



The ESA scientific exploitation element results and outlook

Yves-louis Desnos (1), Peter Regner (1), Steven Delwart (1), Jerome Benveniste (1), Marcus Engdahl (1), Craig Donlon (2), Pierre-Philippe Mathieu (1), Diego Fernandez (1), Ferran Gascon (1), Claus Zehner (1), Malcolm Davidson (2), Philippe Goryl (1), Benjamin Koetz (1), and Simon Pinnock (3)

(1) European Space Agency, Science, Applications and Future Technologies, Italy (yves-louis.desnos@esa.int), (2) ESA-ESTEC The Netherlands, (3) ESA-ECSAT United Kingdom

The Scientific Exploitation of Operational Missions (SEOM) element of ESA's fourth Earth Observation Envelope Programme (EOEP4) prime objective is to federate, support and expand the international research community built up over the last 25 years exploiting ESA's EO missions. SEOM enables the science community to address new scientific research areas that are opened by the free and open access to data from operational EO missions. Based on community-wide recommendations, gathered through a series of international thematic workshops and scientific user consultation meetings, key research studies have been launched over the last years to further exploit data from the Sentinels (<http://seom.esa.int/>).

During 2016 several Science users consultation workshops have been organized, new results from scientific studies have been published and open-source multi-mission scientific toolboxes have been distributed (SNAP 80000 users from 190 countries). In addition the first ESA Massive Open Online Courses on Climate from space have been deployed (20000 participants) and the second EO Open Science conference was organized at ESA in September 2016 bringing together young EO scientists and data scientists.

The new EOEP5 Exploitation element approved in 2016 and starting in 2017 is taking stock of all precursor activities in EO Open Science and Innovation and in particular a workplan for ESA scientific exploitation activities has been presented to Member States taking full benefit of the latest information and communication technology.

The results and highlights from current scientific exploitation activities will be presented and an outlook on the upcoming activities under the new EOEP5 exploitation element will be given.