

HFUS3 BOU 252200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 115

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 25 APR 1985

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 24/2100 TO 25/2100Z: SOLAR ACTIVITY HAS BEEN VERY LOW. THE LARGEST EVENT WAS AN OPTICALLY UNCORRELATED C4 XRAY EVENT WITH MAXIMUM AT 25/0738Z. ALL OPTICALLY CORRELATED EVENTS WERE FROM REGION 4647 (N04E03). THE LARGEST OF THESE WAS A C1/1B WITH XRAY MAXIMUM TIME AT 25/2053Z. REGION 4647 HAS DECREASED SLIGHTLY IN WHITE LIGHT AREA AND NOW COVERS APPROX 820 MILLIONTHS OF THE DISK, AND IS AN EKI GROUP. MAGNETICALLY IT IS STILL A BETA-GAMMA-DELTA GROUP. BUT DURING THIS PERIOD THE TRAILER PENUMBRA HAS LOST ITS DELTA (LEADER DELTA REMAINS). DUE TO CLOUDS AT OBSERVATORIES THERE IS NO ACCURATE MAGNETIC GRADIENT INFORMATION AVAILABLE AT THIS TIME. ONE NEW REGION WAS NUMBERED TODAY. THIS IS 4648 (N01W75) WHICH IS A SMALL BXO GROUP. THESE ARE THE ONLY SPOTTED REGIONS ON THE DISK.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH. WHILE REGION 4647 HAS DECREASED SLIGHTLY IN AREA, IT STILL RETAINS ITS COMPLEXITY (ESPECIALLY IN THE LEADER). THE PROBABILITIES OF X EVENTS WERE LOWERED SLIGHTLY MOSTLY DUE TO THE LACK OF MAGNETIC GRADIENT INFORMATION TO CONFIRM THE OPTICAL INFORMATION. REGION 4647 IS STILL EXPECTED TO PRODUCE AT LEAST ONE MORE X CLASS XRAY EVENT.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 24/2100Z TO 25/2100Z: THE GEOMAGNETIC FIELD HAS BEEN GENERALLY ACTIVE, WITH SOME MINOR STORM CONDITIONS AT HIGH LATITUDES. THE GEOSYNCHRONOUS SATELLITE PROTON EVENT CONTINUES, WITH A MAXIMUM OF 61 PARTICLES/CM²/SEC/STER AT 25/1140Z. A POLAR CAP ABSORPTION ENHANCEMENT WAS OBSERVED WITH A MAXIMUM OF 1.1 DB AT 25/1015Z.

IIB. GEOPHYSICAL ACTIVITY FORECAST: A MAJOR GEOMAGNETIC STORM IS EXPECTED TO BEGIN EARLY ON THE 26TH IN RESPONSE TO THE X1/3B FLARE THAT OCCURRED ON THE 24TH AT 0935Z. MINOR STORM CONDITIONS ARE EXPECTED TO PREDOMINATE ON THE 27TH, WITH A RETURN TO ACTIVE LEVELS ON THE 28TH.

III. EVENT PROBABILITIES 26 APR-28 APR

CLASS M 75/60/60

CLASS X 40/20/20

PROTON 10/10/10

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 25 APR 094

PREDICTED 26 APR-28 APR 093/091/090

90 DAY MEAN 25 APR 073

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 24 APR 016/024

ESTIMATED AFR/AP 25 APR 021/024

PREDICTED AFR/AP 26 APR-28 APR 050/060-030/030-020/025

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