

Proposal for Forming an IAA Study Group **S 5.5**

Title of Study: Space Debris Environment Remediation

Proposer(s): H. Klinkrad, N.L. Johnson

Primary IAA Commission Preference: Commission V

(From Commission 1 to Commission 6)

Secondary IAA Commission Interests: Commission III

(From Commission 1 to Commission 6)

Members of Study Team

Chairs: H. Klinkrad, N.L. Johnson

Secretary: F. Alby

Other Members: B. Ailor, Ch. Bonnal, L. Anselmo, K.-U. Schrogl, A. Kato, S. Campbell, R. Crowther

Short Description of Scope of Study

Overall Goal: Examine the feasibility and effectiveness of space object removal concepts to control the space debris environment.

Intermediate Goals: Identify and critically analyze different techniques for removing mass from orbit, and investigate legal aspects of the implementation of such techniques.

Methodology:

- Investigation of active and passive means of removing on-orbit mass, e.g. space tug, electro-dynamic tether, momentum exchange tether, drag-augmentation device, directed energy, natural orbit perturbations.
- Analysis of the effectiveness and applicability of the techniques in different orbital regimes.

Time Line:

- consolidated outline with identified authors: Sep. 2007
- draft report: end 2008
- final report: mid 2009

Final Product (Report, Publication, etc.):

- cosmic study report

Target Community:

- national space agencies
- industrial aerospace community
- space system operators
- launching states

Support Needed:

- commission III technical assistance
- commission IV technical assistance (t.b.d.)
- publication of the report

Potential Sponsors:

- The Aerospace Corporation (t.b.c.)
- CNES (t.b.c.)
- DLR (t.b.c.)
- ESA (t.b.c.)

To be returned to IAA Secretariat Paris fax: 33 1 47 23 82 16 email: sgeneral@iaaweb.org

Date: 12 July 2007

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