

## PRESS RELEASE

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### **Airbus Defence and Space, OHB System AG and Fraunhofer INT organize RADECS 2016, the European conference on space radiation effects in Bremen, Germany**

**Bremen, September 2016: The RADECS 2016 Conference will be held from September 19 to 23 in Bremen. Together with the NSREC in the US, the RADECS (RADiation Effects in Components and Systems) is the most important meeting of the worldwide radiation effects community. 400 experts from all over the world will present and discuss more than 150 scientific papers accepted for the conference.**

For the first time, the European conference on radiation effects on components and systems, RADECS, will be held in Germany. Bremen has been chosen as the conference host city, as it is one of the focal points of spaceflight in Germany and Europe, with sites of the largest space-tech companies, Airbus DS and OHB. Since the foundation of the RADECS association in 1987, the RADECS conferences have been held in France, Belgium, Italy, Spain, The Netherlands, Greece, Finland, Austria, United Kingdom and Russia – but never in Germany. RADECS will close this gap in September.

Every year, the RADECS conference attracts spaceflight electronics and physics experts from Europe and all over the world. They gather to share the newest developments on how to operate today's complex electronics in the hostile space environment governed by solar and cosmic ionizing radiation. The background for this research is the vulnerability of space assets such as satellites to radiation. Electronic and optical components in space can be disabled or destroyed by ionizing radiation, rendering the affected satellite effectively useless. In order to minimize radiation induced mission failures in space, satellite manufacturers and research organizations such as Airbus, OHB and Fraunhofer seek to improve the radiation hardness of relevant components and systems through irradiation testing and new design concepts. The same problems also occur in other radiation environments, most notably in accelerators such as the Large Hadron Collider at CERN in Geneva.

The 2016 RADECS in Bremen boasts a scientific program with a record of ten sessions, a workshop on Jupiter's harsh radiation environment, and an industrial fair with as many as 40 exhibitors specialized on radiation hard components and associated services showing their newest developments and products. The organizing team expects around 400 participants during the week of September 19th to 23rd, 2016 at the CCB, the Conference Center Bremen.

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<https://www.ohb-system.de/>[www.space-airbusds.com](http://www.space-airbusds.com)

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**Editorial notes**

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**Topical Day on Jupiters Harsh Environment**

The workshop “Jupiter’s harsh radiation environment” will include invited talks from NASA, ESA, AIRBUS DS and other space experts. Past, present and future Jupiter missions will be covered, including JUICE (ESA), Juno (NASA) and Europa (NASA). Space missions to Jupiter encounter the most extreme radiation environment in the Solar System, 10 times higher radiation levels than in GEO around Earth. The extreme radiation can affect the satellite’s electronics and even materials, therefore special precautions and mitigations measurements are necessary. The goal of the workshop is to show how space agencies and industry design their satellites to survive this harsh radiation environment.

2016 also marks the first time the RADECS Conference is organized by an industrial team. Airbus DS and OHB are in the organizational drivers’ seats, while the Fraunhofer institute INT, based in Euskirchen, is in charge of the scientific program. In the past, the conference has been organized exclusively by research institutions and organisations.

The conference is accompanied by a social program for participants and their companions that presents Bremen with its historic charm as well as its modern assets. It ranges from a Gala dinner in the Ratskeller to guided tours through Airbus’ spacecraft and OHB’s integration halls.

[www.radecs2016.com](http://www.radecs2016.com)

The RADECS 2016 team: J. Schneegans (treasurer); J. Ideström (conference chair & Jupiter workshop chair); C. Plettner (exhibition chair); S. Rakers (conference chair); T. Farris (exhibition chair); T. Loosen (public relations) and S. Metzger (technical chair). © Fraunhofer INT | Origin of photo material in print quality: [www.int.fraunhofer.de](http://www.int.fraunhofer.de)

