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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 009A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1300Z 28 JULY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
27/1200Z TO 28/1200Z:

SOLAR ACTIVITY WAS BRIEFLY HIGH DURING THE PAST 24 HOURS.  
REGION 3234 (S13W06) PRODUCED AN X1/1B FLARE WITH MAXIMUM  
AT 27/1726 UT. MODERATE STRENGTH RADIO NOISE BURSTS ACCOMPANIED  
THE FLARE FORMING A U-SHAPED SPECTRAL SIGNATURE. STRONG  
SHORTWAVE FADES TO 15 MHZ WERE ALSO REPORTED. OTHERWISE,  
REGION 3234 PRODUCED 14 C-CLASS SUBFLARES DURING THE REPORTING  
PERIOD, REMAINING THE MOST ACTIVE REGION ON THE DISK. REGION  
3221 (S06W58) WAS ALSO BUSY, PRODUCING 8 C-CLASS SUBFLARES.  
NEW REGION 3247 IS AT (N13E61).

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO OCCASIONALLY  
HIGH. X-RAY BACKGROUND LEVELS ARE SIGNIFICANTLY LOWER THAN  
THEY WERE DURING THE PAST WEEKEND'S FRANTIC ENERGETIC FLARE  
ACTIVITY. WHILE IT IS QUITE POSSIBLE THERE WILL NOT EVEN  
BE M-CLASS ACTIVITY DURING THE NEXT 24 HOURS, IT IS DIFFICULT  
TO BELIEVE THAT A LARGE X-CLASS FLARE WILL NOT OCCUR SOMETIME  
DURING THE NEXT THREE OR FOUR DAYS. REGIONS 3221 AND 3224 ARE  
VERY DIFFERENT FROM EACH OTHER, BUT EACH RESEMBLES REGIONS  
WHICH IN THE PAST PRODUCED SPECTACULAR MAJOR SOLAR FLARES.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN ACTIVE DURING THE PAST 24 HOURS.  
ANOTHER DISTURBANCE, SIMILAR TO THE ONE OBSERVED LAST WEEKEND,  
IS QUIET LIKELY TO ARRIVE AT THE EARTH LATE THIS UT DAY OR  
SOMETIME EARLY ON 29 JULY. ACTIVITY SHOULD REACH AT LEAST  
MINOR GEOMAGNETIC STORM LEVELS. A FLARE-INDUCED GEOMAGNETIC  
STORM IS ALSO A POSSIBILITY IN THE DAYS AHEAD, DEPENDING ON THE  
BEHAVIOR OF REGIONS 3221 AND 3234.

III. EVENT PROBABILITIES: 29 - 31 JULY

CLASS M 85/80/70

CLASS X 40/35/30

PROTON 30/30/25

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 27 JUL 254

ESTIMATED 28 JUL 244

PREDICTED 29-31 JUL 240/231/223

90 DAY MEAN 27 JUL 180

V. GEOMAGNETIC A INDICES

OBSERVED AFR 26 JUL 89 AP 27 JUL 33

ESTIMATED AFR 27 JUL 32 AFR/AP 28 JUL 18/22

PREDICTED AFR/AP 29-31 JUL 35/40 31/45 17/25

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HEUS 3 BOU 282200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO  
SDE NUMBER 2098

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 28 JULY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 28/1200Z  
TO 28/2100Z:

SOLAR ACTIVITY HAS BEEN MODERATE. REGION 3234 (S12W11) HAS  
PRODUCED ONLY C-CLASS SUBFLARES UNTIL 2006Z. AN M3/1B WITH  
14000 F.U. AT 245 MHZ AND SMALLER FLUXES AT THE OTHER DISCRETE  
FREQUENCIES WAS OBSERVED AHEAD OF THE LARGE LEADER SPOT IN THIS  
REGION. THE CENTRAL PORTION OF THE REGION SHOWS DECAY WHILE  
DEVELOPMENT IS OBSERVED IN THE LEADER PORTION. THREE SMALL  
REGIONS WERE NUMBERED TODAY. REGION 3221 (S07W66) APPEARS  
STABLE AND HAS NOT PRODUCED THIS PERIOD.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO OCCASIONALLY HIGH.  
REGIONS 3234, AND 3221, WHILE QUIESCENT FOR LONGER PERIODS AT  
PRESENT, DO NOT APPEAR ANY LESS CAPABLE OF ACTIVITY.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS SUBSIDED TEMPORARILY TO QUIET LEVELS.  
A RETURN TO ACTIVE LEVELS IS EXPECTED TO OCCUR EARLY ON 29 JULY  
DUE TO RECENT HIGH LEVELS OF SOLAR ACTIVITY.

III. EVENT PROBABILITIES 29-31 JUL

CLASS M 85/80/70

CLASS X 40/35/30

PROTON 30/30/25

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 28 JUL 217

PREDICTED 29-31 JUL 212/206/200

90-DAY MEAN 68 JUL 181

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 27 JUL 29/33

ESTIMATED AFR/AP 28 JUL 11/15

PREDICTED AFR/AP 29-31 JUL 35/40 - 31/45 - 17/25

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