

Daily Space Weather Summary (SUPARCO)

Monday, February 13, 2023, 12:21 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)	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)	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	0 (Quiet)
Total Field (F) (Son/Isb)	45525/50035 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	197
Solar radio flux (F10.7)	200 sfu
Solar wind speed	373.1 km/s (varied in the past 24 hrs between 369 & 495 km/s)
Solar x-ray flares	C3.0 (max flare in the past 24 hrs: M3, 0848 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+1.8 nT (varied in the past 12 hrs between +0.9 nT & +3.9 nT) -1.8 nT (varied in the past 12 hrs between -0.3 nT & -2.3 nT)

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

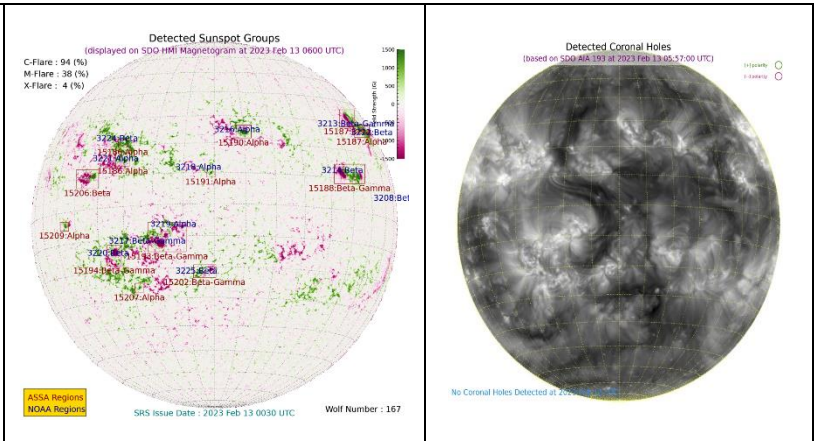
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 13 February 2023

There are two active regions AR3123 and AR3127 present on the Sun capable of producing strong M and X-class solar flares having chances of 38% and 4% respectively.

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



DISCUSSION:

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