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THE ESA SCIENTIFIC EXPLOITATION OF OPERATIONAL MISSIONS ELEMENT

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THEME: National, regional and international programs including education and outreach. Sentinels for Science: SEOM program results

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

ABSTRACT:

SEOM is a program element within the fourth period (2013-2017) of ESA's Earth Observation Envelope Programme (http://seom.esa.int/). The prime objective is to federate, support and expand the 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 leadership of the European Earth Observation research community by enabling them to extensively exploit future European operational EO missions. SEOM will enable the science community to address new scientific research that will be opened by free and open access to data from operational EO missions.

Based on community-wide prioritized recommendations for actions on key research issues gathered through a series of international thematic workshops and scientific user consultation meetings a work plan has been established and approved by ESA Members States for 2014 covering R&D studies for the scientific exploitation of operational missions, the development of open-source, multi-mission, scientific software toolboxes, the organisation of advanced international training courses, summer schools and educational materials, as well as activities for promoting the scientific use of EO data.

The first SEOM projects have been tendered including the development of Sentinel toolboxes, advanced INSAR algorithms for Sentinel-1 TOPS data exploitation, Improved Atmospheric Spectroscopic data-base (IAS), as well as grouped studies for Sentinel-1, -2, and -3 land and ocean applications and studies for exploiting the synergy between the Sentinels.

The status and first results from these SEOM projects will be presented and an outlook for upcoming SEOM studies will be given.

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