Daily Space Weather Summary (SUPARCO)

Monday, January 23, 2023, 12:49 PST

SUPARCO

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)	52 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	1 (Quiet)
Total Field (F) (Son/Isb)	45525/50035 nT

The local geomagnetic field is quiet at the moment.

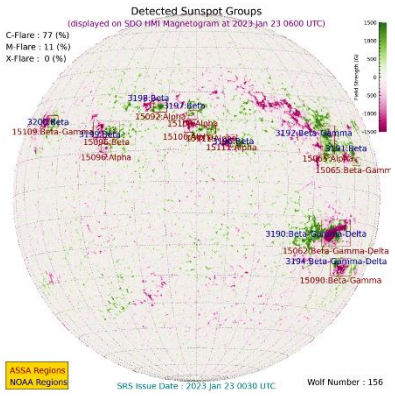
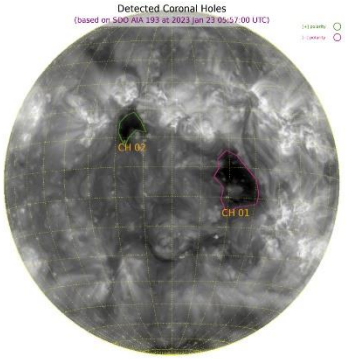
LATEST SOLAR CONDITIONS	
Sunspot Number (SN)	166
Solar radio flux (F10.7)	209 sfu
Solar wind speed	504.7 km/s (varied in the past 24 hrs between 346 & 554 km/s)
Solar x-ray flares	C2.2 (max flare in the past 24 hrs: M1, 1702 UT)
Interplanetary Magnetic Field (IMF) **Total Field (Bt)** **Z Component of Field (Bz)**	+9.2 nT (varied in the past 12 hrs between +5.5 nT & +10.8 nT) -6.6 nT (varied in the past 12 hrs between -3.4 nT & +10.3 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: 23 January 2023

There are three active regions AR3190, AR3192 and AR3194 present on the Sun capable of producing strong C and M-class solar flares having chances of 77% and 11% respectively. 02 Coronal Holes (CHs) are 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. Light to slightly elevated solar wind speed and quiet geomagnetic activity is expected. HF conditions are enhanced.