

Daily Space Weather Summary (SUPARCO)

Thursday, December 21, 2023, 12:51 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)								
Critical Frequency of F2 layer (foF2)		9.4 MHz						
Virtual Height of F2 layer (h`F2)		272 km						
Total Electron Content (TEC)		37 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)	9.5	9.9	11.3	13.3	15.6	17.8	22.8	27.4
FOT (MHz)	8.1	8.4	9.6	11.3	13.3	15.1	19.4	23.3
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)		45605/50615 nT						
The local geomagnetic field is quiet at the moment.								
LATEST SOLAR CONDITIONS								
Sunspot Number (SN)		133						
Solar radio flux (F10.7)		195 sfu						
Solar wind speed		402.6 km/s (varied in the past 24 hrs between 387 & 559 km/s)						
Solar x-ray flares		C2.4 (max flare in the past 24 hrs (M4, 0538 UT))						
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)		+4.1 nT (varied in the past 12 hrs between +3.6 nT & +4.7 nT) -2.5 nT (varied in the past 12 hrs between -2.4 nT & +1.1 nT)						
Solar conditions are at low to moderate level with background X-ray flux at C-class level.								

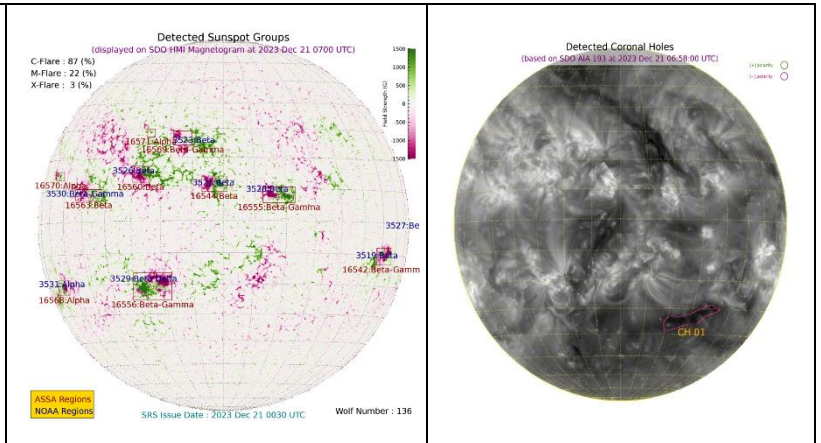
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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

Daily Sun: 21 December 2023

There are two active regions AR3529 and AR3530 present on the Sun capable of producing strong M and X-class solar flares having chances of 22% and 3% respectively.

01 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. HF conditions are normal.