

Daily Space Weather Summary (SUPARCO)

Monday, September 25, 2023, 12:14 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	8.5 MHz							
Virtual Height of F2 layer (h`F2)	275 km							
Total Electron Content (TEC)	35 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)	8.6	8.9	10.2	12.0	13.7	15.8	20.4	23.5
FOT (MHz)	7.3	7.6	8.7	10.2	11.6	13.4	17.3	20.0

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

LOCAL GEOMAGNETIC CONDITIONS

K-index	4 (Unsettled)
Total Field (F) (Son/Isb)	45515/50025 nT

The local geomagnetic field is unsettled at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	172
Solar radio flux (F10.7)	182 sfu
Solar wind speed	465.0 km/s (varied in the past 24 hrs between 300 & 508 km/s)
Solar x-ray flares	C1.6 (max flare in the past 24 hrs (M1, 1500 UT))
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+31.7 nT (varied in the past 12 hrs between +6.3 nT & +26.2 nT) +27.7 nT (varied in the past 12 hrs between -19.2 nT & +20.4 nT)

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

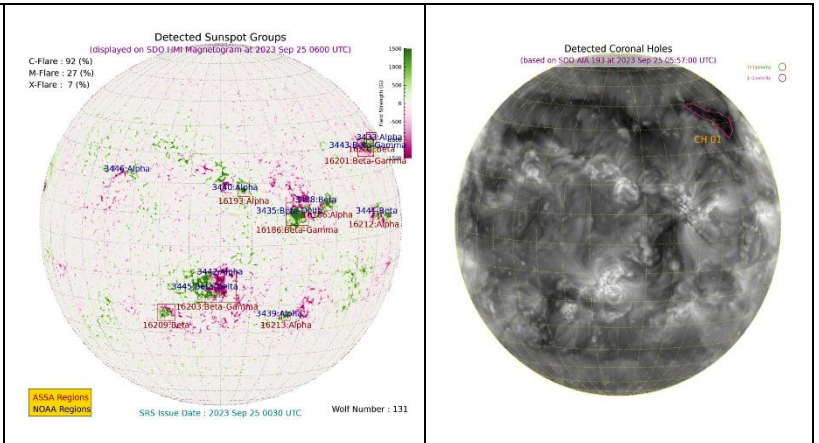
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 25 September 2023

There are three active regions AR3435, AR3443 and AR3445 present on the Sun capable of producing strong M and X-class solar flares having chances of 27% and 7% respectively.

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



DISCUSSION:

Solar activity is expected to be at high 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. Moderate to slightly elevated solar wind speed is expected due to the combined effect of CME and coronal hole. Geomagnetic activity is expected to be quiet to unsettled. HF conditions are depressed.