**Media Release**

**Space Junk Research on show at IAC**

**\*Embargoed until 25/9/2017\***

The world’s top space environment researchers will meet in Adelaide this week to showcase the latest research on the masses of space debris currently orbiting earth.



The Space Environment Research Centre’s (SERC) will showcase its latest space debris research at the International Astronautical Congress, to be held from 25 – 29 September, in Adelaide. The Congress is the world’s largest annual interdisciplinary meeting for space professionals, researchers, major corporations, government, space agencies, students and the media.

Around USD$700 billion worth of global space infrastructure is currently at risk from collisions with an ever increasing amount of space debris. Globally, space infrastructure delivers essential and highly efficient services including communications, navigation, resource management and climate change monitoring. This infrastructure is at risk from space debris ranging in size from spent rocket stages as large as busses, to flakes of paint measuring only 5mm. This debris can travel at speeds in excess of 27,000km/h, so even a flake of paint can badly damage or destroy satellites.

SERC Chief Executive Officer, Dr Ben Greene believes international collaboration is essential for a global problem like space debris.

“We can currently track around 22,000 of the estimated 170 million items of debris orbiting the earth. There is so much debris that it is colliding with itself, and creating more debris. A catastrophic avalanche of collisions which could quickly destroy all orbiting satellites is now possible.” Dr Greene said.

“Light from lasers can be used to move debris objects in space. SERC’s initial aim is to reduce the rate of debris proliferation caused by new collisions, and to subsequently demonstrate the cost effective removal of debris using ground-based lasers”.

The resource commitments for SERC have come from every tier of space activity and are an indication of the international importance of this initiative.”

Working at SERC’s $20 million research facility, SERC researchers are tackling the problem by enhancing capability in tracking, characterising and identifying objects in orbit, orbit determination and predicting behaviours of space objects.

SERC research on display at the Congress includes collision risk assessment of geostationary satellites, space debris manoeuvre experiments using high power lasers with adaptive optics, prioritising tasking of sensors in a distributed network, orbit determination and orbital dynamics, and laser tracking of defunct satellites.

To learn more about Australia’s leadership in space debris mitigation, visit SERC at the Australian Government exhibition (booth 31).

**About SERC**

Funded by the Australian Government’s Cooperative Research Centre Programme and Participants, SERC is a partnership between Canberra-based company EOS Space Systems, the ANU, RMIT University, Optus Satellite Systems, Lockheed Martin and the Japanese National Institute of Information and Communications Technology (NICT).

SERC brings together leading debris mitigation programs from around the world to create a team with the required critical mass of researchers, technology, funding and equipment to address the problem of space debris.

**SERC subject matter experts:**

1. Astrodynamics, space situational awareness (SSA), international collaboration on space debris mitigation – Professor Moriba Jah, University of Texas
2. Space object spin dynamics modelling – Dr Daniel Kucharski, SERC
3. Adaptive optics, early career research – Dr Doris Grosse , Australian National University
4. Distributed sensors, early career research – Dr Steve Gehly, RMIT University
5. SERC, international collaboration on space debris mitigation, Australian expertise and world leading technology in SSA, debris mitigation and SERC research programs – David Ball (SERC Deputy CEO)

**To arrange a media interview with any of our, please contact:**

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