

HFUS 1 BOU 171300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 017A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 1300Z 17 JAN 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
16/1200Z TO 17/1200Z: SOLAR ACTIVITY REMAINS LOW. REGION 4064
(N08E26) HAS BEEN THE MOST ACTIVE OF THE DISK REGIONS,
PRODUCING THIRTEEN SUBFLARES DURING THE 24 HOUR PERIOD. THE
LARGEST OF THESE WAS A C4/SN AT 16/2327Z MAXIMUM. MOST OF THE
FLARES HAVE OCCURRED IN THE NORTHERN PORTION OF THE LEADER
SPOTS OF THIS REGION WHERE SOME MAGNETIC COMPLEXITY EXISTS, AND
GROWTH IS OCCURRING. A WEAK DELTA MAY BE FORMING AGAIN IN THIS
AREA. REGION 4060 (N05E18) SHARES A COMMON NEUTRAL LINE WITH
REGION 4064, AND HAS SHOWN SOME INTERACTION WITH 4064. ARCH
FILAMENTS AND SLOW GROWTH HAVE BEEN REPORTED WITH 4060. REGION
4068 (S13E70) IS NOW COMPLETELY OVER EAST LIMB AND IS ONLY A
SIMPLE UNIPOlar SPOT GROUP WITH DULL PLAGE. SURGING BEHIND THIS
REGION (S09E90) IS APPARENTLY ASSOCIATED WITH ANOTHER REGION
ROTATING OVER EAST LIMB. THIS COULD POSSIBLY BE THE RETURN OF
PREVIOUSLY ACTIVE REGION 4033 OF LAST ROTATION.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO
REMAIN LOW.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN ACTIVE FOR MID-LATITUDE STATIONS WITH ISOLATED PERIODS OF
MINOR STORM CONDITIONS FOR HIGH-LATITUDE SITES. THE FIELDS
ACTIVITY LEVEL SHOULD SHOW A GRADUAL TREND TOWARDS QUIETING
CONDITIONS DURING THE FORECAST PERIOD, BUT STILL REMAIN NEAR
LOW ACTIVE LEVELS.

III. EVENT PROBABILITIES 18 JAN-20 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

ESTIMATED 17 JAN 146

PREDICTED 18 JAN-20 JAN 149/152/154

90 DAY MEAN 16 JAN 176

V. GEOMAGNETIC A INDICES

OBSERVED AFR 15 JAN 017 AP 16 JAN 023

ESTIMATED AFR 16 JAN 020 AFR/AP 17 JAN 020/025

PREDICTED AFR/AP 18 JAN-20 JAN 015/020-015/020-015/020

SOLTERWARN

BT

HFUS 3 BOU 172200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 017B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 17 JAN 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 17/1200Z TO 17/2100Z: SOLAR ACTIVITY HAS BEEN LOW WITH SUB CLASS C ENHANCEMENTS BEING OBSERVED. REGION 4064 (N08E20) DISPLAYS MODERATE MAGNETIC GRADIENTS IN ITS NORTHERN PORTION WHERE A WEAK DELTA CONFIGURATION IS APPEARING AND DISAPPEARING. REGION 4065 (S13E25) HAS DISPLAYED SOME SLIGHT GROWTH. MINOR SURGING HAS BEEN OBSERVED AT THE SOUTHEAST LIMB WHERE SEVERAL REGIONS WERE EXPECTED TO RETURN, BUT SHOULD HAVE ALREADY BEEN VISIBLE. THIS, AND A LACK OF SIGNIFICANT 10CM FLUX FROM THIS AREA, IMPLY YET ANOTHER ACTIVE LONGITUDE HAS FAILED TO RETURN ACTIVE THIS ROTATION.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE LOW WITH ONLY MINOR CLASS C FLARES EXPECTED FOR THE DURATION OF THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE WITH BRIEF PERIODS AT MINOR STORM LEVELS. ISEE-3 DATA (WHICH APPEAR VALID FROM TIME TO TIME AS THE SPACECRAFT EXITS THE MAGNETOTAIL) INDICATE THE EARTH IS UNDER THE INFLUENCE OF A MAGNETICALLY POSITIVE HIGH SPEED CORONAL HOLE SOLAR WIND STREAM. THERE ARE TWO POSSIBLE SOURCES - A SMALL HOLE CENTERED AT N08W24 AND A LARGE SOUTHERN POLAR HOLE WITH AN EQUATORWARD EXTENSION AT S27W25. THE LATTER APPEARS TO BE THE MOST LIKELY SOURCE SINCE THE SOLAR B ANGLE IS -6 DEGREES. THE GEOMAGNETIC FIELD SHOULD CONTINUE ACTIVE WITH BRIEF PERIODS AT MINOR STORM LEVELS FOR THE NEXT THREE DAYS DUE TO THE LONGITUDINAL EXTENT OF THE ABOVE CORONAL HOLES.

III. EVENT PROBABILITIES 18 JAN-20 JAN

CLASS M 10/10/10

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 JAN 143

PREDICTED 18 JAN-20 JAN 140/145/145

90 DAY MEAN 17 JAN 176

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 JAN 020/023

ESTIMATED AFR/AP 17 JAN 022/025

PREDICTED AFR/AP 18 JAN-20 JAN 015/020-015/020-015/020

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