

**CALL FOR PAPERS**  
**15<sup>th</sup> AAS/AIAA Space Flight Mechanics Meeting**  
**23-27 January 2005**  
**Copper Conference Center, Copper Mountain, Colorado**

**ABSTRACT DEADLINE: 1 October 2004**

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The fifteenth annual AAS/AIAA Space Flight Mechanics Meeting will be held at the Copper Conference Center at Copper Mountain, Colorado, during 23-27 January 2005. This event is cosponsored by the American Astronautical Society (AAS) and the American Institute of Aeronautics and Astronautics (AIAA). The meeting is organized by the AAS Space Flight Mechanics Technical Committee and the AIAA Astrodynamics Technical Committee. The conference location is situated in the middle of the Colorado Rocky mountains in the ski resort community of Copper Mountain, about 75 miles from Denver International Airport. Participants are strongly advised to make their lodging arrangements well in advance to take advantage of the incredible group rate offered by the resort. Papers are sought from all areas of astrodynamics, including but not limited to

- Orbital dynamics, perturbations and stability
- Orbit determination and tracking
- Spacecraft guidance, navigation and control
- Trajectory design and optimization
- Earth orbital and planetary mission studies
- Attitude dynamics, determination and control
- Low thrust mission and trajectory design
- Satellite constellations and formation flying
- Dynamics and control of large space structures and tethers
- Artificial and natural space debris
- Trajectories about libration points
- Asteroid and Non-Earth Orbiting missions
- Probability of Asteroid Earth Collisions
- Rendezvous/proximity operations missions

Updated and additional information on the conference will be posted at the AAS Space Flight Mechanics Committee website: <http://www.space-flight.org>.

#### **INFORMATION FOR AUTHORS**

Papers will be accepted on the basis of extended abstracts. These abstracts should consist of

1. A cover page containing the paper title as well as the name, affiliation, postal address, telephone number, fax number, and email address of each author. This page shall also indicate the corresponding author, who will be the point of contact for all communication from the technical chairs.
2. The text of the extended abstract, with a length of 500-1000 words and containing supporting tables and figures. The extended abstract shall provide a clear and concise statement of the problem addressed and the results obtained. Submissions without extended abstracts will not be considered.
3. A condensed version of the abstract (100 words maximum) to be included in the printed conference program.

We encourage submissions to be made by email. Acceptable document formats are PDF (the preferred method), Word , or ASCII. For Word files, use only the standard installation fonts. Avoid using symbols and Greek characters in the short abstracts. All material should be sent to each of the Technical Chairs. Notification of acceptance will be sent to the authors via email by 1 November 2004. Author instructions will be sent by email and also placed on the website, <http://www.space-flight.org>. Final manuscripts are required at the time of the meeting. Authors are required to supply their session chairs with a copy of their paper and a short biography of the presenter before the meeting. A no **paper-no podium** rule will be in effect for all presentations. Authors whose papers are not available in printed form at the time of the meeting will not be allowed to present their paper.

#### **SPECIAL SESSIONS**

Proposals are solicited for appropriate special sessions, such as panel discussions, invited sessions, workshops, and mini-symposia. Potential special session organizers should submit a proposal to the Technical Chairs. For a panel discussion, this proposal should include a title of the discussion, a brief description of the topics to be discussed, and a list of the speakers and their qualifications. For an invited session, workshop, or mini-symposium, the proposal should consist of the title of the session, a brief description (approximately 500 words), and the extended abstract and short summary for each talk to be included in the session. The following special sessions have been suggested.

**Open Astrodynamics.** This panel discussion will focus on the application, development, distribution and implementation of astrodynamics information. There may be a related special session if there are enough relevant papers. The overall goal is to determine what is needed to stimulate a cooperative environment in the astrodynamics community that allows organizations to efficiently share data, resources, and ideas. The potential benefits of polices and their impact to the overall astrodynamics community will be discussed. Related to this is the observational data (SSN, JPL, other) that could be shared for research activities. Another example is the need for the satellite regulatory agencies to standardize an approach to avoid interferences between systems. Each panel participant should bring suggestions to the table from their perspective (data owner, investigator, developer, contractor). They should identify the people in their organizations that make decisions on data sharing – or who can authorize data release. Contact: [Felix Hoots/Paul Cefola](#), phone: (703) 506-5931 / (781)-981-5723.

**Novel Lunar and NEO Mission Design and Analysis.** This session seeks a discussion on the following topics:

- 1) Long-duration human missions to the Moon, Mars, and beyond.
- 2) Circumnavigation and rendezvous missions to comets and NEOs using single or multiple satellites.
- 3) Mission design and analysis for high risk missions with significant payoffs.

Contact: [Rao Vadali](#), phone: (979) 845-3918.

Additional suggestions have been proposed for **Electric Propulsion and Orbit Mechanics** and **Education in Astrodynamics**.

#### **BREAKWELL STUDENT TRAVEL AWARD**

The AAS Space Flight Mechanics Technical Committee also announces the John V. Breakwell Student Travel Award. This award provides a maximum of \$1000 to cover travel expenses for U.S. and Canadian students planning to attend this conference. Further details and applications may be obtained at <http://www.space-flight.org>.

#### **WARNING - TECHNOLOGY TRANSFER CONSIDERATIONS**

Prospective authors are reminded that technology transfer guidelines have substantially extended the time required for the review of abstracts and completed papers by private enterprises and government agencies. These reviews can require four months or more. It is the responsibility of the authors to determine the extent of approval necessary for their papers to preclude late submissions and paper withdrawals.

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All material (cover page, abstracts) should be sent to each of the Technical Chairs:

**AAS Technical Chair**

**AIAA Technical Chair**

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For other questions regarding the conference, please contact the General Chairs:

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