

SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

WEEKLY SPACE WEATHER NEWS

Period: 17 – 23 June 2016

SOLAR ACTIVITY

There were five active regions during past week, NOAA 2553, 2555, 2556, 2557, and 2558. Only one flare occurred earlier on this week, C1.7.5 (19/06 11:58 UT) from NOAA 2558. Three type III radio burst also occurred. For the remaining past of the week, the Sun remained quiet due to less activities from the remaining sunspots. Several coronal mass ejections were also detected by CACTUS system, and only one of them categorized as halo CME, occurred at 20/06 16:36 UT. For the next week, Solar activity is expected remain quiet

GEOMAGNETIC ACTIVITY

Geomagnetic activity during June 17th, 2016 to June 24th, 2016 was on quiet level. Lowest Dst index was -10 nT on June 18th, 2016 at 05:00 UT. The maximum Kp index reached 4 on June 22nd, 2016 which means active level at high and mid latitude regions. The highest K index from Agam Geomagnetic Station was 3 at the third of 3 hours (around 06:00 – 09:00 LT) on June 17th, 2016 which means quiet geomagnetic conditions while Sumedang Geomagnetic Station monitored the geomagnetic K index reached 2 on the same day which states the geomagnetic conditions was also on quiet level. Substorm occurrence with its greatest intensity was <1000 nT monitored on June 17th, 2016 to June 18th, 2016 and lasted for 17 hours, another substorm occurred on June 22nd, 2016 that lasted for 12 hours and the other ones occurred 3 times on June 23rd, 2016 took 4 hours, 5 hours duration and the last is still on going. Substorms and disturbance that occurred at high and mid latitude region were caused by geoeffective coronal holes at near equator that moves westward from June 18th, 2016 to June 22nd, 2016.

IONOSPHERIC ACTIVITY

In this week, the ionospheric were in quiet to strong conditions.

The strong conditions occurred at 21st and 22nd June 2016 due to the depression of F/F_2 critical frequencies (f_oF_2) more than 30% from it's median values more than 2 hours. So there was interferences on HF radio communication. There was no increment of minimum frequencies (f_{min}) which is a source of *Shortwave Fadeout (SWF)* disturbance. However there was occurrence of *Spread-F* in several days that could be a source of Fading disturbance. The E-Sporadic also reported occurred in several days. The 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 (S4)* condition for this week mostly were in quiet level. These conditions of *scintillation* could lead quiet levels of *loss of lock*. The value of W index in this week mostly were less than equals ± 2 . Those values could affecting to the error positioning parameters into 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*



Space Science Center
Deputy of Space and Atmospheric Science
Indonesian National Institute of Aeronautics and Space (LAPAN)
Jl. Dr. Djundjunan 133 Bandung 40173
Ph../Fax. (022) 6012602/6014998
E-mail: swifts@lapan.go.id

