

IAA Study Group Status Report

Responsible Commission: 3

Study Number and Title: 3.29 Strategy and Feasibility Assessment of Collision Protection from Asteroid and Comet: Concept, Technology, and Prospect

Short Study Description (repeat from Study Group Proposal):

The Study Group 3.29 will make effort to push the technologies of collision protection from concept to practice. Based on the potential concepts and strategies of collision protection, the corresponding state-of-the-art technologies such as orbit optimization and design, GNC, propulsion, and remote operation are developed, and the feasibility of different kinds of strategies will be investigated. With the consideration of present technology development, a micro and low cost collision protection mission will be proposed and designed. Furthermore, the prospect of collision protection strategy in the next 10 years will be previewed, which may lead the technology development and the international cooperation.

Progress in past six months:

- 1) The content of the report has been further discussed.
- 2) The task decomposition has been finished and contribution of each team member is ready to be assigned initially.
- 3) The draft materials of several sections were prepared. The latest technology development of small bodies exploration was investigated.

Website Study Information update: (please give any update regarding Study Group Membership, documents, Study Plan and Schedule):

No.

Issues requiring resolution? (recommend approach):

No.

Product Deliveries on Schedule? (If modified explain rationale):

Yes.

Study Team Member Changes? (List any Study Team Members that you wish to discontinue, and provide names plus contact coordinates of any Members you wish to add on the second page of this Study Update form.) Note: Complete contact information including email, tel. and fax must be provided for all additions. Only Members with complete contact information will be listed and receive formal appointment letters from the IAA Secretariat.)

No.

Name of person providing Study Group Status (Study Group Chair or Co-Chair):

Prof. Weimin Bao (Study Group Chair).

Status Report Date: Sep. 10th, 2018