

Daily Space Weather Summary (SUPARCO)

Wednesday, May 15, 2024, 12:18 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	9.0 MHz							
Virtual Height of F2 layer (h`F2)	260 km							
Total Electron Content (TEC)	60 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)	9.2	9.7	11.2	13.2	15.5	17.7	23.0	27.3
FOT (MHz)	7.8	8.2	9.5	11.2	13.2	15.0	19.6	23.2

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

LOCAL GEOMAGNETIC CONDITIONS

K-index	1 (Quiet)
Total Field (F) (Son/Isb)	45384/50484 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	185
Solar radio flux (F10.7)	220 sfu
Solar wind speed	502.0 km/s (varied in the past 24 hrs between 478 & 603 km/s)
Solar x-ray flares	C3.5 (max flare in the past 24 hrs (X8, 1651 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+3.7 nT (varied in the past 12 hrs between +3.5 nT & +4.4 nT) -1.5 nT (varied in the past 12 hrs between -3.8 nT & +3.0 nT)

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

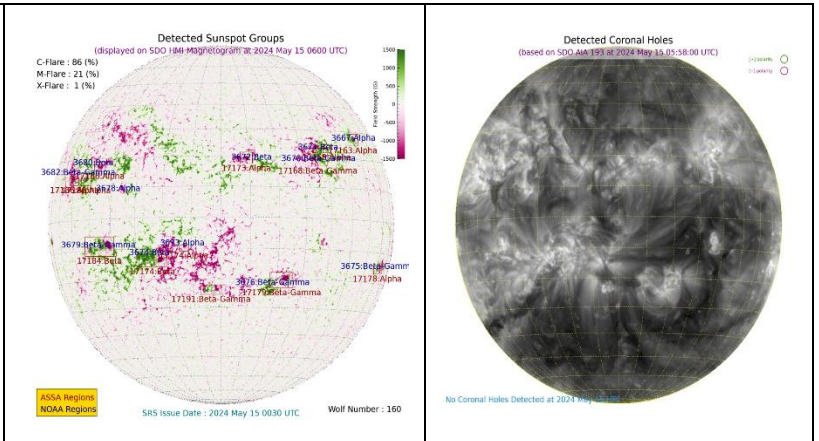
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 15 May 2024

There are five active regions AR3670, AR3675, AR3676, AR3679 and AR3682 present on the Sun capable of producing strong M and X-class solar flares having chances of 21% and 1% respectively.

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



DISCUSSION:

Solar activity is expected to be at moderate to high levels. Multiple M and X-class solar flares, have already occurred from the regions mentioned above causing minor to moderate radio blackouts. In case of more M/X-class solar flares, minor to moderate radio blackouts and disturbed geomagnetic activity may be observed. Moderate to slightly elevated solar wind speed is expected to prevail due to the effect of CME. Minor impact on Satellite operations is possible. HF conditions are normal.