

Continuous SO₂ flux measurements for Vulcano Island, Italy

Fabio Vita, Salvatore Inguaggiato, Nicole Bobrowski, Lorenzo Calderone, Bo Galle, Francesco Parella

Abstract

The La Fossa cone of Vulcano Island (Aeolian Archipelago, Italy) is a closed conduit volcano. Today, Vulcano Island is characterized by sulfataric activity, with a large fumarolic field that is mainly located in the summit area. A scanning differential optical absorption spectroscopy instrument designed by the Optical Sensing Group of Chalmers University of Technology in Göteborg, Sweden, was installed in the framework of the European project "Network for Observation of Volcanic and Atmospheric Change", in March 2008. This study presents the first dataset of SO₂ plume fluxes recorded for a closed volcanic system. Between 2008 and 2010, the SO₂ fluxes recorded showed average values of 12 t d⁻¹ during the normal sulfataric activity of Vulcano Island, with one exceptional event of strong degassing that occurred between September and December, 2009, when the SO₂ emissions reached up to 100 t d⁻¹.

Keywords

SO₂; Differential optical absorption spectroscopy; Vulcano Island; Network for Observation of Volcanic and Atmospheric Change

Full Text:

PDF

References

DOI: <https://doi.org/10.4401/ag-5759>

Published by INGV, Istituto Nazionale di Geofisica e Vulcanologia - ISSN: 2037-416X

USER

Username
 Password
 Remember me

MOST VIEWED

- OPERATIONAL EARTHQUAKE FORECASTING....
- ObsPy – What can it do for data...
- Twitter earthquake detection:...
- Magnitude and energy of earthquakes
- Comparison between low-cost and...

AUTHOR GUIDELINES





EARLY PAPERS

- ▶ Vol 61, 2018

FAST TRACKS

- ▶ Vol 56, Fast Track 1, 2013
- ▶ Vol 57, Fast Track 2, 2014
- ▶ Vol 58, Fast Track 3, 2015
- ▶ Vol 59, Fast Track 4, 2016
- ▶ Vol 59, Fast Track 5, 2016
- ▶ Vol 60, Fast Track 6, 2017
- ▶ Vol 60, Fast Track 7, 2017
- ▶ Vol 61, Fast Track 8, 2018

ARTICLE TOOLS

-  Indexing metadata
-  How to cite item
-  Email this article (Login required)
-  Email the author (Login required)

ABOUT THE AUTHORS

Geochimica, Palermo;
Università di Palermo,
Dipartimento Scienze
della Terra e del Mare,
Palermo
Italy

Salvatore Inguaggiato
Istituto Nazionale di
Geofisica e Vulcanologia,
Sezione di Palermo –
Geochimica, Palermo
Italy

Nicole Bobrowski
Istituto Nazionale di
Geofisica e Vulcanologia,
Sezione di Palermo –
Geochimica, Palermo,
Italy; University of
Heidelberg, Institute for
Environmental Physics,
Heidelberg,
Germany

Lorenzo Calderone
Istituto Nazionale di
Geofisica e Vulcanologia,
Sezione di Palermo –
Geochimica, Palermo
Italy

Bo Galle
Chalmers University of
Technology, Department
of Radio and Space
Sciences, Gotenburg
Sweden

Francesco Parelo
Università di Palermo,
Dipartimento Scienze
della Terra e del Mare,
Palermo
Italy

JOURNAL CONTENT

Search

Search Scope

All

Search

Browse

- [By Issue](#)
- [By Author](#)
- [By Title](#)

Journal Help

KEYWORDS

Central Italy
 Earthquake GPS
 Historical seismology
 Ionosphere Irpinia
 earthquake Italy Mt.
 Etna Seismic hazard
 Seismic hazard
 assessment
 Seismology UN/IDNDR
 earthquake
 earthquakes
 historical
 earthquakes
 ionosphere magnetic
 anomalies
 paleoseismology
 seismic hazard
 seismicity
 seismology

NOTIFICATIONS

- [View](#)
- [Subscribe](#)

INFORMATION

We log anonymous usage statistics. Please read the privacy information for details.

We use cookies to ensure that we give you the best experience on our website. If you continue to use this site we will assume that you are happy with it [\(Read more\)](#).

OK