

HFUS 3 BOU 070500

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 127A

JOINT USAF/NOAA SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 0500Z 07 MAY 1978

IA. SOLAR ACTIVITY HAS BEEN MODERATE TO HIGH. AN X-2 CLASS XRAY BURST AT 07/0332Z (MAX) IS BELIEVED TO HAVE COME FROM REGION 1092 (N20W80) BUT ONLY A BSL WAS OBSERVED AT NW20. RADIO OBSERVATIONS INCLUDED A 900 FLUX UNIT BURST ON 2695 MHZ AND TYPE IV SWEEP FREQUENCY BURST. OPTICAL REPORTS INDICATE THAT 1092 IS SUFFICIENTLY COMPLEX TO CONTINUE PRODUCING MAJOR ACTIVITY UNTIL IT ROTATES FROM SIGHT. REGION 1095 (N22W59) IS GROWING AND DEVELOPING AND MAY BE CAPABLE OF SIGNIFICANT ACTIVITY WITHIN THE COMING 24 HOURS. NO SIGNIFICANT CHANGES IN THE OTHER VISIBLE FEATURES.

IB. SOLAR ACTIVITY WILL REMAIN AT MODERATE TO HIGH LEVELS.

II. THE GEOMAGNETIC FIELD IS QUIET. UNSETTLED TO ACTIVE CONDITIONS ARE EXPECTED DURING THE NEXT 24 HOURS. PROTON ENHANCEMENTS FROM THE X-2 FLARE AT 07/0332Z ARE EXPECTED BY 07/0800Z. GEOMAGNETIC INFLUENCES FROM THIS EVENT ARE LIKELY TO BE OBSERVED ON 10 MAY.

III. EVENT PROBABILITIES 07-09 MAY

CLASS M 95/95/70

CLASS X 50/30/10

PROTON 80/30/10

PCAF RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED 06 MAY 170

PREDICTED 07-09 MAY 164/158/150

90-DAY MEAN 06 MAY 148

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 05 MAY 08

ESTIMATED AFR/AP 06 MAY 03/07

PREDICTED AFR/AP 07-09 MAY 10/10 - 15/15 - 15/20

SOLTERWARN

BT

HFUS 3 BOU 071500

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, CO

SDF NUMBER 127B

JOINT USAF/NOAA SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 1500Z 07 MAY 1978

IA. SOLAR ACTIVITY HAS BEEN HIGH. AN X1 X-RAY BURST (2B OPTICALLY) OCCURRED IN REGION 1095 (N21W66) WITH A MAXIMUM AT 07/0334Z. SHORT-WAVE FADES AND SUDDEN PHASE ANOMALIES WERE REPORTED WITH THIS EVENT. A 900 F.U. RADIO BURST WAS OBSERVED ON 10 CENTIMETER CHANNELS. CUL-GOORA REPORTED A 1F SYMPATHETIC FLARE IN REGION 1105 (N19E60) AND CONCURRENT BSL ACTIVITY OCCURRED IN REGION 1092 (N20W82). OTHERWISE FOUR M1 X-RAY BURSTS WERE OBSERVED; ALL OF WHICH ARE PROBABLY ASSOCIATED WITH BRIGHT SURGES FROM REGION 1092 AND FLARE BRIGHTENINGS IN REGION 1095. ALL OTHER REGIONS ARE CURRENTLY UNIMPRESSIVE, BY COMPARISON.

IB. REGIONS 1092 AND 1095 ARE EVIDENTLY GOING TO HAVE A STORMY WEST LIMB PASSAGE. MORE HIGHLY ENERGETIC FLARES ARE POSSIBLE BUT THE PROBABILITY OF RECEIVING ENERGETIC PARTICLES AT THE EARTH IS NOW DIMINISHING DUE TO THE CONFIGURATION OF THE INTERPLANETARY MAGNETIC FIELDS.

II. THE GEOMAGNETIC FIELD HAS BEEN GENERALLY QUIET DURING THE PAST 17 HOURS. THE FIELD IS EXPECTED TO BECOME UNSETLED TO MILDLY ACTIVE DURING THE NEXT 72 HOURS.

