

SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

WEEKLY SPACE WEATHER NEWS

Periode: December 16th – 22th, 2016

SOLAR ACTIVITY

Over the past week, solar activity at the quiet level. No flares occurred bigger than B-class and only three B-class flares occurred from NOAA2617 (2 times) and NOAA2620 (1 time). Also twice type III solar radio bursts occurred. During this week, there are only three active regions appear in the solar disk, which is NOAA2618, NOAA2619 and NOAA2620. In fact, on December 17th and 18th, the is spotless solar disk. It is predicted solar activity is still at the quiet level in the next week.

GEOMAGNETIC ACTIVITY

Geomagnetic activities during Desember, 16th –22th 2016 were in quiet to active level. Active level (based on Dst index) occurred on Desember 21th, 2016 at 19 UT with the minimum of Dst index reached -33 nT. Active condition of Geomagnet due to high speed stream from geoeffective coronal hole that have occurred for a week. Substorm occurred in Desember, 16th-22th 2016 with intensity more than 2000 nT. The conditions of electron flux in this week were in low to high level.

IONOSPHERIC CONDITIONS

In this week, the ionospheric condition were quiet to strong level disturbance.

The disturbances due to the depression of $F/F2$ critical frequencies ($foF/F2$) more than 30% from it's median values. The depression of $foF/F2$ could disturbing the radiowave propagation over the ionosphere which known as the Radio Blackout. There was no increment of minimum frequencies ($fmin$) which is a source of *Shortwave Fadeout (SWF)* disturbance. However there was occurrence of *Spread-F* every day that could be a source of Fading disturbances except on Desember 18,2016 . The Sporadic-E also reported occurred in several days during day and nighttime. The occurances of Sporadic-E could be a positive impact especially when the depression of $foF/F2$ occurred. Based on the observations using GISTM over Biak and Bandung, the *scintillation (S4)* condition for this week were in quiet. These conditions of *scintillation* could lead quiet levels of *loss of lock*. The value of W index in this week were -1. Those values could affecting to the error positioning parameters into the normal 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. Djundjunaan 133 Bandung 40173
Ph../Fax. (022) 6012602/6014998
E-mail: swifts@lapan.go.id