



## COSMOS2020 NEWSLETTER #25

02 March 2017



### **"Horizon 2020: Associated!" - Swiss National Conference.**

**March 14th 2017, Kursaal Bern**

**Since the beginning of the year Switzerland is associated to the entire European Framework Programme for Research and Innovation "Horizon 2020".**

**That means Swiss legal entities are automatically eligible for funding.**

**Euresearch invites researchers to participate to the National Conference "Horizon 2020: Associated!" to get information about the changes and new opportunities for Switzerland.**

#### **Topics:**

- What changes for Switzerland with the full association to Horizon 2020.
- Why Horizon 2020 is essential for Switzerland
- Experiences with the European Research Council ERC
- The SME Instrument and support to innovation in Horizon 2020

**Target Audience:** Research and Innovation Community, including Universities, Federal Institutes of Technologies, Universities of Applied Sciences, Companies, Public Administration and Civil Society

[Register here!](#)



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## **Munich Satellite Navigation Summit 2017!** **March 14 - 16 2017, Munich (Germany)**

**The Munich Satellite Navigation Summit is a conference with global impact dealing with satellite navigation now and in the future.**

The one-of-a-kind convention of high-ranking worldwide speakers from industry, science and governments provides the participants with a broad overview and different perspectives on the latest developments in the field of GNSS.

Trending topics of the 2017 edition and a preliminary agenda is available on the [event website!](#)



## **UK Space Agency funds satellite solutions for developing countries**

**UK space businesses have won £70 million of funding for projects that will deliver practical help to developing countries.**

The UK Space Agency's International Partnership Programme (IPP), is a five-year, £152 million programme designed to partner UK space expertise with governments and organizations in emerging and developing economies around the world to deliver a sustainable, economic or societal benefit. Satellite data will be used to tackle problems such as flooding, drought, and deforestation.

The 21 chosen projects help provide solutions for local issues in countries across Africa, Asia and Central and South America. They include providing communications in remote areas for education and health provision, improving maritime safety for small fishing vessels in South Africa and Madagascar and reducing illegal logging in Guatemala.

The IPP will make a second call for applications later this year, with an opportunity for new projects to secure funding. For up to date information about IPP calls please email the IPP team on [IPP@ukspaceagency.bis.gsi.gov.uk](mailto:IPP@ukspaceagency.bis.gsi.gov.uk) and ask to be added to the IPP Basecamp site.

[Read more!](#)



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## Marine-EO: All eyes on Horizon 2020's first Earth Observation Pre-Commercial Procurement

**Azores, 23<sup>th</sup> February 2017**

**Since 1<sup>st</sup> of January 2017, the Horizon 2020 project Marine-EO has been officially started, aiming at the implementation of the first Pre-Commercial Procurement (PCP) for Earth Observation services.**

Marine-EO applies to a vast array of ocean-related areas covering the development, testing and validation of demand-driven Earth Observation based services in the fields of both (i) maritime environment monitoring (i.e. Fish farm monitoring, Marine Protected Areas (MPA) monitoring, Harmful algal blooms detection, Oil spill detection, Iceberg open channel detection, etc.) and (ii) security (i.e. unusual activity detection, change detection of irregular immigrants, border permeability mapping etc.).

This endeavor will support the development of sustainable supply chains for delivery of downstream EO and Copernicus-enabled services that meet the needs of public authorities around Europe.

Comprising of 9 partners from Greece, Portugal, Spain and Norway, the Consortium within a time span of 47 months will set the processes for publishing a call for tender that will invite the EO industry to develop robust innovative solutions beyond the current state-of-the-art, in three PCP phases (solution design, prototyping and operational development). The total subcontracting cost of the procurement amounts to 3,4M€.

Expectations are high among stakeholders operating with Copernicus Downstream Services regarding the project's potential for incremental and/or radical innovation expected in the field of maritime awareness and consequent leverage effect on the already existing Copernicus Services and products.

During the first semester of 2017, the Lead Procurer (DGPM-PT) will launch a Prior Information Notice (PIN) for the organization of an Open Market Consultation in order to start a dialogue with potential tenderers and end-users, to fine tune the R&D tender scope according to market needs. By the end of 2017, the PCP call for tender will be published in all relevant European tender platforms and the project's website. The submission of tenders will remain open for at least 60 days.

