

Daily Space Weather Summary (SUPARCO)

Thursday, July 25, 2024, 12:22 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	12.1 MHz							
Virtual Height of F2 layer (h`F2)	272 km							
Total Electron Content (TEC)	65							
Maximum Usable Frequency (MUF) and Optimum Traffic Frequency (FOT) for various distances								
Distance (Km)	100	200	400	600	800	1000	1500	3000
MUF (MHz)	12.2	13.1	13.8	14.7	15.6	20.9	23.9	26.1
FOT (MHz)	9.8	11.1	12.3	13.9	14.3	17.6	20.3	22.2

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

LOCAL GEOMAGNETIC CONDITIONS

K-index	2 (Quiet)
Total Field (F) (Son/Isb)	45664/50674 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	160
Solar radio flux (F10.7)	175 sfu
Solar wind speed	316.2 km/s (varied in the past 24 hrs between 279 & 37 km/s)
Solar x-ray flares	C1.6 (max flare in the past 24 hrs (M1, 1204 UT))
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+8.56 nT (varied in the past 12 hrs between +4.11 nT & +8.56 nT) 4.87 nT (varied in the past 12 hrs between -1.48 nT & +6.7 nT)

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

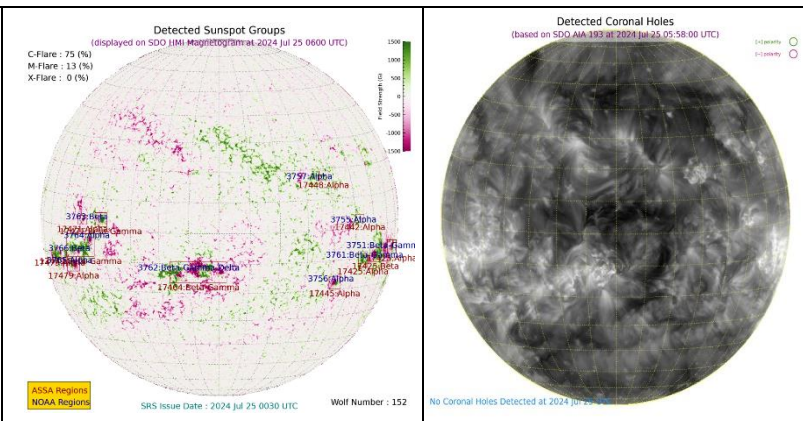
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 25 July 2024

There is one active region present on the Sun capable of producing M and X-class solar flares having chances of 13% and 0% respectively.

No Coronal Hole (CH) is detected on the solar disk.



DISCUSSION:

Solar activity is expected to be at Low to Moderate levels. Multiple 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 to moderate solar wind speed is expected due to the presence of coronal hole. Geomagnetic activity is expected to be quiet to unsettled. HF conditions are normal.