

Daily Space Weather Summary (SUPARCO)

Tuesday, September 10, 2024, 14:16 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	13.5 MHz							
Virtual Height of F2 layer (h`F2)	363 km							
Total Electron Content (TEC)	60 TECU							
Maximum Usable Frequency (MUF) and Optimum Traffic Frequency (FOT) for various distances								
Distance (Km)	100	200	400	600	800	1000	1500	3000
MUF (MHz)	13.6	14.0	15.3	17.1	19.3	21.6	27.3	34.4
FOT (MHz)	11.6	11.9	13.0	14.5	16.4	18.4	23.2	29.3

Local HF conditions are slightly enhanced as compared to the predicted monthly median MUF.

LOCAL GEOMAGNETIC CONDITIONS

K-index	1 (Quiet)
Total Field (F) (Son/Isb)	45675/50775 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	213
Solar radio flux (F10.7)	228 sfu
Solar wind speed	418.6 km/s (varied in the past 24 hrs between 356 & 504 km/s)
Solar x-ray flares	C3.0 (max flare in the past 24 hrs (M3, 1708 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+6.7 nT (varied in the past 12 hrs between +7.0 nT & +8.4 nT) -3.6 nT (varied in the past 12 hrs between -6.3nT & +7.7 nT)

Solar conditions are at moderate to high levels with background X-ray flux at C-class level.

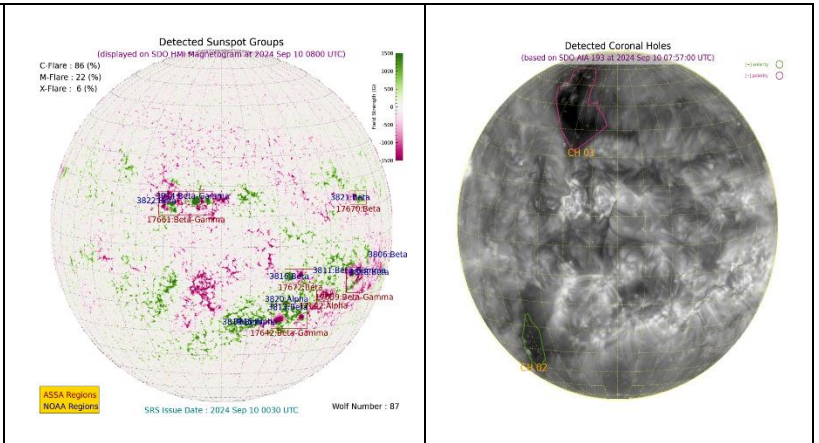
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

Notes: Credits: www.spaceweather.go.kr, www.sws.bom.gov.au, www.spaceweather.com, www.solen.info

Daily Sun: 10 September 2024

There are two active regions AR3811 and AR3814 present on the Sun capable of producing strong M and X-class solar flares having chances of 22% and 6% respectively.

02 Coronal Holes (CHs) are detected on the solar disk.



DISCUSSION:

Solar activity is expected to be at moderate to high levels. Few M-class solar flares, have already occurred from the regions mentioned above. In case of more M/X-class solar flares, minor to moderate radio blackouts may be observed. Low solar wind speed and quiet geomagnetic activity is expected. HF conditions are slightly enhanced.