



The PEOS e-infrastructure for upper atmosphere and Earth observation from space

Vincenzo Romano^{*(1)}, Claudio Cesaroni⁽¹⁾, Gaetana Ganci⁽¹⁾, Sara Mainella ⁽¹⁾, Michele Manunta ⁽²⁾, Carlo Marcocci⁽¹⁾, Enrica Marotta⁽¹⁾, Massimo Musacchio⁽¹⁾, and Carlo Scotto⁽²⁾

(1) Istituto Nazionale di Geofisica e Vulcanologia, Italy, e-mail: vincenzo.romano@ingv.it

(2) IREA-CNR, Italy, e-mail: manunta.m@irea.cnr.it

The "Monitoring Earth's Evolution and Tectonics" (MEET) project is funded by the Italian "Piano Nazionale di Ripresa e Resilienza (PNRR) – Next Generation EU", approved by the Ministry of University and Research. MEET is in the framework of the Research Infrastructure European Plate Observing System "EPOS" and aims to strengthen the observational systems dedicated to discovering the Earth's dynamics, focusing on the Italian territory, particularly those regions more affected by natural hazards. The PEOS (Platform for Earth Observation from Space) e-infrastructure provides the capability to manage heterogeneous space-based data into a dedicated system, supporting the generation of products and services suitable for society and freely accessible by the scientific community and the relevant stakeholders. This transversal IT solution will, therefore, be based on scientific and technological modules composing the backbone of the community itself. The scientific modules are based on procedures developed to estimate a number of geophysical parameters within the framework of: (i) space geodesy and SAR (Synthetic Aperture Radar) direct and derived products, (ii) surface thermal properties, (iii) SO₂ and ash emissions, (iv) characterization of the space weather derived products and (v) LAIC (Lithosphere–Atmosphere–Ionosphere Coupling) products. The harmonization of these different contributions is ensured by the technological development of the platform, which will host all the data, products, and services.

In this contribution, we will discuss the state of the art of the project, particularly for the upper atmosphere modules, and we would like to stimulate the audience for potential collaborations and future use of the developing platform.