

16th IAA SYMPOSIUM ON SPACE DEBRIS (A6)

Mitigation and Standards: status, lessons learnt and future with smallsats and constellations (4)

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IMPACTS OF SPACE DEBRIS MITIGATION REQUIREMENTS ON SPACECRAFT DESIGN IN
AIRBUS DEFENCE AND SPACE**Abstract**

This paper will address Airbus Defence and Space approach to Space Debris Mitigation with a global system perspective from requirements to design and operations. After a short recall of the main SDM rules applicables to Airbus satellites (ESA policy, French Space Operations Act) and their impact on the spacecraft design, the paper will review the current status of the various studies and developments performed by Airbus Defence and Space to support the implementation of these Debris Mitigation requirements in the design of the future LEO and GEO satellites. All main topics will be addressed: design for demise techniques, passivation needs and principles (fluidic and electric), re-orbitation and deorbitation strategies, probability of success of the EOL operations and reliability assessment, and finally re-entry simulations issues. Priorities for future technology development will also be highlighted.