**CONSORTIUM:** "NATIONAL CENTER FOR SCIENTIFIC RESEARCH "DEMOKRITOS", (GR)/ DIRECAO-GERAL DE POLITICA DO MAR, (PT)/ MINISTERIO DEL INTERIOR, (ES)/ HELLENIC CENTRE FOR MARINE RESEARCH, (GR)/ FUNDO REGIONAL PARA A CIENCIA E TECNOLOGIA, (PT)/ KYSTVERKET VEST, (NO)/ NATIONAL OBSERVATORY OF ATHENS, (GR)/ EUROPEAN UNION SATELLITE CENTRE, (ES)/ SINTEF OCEAN AS, (NO)

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## European Defence Action Plan: new boost for research and innovation

**In the new year, the European Commission (COM) will present an initiative for reliable, secure and cost-effective satellite communications for public authorities (GOVSATCOM) and measures to promote market access to space services and data, in line with its work program for 2017. It refers to the European Defense Action Plan and to the Space Strategy for Europe published in 2016. In addition, the Commission intends to submit a proposal for the creation of a European Defense Fund to implement the European Defense Action Plan.**

As part of the European Union Space Surveillance and Tracking Support Framework (EUSST), DLR is responsible for subcontracting analysis activities related to the strategic and operational dimension of a quasi-global network of heterogeneous radar systems. In this context, the study 'Legal, Political, Geographical and Infrastructural Opportunities for Deploying European Radar Sensor Assets for Space Surveillance and Tracking Including Ultra-Peripheral Sites' shall establish the range of potential sensor sites accessible to European actors, and examine their sociotechnical dimension and potential constraints. The findings will inform discussions on the evolution of the EUSST network.

The European Defense Action Plan published at the end of 2016 shows that space is becoming increasingly important in this area as well. In order to develop a stronger European defense, also aerospace capacities must be developed and maintained.

For example it has to be invested in satellite communications, autonomous access to space and permanent observation of the Earth. The EU Commission (COM) agrees to contribute to ensuring the protection and resilience of critical European civilian and military space infrastructures by supporting the existing framework for the surveillance and tracking of space (Space Surveillance and Tracking, "SST").

The synergies and complementarity with activities of the EU satellite center in the areas of space security and defense should be maximized.

By the end of 2017, the COM, together with the European Defense Agency (EDA) and the ESA, is planning to launch an initiative for satellite communications services for the EU and national authorities (GOVSATCOM). In the context of the Copernicus Earth Observation System, it is planned to examine how further security and defense requirements can be covered. The COM will strengthen the corresponding security requirements in 2018 and provide for more synergies with non-space-based observation capabilities.

By 2018, the COM, together with the ESA and the EDA, will also develop measures to promote a coordinated research agenda on maritime safety in the civil and military sectors as well as interoperable capabilities in the field of maritime surveillance.

Further information can be downloaded from:

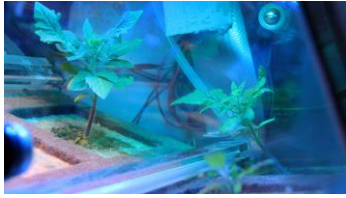
<https://www.subreport.de/E15138752>

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## Eu:CROPIS – Greenhouses for the Moon and Mars

**The Eu:CROPIS satellite developed by the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) will operate two greenhouses under Martian and lunar conditions.**

Construction of the flight model can now begin. The finish line is already in sight: launched by Space-X, the satellite and its scientific payload will take off for outer space on board the Falcon 9 in the second half of 2017. "We will be constructing the model here at DLR Bremen until spring 2017, and then conduct rigorous flight tests," explains engineer Hartmut Müller, Project Manager for satellite construction at the DLR Institute of Space Systems.

During its mission, the [Eu:CROPIS](#) satellite is designed to rotate at an altitude of 600 kilometres, initially replicating lunar gravity for a period of six months before simulating Martian gravity for the next six months. During this period, tomato seeds will germinate and produce small cosmic tomatoes under the watchful eye of 16 cameras. Key helpers that enable this growth will also be transported into space: first, an entire colony of microorganisms inhabiting a trickle filter will convert synthetic urine into easily digestible fertilisers for the tomatoes. Second, the single-cell organism euglena will also be on board to protect the hermetic system from excessive ammonia and to deliver oxygen. LED light will be used to provide the day/night rhythm that the euglena and tomato seed require. A pressure tank will replicate the Earth's atmosphere.

[Read more!](#)



## The ESA Highlights for 2017

**This informative video shows a compilation of the most important Esa's Highlights for the Year 2017.**

1. First satellite launch using the [SmallGeo-Telecommunication Platform](#) developed by OHB Systems from Germany ([Hispasat-36W1](#))
2. EDRS-C Communication Satellite is being added to the [EU-Data-Relay-System](#).
3. Four more [Gallileo Satellites](#) adding up the total number of Gallileo-Satellites to 22.
4. Three Sentinel Satellites added to the [Copernicus Earth observatory Programm](#):  
*Sentinel 2B* - observes vegetation, landcover, waterpollution through Wide Spectral Imaging together with *Sentinel 2A*  
*Sentinel 3B* - observes seasurface topography, surface temperature, ocean and landcover  
*Sentinel 5B* - observes Atmosphere, enables cloudfree observation through high temporal and spectral resolution
5. [ADM-Eolus the Atmospheric-Dynamics-Mission](#) monitors Windprofiles through advanced Laser-technology
6. On the ISS, *Thomas Pesquet* will return to earth after 6 months, and for the 3rd time *Paolo Nespoli* returns to the ISS to start ESAs 10th long duration Study



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