

HENSBERG BUREAU FOR DAEEIT

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 139

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 19 MAY 1983

I.A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 18/2100 TO 19/2100Z: SOLAR ACTIVITY HAS BEEN LOW DURING THIS PERIOD WITH ONLY "C" CLASS EVENTS BEING OBSERVED. THE LARGEST EVENT WAS A C2/NO OPTICAL AT 1945UT. REGION 4183 (N18E52) HAS EXHIBITED RAPID GROWTH AND IS NOW A DELTA MAGNETICALLY. LARGE ACTIVE FILAMENTS WITH SEVERAL FLUCTUATIONS HAVE ALSO BEEN OBSERVED WITH THIS REGION. REGION 4181 (S24E28) HAS VERY STRONG MAGNETIC GRADIENTS AND HAS HAD RAPID GROWTH IN THE CENTER OF THE REGION. NO NEW REGIONS WERE NUMBERED TODAY, HOWEVER IT DOES APPEAR THAT A NEW REGION MAY BE ROTATING INTO VIEW JUST BEHIND 4183.

I.B. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE AT MODERATE LEVELS DURING THIS FORECAST PERIOD. REGIONS 4183 AND 4181 BOTH HAVE THE POTENTIAL FOR LARGE EVENTS, THEY BOTH HAVE BEEN OMINOUSLY QUIET, DURING THIS FORECAST PERIOD. OLD REGION 4157 (S04 L113), DUE TO RETURN ON 20 MAY, DEPARTED THE WEST LIMB ACTIVE AND MAY RETURN AS A VISIBLE GROUP.

II.A. GEOPHYSICAL ACTIVITY SUMMARY FROM 18/2100Z TO 19/2100Z: THE GEOMAGNETIC FIELD HAS BEEN GENERALLY ACTIVE DURING THIS PERIOD. A LARGE EQUATORIAL CORONAL HOLE JUST PASSED CENTERAL MERIDIAN.

II.B. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO REMAIN ACTIVE FOR THIS FORECAST PERIOD. THE EFFECTS OF THE CORONAL HOLE ARE EXPECTED TO INCREASE ACTIVITY TO NEAR MINOR STORM CONDITIONS LATE ON 22 THRU 25 MAY.

III. EVENT PROBABILITIES 20 MAY-22 MAY

CLASS M 50/50/50

CLASS X 15/20/20

PROTON 05/05/10

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 19 MAY 143

PREDICTED 20 MAY-22 MAY 148/151/153

90 DAY MEAN 19 MAY 123

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 18 MAY 013/014

ESTIMATED AFR/AP 19 MAY 012/012

PREDICTED AFR/AP 20 MAY-22 MAY 015/020-020/020-025/030

SOLTERWARN