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HAUS BOU 160400Z

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 659A ISSUED 0400Z 16 JUNE 1970

CLASS X FLARES ARE EXPECTED DURING THE NEXT 13 HOURS.

A. SOLAR ACTIVITY HAS CONTINUED AT A HIGH LEVEL DURING THE PAST 11 HOURS. THE COMPLEX REGION N17E13 HAS PRODUCED THE MAJORITY OF ENERGETIC FLARES. THE REGION N16W27 HAS INCREASED IN ACTIVITY AND HAS PRODUCED SEVERAL CLASS M FLARES. REGION N16W02 HAS ALSO INCREASED IN ACTIVITY BUT AS YET HAS PRODUCED ONLY OPTICAL FLARES. THE GEOMAGNETIC FIELD SHOWS PERIODS OF DISTURBANCE, IT HAS NOT REACHED STORM PROPORTIONS.

B. SOLAR ACTIVITY WILL CONTINUE AT PRESENT LEVEL, CLASS M FLARES WITH AN OCCASIONAL CLASS X FROM REGIONS N17E13, N16W27 AND N16W02. THE GEOMAGNETIC FIELD WILL CONTINUE HAVING PERIODS OF DISTURBANCE.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 16 JUNE/0400Z ENDING 19 JUNE/0400Z

CLASS M OR GREATER 99/99/99

CLASS X 65/65/65

PROTON EVENTS 30/30/30

D. OTTAWA 10.7 CM FLUXES FOR 15/1700Z AND 15/2000Z WERE BOTH 203.

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HAUS BOU 161700Z

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO

SDF NUMBER 659B ISSUED 1700Z 16 JUNE 1970

CLASS-M FLARES ARE EXPECTED AND CLASS-X FLARES ARE PROBABLE DURING THE NEXT 11 HOURS

A. SOLAR ACTIVITY, THOUGH STILL AT A FAIRLY HIGH LEVEL, HAS DECLINED SLIGHTLY DURING THE PAST 13 HOURS. AT LEAST FOUR CLASS-M FLARES, ALL FROM THE REGION AT N17E03, HAVE OCCURRED DURING THE PAST 13 HOURS; ALL FLARES REPORTED DURING THE LAST 24 HOURS HAVE BEEN OF OPTICAL IMPORTANCE ONE-BRILLIANT OR SMALLER. THE NORTHEASTERN COMPLEX WITH CENTERS AT N17E03 AND N21E14 HAS SHOWN RE-ORGANIZATION DURING THE PAST 13 HOURS. THE REGION AT N16W12 HAS SHOWN CHANGES IN ITS SPOT STRUCTURE BUT HAS PRODUCED NO ENERGETIC FLARES DURING THE PAST 13 HOURS. DECAY IS IN PROGRESS IN THE N16W37 REGION. OTHER DISK REGIONS APPEAR TO BE RELATIVELY STABLE. THE GEOMAGNETIC FIELD HAS SHOWN DISTURBED PERIODS.

B. ENERGETIC FLARE ACTIVITY IS EXPECTED TO CONTINUE, PRIMARILY FROM THE REGIONS AT N21E14 AND N17E03. THE GEOMAGNETIC FIELD IS EXPECTED TO REMAIN UNSETTLED. THE PROBABILITY OF A PROTON EVENT IS INCREASING DUE TO WESTWARD ROTATION OF THE NORTHEASTERN COMPLEX.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 16 JUNE/1700Z ENDING 19 JUNE/1700Z.

CLASS M OR GREATER 99/99/99

CLASS X 60/55/50

PROTON EVENTS 30/35/35

D. OTTAWA 10.7CM FLUX FOR 16/1400Z WAS 190. PREDICTED 10.7CM FLUX FOR 17-19 JUNE IS 190/190/185.

E. MAGNETIC A-FREDERICKSBURG FOR 15 JUNE WAS 15. FOR 16 JUNE ABOUT 13. PREDICTED AP FOR 17-19 JUNE IS 15/17/20.

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HAUS BOU 162300Z

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDFR 980 ISSUED 16 JUNE 1970

HIGHLIGHTS FOR THE PERIOD 09-16 JUNE 1970:

