

SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

WEEKLY SPACE WEATHER NEWS

Periode: August, 19th – August, 25th 2016

SOLAR ACTIVITY

For this whole week, Sun is quiet. No C-classes or larger flare occurred. Since the disappearance of several active regions for the earlier crowded active regions (5 ARs) on this week (19th to 20th of August), on 21st only two active regions left, with NOAA 2576 already on the west limb. On 23th of August, two new active regions appeared. And for the past of the week, three active regions remain (NOAA 2578, NOAA 2579 and NOAA 2580) with tendency to remain stable for the past of the 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 at the beginning of the week from August 19th, 2016 to August 25th, 2016 were on quiet level. Geomagnetic disturbance in active level occurred on 23 - 25 August 2016. The minimum Dst index was -80 nT on August, 23th 2016 at 22:00 UT and the maximum Kp index reached 5 while K index from Station of Agam showed 4 means active 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, 23th – 25th 2016 with intensity <1000 nT for 11 hours and the others ones lasted for 3-5 hours.

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 (*foF/F2*) for more than 4 hours after midnight. The *foF/F2* depressions impacting to the radiowave propagation over the ionosphere which known as the Radio Blackout. Although the *foF/F2* experienced one day 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* 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 (*foEs*) could reach above the *foF/F2* values. This occurrences of *E-Sporadic* could be a positive impact especially when the depression of *foF/F2* occurred. Based on the observations using GISTM over Biak, the scintillation (*S4*) 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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