

Daily Space Weather Summary (SUPARCO)

Wednesday, September 13, 2023, 12:05 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	10.6 MHz							
Virtual Height of F2 layer (h`F2)	295 km							
Total Electron Content (TEC)	42 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)	7.4	7.8	9.3	11.3	13.6	16.0	21.4	30.2
FOT (MHz)	6.3	6.7	7.9	9.6	11.6	13.6	18.2	25.7

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

LOCAL GEOMAGNETIC CONDITIONS

K-index	3 (Quiet)
Total Field (F) (Son/Isb)	45512/50022 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	141
Solar radio flux (F10.7)	154 sfu
Solar wind speed	427.7 km/s (varied in the past 24 hrs between 332 & 442 km/s)
Solar x-ray flares	B9.8 (max flare in the past 24 hrs (M2 0707 UT))
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+4.5 nT (varied in the past 12 hrs between +7.3 nT & +13.3 nT) +2.2 nT (varied in the past 12 hrs between -4.3 nT & +5.4 nT)

Solar conditions are at moderate levels with background X-ray flux at B-class level.

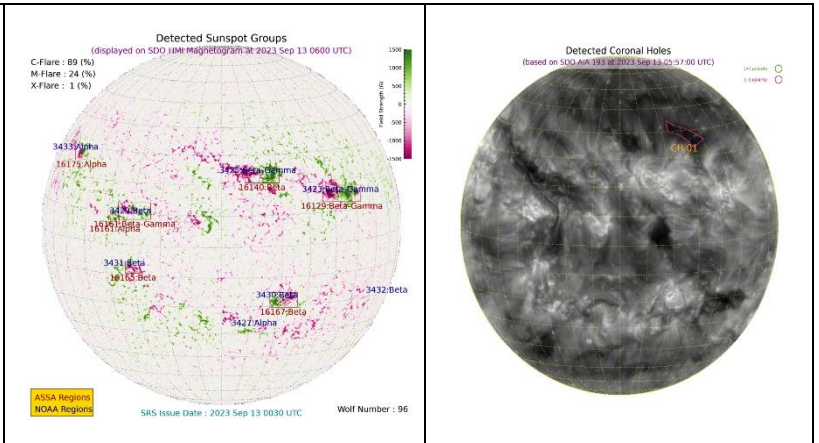
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 13 September 2023

There are two active regions AR3423 and AR3425 present on the Sun capable of producing strong M and X-class solar flares having chances of 24% and 1% respectively.

01 Coronal Hole (CH) is detected on the solar disk.



DISCUSSION:

Solar activity is expected to be at moderate levels. Multiple M class flares have already occurred from the regions present on the solar limb. In case of more M/X solar flares, minor to moderate radio blackouts may be observed. Low to moderate solar wind speed and quiet to unsettled geomagnetic activity is expected. HF conditions are normal.