Daily Space Weather Summary (SUPARCO)

Thursday, July 18, 2024, 12:34 PST

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)	
Critical Frequency of F2 layer (foF2)	9.0 MHz
Virtual Height of F2 layer (h`F2)	272 km
Total Electron Content (TEC)	55

Maximum Usable Frequency (MUF) and Optimum Traffic Frequency (FOT) for various distances

Distance (Km)	**100**	**200**	**400**	**600**	**800**	**1000**	**1500**	**3000**
MUF (MHz)	9.2	9.6	11.1	13.0	15.2	17.4	22.3	26.6
FOT (MHz)	7.8	8.2	9.4	11.1	12.9	14.8	19.0	22.6

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

LOCAL GEOMAGNETIC CONDITIONS	
K-index	0 (Quiet)
Total Field (F) (Son/Isb)	45654/50664 nT

The local geomagnetic field is quiet at the moment.

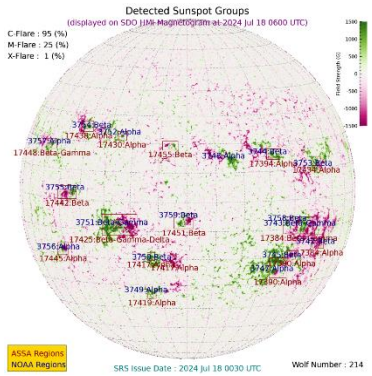
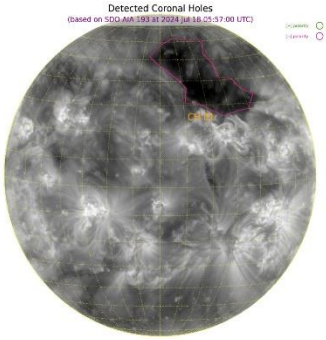
LATEST SOLAR CONDITIONS	
Sunspot Number (SN)	275
Solar radio flux (F10.7)	224 sfu
Solar wind speed	348.3 km/s (varied in the past 24 hrs between 358 & 393 km/s)
Solar x-ray flares	C4.5 (max flare in the past 24 hrs (M3, 0708 UT)
Interplanetary Magnetic Field (IMF) **Total Field (Bt)** **Z Component of Field (Bz)**	+3.2 nT (varied in the past 12 hrs between +3.4 nT & +4.5 nT) -0.5 nT (varied in the past 12 hrs between -4.3 nT & +2.9 nT)

Solar conditions are at low to 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: 18 July 2024

There are two active regions AR3743 and AR3751 present on the Sun capable of producing M and X-class solar flares having chances of 25% and 1% respectively. 01 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 solar wind speed and quiet geomagnetic activity is expected. HF conditions are normal.