

Daily Space Weather Summary (SUPARCO)

Monday, February 27, 2023, 12:27 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	12.1 MHz							
Virtual Height of F2 layer (h`F2)	318 km							
Total Electron Content (TEC)	50 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)	12.2	12.4	13.7	15.5	17.6	19.8	24.9	31.5
FOT (MHz)	10.4	10.5	11.6	13.2	15.0	16.8	21.2	26.7

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

LOCAL GEOMAGNETIC CONDITIONS

K-index	5 (Unsettled)
Total Field (F) (Son/Isb)	45525/50035 nT

The local geomagnetic field is unsettled at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	120
Solar radio flux (F10.7)	159 sfu
Solar wind speed	577.9 km/s (varied in the past 24 hrs between 440 & 756 km/s)
Solar x-ray flares	C1.3 (max flare in the past 24 hrs: C5, 1200 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+12.7 nT (varied in the past 12 hrs between +9.2 nT & +19.6 nT) -7.0 nT (varied in the past 12 hrs between -14.1 nT & +5.3 nT)

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

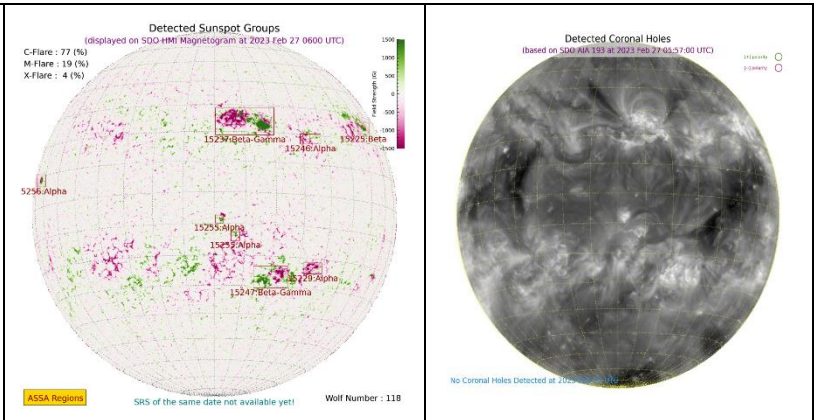
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 27 February 2023

There is one active region AR3234 present on the Sun capable of producing strong M and X-class solar flares having chances of 19% and 4% respectively.

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



DISCUSSION:

Solar activity is expected to be at moderate levels. Radio blackouts/shortwave fadeouts (SWF) is ongoing at the time of generation of the summary. Greater than 9 MHz frequencies are operational till the SWF (8MHz absorption) subsides. Moderate to slightly elevated solar wind speed is expected. Quiet to unsettled geomagnetic activity is expected to prevail. HF conditions are enhanced.