

Daily Space Weather Summary (SUPARCO)

Thursday, January 04, 2024, 12:52 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	10.0 MHz							
Virtual Height of F2 layer (h`F2)	280 km							
Total Electron Content (TEC)	40 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)	8.1	8.5	9.8	11.7	13.7	15.8	20.5	27.9
FOT (MHz)	6.9	7.2	8.4	9.9	11.7	13.4	17.4	23.7

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)	45618/50628 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	63
Solar radio flux (F10.7)	140 sfu
Solar wind speed	441.5 km/s (varied in the past 24 hrs between 416 & 494 km/s)
Solar x-ray flares	C1.4 (max flare in the past 24 hrs (M3, 0155 UT))
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+5.2 nT (varied in the past 12 hrs between +5.7 nT & +9.3 nT) +1.7 nT (varied in the past 12 hrs between -3.5 nT & +5.7 nT)

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

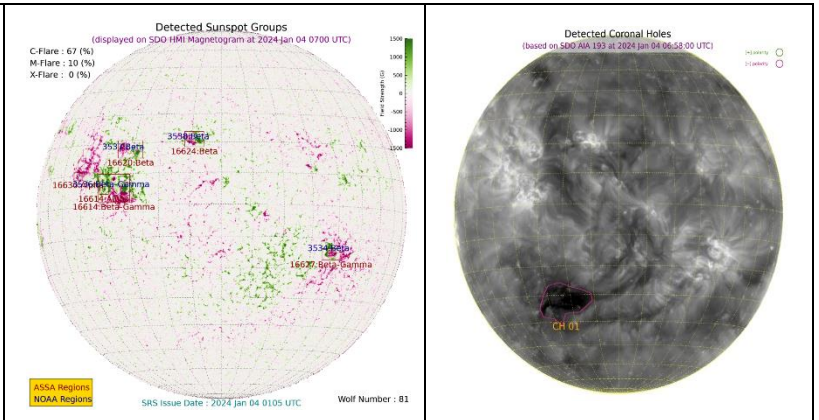
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 4 January 2024

There is one active region AR3536 present on the Sun capable of producing strong C and M-class solar flares having chances of 67% and 10% 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 flares have already occurred from the region present on the solar limb. In case of more M/X-class solar flares, radio blackouts may be observed. Moderate to slightly elevated solar wind speed is expected to prevail due to the combined effect of CME and coronal hole. Quiet to unsettled geomagnetic activity is expected. HF conditions are slightly elevated.