

Daily Space Weather Summary (SUPARCO)

Wednesday, February 07, 2024, 12:50 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	10.5 MHz							
Virtual Height of F2 layer (h`F2)	290 km							
Total Electron Content (TEC)	43 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)	10.7	11.3	12.5	14.4	16.6	18.9	24.0	27.2
FOT (MHz)	9.1	9.1	10.6	12.4	14.1	16.1	20.4	23.1

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

LOCAL GEOMAGNETIC CONDITIONS

K-index	0 (Quiet)
Total Field (F) (Son/Isb)	45638/50648 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	175
Solar radio flux (F10.7)	190 sfu
Solar wind speed	479.6 km/s (varied in the past 24 hrs between 397 & 542 km/s)
Solar x-ray flares	C2.9 (max flare in the past 24 hrs (M5, 0331 UT))
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+5.5 nT (varied in the past 12 hrs between +4.8 nT & +6.3 nT) -1.5 nT (varied in the past 12 hrs between -4.2 nT & +1.8 nT)

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

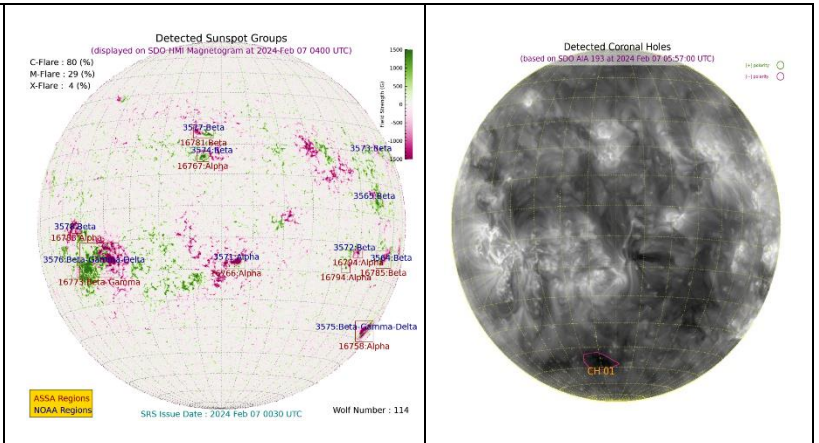
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 7 February 2024

There are two active regions AR3575 and AR3576 present on the Sun capable of producing strong M and X-class solar flares having chances of 29% and 4% respectively.

01 Coronal Hole (CH) is detected on the solar disk.



DISCUSSION:

Solar activity is expected to be at low to moderate levels. Multiple M-class solar flares have already occurred from the regions mentioned. 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 to prevail due the presence of coronal hole. Geomagnetic activity is expected to be quiet. HF conditions are slightly enhanced.