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Study of sulfur dioxide detection over East-Asian.

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Sulfur dioxide (SO₂) is the primary gas constituting the background atmosphere and is a colorless and pungent gas. SO₂ is a direct effect on the health as the pollutant and affects also the climate impact. According to SO₂ absorption on the mid-infrared spectrum from 6.25-9.09 μm , geostationary satellite is difficult in SO₂ detection because geostationary has insufficient number of channels. Recently, it is possible to detect the SO₂ using geostationary satellite due to an increase of number of channels. In this study, we apply the Brightness Temperature Differences (BTD) method and effective absorption optical depth ratios to Moderate Resolution Imaging Spectroradiometer (MODIS) satellite which has similar channels with Geo-KOMPSAT-2A (GK2A). And then, we evaluate the possibility of SO₂ detection using geostationary satellite, GK2A over East-Asian. This study will provide the sulfur dioxide detection algorithm using GK2A scheduled in 2018.