



an Open Access Journal by MDPI

Investigation of Volcanic Activity Using Potential and Deformation Fields Retrieved from Proximal and Remote Sensing Techniques

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Deadline for manuscript submissions: 15 December 2022

Message from the Guest Editors

Active volcanic areas are fed by plumbing systems, transporting magma from the Earth's mantle and crust towards the surface through a complex network of conduits. The temporal and spatial evolution of volcanic activity generally depend on the thermodynamics of the feeding system and its interaction with the embedding-rocks mechanical heterogeneities and pre-existing structural discontinuities. In the last several decades, remote sensing techniques have made important contributions to the knowledge of volcanic systems and their structural evolution. Significant advances have come from the integration of remote and proximal sensing techniques, and from the development of new techniques related to the analysis of potential (e.g., gravity and magnetic) and ground deformation fields.

This Special Issue aims to collect studies focusing on the understanding of several aspects of volcano systems, from their physical characterization to monitoring their temporal evolution through multi-platform geodetic and interdisciplinary data and their modelling.



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