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PP KGFF

DE BOU 280500Z

THIS IS THE MESSAGE FOR REFILE

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO

SPACE DISTURBANCE FORECAST NUMBER 542C ISSUED AT 0500Z

MAY 28 1967

MAJOR FLARES POSSIBLE DURING NEXT 12 HOURS.

BT

THIS IS THE MSG FOR REFILE

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO

SPACE DISTURBANCE FORECAST NUMBER 542D ISSUED AT 1100Z

MAY 28 1967

MAJOR PROTON EVENT IN PROGRESS. MODERATE MAGNETIC  
STORM IN PROGRESS. DURING THE NEXT 12 HOURS MAJOR FLARES  
ARE POSSIBLE.

A. AN IMPORTANCE THREE BRIGHT FLARE OCCURRED AT 0527Z AT N28 W32  
AND WAS ACCOMPANIED BY LOOPS ON THE DISK AND VERY STRONG  
IONOSPHERIC EFFECTS. AT 0625Z HIGH ENERGY PROTONS WERE  
DETECTED BY SATELLITE SENSORS AND CONFIRMED BY GROUND  
OBSERVATIONS AT 0626Z. AT 0700Z SATELLITES REPORTED A PROTON  
FLUX OF AT LEAST THREE TIMES NORMAL IN THE ENERGY RANGE GREATER  
THAN 20 MEV. AN IMPORTANCE TWO FLARE OCCURRED AT 0725Z AT  
N27 W45 BUT WAS NOT ASSOCIATED WITH STRONG EFFECTS.

B. THE FLUX OF HIGH ENERGY PROTONS IS EXPECTED TO DECLINE  
RAPIDLY WITHIN THE NEXT 12 HOURS. IT WILL BE FOLLOWED  
BY A GREAT INCREASE IN PROTONS OF LOW ENERGY WITHIN THE  
NEXT 24 HOURS. THE FLARE AT 0725Z WILL NOT PRODUCE PROTONS.  
A MAJOR MAGNETIC STORM IS EXPECTED TO BEGIN WITHIN 36 HOURS.

C. REVISED PROTON PROBABILITIES FOR MAY 28-30 ARE 100/100/80.

BT

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO  
SPACE DISTURBANCE FORECAST NUMBER 543A ISSUED AT 1700Z  
MAY 28 1967

PROTON EVENT IN PROGRESS MODERATE MAGNETIC STORM IN PROGRESS  
MAJOR FLARES POSSIBLE NEXT 12 HOURS

A. AN IMPORTANCE 3 FLARE AT 0527Z WITH VERY STRONG RADIO  
EMISSION AND IONOSPHERIC EFFECTS HAS PRODUCED PROTON EMISSION  
AT THE EARTH BEGINNING 0625Z. EARLY REPORTS INDICATE THAT  
THIS EVENT IS CONSIDERABLY SMALLER THAN THE EVENT OF 25 MAY  
BUT MAY CONTAIN PARTICLES OF SLIGHTLY HIGHER ENERGIES. THE  
FLARE OCCURRED OVER THE DELTA MAGNETIC CONFIGURATION IN THE  
SPOT GROUP NOW AT N26 W36. AN IMPORTANCE 2 FLARE ALSO OCCURRED  
THERE AT ABOUT 0718Z AND AN IMPORTANCE ONE FLARE WAS REPORTED  
THERE AT 0035Z. AS OF 1300Z THE SPOT GROUP HAD DECAYED CON-  
SIDERABLY BUT IT RETAINS SUFFICIENT STRENGTH AND COMPLEXITY  
TO SUPPORT FURTHER MAJOR ACTIVITY. HYDROGEN FINE STRUCTURE IN  
THE REGION SUPPORTS THIS VIEW. FREQUENT SMALL BUT ENERGETIC  
LIMB FLARES ARE OCCURRING NEAR N23 ELIMB. A SMALL SUN SPOT IS  
VISIBLE AT N23 W78 IN A BRIGHT PLAGE THAT EXTENDS OVER THE LIMB.  
THE SPOTS NEAR N11 W11 REMAIN OF MODERATE SIZE AND SLIGHTLY  
COMPLICATED CMMA SUGGESTING THE EXISTENCE OF SOME POTENTIAL  
FOR MAJOR FLARES. THE REMAINING REGIONS ARE LITTLE CHANGED  
AND ARE INACTIVE.

