

Daily Space Weather Summary (SUPARCO)

Wednesday, September 27, 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 enhanced as compared to the predicted monthly median MUF.

LOCAL GEOMAGNETIC CONDITIONS

K-index	2 (Quiet)
Total Field (F) (Son/Isb)	45515/50025 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	179
Solar radio flux (F10.7)	165 sfu
Solar wind speed	483.0 km/s (varied in the past 24 hrs between 435 & 529 km/s)
Solar x-ray flares	C2.1 (max flare in the past 24 hrs (C4 0546 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+4.6 nT (varied in the past 12 hrs between +2.2 nT & +6.3 nT) -0.5 nT (varied in the past 12 hrs between -3.1 nT & +5.9 nT)

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

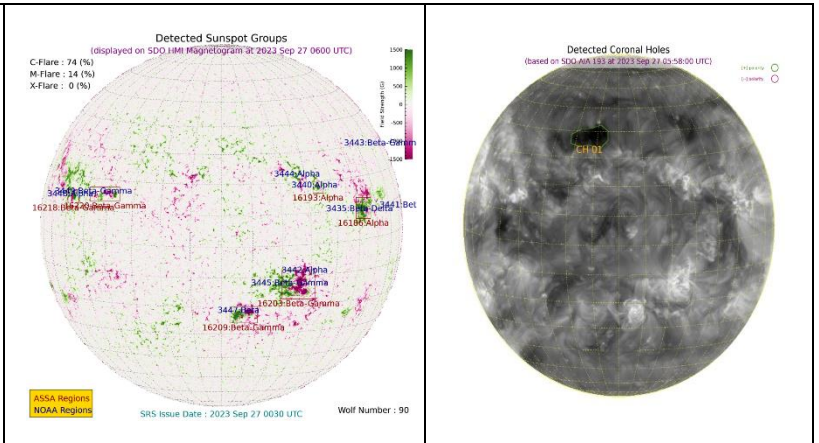
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 27 September 2023

There are four active regions AR3435, AR3443, AR3445 and AR3449 present on the Sun capable of producing strong C and M-class solar flares having chances of 74% and 14% respectively.

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



DISCUSSION:

Solar activity is expected to be at moderate levels. In case of M/X solar flares, minor to moderate radio blackouts may be observed. Moderate to elevated solar wind speed and quiet geomagnetic activity is expected. HF conditions are enhanced.