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The ESA Scientific Exploitation of Operational Missions element

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The prime objective of the ESA Scientific Exploitation of Operational Missions (SEOM) programme element is to federate, support and expand the large international research community that the ERS, ENVISAT and the Envelope programmes have built up over the last 20 years. It aims to further strengthen the international leadership of European Earth Observation research community by enabling them to extensively exploit observations from future European operational EO missions. SEOM will enable the science community to address many new avenues of scientific research that will be opened by free and open access to data from operational EO missions.

As a preparation for the SEOM element a series of international science users consultation has been organized by ESA in 2012 covering Sentinel 1 (FRINGE /SEASAR), Sentinel 2 (S2 symposium), Sentinel 3 (COAST-ALT workshop , 20 Years Progress in Radar Altimetry, Sentinel 3 OLCI/SLSTR 2012 workshop) and Sentinel 4-5 (Atmospheric Science Confrence). The science users recommendations have been gathered and form the basis for the work plan 2013 for the SEOM element.

The SEOM element is organized along the following action lines:
1. Developing, validating and maintaining open-source, multi-mission, scientific software toolboxes capable to handle the Sentinels data products
2. Stimulating the development and validation of advanced EO methods and observation strategies in particular the new TOpS mode on Sentinel 1, the new band settings on Sentinel 2, the new geometry/bands of Sentinel 3 OLCI ,SLSTR intruments and the advanced delay-doppler (SAR) altimeter exploitation.
3. Continuing to federate, support and expand the multi-disciplinary expert EO research communities by organizing thematic workshops and ensuring high-quality scientific publications linked to these research domains. Promoting widespread scientific use of data.
4. Training the next generation of European EO scientists on the scientific exploitation of Sentinel s data
The ensuing projects will be tendered as research opportunities for EO science communities in ESA Member States.

The SEOM element content will be presented and the mechanisms for project results presentation and science users consultation will be introduced.

Keywords : ESA, Sentinel 1 2/3/4/5P, Scientific Exploitation