

SPACE WEATHER INFORMATION AND FORECAST SERVICES
(SWIFtS)

WEEKLY SPACE WEATHER NEWS

Periode: October 21st – 27th , 2016

SOLAR ACTIVITY

For this whole week, Sun is quiet. No C-classes or larger flare occurred. Earlier on this week, two ARs appeared on the Sun (NOAA 2602 & 2603), but only NOAA 2603 remain on the Sun, also remain stable for the whole week and moving toward west limb. No significant events occurred from the Sun, so the Sun activity tends to be quiet for this past week.

For the past week, flux of high energy proton was far below threshold so that the activity level is quiet.

GEOMAGNETIC ACTIVITY

Geomagnetic activities during October 21st – 27th was experienced a quite long duration minor storm, marked with a gradually decreased Dst Index. This gradual decrease on Dst index occurred at 24 October 2016 which is caused by fast stream from geoeffective coronal hole. Minimum Dst index was -61 nT with Kp index maximum reached 6 on 25 October 2016. Maximum local K index from Agam Station reached 5 at the same time. This geomagnetic disturbance has continued until this weekend, though with a tendency to recover. Substorm occurrence along this week, has a long duration with the highest intensity more than 2000 nT on 25 October 2016. It also caused the electron flux to increase to very high level and still continue until today.

IONOSPHERIC CONDITIONS

Ionosphere conditions in this week were in quiet, moderate and strong disturbances level. The strong level disturbances in the ionosphere was occurred at 27th October due to the depression of critical frequencies of F/F2 layers (*foF2*). The *foF2* depressions were impacted to the radiowave propagation over the ionosphere which known as the Radio Blackout. Although the *foF2* experienced depression, the minimum frequencies (*fmin*) of the ionosphere in this week were in normal conditions. There was no increment of *fmin* that could be a source of disturbance in the HF radio communication which known as Shortwave Fadeout (SWF). The occurrences of *Spread-F* was noted appeared in one day which is in 27th October 2016. This occurrences of *Spread-F* could be a source of *Fading* disturbances for HF Radio communication. Beside the *Spread-F*, the *E-Sporadic* reported always occurred every days in this week and with values of the critical frequency (*foEs*) below the *foF2* values. Based on the observations using GISTM over Bandung, the scintillation (*S4*) condition for this week were quiet to minor level. In this week the error positioning conditions were in medium to slightly levels conditions.

*For daily space weather information and forecast, please refer to our **Space Weather Information and Forecast Services (SWIFtS)** official website at swifts.sains.lapan.go.id or please e-mail us for request by facsimile*



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