Daily Space Weather Summary (SUPARCO)

Thursday, June 22, 2023, 12:42 PST

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)	
Critical Frequency of F2 layer (foF2)	11.0 MHz
Virtual Height of F2 layer (h`F2)	298 km
Total Electron Content (TEC)	49 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)	11.2	11.6	13.1	15.1	17.5	19.9	25.4	28.3
FOT (MHz)	9.5	9.9	11.1	12.8	14.9	16.9	21.6	24.1

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

LOCAL GEOMAGNETIC CONDITIONS	
K-index	0 (Quiet)
Total Field (F) (Son/Isb)	45514/50024 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS	
Sunspot Number (SN)	190
Solar radio flux (F10.7)	176 sfu
Solar wind speed	449.6 km/s (varied in the past 24 hrs between 444 & 485 km/s)
Solar x-ray flares	C2.3 (max flare in the past 24 hrs (M1, 1244 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+6.6 nT (varied in the past 12 hrs between +6.3 nT & +7.8 nT) -5.2 nT (varied in the past 12 hrs between -4.8 nT & +1.5 nT)

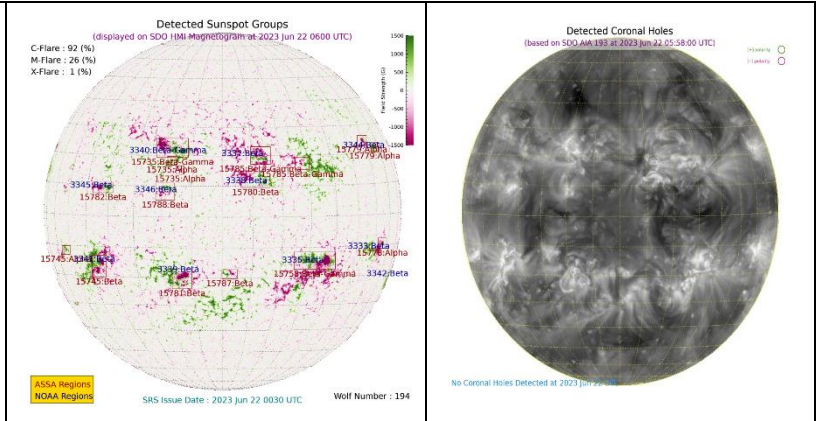**Solar conditions are at low to moderate levels with background X-ray flux at C-class level.**

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

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

Daily Sun: 22 June 2023

There is one active region AR3340 present on the Sun capable of producing strong M and X-class solar flares having chances of 26% and 1% respectively.

03 Coronal Holes (CHs) are detected on the solar disk.

Detected Sunspot Groups
(displayed on SDO HMI Magnetogram at 2023 Jun 22 0600 UTC)
C-Flare : 92 (%)
M-Flare : 26 (%)
X-Flare : 1 (%)
SRS Issue Date : 2023 Jun 22 0030 UTC
Wolf Number : 194

Detected Coronal Holes
(based on SDO AIA 193 at 2023 Jun 22 05:58:00 UTC)
No Coronal Holes Detected at 2023 Jun 22

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 normal.