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 Signature: H. Klinkrad, N.L. Johnson

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