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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDE NUMBER 106A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY,
ISSUED 1200UT 16 APRIL 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
15/1200UT TO 16/1200UT:

SOLAR ACTIVITY HAS BEEN MODERATE FOR THE PAST 24 HOURS. FOUR
M-CLASS EVENTS HAVE OCCURED FROM REGIONS 3027 (N20W89), 3038
(N10W15) AND 3035 (N14W29). REGION 3038 PROVIDED TWO OF THE
EVENTS INCLUDING THE LARGEST WHICH WAS AN M2/1B FLARE MAXING AT
0846UT. REGION 3035 HAS BEEN SHOWING MINOR DECAY BUT ITS
RECENT ACTIVITY RENEWS ITS POTENTIAL FOR A MAJOR FLARE. REGION
3038 IS PROVING TO BE CAPABLE OF CONSISTENT SIGNIFICANT ACTIVITY
AND REGION 3049 (N14E53) IS NOW SEEN TO BE A REVERSED POLARITY
MAGNETICALLY COMPLEX REGION WITH THE TIGHTEST MEASURED MAGNETIC
GRADIENT. A QUIESCENT FILAMENT EXTENDING NORTH EAST OF REGION
3035 ON 14 APRIL DISAPPEARED BEFORE 1800UT ON 15 APRIL.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO CONTINUE MODERATE WITH ISOLATED
X-CLASS FLARES LIKELY FROM 3035 AND POSSIBLY FROM 3049 AND
3038.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN MOSTLY UNSETTLED FOR THE PAST 24
HOURS. UNSETTLED TO SLIGHTLY ACTIVE CONDITIONS ARE EXPECTED TO
PERSIST IN RESPONSE TO THE FREQUENT M-CLASS FLARE ACTIVITY FROM
SEVERAL REGIONS ON THE SOLAR DISK. A SLIGHT PROTON ENHANCEMENT
AT ENERGIES GREATER THAN 10 MEV BEGAN AT APPROXIMATELY 0200UT
AND CONTINUES AT THE PRESENT TIME.

III. EVENT PROBABILITIES: 17 APRIL - 19 APRIL

CLASS M: 95/95/95

CLASS X: 30/20/20

PROTON: 20/20/20

POAF: YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED: 15 APRIL 257

ESTIMATED: 16 APRIL 250

PREDICTED: 17-19 APRIL 245/245/245

90 DAY MEAN: 15 APRIL 207

V. GEOMAGNETIC A INDICES

OBSERVED AFR: 14 APRIL 24 AP: 15 APRIL 10

ESTIMATED AFR: 15 APRIL 11 AFR/AP: 16 APRIL 18/20

PREDICTED AFR/AP: 17-19 APRIL 18/25 18/18 18/12

SOLTERWARN

BT

HFUS 3 BOU 162200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO
SDF NUMBER 106E

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200UT 16 APRIL 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
16/1200UT TO 16/2200UT:

SOLAR ACTIVITY HAS BEEN LOW SINCE 16/1200 UT. ONLY A FEW
SUBFLARES OCCURRED IN REGIONS 3035 (N14W34), 3038 (N10W22),
3039 (S04W25), 3043 (N23E23), 3048 (N18E25), 3050 (S10E51),
AND 3052 (N15W10). TODAY'S LARGEST X-RAY EVENT WAS AN
UNASSOCIATED C7 AT 2019 UT. REGION 3035 RETAINED ITS DELTA
MAGNETIC CONFIGURATION AND IS CURRENTLY STABLE, AND REGION
3049 (N14E47) IS STILL REVERSE POLARITY. TWO NEW REGIONS
WERE CONFIRMED TODAY, 3053 (N25W08) AND 3054 (N12W03).

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE DUE PRIMARILY TO
THE HISTORY AND CHARACTERISTICS OF REGIONS 3035, 3038, AND
3049.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED FOR THE PAST 24
HOURS AND IS EXPECTED TO BECOME SLIGHTLY ACTIVE FOR THE
FORECAST PERIOD DUE TO NUMEROUS, MODERATELY ENERGETIC
FLARES OCCURRING YESTERDAY AND TODAY.

III. EVENT PROBABILITIES 17 APRIL - 19 APRIL

CLASS M	95/95/95
CLASS X	30/20/20
PROTON	20/20/20
PCAF	YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED	16 APRIL 248
PREDICTED	17-19 APRIL 245/245/245
90-DAY MEAN	16 APRIL 208

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP	15 APRIL 10/10
ESTIMATED AFR/AP	16 APRIL 11/14
PREDICTED AFR/AP	17-19 APRIL 18/25 - 18/18 - 18/12

SOLTERWARN

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