

HFUS 1 BOU 161300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 016A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 16 JAN 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 15/1200Z TO 16/1200Z: SOLAR ACTIVITY REMAINS LOW. THE LARGEST EVENT DURING THE 24 HOUR PERIOD WAS AN UNCORRELATED C3 XRAY BURST AT 16/0620Z MAXIMUM. CONTINUOUS OPTICAL OBSERVATIONS DURING THIS BURST INDICATE THIS EVENT COULD HAVE COME FROM A REGION STILL BEHIND EAST LIMB. ALL OF THE OPTICALLY OBSERVED DISK FLARES REPORTED DURING THE PERIOD HAVE BEEN SMALL (SUBFLARES), WITH LITTLE XRAY EMISSION AND FROM A VARIETY OF WEAK REGIONS. REGION 4064 (N08E39) IS THE MOST IMPRESSIVE OF THESE, A GROWING D-TYPE WITH A WEAK DELTA MAGNETIC CONFIGURATION IN ITS NORTHERN PORTION. A NEW REGION HAS APPEARED AT THE SOUTHEAST LIMB (S11E80) AND HAS BEEN NUMBERED 4068. SURGING BEHIND THE SPOT INDICATES THAT THE TRAILER PORTION OF THE GROUP HAS YET TO ROTATE OVER THE LIMB.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN LOW. PREVIOUSLY ACTIVE REGION 4033 (S13, CAR 294) WHICH PRODUCED 2 X-CLASS AND 5 M-CLASS XRAY EVENTS LAST ROTATION, IS DUE BACK ON THE VISIBLE DISK BY TOMORROW. THIS REGION COULD RAISE THE ACTIVITY LEVEL SLIGHTLY, BUT IS NOT EXPECTED TO BE AS DYNAMIC THIS ROTATION.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE TO MINOR STORM LEVELS FOR MID-LATITUDES WITH INTERMITTENT MAJOR STORM CONDITIONS FOR HIGH LATITUDES. THE DISTURBANCE, WHICH HAS THE SIGNATURE OF A CORONAL HOLE, SHOULD CONTINUE AT ACTIVE TO OCCASIONAL MINOR STORM LEVELS FOR THE NEXT 48 HOURS.

III. EVENT PROBABILITIES 17 JAN-19 JAN

CLASS M 20/20/20

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 15 JAN 146

ESTIMATED 16 JAN 148

PREDICTED 17 JAN-19 JAN 152/156/160

90 DAY MEAN 15 JAN 176

V. GEOMAGNETIC A INDICES

OBSERVED AFR 14 JAN 006 AP 15 JAN 027

ESTIMATED AFR 15 JAN 019 AFR/AP 16 JAN 020/025

PREDICTED AFR/AP 17 JAN-19 JAN 025/025-015/020-015/020

SOLTERWARN

BT

HFUS 3 BOU 162200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 016B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 16 JAN 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/1200Z TO 16/2100Z: SOLAR ACTIVITY HAS BEEN LOW WITH LOW LEVEL CLASS C EVENTS BEING OBSERVED. WITH GOOD OBSERVING CONDITIONS AROUND THE NETWORK, IT APPEARS THAT ACTIVE SURGING ON THE WEST LIMB IS THE MOST LIKELY OPTICAL CORRELATION FOR MOST OF THESE SMALL EVENTS. REGION 4060 (N04E25) WHICH WAS REPORTED EARLY TODAY AS HAVING A WEAK DELTA CONFIGURATION IS NOW OBSERVED AS BIPOLAR. SLIGHT GROWTH AND AN INCREASE IN THE NUMBER OF SMALL SPOTS HAVE BEEN OBSERVED IN REGIONS 4064 (N07E33) AND 4065 (S13E39). NEW REGION 4068 (S13E78) IS STILL OBSERVED AS A SINGLE LEADER POLARITY SPOT. THIS REGION EMERGED SLIGHTLY AHEAD OF PREVIOUSLY ACTIVE REGION 4033 (S13, L294).

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE LOW. THE POSSIBILITY OF AN ISOLATED CLASS M FLARE EXISTS. PREVIOUSLY ACTIVE LONGITUDES ARE DUE TO RETURN TO THE DISK DURING THE FORECAST PERIOD BUT ARE NOT EXPECTED TO INCREASE MODERATE CLASS FLARE ACTIVITY SIGNIFICANTLY.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE. GENERALLY ACTIVE CONDITIONS SHOULD PREVAIL FOR THE NEXT THREE DAYS. NIGHTTIME MINOR STORM LEVELS ARE LIKELY FOR 17 JAN.

III. EVENT PROBABILITIES 17 JAN-19 JAN

CLASS M 20/20/20

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 16 JAN 145

PREDICTED 17 JAN-19 JAN 146/149/152

90 DAY MEAN 16 JAN 176

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 15 JAN 017/027

ESTIMATED AFR/AP 16 JAN 022/025

PREDICTED AFR/AP 17 JAN-19 JAN 025/025-015/020-015/020

SOLTERWARN

BT