B. MAJOR FLARE POTENTIAL WILL REMAIN HIGH UNTIL WEST LIMB  
PASSAGE OF THE DELTA REGION ON 31 MAY - 1 JUNE. THE PROTON  
EVENT SHOULD CONTINUE FOR AT LEAST 24 HOURS. THE PRESENT  
MAGNETIC STORM WAS INCREASING IN INTENSITY AS OF 1630Z AND  
A MAJOR INCREASE IS EXPECTED DURING THE NEXT 24 HOURS.  
OVERALL SOLAR ACTIVITY INDICES SHOULD CHANGE ONLY SLIGHTLY  
AS A SIGNIFICANT REGION APPEARING AT NE LIMB WILL TEND TO  
BALANCE THE DECAY OF THE NW REGION.

C. THE PROBABILITIES FOR FLARES AND PROTON EVENTS FOR THE  
THREE DAY PERIOD MAY 29-31 ARE AS FOLLOWS /FIGURES ARE  
PERCENTAGES FOR EACH OF THE THREE DAYS/  
IMPORTANCE ONE OR GREATER 100/100/100  
IMPORTANCE TWO OR GREATER 80/80/80  
IMPORTANCE THREE OR GREATER 40/40/40  
PROTON EVENTS 100/80/60

D. THE OTTAWA 10.7 CM FLUX TODAY IS ESTIMATED TO BE 198.  
THE PREDICTED VALUES FOR MAY 29-31 ARE 195/193/185

BT

FROM SPACE DISTURBANCE FORECAST CENTER, ESSA BOULDER COLO.  
SPACE DISTURBANCE FORECAST NUMBER 543B ISSUED 2300Z  
MAY 28 1967.

PROTON EVENT IN PROGRESS. MAGNETIC STORM IN PROGRESS EXPECTED  
TO INTENSIFY NEXT 12 HOURS. MAJOR FLARES POSSIBLE NEXT 12  
HOURS.

A. NO MAJOR SOLAR FLARES HAVE OCCURRED SINCE 0718Z. THE PROTON EVENT  
FROM THE 0527Z FLARE REMAINS SMALL AND IS NOW BEING MASKED ON  
RIOMETERS BY AN ELECTRON EVENT. THE DELTA CONFIGURATION AT N26 W40  
HAS ALTERED ITS GEOMETRY AND APPEARS TO BE WEAK. VERY LITTLE  
ACTIVITY HAS BEEN REPORTED NEAR THIS LOCATION SINCE THE MAJOR  
EVENTS. SURGE ACTIVITY CONTINUES AT NE LIMB AND IS ASSOCIATED WITH  
IONOSPHERIC DISTURBANCES. A MAGNETIC STORM CONTINUES AT MODERATE  
INTENSITY.

B. THE POTENTIAL FOR MAJOR FLARES MAY BE DECREASING BUT MAJOR EVENTS  
ARE POSSIBLE UNTIL JUNE 2. A MAJOR MAGNETIC STORM IS EXPECTED TO  
BEGIN IN 6-12 HOURS.

C. THE PROBABILITIES FOR FLARES AND PROTON EVENTS FOR THE  
THREE DAY PERIOD MAY 29-31 ARE AS FOLLOWS /FIGURES ARE  
PERCENTAGES FOR EACH OF THE THREE DAYS/  
IMPORTANCE ONE OR GREATER 100/100/100  
IMPORTANCE TWO OR GREATER 80/70/70  
IMPORTANCE THREE OR GREATER 40/30/30  
PROTON EVENTS 100/80/50

D. THE OTTAWA 10.7 CM FLUX TODAY IS 197. THE PREDICTED  
VALUES FOR MAY 29-31 ARE 193/188/182.

E. THE FREDERICKSBURG MAGNETIC A INDEX FOR YESTERDAY WAS 16.  
TODAY IT WILL BE ABOUT 43. THE PREDICTED AP RANGES FOR  
MAY 29-31 ARE 80-150/40-60/20-30.