Daily Space Weather Summary (SUPARCO)

Monday, October 07, 2024, 14:45 PST

SUPARCO

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)	
Critical Frequency of F2 layer (foF2)	14.4 MHz
Virtual Height of F2 layer (h`F2)	378 km
Total Electron Content (TEC)	78 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)	14.5	14.8	16.1	17.9	20.1	22.5	28.3	36.0
FOT (MHz)	12.3	12.6	13.7	15.2	17.1	19.1	24.1	30.6

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

LOCAL GEOMAGNETIC CONDITIONS	
K-index	2 (Quiet)
Total Field (F) (Son/Isb)	45615/51728 nT

The local geomagnetic field is quiet at the moment.

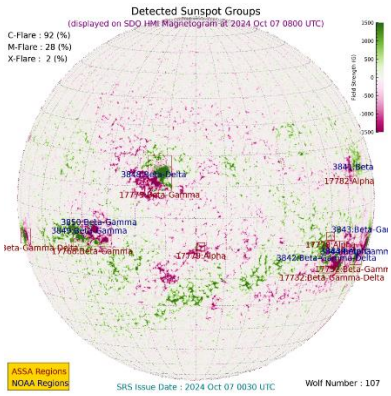
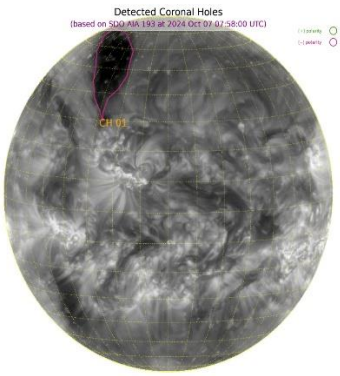
LATEST SOLAR CONDITIONS	
Sunspot Number (SN)	167
Solar radio flux (F10.7)	265 sfu
Solar wind speed	480.0 km/s (varied in the past 24 hrs between 623 & 368 km/s)
Solar x-ray flares	C6.6 (max flare in the past 24 hrs (M1, 2119 UT)
Interplanetary Magnetic Field (IMF) **Total Field (Bt)** **Z Component of Field (Bz)**	+11.24 nT (varied in the past 12 hrs between +8.79 nT & +13.76 nT) -0.3 nT (varied in the past 12 hrs between -11.14 nT & +3.58 nT)

Solar conditions are at 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: 7 October 2024

There are six active regions AR3842, AR3843, AR3844, AR3848, AR3849 and AR3850 present on the Sun capable of producing strong C and M-class solar flares having chances of 28% and 2% respectively. 01 Coronal Hole (CH) is detected on the solar disk.		

DISCUSSION:

Solar activity is expected to be at moderate levels. Multiple M-class solar flares, have already occurred from the regions present on the solar limb. In case of more M/X-class solar flares, minor to moderate radio blackouts may be observed. Low to moderate solar wind speed and quiet to unsettled geomagnetic conditions are expected. HF conditions are enhanced.