

IAA Study Group Status Report – SG 4.16

Responsible Commission: IV

Study Number and Title: The Applications of Micro-Satellites and Cube-Sats to Planetary Science and Exploration Missions

Short Study Description (repeat from Study Group Proposal):

Whereas CubeSats and various forms of Micro-Sats have been in existence for the past 20-30 years, they have been primarily focused on Earth-bound applications and primarily developed by universities and small businesses. In light of recent advances in spacecraft and science instrument technologies, Cube-Sats and small satellites can now be considered for very low cost planetary missions. COTS components utilization and accessibility of miniaturized technologies and devices make small satellites a more powerful and cheaper tools than in the past to carry out low cost exploration.

This study will focus on developing a clear vision and a consensus on the future use of such small (~ 1-10kg) satellites for science and technology demonstration missions beyond Earth orbit, including but not limited to the exploration of the Earth's Moon, Mars, Outer Planets, Small Bodies (asteroids and comets) and other destinations.

Progress in past six months:

During the past 6 months the following progress has been made:

1. This study group (SG 4-16) proposed by Commission IV has been merged with a similarly (but slightly later) proposed study group from Commission I with the following key changes:
 - a. John Baker (USA/JPL) has been added as a SG Co-Chair
 - b. Pierre Bousquet (CNES/France) has been added as a Co-Secretary
2. Commission IV and I will work together to produce a common study group report and work together closely.
3. Additional members were added to the study group, as suggested by Commission I including:
 - a. Julie Castillo, JPL/USA
 - b. Tomas Komarek, JPL/USA
 - c. Joel Michaud, CNES/France
 - d. Joel Poncy, TAS/France
 - e. Stephan Ulamec, DLR/Germany
 - f. William Frasier, Ball Aerospace/USA
 - g. Hajime Yano, JAXA-ISAS/Japan
 - h. Karen McBride, UCLA/USA

Website Study Information up to date? (Study Group Membership, Study Plan and Schedule):

Issues requiring resolution? (recommend approach):
NONE.

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

Study Team Member Changes? **YES. See expanded list above.**

Name of person providing Study Group Status: **Leon Alkalai, Chair**

Status Report Date: **8-26-2013**

Study Team Membership Changes

Effectivity Date:

Discontinue:

Add: