**SPACE WEATHER INFORMATION AND FORECAST SERVICES**
**(SWIFtS)**
**WEEKLY SPACE WEATHER NEWS**
Periode: 07 October – 13 October 2016

## SOLAR ACTIVITY

For the last week, the sun has been in quiet level. During those period, there were only 3 active regions on the solar disk: NOAA 2598, 2598, 25600, 2601 and 2602. All regions were having simple magnetic configuration and stable.According to software package CACTus in the last week several CMEs were detected with low velocity. Solar activity for the next week is predicted to be in quiet to less eruptive level.

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

## GEOMAGNETIC ACTIVITY

Geomagnetic activities during October, 7th – 13th 2016 were in quiet level. Active level happened when the maximum of K index reached 4 from Station of Agam on October 10, 2016. The minimum of Dst index reached -27 nT on October 7, 2016. Substorms occurred with intensity less than 1000 nT at October, 7th – 10th 2016. The geoeffective coronal holes were at northern and equator hemisphere started from October, 7th - 13th 2016. There were some geoeffective CMEs with width angle less than 900 on October 7th, 8th, 8th, and 11th, 2016 Electron flux were in low to very high condition. The very high condition of electron flux occurred on October, 7th 2016 due to geoeffective coronal holes for several days earlier.

## IONOSPHERIC CONDITIONS

Ionosphere conditions in this week were in quiet to strong disturbances level.

The strong level disturbances in the ionosphere was occured at 11th 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 12th 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 Biak, the scintillation (*S4*) condition for this week were between quiet to strong level. These conditions of scintillation could lead to the quiet until medium levels of *loss of lock*. Although the S4 were fluctuated, the error positioning conditions were in quiet 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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