BEC officially broadens its scope

The SMOS-BEC (SMOS-BARCELONA EXPERT CENTER ON RADIOMETRIC CALIBRATION AND OCEAN SALINITY) was created in July 2007 by agreement between CSIC (Spanish Research Council) and UPC (Technical University of Catalonia) to enhance coordination and visibility of both institutions in their joint work in processing data from the SMOS mission. It was installed in the Centre Mediterrani d'Investigacions Marines i Ambientals (CMIMA) building, belonging to CSIC and that also hosts the Institut de Ciències del Mar (ICM) and the Unitat de Tecnologia Marina (UTM), in the Barcelona sea front. The UPC participation is made through the Passive Remote Sensing Group / Remote Sensing Lab from the Department of Signal Theory and Communications. The main CSIC actor in SMOS is the Physical and Technological Oceanography Department from ICM, together with the Earth Observation Group from the Institut de Ciències de l'Espai (ICE).

BEC scientists play a key role in the mission: Jordi Font (ICM) is the SMOS Co-Lead Investigator for ocean salinity, Ignasi Corbella (UPC) and Antonio Turiel (ICM) are members of the SMOS Quality Working Group, the BEC-UPC team is an Expert Support Laboratory to ESA for the SMOS level 1 processor definition and development, and the BEC-ICM team is an ESL for the level 2 ocean salinity processor. The BEC proposed, designed and validated the level 3 and level 4 SMOS products generated in CP34, *Centro de Producción de datos SMOS de niveles 3 y 4*, an additional Spanish contribution to the mission to build and operationally distribute SMOS added value products beyond the level 2 official ESA data. CP34 was operated at ESAC, the ESA establishment near Madrid that hosts the SMOS Data Processing Ground Segment, until July 2013. Then it was moved to BEC facilities, where an improved web site

allows now an easy access to operational and experimental SMOS level 3 and 4 products, with user friendly format plus additional information to the international users community.

The work of the BEC team is not restricted to SMOS but also covers basic and applied research in other satellite remote sensing domains, like radar scatterometry and altimetry (ICM-CSIC) or GNSS reflectometry (UPC and ICE-CSIC). Now, six years after SMOS launch, the BEC is a consolidated research group in the international scene beyond the radiometric calibration and ocean salinity topics defined in 2007. A collaboration agreement has been recently signed between CSIC and UPC with the Institute of Space Studies of Catalonia (IEEC), a private, non-profit foundation in Barcelona and international leader in different aspects of space sciences. The objective of the agreement is to build synergies based on common strategies in the field of Earth observation, to allow an increase of scientific productivity, a more efficient participation in international satellite missions, and a joint work in designing and providing products for applications to stakeholders in the domains of climate change, oceanography, meteorology, and natural risks management. As a result, from January 2016 the IEEC is officially integrated in the BEC that becomes now the BARCELONA EXPERT CENTER ON REMOTE SENSING and widens its scope to cover all remote sensing topics of interest for the three entities.