THE PAST WEEK HAS BEEN MARKED BY THE HIGHEST LEVEL OF ENERGETIC FLARE ACTIVITY OBSERVED IN THE PAST 18 MONTHS. WITH THE POSSIBLE EXCEPTION OF EIGHT SMALL CLASS M EVENTS, ALL THE ACTIVITY HAS ORIGINATED IN MCMATH REGION 789, CENTERED NEAR N19E09 (L 222) AS OF 17/0000Z. THIS REGION, WHICH BEGAN CROSSING THE EAST LIMB ON 10 JUNE, DEVELOPED ON THE BACK SIDE OF THE SUN; DURING THE PREVIOUS ROTATION ITS LOCATION WAS MARKED ONLY BY THREE ROUGHLY PARALLEL FILAMENTS RUNNING FROM NE TO SW. BY 12 JUNE THE ASSOCIATED SPOT COMPLEX WAS FULLY ON THE DISK AND HAD A CLASS/AREA OF F/800 MILLIONTHS; ITS AREA HAS SINCE BEEN OVER 1000 MILLIONTHS. THE SPOT COMPLEX, CLASSIFIED MAGNETICALLY AS BETA-GAMMA WITH MULTIPLE DELTA CONFIGURATIONS AT TIMES, APPARENTLY CONSISTS OF THREE CLOSELY-SPACED BIPOLAR GROUPS. TOTAL ENERGETIC FLARE ACTIVITY FROM THE REGION HAS INCLUDED 51 CLASS M AND 13 CLASS X EVENTS. ACTIVITY STARTED ON 11 JUNE AND PEAKED ON 13-14 JUNE WITH THE DAILY TOTALS BEING 18 M AND 5 X FOR 13 JUNE AND 14 M AND 6 X FOR 14 JUNE.

ALTHOUGH THE 1-8A BACKGROUND LEVEL HAS BEEN EXTREMELY HIGH, OFTEN HOVERING CLOSE TO THE CLASS M THRESHOLD, ONLY 11 EVENTS ARE JUDGED TO HAVE REACHED THE CLASS M LEVEL ONLY BECAUSE OF THIS HIGH BACKGROUND. OPTICALLY, THE EVENTS RANGED FROM SN TO 2B, WITH THE MAJORITY BEING SN OR SB (49 CASES) AND ONLY ONE BEING 2B (A CLASS X AT 14/1320Z). SIX OF THE CLASS X EVENTS WERE ONLY SB OPTICALLY. IN ADDITION TO THE INTENSE X-RAY EMISSION, MANY OF THE FLARES WERE ACCCOMPANIED BY MAJOR RADIO BURSTS. ACTIVITY FROM REGION 789 HAS BEEN DECLINING SLOWLY FOR THE PAST 48 HOURS. PROTON FLUXES NEAR EARTH AS DETECTED BY ATS-1 HAVE BEEN VERY SLIGHTLY ENHANCED SINCE 14 JUNE, BUT AS YET THE HIGH LEVEL OF ACTIVITY HAS NOT PRODUCED A BONAFIDE PROTON EVENT. THE GEOMAGNETIC FIELD HAS BEEN QUIET TO SLIGHTLY UNSETLED.

FORECAST FOR THE WEEK 18-24 JUNE 1970:

ENERGETIC FLARE ACTIVITY IS EXPECTED TO CONTINUE AT AN ABOVE AVERAGE LEVEL IN MCMATH REGION 789; HOWEVER, THE NUMBER OF EVENTS IS EXPECTED TO BE CONSIDERABLY REDUCED FROM THE PAST WEEK. MAJOR FLARES ARE EXPECTED AND PROTON EVENTS ARE POSSIBLE. PREVIOUSLY ACTIVE MCMATH REGION 760, WHICH IS NOW BEGINNING ITS RETURN NEAR S05 (L 130), MAY CONTRIBUTE TO THE ACTIVITY. DISTURBED GEOMAGNETIC CONDITIONS ARE EXPECTED.

28-DAY FORECAST FOR THE PERIOD 18 JUNE-16 JULY 1970:

PERIODS OF ENHANCED ACTIVITY ARE EXPECTED DURING THE INTERVALS 18-23 JUNE AND 07-16 JULY.

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