

# SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

## BERITA CUACA ANTARIKSA MINGGUAN

Periode: 29– 4Februari2016

### AKTIVITAS MATAHARI

In general, solar activity during the past week was at the eruptive level. Recorded about 20 times C class flares. The maximum flares was C5.1 which occurred on February 04, 2016 peaked at 18:22 UT coming from NOAA 12494. There are 7 active regions with spots on the solar disk in the past week (NOAA 12488, 12489, ..., 12494). From those regions, NOAA 12494 is the most complex one which grew from a nearly spotless active region into beta-gamma-delta spot group in less than 24 hours. Filament eruption also occurred during the past week that caused the particle mass burst into interplanetary space. It also noted several CME hurled but with angular width below 90 degree. Solar activity is predicted still at the eruptive level for the next week with potential major flare came from an active region NOAA 12494.

### AKTIVITAS GEOMAGNET

Geomagnetic activity during the week, from 29 January 2016 – 4 February 2016 has encountered two times in conditions at the active level. The first active condition occurs on February 1<sup>st</sup> 2016 with peak at 08:00 UT, dst index reached -51 nT and K index form Pare-Pare station was 4 at that time. The second active condition occurs on February 3<sup>rd</sup> 2016 with peak at 05:00 UT, dst index reached -52 nT and K index form Pare-Pare station was 4 at that time. These active conditions are caused by high-speed plasma flows from the corona holes in the north side of the solar disc. IMF condition during storm was varied between -20 to 20 nT. Coinciding with the first active condition, a substorm has also occurred and lasted for 30 hours, begin on January 31<sup>st</sup> 2016 at 05:00 UT and finished on February 1<sup>st</sup> 2016 at 10:00 UT with Ae index show value < 1000 nT. And coinciding with the second active condition, a substorm has also occurred and lasted for 20 hours, begin on February 2<sup>nd</sup> 2016 at 14:00 UT and finished on February 3<sup>rd</sup> 2016 at 10:00 UT with Ae index show value < 1000 nT.

### IONOSPHERIC ACTIVITY

Ionospheric conditions for this week were in quiet conditions. The critical frequencies of Ionosphere and the minimum frequencies were in normal variations. There were not Spread-F events. However, the E-Sporadic occurred during daytime with maximum foEs up to 11.50 on February 2, 2016 at 13:30 LT. So, for this week HF Radio Blackout in quiet level and minor, SWF in slightly conditions and fading also in slightly disturbance conditions. Based on the observations using GISTM in Bandung, for this week it the scintillation was in quiet condition also. The quiet conditions related to the quiet levels of Loss of Lock. The peak of TEC values for this week were between 45 to 63 TECU with the maximum peak value was 62.36 TECU on February 2, 2016. The TEC value more than 50 TECU could affect the Error positioning for navigation application into the moderate disturbance conditions at January 30th, February 2nd and 3rd 2016.

*Untuk informasi prediksi cuaca antariksa harian dapat diakses melalui menu **Space Weather Information and Forecast Services (SWIFtS)** pada alamat [swifts.sains.lapan.go.id](http://swifts.sains.lapan.go.id) atau silahkan mengirimkan permintaan lewat e-mail jika menginginkan dikirim melalui faks*