

FUS 3 BOU 092200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 129

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 09 MAY 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 08/2100 TO 09/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS. REGION 4172 (S09E40) REPLACED REGION 4171 (S31E38), (THE AREA THAT PRODUCED THE X-CLASS EVENTS) AS THE PRIMARY CENTER OF ACTIVITY. THIS GROUP, WHICH IS COINCIDENTLY ON THE SAME LONGITUDE AS 4171, HAS PRODUCED FREQUENT FLARE ACTIVITY DURING THE 24 HOUR PERIOD. THE LARGEST OF THESE WAS AN M1/1N AT 1413Z MAXIMUM. 4172 HAS GROWN RAPIDLY DURING THE PAST 12 HOURS AND NOW POSSESSES A BETA-GAMMA MAGNETIC CONFIGURATION WITH A STRONG CENTRAL MAGNETIC GRADIENT AND WELL-DEVELOPED ARCH FILAMENTS. REGION 4171 BY CONTRAST HAS ONLY PRODUCED MINOR SUBFLARES ALTHOUGH IT REMAINS THE DOMINANT DISK REGION IN BOTH H-ALPHA AND WHITE LIGHT. IT CONTAINS A MAGNETIC DELTA CONFIGURATION IN ITS NORTHEASTERN PORTION ALONG WITH AN ACTIVE NEUTRAL LINE FILAMENT. REGION 4173 (S11W10) IS THE ONLY OTHER GROUP TO SHOW DYNAMICS, WITH SLOW GROWTH AND ARCH FILAMENTS VISIBLE. NO NEW REGIONS WERE NUMBERED TODAY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE MODERATE WITH THE POSSIBILITY OF AN ISOLATED X-CLASS EVENT FROM REGION 4171 DURING THE FORECAST PERIOD. ITS RECENT DORMANT STATE COULD INDICATE THE STORAGE OF ENERGY FOR A LARGE FLARE. REGION 4172 SHOULD CONTINUE CAPABLE OF M-CLASS EVENTS.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 08/2100Z TO 09/2100Z: THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED DURING THE PAST 24 HOURS. THE STORM FORECAST AS A RESULT OF THE FILAMENT DISRUPTION ON THE 5TH HAS YET TO MATERIALIZE.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE LEVEL OF MAGNETIC ACTIVITY IS EXPECTED TO INCREASE TO ACTIVE CONDITIONS DURING THE NEXT 24 HOURS FOLLOWED BY INTERMITTENT MINOR STORM LEVELS ON THE 11TH IN RESPONSE TO YESTERDAY'S FLARES.

III. EVENT PROBABILITIES 10 MAY-12 MAY

CLASS M 80/80/80

CLASS X 30/30/30

PROTON 10/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 09 MAY 125

PREDICTED 10 MAY-12 MAY 129/130/132

90 DAY MEAN 09 MAY 118

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 08 MAY 011/012

ESTIMATED AFR/AP 09 MAY 012/015

PREDICTED AFR/AP 10 MAY-12 MAY 025/025-030/025-025/025

SOLTERWARN

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