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HFUS 1 BOU 220600

SDF NUMBER 053A

JOINT AESU/SESC SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 0600Z 22 FEB 1973

IA. NO CHANGE

IB. NO CHANGE

II. NO CHANGE

III. NO CHANGE

IV. NO CHANGE

V. NO CHANGE

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FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 053B

JOINT AESU/SESC SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1300Z 22 FEBRUARY 1973

IA. SOLAR ACTIVITY HAD BEEN LOW, HOWEVER A SIGNIFICANT EVENT ON THE EAST LIMB MAY BE A HARBINGER FOR AN ACTIVE PERIOD. AT 0649Z, NRL/OSO-7 ALERTED THE FCST CENTER TO A STRONG X-RAY REGION NEAR NE09. OBSERVED IN PROGRESS AT 0800Z WAS A BRIGHT LIMB FLARE TENTATIVELY CLASS M5. AT THE SAME TIME OSO-7 LONG X-RAY (8.3 TO 15 ANGSTROM) HAD A COUNT OF 9,728! OPTICALLY THE REGION HAS NOT YET CROSSED THE LIMB. SURGES AT AND BEYOND THE LIMB ARE OCCURRING OVER A 5 DEGREE LATITUDE SPREAD.

IB. PROBABILITIES ARE INCREASED MARKEDLY. THIS REVISION MAY BE PREMATURE SINCE THE REGION HAS NOT YET MADE ITS APPEARANCE ON TO THE DISK. HOWEVER IT IS FELT THAT A TIMELY ALERT TO THE PROBABILITY OF THE IMMINENT ARRIVAL OF AN ACTIVE REGION IS REQUIRED.

II. THE GEOMAGNETIC FIELD WAS ACTIVE 21/1700Z TO 22/0200Z AND HAS BEEN MODERATELY UNSETLED SINCE. THE FIELD IS EXPECTED TO REMAIN STRONGLY UNSETLED TO ACTIVE FOR THE BALANCE OF THE FORECAST PERIOD. EARTH IS IN A SECTOR THAT WAS STRONGLY UNSETLED/ACTIVE LAST ROTATION. PIONEER 9 DATA HAS BEEN INTERMITTENT, BUT THE LATEST DATA INDICATES EARTH WILL INTERCEPT, PROBABLY NEAR THE BEGINNING OF THE 24TH, A SOLAR WIND OF A TWO-FOLD VELOCITY INCREASE. HOWEVER THE LOCAL MAGNETIC FIELD AT THE SATELLITE WAS QUIET. THE EARTH/SATELLITE CURRENTLY ARE EMERSED IN THE SAME SECTOR POLARITY. ACTIVE AURORAL ARCS AND BANDS ILLUMINATING THE MOUNTAINS HAVE BEEN REPORTED AT ELMENDORF ALASKA.

III. EVENT PROBABILITIES 22 - 24 FEB

CLASS M 50/60/60

CLASS X 05/10/10

PROTON 01/03/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 FEB 92

PREDICTED 22 - 24 FEB 92/97/102

90-DAY MEAN 21 FEB 103

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 20 FEB 05

ESTIMATED 21 FEB 20

PREDICTED 22 - 24 FEB 15/15/20

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HFUS BOU 222210

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 053

JOINT AESU/SESC PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 22 FEBRUARY 1973

IA. SOLAR ACTIVITY HAS BEEN MODERATE DURING THE LAST 24 HOURS. ONLY TWO C-CLASS SUBFLARES HAVE BEEN OBSERVED. REGION 034 (S16W84) PRODUCED A VERY SMALL M-CLASS FLARE AT 0135Z (A SUBNORMAL OPTICALLY). A NEW REGION (NOW LABELLED SESc NO. 044) BEGAN EAST LIMB TRANSIT DURING THE NIGHT. THIS NEW REGION PRODUCED AN M4 X-RAY INTENSITY FLARE AT 0805Z AS A LARGE ACTIVE SURGE REGION WAS REPORTED ON THE NORTHEAST LIMB. MANY OF THE SURGES APPEARED TO COME FROM 5 TO 10 DEGREES BEHIND THE LIMB. THIS SAME REGION PRODUCED AN M2 X-RAY FLARE AT 1240Z WHICH AGAIN WAS ACCCOMPANIED BY ACTIVE SURGES. THIS EVENT WAS FOLLOWED BY 3DB SHORTWAVE FADES AT 65 MHZ OVER TWO PATHS AND SUDDEN PHASE ANOMALIES OF 46 DEGREES AND 58 DEGREES AT 16 MHZ OVER TWO DIFFERENT PATHS. AN OSO-7 LONG X-RAY MAP OF THE SUN SHOWS THE REGION TO BE VERY INTENSE, HOWEVER THE MAP WAS MADE BY THE SATELLITE AT ABOUT THE SAME TIME AS THE FLARE OCCURRED.

IB. SOLAR ACTIVITY SHOULD CONTINUE MODERATE. REGION 044 (N08E85) CAN BE EXPECTED TO PRODUCE ANOTHER M-CLASS FLARE AT ANYTIME. IT IS DIFFICULT TO DETERMINE THE PRESENT STAGE OF EVOLUTION OF THIS NEW REGION UNTIL IT HAS FULLY ROTATED ONTO THE DISK. THEREFORE, IT MUST BE ASSUMED, FOR THE TIME BEING, THAT THE REGION IS STILL ACTIVE AND GROWING.

II. THE GEOMAGNETIC FIELD HAS BEEN ACTIVE FOR THE PAST 24 HOURS. WE ARE CURRENTLY OBSERVING MAGNETIC STRUCTURE WHICH IS RETURNING FOR ITS THIRD ROTATION. PIONEER 9 DATA INDICATES A SUBSTANTIAL INCREASE IN SOLAR WIND VELOCITY (TO 783 KM/SEC). THUS, IT IS LIKELY THE GEOMAGNETIC FIELD WILL BECOME VERY ACTIVE ON FEB 24TH. ACTIVITY IS EXPECTED TO DIMINISH SOMEWHAT BY THE END OF THE FORECAST PERIOD.

III. EVENT PROBABILITIES 23 FEB - 25 FEB.

CLASS M 60/60/60

CLASS X 10/10/10

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX.

OBSERVED 22 FEB 092

PREDICTED 23 FEB - 25 FEB 094/098/100

90-DAY MEAN 22 FEB 102

V. GEOMAGNETIC A INDICES.

OBSERVED FREDERICKSBURG 21 FEB 25

ESTIMATED 22 FEB 24

PREDICTED 23 FEB - 25 FEB 22/32/16

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