Daily Space Weather Summary (SUPARCO)

Thursday, October 17, 2024, 14:24 PST

SUPARCO

Radio Blackouts			Solar Radiation Storms			Geomagnetic Storms		
-24 Hr	Current	Predicted	-24 Hr	Current	Predicted	-24 Hr	Current	Predicted
R0	R0	R0 - R1	S0	S0	S0	G0	G0	G0

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)	
Critical Frequency of F2 layer (foF2)	14.4 MHz
Virtual Height of F2 layer (h`F2)	318 km
Total Electron Content (TEC)	70 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.

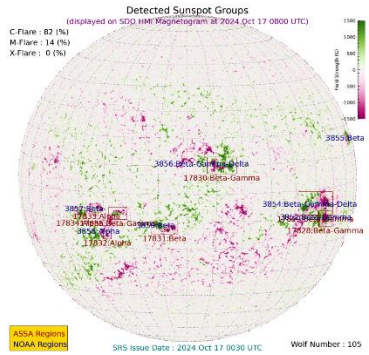
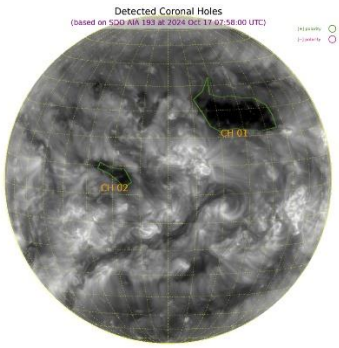
LOCAL GEOMAGNETIC CONDITIONS	
K-index	2 (Quiet)
Total Field (F) (Son/Isb)	45675/50714 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS	
Sunspot Number (SN)	135
Solar radio flux (F10.7)	172 sfu
Solar wind speed	407.7 km/s (varied in the past 24 hrs between 373 & 500 km/s)
Solar x-ray flares	C1.9 (max flare in the past 24 hrs (M2, 0505 UT)
Interplanetary Magnetic Field (IMF) **Total Field (Bt)** **Z Component of Field (Bz)**	+6.46 nT (varied in the past 12 hrs between +5.09 nT & +7.42 nT) +5.13 nT (varied in the past 12 hrs between -4.78 nT & +5.97 nT)

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

Daily Sun: 17 October 2024

There are three active regions AR3852, AR3854 and AR3856 present on the Sun capable of producing strong C and M-class solar flares having chances of 82% and 14% respectively. 02 Coronal Holes (CHs) are detected on the solar disk.		

DISCUSSION:

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

Credits:

Solar conditions courtesy to SOHO, DSCOVR and GOES-16 missions.
NOAA SWPC is acknowledged for solar radio flux conditions.
Korean Space Weather Centre is acknowledged for solar disk and coronal hole images.

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

RSG SCALES

Radio Blackouts				
Minor	**Moderate**	**Strong**	**Severe**	**Extreme**
R1	**R2**	**R3**	**R4**	**R5**

Solar Radiation Storms				
Minor	**Moderate**	**Strong**	**Severe**	**Extreme**
S1	**S2**	**S3**	**S4**	**S5**

Geomagnetic Storms				
Minor	**Moderate**	**Strong**	**Severe**	**Extreme**
G1	**G2**	**G3**	**G4**	**G5**