3-day Space Weather Conditions (SUPARCO)

Friday, July 06, 2018, 1230PST

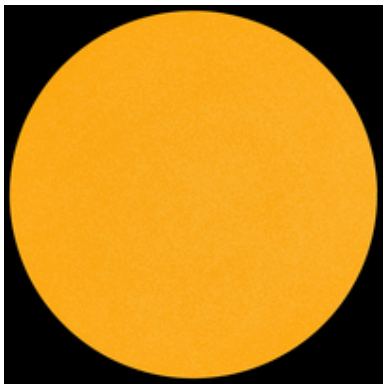
DATE	6-Jul-18 (noon)	7-Jun-18 (noon)	8-Jul-18 (noon)
LOCAL CURRENT IONOSPHERIC CONDITIONS OVER PAKISTAN			
foF2	ISL/SON: 6.5/6 MHz	9/8 MHz	11/10 MHz
h'F2	ISL/SON: 315/330 km	310/320 km	300/310 km
MUF	ISL/SON: 19/18 MHz	27/24 MHz	30/30 MHz
TEC	ISL/SON: 16/15 TECU	22/20 TECU	21/19 TECU
Local ionospheric conditions are nominal with mildly depressed MUF conditions. It is advised to use a higher frequency band in case of HF communication difficulty.			
LOCAL GEOMAGNETIC CONDITIONS OVER PAKISTAN			
K-index	1	1	1
F	ISL/SON: 49824/45319 nT	49800±30 /45290±30 nT	49800±20/45290±30 nT
D	ISL/SON: 0.65/0.56 degrees	0.65 /0.56 degrees	0.65/0.56 degrees
The local geomagnetic field is quiet at the moment.			
SOLAR CONDITIONS			
SN	0	2 (SSN-predicted)	2 (SSN-predicted)
F 10.7	68 sfu	68 sfu	70 sfu
V_{SW}	434 km/sec (varied in the past 12 hrs between 406 & 434 km/s)	Moderate solar wind expected	Low solar wind expected
Solar flares	A 2.6 (max. flare in the past 24 hrs: A 2.0 0858 UT Jul 06)	Very Low levels of solar flare activity expected	Very Low levels of solar flare activity expected
IMF Bt Bz	5.7 nT (varied in the past 12 hrs between 2.99 & 7.13 nT) +3.6 nT (varied in the past 12 hrs between -4.4 & +3.6 nT)	Expected to vary between positive and negative sectors.	Expected to vary between positive and negative sectors
Solar conditions are at <u>very low</u> levels with background X-ray flux at A-class levels. Local HF working frequencies are <u>normal</u> as compared to monthly average predicted values.			

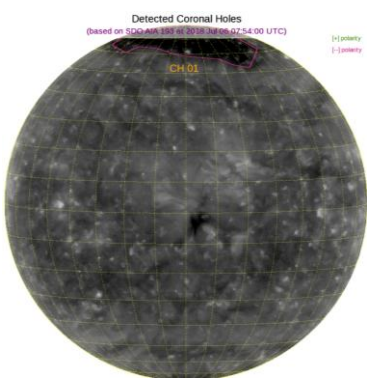
Daily Sun: 6 July 2018

There are no active regions on the Sun as the Sun is currently spotless.

(Credit: discerned from solar image processed and analysed by SUPARCO)

01 CH is visible on the solar disk.





2-Day Conditions

Solar activity is expected to remain at very low levels over the weekend.
Quiet to unsettled geomagnetic conditions are expected over the weekend.
Normal HF conditions are expected over the weekend.

ANNEXURE

	DEFINITIONS OF TERMINOLOGIES USED IN THIS SUMMARY
foF2	Maximum frequency of F2-layer of the ionosphere
h'F2	Virtual height of the F2-layer
MUF	Maximum usable frequency for 3000 km
K-index	Local index defining geomagnetic conditions
Declination	Planetary A index defining geomagnetic conditions, predicted value during geomagnetic unsettled conditions
F	Magnitude of the total geomagnetic field vector (unit in nano Teslas)
SON, difference	Sonmiani Geomagnetic Observatory mean value, difference limit from night time value of quiet conditions: 25-30 nT, max: 260 nT
ISP	Islamabad Geomagnetic Observatory mean value
SN	Relative sunspot numbers
Vsw	Solar Wind Speed (km/s)
F10.7	Solar radio flux at 2.8 GHz (10.7 cm wavelength)
sfu	Solar flux unit (defines the solar radio 10.7 cm flux)
Solar Flare	Could be B, C, M and X depending upon the intensity of x-rays being emitted (each type has further 10 classes based on amount of energy released by the flare)
IMF	Interplanetary magnetic field (the source of which is the Sun)
Bt	Total IMF (unit in nano Teslas)
Bz	Vertical component of IMF (could be north/upward/positive or south/downward/negative) (unit in nano Teslas)
AR	Active Regions on the sun currently in view
CME	Coronal Mass Ejection
CH	Coronal Hole
KASI	Korean Astronomy & Space Science Institute
SWFs	Short-wave fadeouts, caused by M/X class flares on the daylit side of the hemisphere absorbing lower frequencies and hampering HF communication.
SSN-predicted	Smooth Sunspot Number-it is an estimated value using a mathematical relation to forecast it.

For information on radio blackout levels, please follow the link:
http://www.swpc.noaa.gov/noaa-scales-explanation

Acknowledgements:

Images source: Solar Dynamics Observatory-SDO) Both images showing the Solar disk and Coronal Holes have been processed at SUPARCO using Automatic Solar Synoptic Analyzer (ASSA), developed jointly by the Korean Space Weather Centre of the Radio Research Agency (RRA) & Space Environment Laboratory (SELab).

Data sources: The planetary indices and solar data are taken from the URLs below:
http://www.spaceweather.go.kr
http://www.sws.bom.gov.au
http://www.solarmonitor.org

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