III. EVENT PROBABILITIES 07 MAY - 09 MAY

CLASS M 95/95/70

CLASS X 50/30/10

PROTON 50/30/10

FCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 06 MAY 170

PREDICTED 07 - 09 MAY 164/158/150

90-DAY MEAN 06 MAY 148

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 05 MAY 08

ESTIMATED AFR/AP 06 MAY 03/07

PREDICTED AFR/AP 07 - 09 MAY 10/10 - 15/15 - 15/20

SOLTERWARN

BT

HFUS 1 BOU 072200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 127

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 07 MAY 1978

IA. SOLAR ACTIVITY HAS BEEN HIGH. AN X1 XRAY BURST (2B OPTICALLY) OCCURRED IN REGION 1095 (N21W71) WITH A MAXIMUM AT 07/0334Z. A 10-CENTIMETER RADIO BURST OF 900 F.U. ACCOMPANIED THIS FLARE. CONCURRENT BSL ACTIVITY WAS REPORTED IN REGION 1092 (N20W88). QUILGOORS REPORTED A 1F SYMPATHETIC FLARE IN REGION 1105 (N19E53). NOTE; MT. WILSON DATA NOW CONFIRMS THAT REGION 1105 IS REALLY TWO REGIONS, REGION 1105 (N17E49) AND REGION 1108 (N17E59) OTHERWISE SOME SIX M-CLASS XRAY BURSTS WERE NOTED DURING THE PAST 24 HOURS; AN M4 (MAX AT 1600Z), AN M3 (MAX AT 1712Z), AN M2 (MAX AT 1124Z) THE THREE M1'S (MAX AT 0527Z, 0635Z AND 0858Z). THE X-CLASS BURST AND THE LARGER M-CLASS BURSTS WERE ACCCOMPANIED BY SHORT WAVE FADES AND SUDDEN PHASE ANOMALIES. THESE M-CLASS EVENTS WERE VARIOUSLY ASSOCIATED WITH FLARES, OR FLARE BRIGHT ENHANCEMENTS, IN REGION 1095 AND AN IMPRESSIVE SERIES OF BSL'S IN REGION 1092. QUILGOORA REPORTED ONE OF THESE BSL'S (0520 TO 0545Z) HAD THE FORM OF A VERY ELONGATED BUBBLE EXTENDING TO 0.6 SOLAR RADIUS.

OTHER REGIONS PRESENTLY VISIBLE ON THE SOLAR DISK ARE QUIESCENT.

IB. REGIONS 1092 AND 1095 ARE EVIDENTLY DESTINED TO MAKE A STORMY EXIT FROM THE VISIBLE DISK. MORE ENERGETIC FLARES ARE NOT ONLY POSSIBLE, BUT LIKELY. BOTH REGIONS RETAIN THEIR COMPLEXITY. REGIONS 1105 AND 1108 APPEAR TO BE THE REMANENTS OF OLD REGIONS 1075 AND 1070, RESPECTIVELY. TRAILER POLARITY SPOTS ARE LOCATED NORTH OF THE LEADER IN REGION 1108, BUT THIS REGION AND REGION 1105 CURRENTLY APPEAR QUIET, AS ARE THE OTHER DISK REGIONS. MCMAHAN CALCIUM PLAGE DATA AND HOLLOWAY 2000Z EPL (NE 10) REPORT INDICATE ANOTHER REGION IS FOLLOWING REGION 1108 ONTO THE DISK.

II. THE GEOMAGNETIC FIELD HAS BEEN GENERALLY QUIET DURING THE PAST 24 HOURS. THE FIELD IS EXPECTED TO BECOME UNSETLED TO MILDLY ACTIVE DURING THE NEXT 24 HOURS. A MINOR MAGNETIC STORM IS EXPECTED ON 10 MAY AS A RESULT OF THE X1 XRAY BURST TODAY. A MINOR PROTON EVENT WAS EVIDENTLY CAUSED BY THE X1 FLARE. GREATER THAN 10 MEV PARTICLE FLUXES REACHED EVENT CRITERIA AT 07/0430Z. PARTICLE COUNTS REACHED A MAXIMUM OF NEARLY 100 PARTICLES/SQ CENT/SEC/STERADIAN AT 0530Z AND ENDED AT 1630Z. A MILD POLAR CAP ABSORPTION EVENT (ALSO DUE TO THE X1 FLARE) BEGAN AT 0515Z. THE SMALL PCA REACHED A MAXIMUM AT 0645Z OF ABOUT 2.2 dB, AND ENDED AT 0830Z. THE QUIET MAGNETIC FIELD WOULD INDICATE INTERPLANETARY FIELD LONGITUDES; HENCE, ENERGETIC FLARES IN REGIONS 1092 AND 1095 CAN STILL EASILY PRODUCE FURTHER PROTON EVENTS AT EARTH.

III. EVENT PROBABILITIES 08-10 MAY

CLASS M 95/70/50

CLASS X 30/10/05

PROTON 30/25/10

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 07 MAY 165

PREDICTED 08-10 MAY 158/150/144

90-DAY MEAN 07 MAY 148

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 06 MAY 07

ESTIMATED AFR/AP 07 MAY 07/06

PREDICTED AFR/AP 08-10 MAY 15/20 - 20/25 - 35/40

SOLTERWARN

BT