

## A Database of Global Emission of SO<sub>2</sub> from Volcanoes in the Network for Observation of Volcanic and Atmospheric Change (NOVAC) 2005-2017

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### Abstract

We present a dataset of daily statistics of gas emission rate of SO<sub>2</sub> from volcanoes of NOVAC, the Network for Observation of Volcanic and Atmospheric Change. This is the result of re-analysis of ground-based scanning-DOAS remote sensing measurements of volcanic plumes on 32 volcanoes during the period 2005-2017. We used wind speed information from the ECMWF ERA-interim database and standardized routines for processing and validation of measurements, resulting in the largest available dataset of gas emission measurements on volcanoes using the same technique. Time-series are compared to historical reports, in particular to the Andres and Kasgnoc (1998) GEIA database, which has been the more widely used dataset used for estimations of global volcanic emission. We also present a comparison of NOVAC results with those obtained from satellite-based measurements of Aura/OMI sensor during the same period of time (Carn et al., 2017). Data is available through an open-access database of the NOVAC collaboration.

### References

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