Daily Space Weather Summary (SUPARCO)

Tuesday, February 14, 2023, 12:54 PST

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)	
Critical Frequency of F2 layer (foF2)	13.2 MHz
Virtual Height of F2 layer (h`F2)	335 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)	13.3	14.4	15.7	17.5	19.6	21.9	27.2	33.3
FOT (MHz)	11.3	12.2	13.3	14.9	16.7	18.6	23.1	28.3

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.

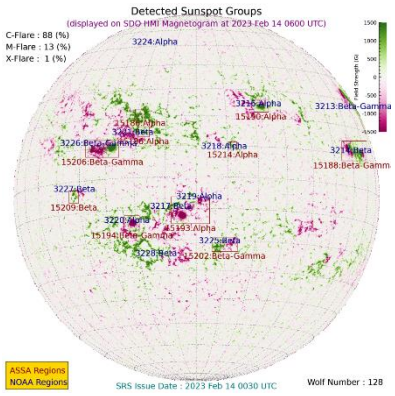
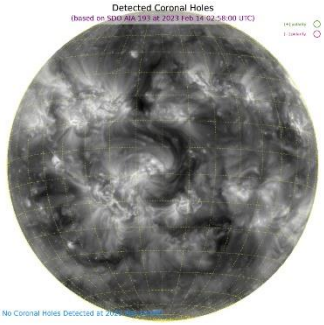
LATEST SOLAR CONDITIONS	
Sunspot Number (SN)	185
Solar radio flux (F10.7)	189 sfu
Solar wind speed	378 km/s (varied in the past 24 hrs between 338 & 412 km/s)
Solar x-ray flares	C3.3 (max flare in the past 24 hrs (M1, 0203 UT)
Interplanetary Magnetic Field (IMF) **Total Field (Bt)** **Z Component of Field (Bz)**	+3.1 nT (varied in the past 12 hrs between +1.4 nT & +4.9 nT) +0.6 nT (varied in the past 12 hrs between -2.2 nT & +1.9 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: 14 February 2023

There is two active regions AR3213 and AR3226 present on the Sun capable of producing strong M and X-class solar flares having chances of 13% and 1% 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 to moderate solar wind speed and quiet geomagnetic activity is expected to prevail. HF conditions are enhanced.