

Daily Space Weather Summary (SUPARCO)

Tuesday, May 07, 2024, 12:10 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	7.2 MHz							
Virtual Height of F2 layer (h`F2)	254 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	7.7	8.8	10.4	12.2	13.8	17.4	21.1
FOT (MHz)	6.3	6.5	7.5	8.8	10.4	11.7	14.8	18.0

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

LOCAL GEOMAGNETIC CONDITIONS

K-index	1 (Quiet)
Total Field (F) (Son/Isb)	45692/50792 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	148
Solar radio flux (F10.7)	171 sfu
Solar wind speed	544.2 km/s (varied in the past 24 hrs between 415 & 602 km/s)
Solar x-ray flares	M2.2 (max flare in the past 24 hrs (X1, 0654 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+5.0 nT (varied in the past 12 hrs between +4.0 nT & +6.1 nT) -0.2 nT (varied in the past 12 hrs between -3.3 nT & +4.8 nT)

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

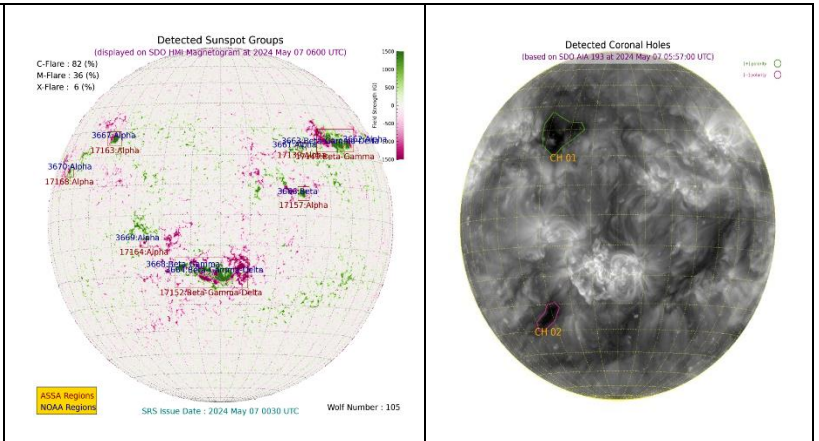
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 7 May 2024

There are three active regions AR3663, AR3664 and AR3668 present on the Sun capable of producing strong M and X-class solar flares having chances of 36% and 6% respectively.

02 Coronal Holes (CHs) are detected on the solar disk.



DISCUSSION:

Solar activity is expected to be at moderate to high levels. Multiple M/X-class solar flares, have already occurred from the regions mentioned causing radio blackouts. 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 holes. Geomagnetic activity is expected to be quiet. HF conditions are slightly depressed.