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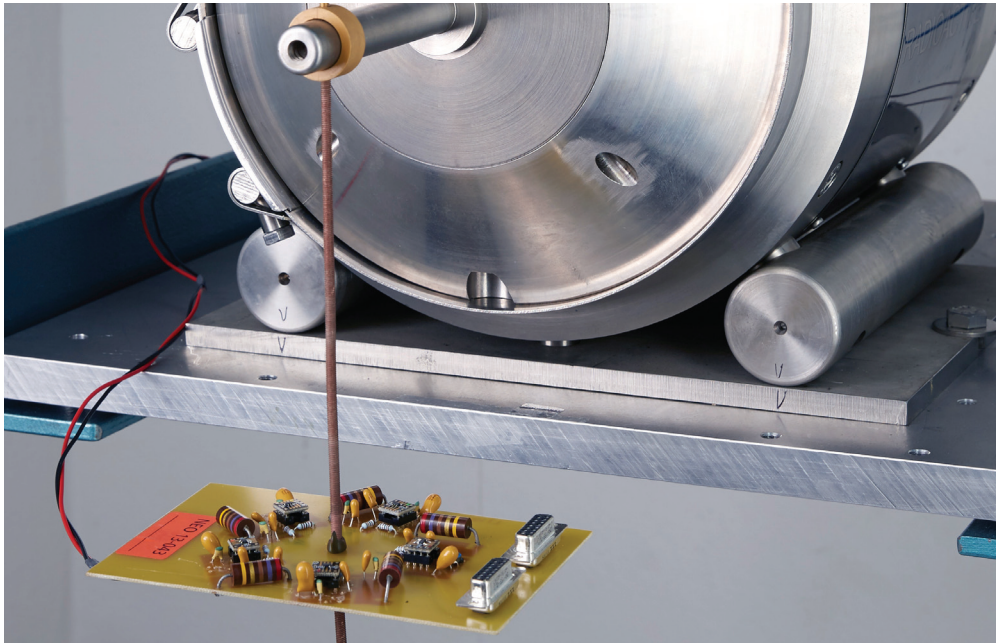
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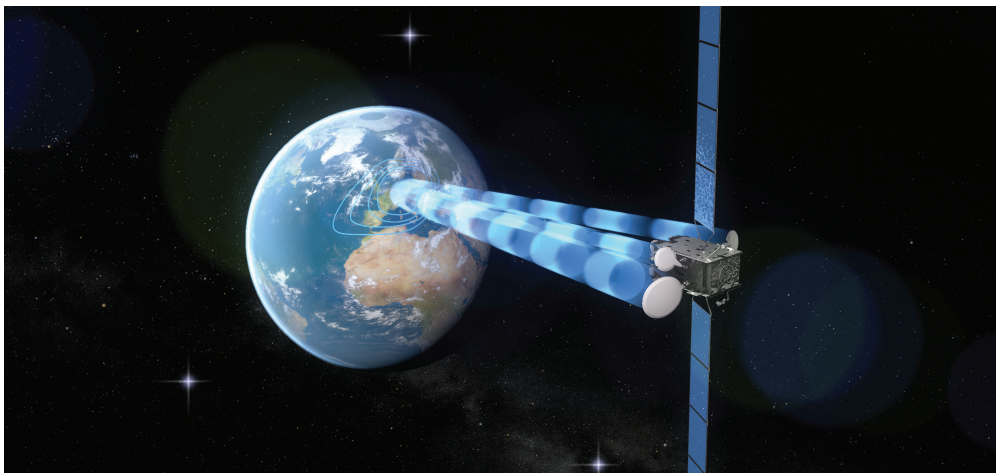
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Irradiation setup for electronic components for space applications at Fraunhofer INT in Euskirchen. The metal cylinder is the housing of a Co-60-Gamma-Radiation-Source. The electronic components are arranged in a circle on a circuit board to ensure a homogenous radiation exposition for all components. © Fraunhofer INT | Origin of photo material in print quality: [www.int.fraunhofer.de/presse](http://www.int.fraunhofer.de/presse)



Electra is OHB's first satellite of a new generation using EP (electrical propulsion) for orbit raising. EP gives many advantages (weight reduction and so on), but causes as well new radiation challenges. A satellite undergoing 200 days of orbit raising with EP gets a radiation dose which is equivalent to 6.7 years at GEO. This added radiation can affect the satellite's electronics and even materials, and therefore new radiation precautions and mitigation measurements need to be implemented which are discussed at the RADECS conference. © OHB System AG | Origin of photo material in print quality: [www.int.fraunhofer.de/presse](http://www.int.fraunhofer.de/presse)

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