

**SPACE WEATHER INFORMATION AND FORECAST SERVICES
(SWIFtS)**

WEEKLY SPACE WEATHER NEWS

Periode: November, 4th – November 10th, 2016

SOLAR ACTIVITY

For this whole week, the Sun is very quiet. No C-classes or larger flare occurred. For the whole week, only three simple ARs appeared on the Sun (NOAA 2605, 2606 & 2607), but only with low activity for the whole week. 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 November 4th – November 10th, 2016 was in quiet condition. Dst index minimum was -25 nT on 4 November 2016 with Kp index maximum reached 2. Local K index maximum from Pamengpeuk Station reached 3. As for solar wind condition during the week, the speed appeared to be decreased to normal speed of solar wind, however the density seemed to increase a few times and reached 50 /cm³. The effect of the increment of solar wind density was not affect the Earth especially at low latitude to equator region. Substorm occurrence along this week, was occurred twice with intensity less than 500 nT with such a short duration.

IONOSPHERIC CONDITIONS

In this week, the ionosphere condition were vary from quiet to strong level of disturbances. The strong condition was occurred on November 10, 2016, the moderate disturbances occurred on November 6 and 7, 2016., on other days in this week, ionospheric condition was quiet. The disturbances occurred due to a decrement of critical frequencies of F/F2 layer (*foF/foF2*). The decrement of *foF/foF2* affects the radiowave propagation in ionosphere which known as Radio Blackout. Although the *foF/foF2* decrease, the minimum frequencies (*fmin*) of the ionosphere in this week were in normal conditions. There were 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* were noted appeared on November 6 and 7, 2016 in high level also November 8, 2016 in slight level. This occurrences of *Spread-F* could be a source of *Fading* disturbances for HF Radio communication. Beside the *Spread-F*, the *E-Sporadic* reported almost occurred every days in this week and with values of the critical frequency (*foEs*) below and sometimes above the *foF2* values. Based on the observations using GISTM over Bandung, Manado, and Biak, the scintillation (*S4*) condition for this week were quiet. In this week the error positioning conditions were in normal levels conditions and lost of lock were quiet.

*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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