

VSM from Taverna - Campi Flegrei 2004-2006

INGV

Abstract—

This RO contains the results of the geodetic inversion of the 2004-2006 InSAR data at Campi Flegrei (Italy) due to the action of a deep magmatic source.

Data can be also found in the following Research Object Link: http://sandbox.rohub.org/rodl/ROs/InSAR_CampiFlegrei20042006-release/DOI:10.5072/ro-id.F95NIHF8QA

The workflow included can be run in the Taverna Runner in the Virtual Research Environment provided by EVER-EST project <https://vre.ever-est.eu/supersites/> Link to the executable `VSM.exe.url` : <http://box.everest.psnec.pl/f/11ef876776/?raw=1> The VSM (Volcano Source Modeling) workflow models ground deformation source parameters. The VSM tool carries out this task by minimizing linear inversion cores by M. Sambridge. More details can be found in

This RO contains the results of the geodetic inversion of the 2004-2006 InSAR data at Campi Flegrei (Italy) due to the action of a deep magmatic source.

Data can be also found in the following Research Object Link: http://sandbox.rohub.org/rodl/ROs/InSAR_CampiFlegrei20042006-release/DOI:10.5072/ro-id.F95NIHF8QA

The workflow included can be run in the Taverna Runner in the Virtual Research Environment provided by EVER-EST project <https://vre.ever-est.eu/supersites/> Link to the executable `VSM.exe.url` : <http://box.everest.psnec.pl/f/11ef876776/?raw=1>

Index Terms— *geodetic data; unrest; Inversion methods; InSAR; volcanic source*

I. INTRODUCTION

This document provides a paper-style view of the Research Object (RO) “VSM from Taverna - Campi Flegrei 2004-2006”¹, which is a release generated on 01 March 2018 from the live RO “VSM from Taverna - Campi Flegrei 2004-2006”². The ROs have been created, managed and preserved via ROHub platform [1]. Please refer to [2] for a general introduction to the RO concept, to [3] for a detailed description of the RO model, and to [4] for more information about ROHub platform.

The RO is of type “Basic”, which represents a general aggregation of related resources.³

An overview of this RO is depicted in Figure 1. In summary, the hypothesis of this work is described in⁴; Additionally, this RO has been enriched automatically with the following annotations:

- concepts (most frequently mentioned in the RO): *techniques, points, parameter, PPD, model, problem, ensemble, information, ensemble, search, integrals, algorithm, Modeling*

¹http://sandbox.rohub.org/rodl/ROs/vsm_tav_cf_2004_06_basic-1-release/

²http://sandbox.rohub.org/rodl/ROs/vsm_tav_cf_2004_06_basic-1/

³See RO types definitions at <http://w3id.org/ro/earth-science#>

⁴<http://box.everest.psnec.pl/f/84dbcc7e00/>

- domains (fields of knowledge in which the main concepts are commonly used): *mathematics*
- frequent expressions (most frequently mentioned noun phrases): *SAR data, data inversion, The VSM software tool, volcano source modeling*
- named entities (most frequently mentioned):
 - Places: *Monte Carlo*

Note that the RO can be cited through its DOI [10.5072/ro-id.JJH3OHNHFG](https://doi.org/10.5072/ro-id.JJH3OHNHFG).

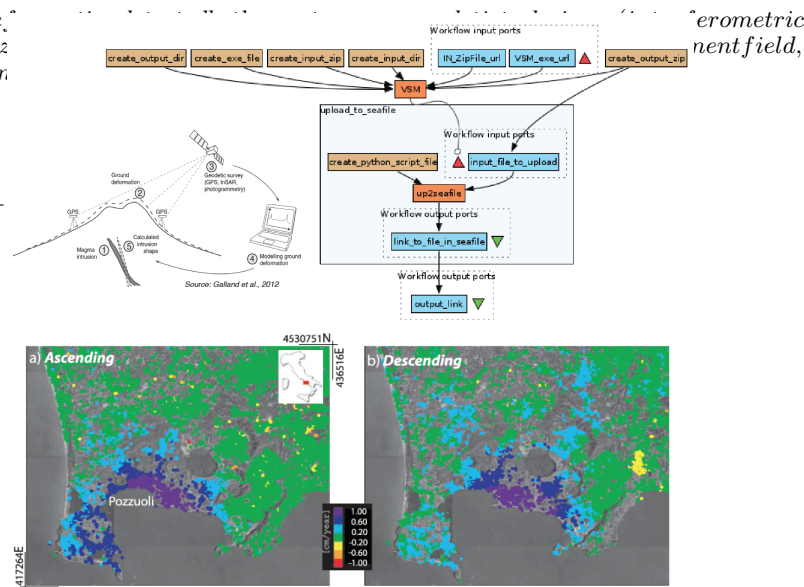


Fig. 1. Research Object Sketch

II. RESOURCES

The resources encapsulated by the RO are summarized in table I

ACKNOWLEDGMENT

The Research Object was uploaded to ROHub by *Elisa Trasatti*. ROHub portal development was supported by EVER-EST EU project (HORIZON 2020 grant 674907).

REFERENCES

- [1] The Research Object Management Platform - ROHub <http://www.rohub.org/>.
- [2] K. Belhajjame, O. Corcho, D. Garjo, J. Zhao, P. Missier, D. Newman, R. Palma, S. Bechhofer, E. García Cuesta, J. M. Gómez-Pérez, S. Soiland-Reyes, L. Verdes-Montenegro, D. De Roure, and C. Goble “Workflow-Centric Research Objects: First Class Citizens in Scholarly Discourse”, Proceedings of Workshop on the Semantic Publishing, SePublica Crete, Greece 28 May 2012.

TABLE I
RESEARCH OBJECT RESOURCES

name	size	type
HOW_TO_USE_VSM_TAVERNA.pdf	338.2 KB	Document
SAR_RESULTS_ASC_SAR_RESULTS_SIM_col.png	2.0 KB	Image
Geophysical inversionpdf	1.0 MB	Paper
VSM_global_oldlink.t2flow	120.7 KB	Workflow
SAR_RESULTS_ASC_SAR_RESULTS_RES_col.png	1.6 KB	Image
SAR_RESULTS_ASC_SAR_RESULTS_RES_col.pngw	81.0 B	File
SAR_RESULTS_DSC_SAR_RESULTS_OBS_col.png	4.0 KB	Image
SAR_RESULTS_DSC_SAR_RESULTS_SIM_col.png	1.7 KB	Image
SAR_RESULTS_DSC_SAR_RESULTS_RES_col.png	3.0 KB	Image
sketch.png	915.0 KB	Sketch
SAR_RESULTS_DSC_SAR_RESULTS_OBS_col.pngw	81.0 B	File
SAR_RESULTS_ASC_SAR_RESULTS_SIM_col.pngw	81.0 B	File
SAR_RESULTS_DSC_SAR_RESULTS_RES_col.pngw	81.0 B	File

- [3] Belhajjame K., Zhao J., Garijo D., Gamble M., Hettne K., Palma R., Mina E., Corcho O., Gómez-Pérez J. M., Bechhofer S., Klyne G., Goble C. "Using a suite of ontologies for preserving workflow-centric research objects", *Journal of Web Semantics: Science, Services and Agents on the World Wide Web* Available online 11 February 2015 ISSN 1570-8268.
- [4] Palma R., Corcho O., Gómez-Pérez J. M., Mazurek, C. "ROHub - A Digital Library of Research Objects Supporting Scientists Towards Reproducible Science". In *Semantic Publishing Challenge of Proc. Extended Semantic Web Conference (ESWC) Crete, Greece 25-29 May 2014*