Daily Space Weather Summary (SUPARCO)

Thursday, October 31, 2024, 15:11 PST



	Radio Blackouts			Solar Radiation Storms			Geomagnetic Storms		
-24	4 Hr	Current	Predicted	-24 Hr	Current	Predicted	-24 Hr	Current	Predicted
R 1/	/ R2	R0	R1 - R2	S0	S1	S 1	G0	G0	G0 / G1

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)									
Critical Frequency of F2 layer (foF2)				13.5 MHz					
Virtual Height of F2 layer (h`F2)				295 km					
Total Ele	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)	13.6	14.1	15.9	18.4	21.1	24.0	30.6	37.3	
FOT (MHz)	11.6	12.0	13.5	15.6	17.9	20.4	26.0	31.7	

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)	45674/50714 nT				

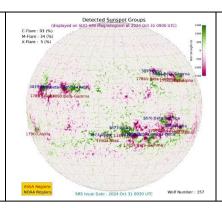
The local geomagnetic field is quiet at the moment.

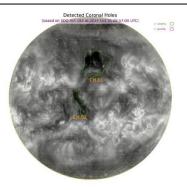
LATEST SOLAR CONDITIONS					
Sunspot Number (SN)	200				
Solar radio flux (F10.7)	270 sfu				
Solar wind speed	549.0 km/s (varied in the past 24 hrs between 447 & 622 km/s)				
Solar x-ray flares	M1.1 (max flare in the past 24 hrs (M7, 2053 UT)				
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+6.44 nT (varied in the past 12 hrs between +6.09 nT & +7.45 nT) +3.06 nT (varied in the past 12 hrs between -3.91 nT & +6.28 nT)				
Solar conditions are at high levels with background X-ray flux at M-class level.					

Daily Sun: 31 October 2024

There are four active regions AR3869, AR3874, AR3876 and AR3878 present on the Sun capable of producing strong M and X-class solar flares having chances of 34% and 5% respectively.

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





DISCUSSION:

Solar activity is expected to be at high levels. Few M-class solar flares, have already occurred from the regions present on the solar disk. In case of more M/X flares, minor to moderate radio blackouts may be observed. Solar wind speed is expected to be at moderate to slightly elevated levels. Geomagnetic activity is expected to be at quiet to unsettled levels. 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			