

# SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

## WEEKLY SPACE WEATHER NEWS

Periode: February, 17<sup>th</sup> – 23<sup>th</sup> 2017

### SOLAR ACTIVITY

In general, Solar activity during this week at the quiet level. There are three active regions with spots appeared in the solar disk, i.e. NOAA 12636, NOAA 12637, and NOAA 12638. Only NOAA 12638 which start to appear on 21 February 2017 until now gives eruptive condition in the past few days while two other active regions give quiet condition. NOAA12638 produce 16 B-class flares and 2 C-class flares with the largest C4.1 flare occurred on February 22, 2017, peaked at 13:27 UT. NOAA12638 also continue to increase in the magnetic configuration, the area and McIntosh class that is still likely to generate C-class flares in the next week. No coronal mass ejection that is cause space weather disturbances on Earth.

For the next week, solar activity is expected at the quiet to eruptive level.

### GEOMAGNETIC ACTIVITY

Geomagnetic activities during February, 17<sup>th</sup> – 23<sup>th</sup> 2017 were in quiet level. The local K index from magnetometer in Kupang showed quiet level with maximum K index reached 3. The minimum Dst index was -37 nT on February, 17<sup>th</sup> 2017 and maximum Kp index was 4. On February 17<sup>th</sup> and 18<sup>th</sup> 2017, substorm occurred continuously with maximum intensity was  $\leq 1000$  nT and electron flux were in low conditions around 100 [cm<sup>2</sup>/sec/sr].

### IONOSPHERIC CONDITIONS

Ionosphere conditions in this week were dominantly in quiet level.

The Quiet level disturbances in the ionosphere was due to no depression of critical frequencies of  $F/F2$  layers ( $foF2$ ). The  $foF2$  depressions were impacted to the radiowave propagation over the ionosphere which known as the *MUF Depression*. There was no increment of  $fmin$  that could be a source of disturbance in the HF radio communication which known as *Shortwave Fadeout* (SWF) or *Radio Blackout* (RB). Based on the observations using GISTM over Bandung, Biak and Manado the scintillation ( $s4$ ) condition for this week were quiet level. Similar to the  $s4$  conditions, the error positioning conditions were between normal to slight levels conditions that determined by the index W values.



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