

14TH IAA SYMPOSIUM ON SPACE DEBRIS (A6)  
Space Debris Removal Concepts (6)

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ADRAS 1 AND ASTROSCALE'S PLANS FOR DEBRIS REMOVAL AND SPACECRAFTS EOL  
SERVICES

**Abstract**

With new announcements made by operators of new satellites mega constellations, experts expect the population of satellites and defunct spacecrafts to grow significantly in the coming decade. As a consequence, the need for space objects tracking, collision avoidance systems, post mission disposal services and to a certain extent debris removal services will be growing as well in the future. As such, the ambition of Astroscale is to become a key solutions provider for improved spacecrafts post mission disposal and space debris removal. ADRAS 1 is Astroscale's demonstration mission planned for 2018 that will be testing technological capabilities necessary to perform spacecrafts End-of-Life services such as debris mitigation and removal activities. The ADRAS 1 satellite features the world's first space-adhesive docking system, an enhanced ion engine for long-range operations as well as solid rocket boosters for de-orbiting of large spacecrafts. The capabilities demonstrated in the ADRAS 1 mission are critical in helping Astroscale achieve its mission of providing economically viable solutions for the sustainability of outer space.