

SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

WEEKLY SPACE WEATHER NEWS

Periode: August, 12th – August, 18th 2016

SOLAR ACTIVITY

In the past week, solar activity is at the eruptive level with the occurrence of C1.1 flare on August 14th and 15th, 2016, peaked at 19:36 UT and 00:23 UT, respectively, from the east limb of the solar disk. There are 6 active regions with the spot in the past week. The source of most of B-class flares and those C-class flares that occurred in the past week was NOAA 2578. Several type III solar radio bursts also detected in the past week with one of them related to B-flare event. Also recorded by CACTUS, five times coronal mass ejection with the highest angular width was 44 degree. For the next week, solar activity is expected at the level of quiet with the small chance of reaching eruptive level.

GEOMAGNETIC ACTIVITY

Geomagnetic activities along this week from August 12th, 2016 to August 18th, 2016 were on quiet level. The minimum Dst index was -27 nT on August, 12th 2016 and the maximum Kp index reached 4 while K index from Station of Agam showed 2 means quiet condition. A long this week there were geoeffective coronal holes, thus affected high latitude disturbance showed by Kp index. There was no CME with angular width more than 90⁰ in this week. In a week, there were substorms as a result of geoeffective coronal holes. The biggest one occurred on August, 12th 2016 with intensity <1500 nT for 19 hours and the others ones <500 nT and <1000 nT.

IONOSPHERIC CONDITIONS

For the couple days in this week, the ionosphere were in strong disturbance conditions but dominantly in quiet conditions

The disturbances in the ionosphere occurred at 16th to 17th August due to the depression of critical frequencies of F/F2 layers (f_oF_2) for more than 4 hours after midnight. The f_oF_2 depressions impacting to the radiowave propagation over the ionosphere which known as the Radio Blackout. Although the f_oF_2 experienced one day depression, the minimum frequencies (f_{min}) of the ionosphere in this week were in normal conditions. There was no increment of f_{min} 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 appear in several days. This occurrences of *Spread-F* could be a source of *Fading* disturbances for HF Radio communication. Beside the *Spread-F*, the *E-Sporadic* also reported always occurred during all days with values of the critical frequency (f_oE_s) could reach above the f_oF_2 values. This occurrences of *E-Sporadic* could be a positive impact especially when the depression of f_oF_2 occurred. Based on the observations using GISTM over Biak, the scintillation (S_4) condition for this week were in quiet level. These conditions of scintillation could lead to the quiet levels of *loss of lock*. The maximum average value of W index in this week were 2. Those values indicated that the error positioning parameters could be in to the slight scale of disturbance 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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