

ABSTRACT

Sugeng Waisal, ANALYSIS OF MERAPI SO₂ GAS CONCENTRATION FOR MOUNTAIN ERUPTION PREDICTION USING SENTINEL 5P SATELLITE, Telkom Purwokerto Institute of Technology, 2024.

SO₂ gas data obtained from the Sentinel 5P Satellite from July 1 2023 to July 30 2023 was processed using Google Earth Engine Software. Monitoring results show that SO₂ gas outbursts from Mount Merapi are quite fluctuating, where on 1 to 5 July 2023 it released a total of 3.66 tons of SO₂ gas, on 6 to 10 July 2023 it released a total of 1.13 tons of SO₂ gas, on 11 to 10 15 July 2023 released a total of 0.59 tonnes of SO₂ gas, on 16 to 20 July 2023 a total of 1.73 tonnes of SO₂ gas was released, on 21 to 25 July 2023 a total of 3.39 tonnes of SO₂ gas was released, and on 26 to 30 July 2023 releases a total of 1.33 tons of SO₂ gas. So that in total during July 2023, Mount Merapi released 11.83 gases. The data was then compared with the mountain level status table and showed that during July 2023 Mount Merapi was in Alert status.

Keywords: Sentinel 5P Satellite, SO₂ Gas, Mount Merapi.