Proposal for Forming an IAA Study Group

Title of Study: S5.14 - Reference Report on Space Debris

Proposer(s): Christophe Bonnal
(Must be member(s) of the Academy M or CM)

Primary IAA Commission Preference: 5
(From Commission 1 to Commission 6):
Commissions: 1 Space Physical Sciences, 2 Space Life Sciences, 3 Space Technology & Systems Development, 4 Space Systems Operations & Utilization, 5 Space Policy, Law & Economics, 6 Space and Society: Culture and Education
Secondary IAA Commission Interests: 1, 3, 4, 6
(From Commission 1 to Commission 6)

Members of Study Team

Chair(s): Bonnal
(Must be member(s) of the Academy, M or CM)

Secretary:

Other Members:
(Open to members and non-members of the Academy)
Klinkrad
Agapov
Schildknecht
Alby
Finkelman
Krisko
Matney
McKnight
Kibe
Schäfer
Martin
Mathieu
Masson-Zwaan
Prasad
Short Description of Scope of Study

Overall Goal:
(Expected scientific or practical benefit of the study group's efforts)
Reference status of the Space Debris problematics, acting as an update of the IAA Position Papers 1993 and Revision from 2001, taking into account the IAA Position Papers on Space Debris Mitigation (SG5.1) and on Space Debris Remediation (SG5.5). Available elements from on-going SG5.10 devoted to Policy, Legal and Economic Issues in Orbital Debris Removal will also be included.

Intermediate Goals:
Presentation at IAC 2014 in Toronto of the Final Draft Content through a Plenary Event or Highlight Lecture type of session.

Methodology:
(Email works, workshops, stand alone conferences, interim publications, etc.)
Work by e-mail to have a preliminary draft by March 2014.
Status during the March meeting of the IAA Space Debris Committee in Paris
Final Draft in Toronto reviewed within the March meeting of the IAA Space Debris Committee
Delivery to IAA for Peer Reviewing and final process
Effective publication expected before IAC 2015

Draft table of contents and chapter captains:

<table>
<thead>
<tr>
<th>Chapter Captain</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christophe Bonnal</td>
<td>Introduction, recall of scope and past studies</td>
</tr>
<tr>
<td>Heiner Klinkrad</td>
<td>Present status</td>
</tr>
<tr>
<td>Thomas Schildknecht &amp; Vladimir Agapov</td>
<td>Measurements</td>
</tr>
<tr>
<td>Fernand Alby &amp; Dave Finkelman</td>
<td>Space surveillance &amp; collision</td>
</tr>
<tr>
<td>Paula Krisko &amp; Mark Matney</td>
<td>Reentering space objects</td>
</tr>
<tr>
<td>Paula Krisko</td>
<td>Future environment</td>
</tr>
<tr>
<td>Mark Matney &amp; MYS Prasad</td>
<td>Debris mitigation</td>
</tr>
<tr>
<td>Darren McKnight &amp; Seishiro Kibe</td>
<td>Remediation</td>
</tr>
<tr>
<td>Franck Schäfer &amp; Martin Rudolph</td>
<td>Protection</td>
</tr>
<tr>
<td>Tanja Masson-Zwaan</td>
<td>Legal</td>
</tr>
<tr>
<td>Christophe Bonnal</td>
<td>References &amp; Standards</td>
</tr>
<tr>
<td>Charlotte Mathieu &amp; MYS Prasad</td>
<td>International aspects</td>
</tr>
</tbody>
</table>

Time Line:
(Cannot exceed three years)
Final Draft for Peer reviewing after 1 year
Effective publication: 2 year.

Final Product (Report, Publication, etc.):
IAA Reference Report on Space Debris
Dedicated publication ≈ 50 pages
**IAA, Paris, 2012 Form**

-3-

*Instructions and application form: see: “Scientific Activity” section at [http://iaaweb.org/content/view/256/393/](http://iaaweb.org/content/view/256/393/)*

<table>
<thead>
<tr>
<th><strong>Target Community:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very wide: Space Agencies, Industrial companies, Academics, laboratories, students… any person or entity interested in an updated reference synthesis on the topic of Space Debris</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Support Needed:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Potential Sponsors:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

*To be returned to the IAA Secretary General Paris by fax: 33 1 47 23 82 16 or by email: sgeneral@iaamail.org*

**Date: September 21\textsuperscript{st}, 2013**

*(No Signature required if document authenticated).*
**Initial Phase**

- **Application received:**
- **Commission Approved:**
- **SAC Approved:**
- **Web Site Section opened:**
- **Members Formally Appointed by IAA:**

**Final Phase**

- **Peer Review by Commission Completed:**
- **Recommended by the Commission:**
- **Final Report Received:**
- **SAC Approved:**
- **BOT Accepted:**
- **Publisher Selected:**
- **Study Published:**

Instructions and application form: see: “Scientific Activity” section at http://iaaweb.org/content/view/256/393/