FOR THE PAST 24 HOURS. SOLAR WIND DATA FROM THE ISEE-3 SPACECRAFT INDICATES FLUCTUATING INTERPLANETARY CONDITIONS TENDING TOWARD HIGH SPEEDS AND LOW DENSITIES FROM A POSITIVE POLARITY SECTOR. THIS IS CONSISTENT WITH AN EARLY ARRIVAL OF A HIGH-SPEED STREAM FROM AN EQUATORIAL CORONAL HOLE. THIS STREAM IS EXPECTED TO INFLUENCE THE GEOMAGNETIC FIELD FOR THE NEXT THREE DAYS RESULTING IN UNSETLED TO MOSTLY ACTIVE CONDITIONS PEAKING ON 22 APRIL.

III. EVENT PROBABILITIES 21 APR-23 APR

CLASS M 30/30/30

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 19 APR 144

ESTIMATED 20 APR 145

PREDICTED 21 APR-23 APR 151/153/155

90 DAY MEAN 19 APR 202

V. GEOMAGNETIC A INDICES

OBSERVED AFR 18 APR 013 AP 19 APR 011

ESTIMATED AFR 19 APR 013 AFR/AP 20 APR 015/020

PREDICTED AFR/AP 21 APR-23 APR 015/012-018/017-012/012

SOLTERWARN

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PREDM 03021 03022 03023

PREDX 00121 00122 00123

PREDP 00121 00122 00123

PCAF 00121

TENCM 15121 15322 15523

AFRED 01521 01822 01223

AFAPP 01221 01722 01223

KKK 33333 32223 34332

BT

HFUS 3 BOU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 110B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 20 APR 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/1200Z TO 20/2100Z: SOLAR ACTIVITY HAS BEEN LOW DURING THIS PERIOD. REGION 3703 (N18E55) IS REPORTED TO CONTAIN A STRONG ARCH FILIAMENT SYSTEM. NEW REGION 3704 (N23E24) IS A SIMPLE A-TYPE GROUP. ALL OTHER REGIONS ARE REPORTED AS STABLE OR LITTLE CHANGED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO CONTINUE AT A LOW LEVEL DURING THIS FORECAST.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE TO UNSETTLED THIS PERIOD. THE FIELD IS EXPECTED TO BE ACTIVE UNTIL LATE ON 22 APRIL WHEN UNSETTLED CONDITIONS ARE EXPECTED TO RETURN.

III. EVENT PROBABILITIES 21 APR-23 APR

CLASS M 30/30/30

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 APR 143

PREDICTED 21 APR-23 APR 151/153/155

90 DAY MEAN 20 APR 202

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 19 APR 008/011

ESTIMATED AFR/AP 20 APR 018/020

PREDICTED AFR/AP 21 APR-23 APR 015/012-018/017-012/012

SOLTERWARN

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HXUS BOU 202200

PREDM 03021 03022 03023

PREDX 00121 00122 00123

PREDP 00121 00122 00123

PCAF 00121

TENCM 15121 15322 15523

AFRED 01521 01822 01223

AFAPF 01221 01722 01223

BT