

Daily Space Weather Summary (SUPARCO)

Wednesday, June 21, 2023, 12:01 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	10.4 MHz							
Virtual Height of F2 layer (h`F2)	280 km							
Total Electron Content (TEC)	48 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)	10.6	11.0	12.6	14.7	17.1	19.6	21.9	26.4
FOT (MHz)	9.0	9.4	10.7	12.5	14.5	16.7	18.6	22.4

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)	45525/50035 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	155
Solar radio flux (F10.7)	169 sfu
Solar wind speed	449.2 km/s (varied in the past 24 hrs between 394 & 477 km/s)
Solar x-ray flares	C2.1 (max flare in the past 24 hrs (X1, 1709 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+5.7 nT (varied in the past 12 hrs between +5.3 nT & +7.0 nT) +5.4 nT (varied in the past 12 hrs between -4.7 nT & +3.6 nT)

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

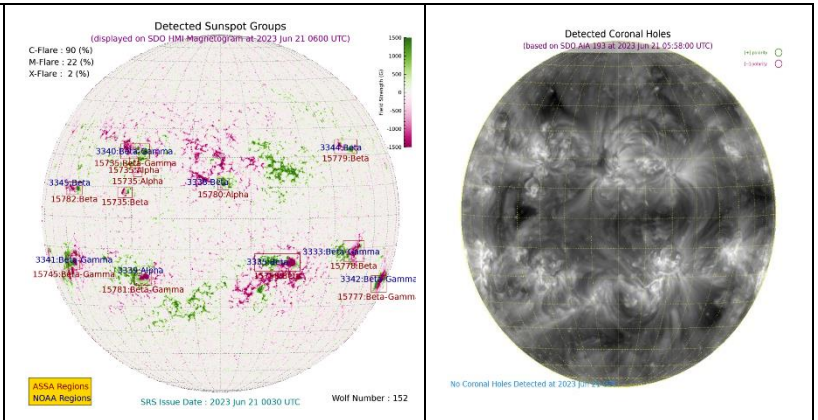
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 21 June 2023

There are 4 active regions present on the Sun capable of producing strong M and X-class solar flares having chances of 22% and 2% respectively.

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



DISCUSSION:

Solar activity is expected to be at moderate to high levels. In case of solar flares, shortwave fadeouts may be observed. Moderate solar wind speed and quiet geomagnetic activity is expected. HF conditions are normal.