

Australian bushfire captured by AHI/Himawari-8 and SGLI/GCOM-C

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JAXA in collaboration with JMA provides geophysical parameters retrieved from the data obtained with AHI/Himawari-8. The wildfire product is one of the Himawari-8 products by JAXA. We developed a new wildfire product in 2019, which provides the fire radiative power (FRP) determined by performing the bi-spectral method to 2.3- and 3.9-micron data. About 60 % of the preliminary detected wildfire has agreed with the MOD6 fire products, and the statistical comparison of FRP shows a good agreement between the new product and MOD6.

SGLI is the optical sensor onboard the GCOM-C satellite which JAXA launched in Dec. 2017. SGLI has 11 channels for visible to near-infrared wave range, 6 channels for short-wavelength to thermal infrared wave range, and two polarization channels for visible and near-infrared wavelength. The spatial resolution is switchable between 250 m and 1 km except for some channels which have the 1 km of the resolution. SGLI observes land and the seas near land with the 250 m resolution and open ocean with the 1 km resolution.

The newly developed Himawari-8 wildfire product and SGLI have captured the Australian bushfire from September 2019 to early 2020. The fire radiative energy (FRE) and the burned biomass emission have been calculated based on retrieved FRPs. And a cumulative total of the burned area has been calculated from the fire fractions determined for FRP and compared the area estimated based on NDVI calculated with the SGLI data obtained with the 250 m resolution.

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