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FOR IMMEDIATE RELEASE

## **Astroscale and University of Southampton Jointly Advance Business Case for Active Debris Removal Services**

30 September 2019 - Astroscale, the market-leader in developing a service to remove space debris and secure long-term orbital sustainability, today announced that it will collaborate with the University of Southampton on a project to investigate collision risks between satellites, highlighting the necessity for financial incentives for satellite operators to engage with active debris removal services.

The University of Southampton is a partner university on the national SPRINT (SPace Research and Innovation Network for Technology) programme and the project with Astroscale will be funded by SPRINT. The programme provides small businesses with unprecedented funded access to expertise from the UK's top space universities to support the development of new products and services, enabled through space, for their core markets.

During the eight-month project, the effectiveness of different active debris removal strategies will be determined using the semi-deterministic model, Debris Analysis and Monitoring Architecture to the Geosynchronous Environment (DAMAGE). DAMAGE, developed by Hugh Lewis, Professor within the faculty of Engineering and Physical Sciences at the University of Southampton, can simulate the evolution of future debris populations and will support quantifying the financial value of debris removal to satellite operators. The software was extensively upgraded recently to provide the capability to simulate large satellite constellations in low Earth orbit.

The increase in the number of large satellite constellations will add thousands of objects to low-Earth orbit in the next ten years, increasing the likelihood of collision and posing a risk to the sustainability of the entire orbital environment. This project marks a significant step forward in identifying the commercial value of active debris removal services and justifying action to remove failed satellites to maintain the orbital environment. The results from the data will allow Astroscale to identify which debris removal strategies are most effective, strengthening the business case for future debris removal missions.

"Debris poses a threat to active satellites on which we rely daily. Though society is growing more aware of this increasing hazard, some satellite operators have not fully recognised the importance of removing their defunct spacecraft," said John Auburn, Chief Commercial Officer of Astroscale. "By using DAMAGE to identify and model collision risk in orbit, we expect to quantify the value of debris removal to the maintenance of business sustainability."

"Whilst Astroscale's mission is technically very challenging, an equally large challenge, requiring extensive innovation, comes from proving the commercial business case for debris removal," said Harriet Brett, Business Analyst at Astroscale. "We are looking forward to working with Professor Hugh Lewis to identify effective debris removal strategies and further understand the collision risk faced by potential future customers."

Professor Hugh Lewis added: "It is widely understood that removing debris from the orbital environment is important for the long-term sustainability of space activities, but it is challenging to

determine how best to deploy removal technologies for the greatest effect. I'm delighted to be working with Astroscale to tackle this challenge and to enable their engineers to begin the drive towards a more sustainable future in space."

The project is expected to be concluded and findings released in summer 2020.

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### **About Astroscale**

Astroscale is the first private company with a mission to secure long-term spaceflight safety and orbital sustainability for the benefit of future generations. Founded in 2013, Astroscale is developing innovative and scalable solutions for satellite end-of-life and active debris removal services to mitigate the growing and hazardous build-up of debris in space. Headquartered in Japan with offices in Singapore, the United Kingdom and the United States, Astroscale is a rapidly expanding venture company, preparing to solve a growing environmental concern.

Astroscale is currently developing its second mission, ELSA-d, a technology demonstration for end-of-life services and pursuing complementary missions with potential customers.

For more about Astroscale, visit us at <http://astroscale.com/>

### **About University of Southampton**

The University of Southampton drives original thinking, turns knowledge into action and impact, and creates solutions to the world's challenges. It is among the top 100 institutions globally (QS World University Rankings 2019). Its academics are leaders in their fields, forging links with high-profile international businesses and organisations, and inspiring a 24,000-strong community of exceptional students, from over 135 countries worldwide. Through its high-quality education, the University helps students on a journey of discovery to realise their potential and join its global network of over 200,000 alumni.

[www.southampton.ac.uk](http://www.southampton.ac.uk)

### **About SPRINT**

The £4.8 million SPRINT programme provides unprecedented access to university space expertise and facilities to help businesses develop new commercial products for space and other key sectors.

SPRINT is supported by Research England and is being delivered by a consortium of five of the UK's leading space universities, led by the University of Leicester and including the University of Edinburgh, The Open University, University of Southampton and University of Surrey.

[www.sprint.ac.uk](http://www.sprint.ac.uk)

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### **For media inquiries, please contact:**

PR/Communications

Email: [media@astroscale.com](mailto:media@astroscale.com)

Tel: +81-3-6658-8175 (Japan) | +44-1235-395359 (UK) | +1-206-889-7384 (US)