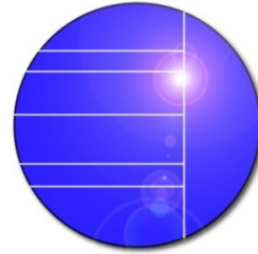




SOSTC



SPACE OPERATIONS AND SUPPORT
TECHNICAL COMMITTEE

PROUDLY PRESENT
The 18th Annual

IMPROVING SPACE OPERATIONS WORKSHOP

April 24-25, 2012

*The Theme for this workshop is
Commercial Space Operations*

Hosted by



Jet Propulsion Laboratory
Pasadena, CA

Sponsored by



Southwest Research Institute,
Boulder, CO

You are invited to attend the **18th Annual Improving Space Operations Workshop**, jointly sponsored by the American Institute of Aeronautics and Astronautics (AIAA), Space Operations & Support Technical Committee (SOSTC), and SpaceOps. This year's workshop will be held **April 24th & 25th, 2012** at the Jet Propulsion Laboratory in Pasadena, California.

The workshop is a primary means by which the SOSTC achieves its objectives:

1. Investigate the development, implementation, and operation of systems that support space related activities.
2. Focus on operations technologies associated with space operations infrastructure, including the Internet and other commercial technologies.
3. Develop positions on operational issues needing AIAA input from a cross section of member expertise.
4. Identify approaches and standards for making operations more affordable, more flexible, more productive, and safer.

As in past years, the emphasis will be on small groups working to advance the level of understanding in several technical areas relevant to space operations.

Call for Presentations:

Presentations (no paper required) are solicited in each of the three tracks of the workshop. Each presentation should be of an educational nature and not a product or service advertisement. Please send a short paragraph describing the proposed topic(s) to be covered to the leader of the appropriate track by close of business on **Friday, February 4**, to propose a presentation. If selected for presentation, charts must be emailed to the Track Leader by close of business on **Friday, April 21**. Please contact the Track Leader if you have questions.

Workshop format:

Brief sessions at the start and end will respectively introduce and summarize each track. The tracks run in parallel. This year's tracks include:

Commercial Space – Leader J. Paul Douglas (jpauldouglas@opsjournal.org)

Over the past several years the commercial space flight industry has come into its own. Unlike decades past where all risk was borne by the government, a small but growing cadre of aggressive entrepreneurs has entered the field and is investing private capital into space projects. This strategy of assuming risk has won them “a seat at the table.” Within the private sector flight hardware is being built that will carry paying passengers on sub-orbital flights, establish orbiting outposts available for lease, transport astronauts and cargo to and from the International Space Station and return to what some have called Earth’s eighth continent: the moon. The natural consequence of these endeavors is the emergence of a space-based infrastructure that will dramatically drive down the cost of access to space. This track brings together those pioneers who are laying the foundation for a Space Industrial Revolution to tackle the challenges that lay ahead.

End-of-Mission Disposal Requirements and Activities – Leader Bill Ailor (William.H.Ailor@aero.org)

Space debris mitigation requirements specify that space hardware be moved to a disposal orbit and “safed” (all energy sources be depleted) or be sent into the atmosphere for disposal at end of life. Proposals for presentations related to this topic are invited in the following areas:

- Current disposal requirements and standards
- Selection of the appropriate disposal option for a specific spacecraft or launch stage

- Compliance of CubeSats with disposal requirements
- Commercial options (Space Tugs, tether packages, etc.) for disposal
- Cost effectiveness of commercial disposal services
- Examples of actual disposal actions and successes
- Examples of problems with meeting disposal requirements

Mission Operations Assurance Track – Leader Larry Bryant (larry.w.bryant@jpl.nasa.gov)

Mission Operations Assurance (MOA) extends the tenets of safety and mission assurance (SMA) into the operational arena. Just as the growth of robotic missions have demonstrated the value of the MOA discipline, the importance to the expanding Commercial Space Operations realm needs to be considered and explored. Last year’s workshop focused on the genesis of MOA and its maturation. This year’s track will focus on the applicability to Commercial Space Operations. One area we would like to emphasize is that of command file errors. The reason is that the results of seemingly innocuous command file errors can be mission ending. Proposals for presentations related to this topic are invited in the following areas:

- Risk Management for Commercial Space Operations
- Extension of robotic mission MOA to Commercial Space Operations
- Command File Errors
 - Definitions,
 - Threats,
 - Cause assessment,
 - Mitigation,
 - Elimination
- MOA relative to End-of-Mission activities

Additional Activities:

A guided tour of the Jet Propulsion Laboratory will conclude the workshop on April 25th from 1330 to 1630. There is a good deal of walking, so wear suitable footwear.

Accommodations:

A block of rooms have been reserved at **Sheraton** in downtown Pasadena for the nights of Monday April 23 and Tuesday April 24. For SOSTC members, rooms are also being held for the night of Wednesday, April 25. These rooms are being held until *March 23rd* at a special rate of **\$125** plus 15.07 % tax, which includes high speed internet connection. Be sure to mention ‘AIAA SOSTC Workshop’ when calling to make your reservations.

Please visit the hotel’s website at <http://www.sheratonpasadena.com> for additional information regarding the hotel.

Registration Information and Fee

Workshop attendance is limited to 100 persons, so you are encouraged to respond early.

Email your reservation to: Larry.W.Bryant@jpl.nasa.gov with “Workshop Registration” in the subject line. Please include information to meet the **Security Requirements** according to the table below. Register by date according to the table. **Late submittals will not be accepted.**

The cost of the workshop is \$75 (US) payable in advance (check) or on the morning of the workshop by **cash or check only**. Checks should be made payable to **SOSTC**. A special rate of \$25 (US) is offered for students.

Advance registration fees may be sent to:

Larry Bryant
 Jet Propulsion Laboratory
 4800 Oak Grove Drive
 MS 264-767
 Pasadena, CA 91109

All attendees should provide the following information. *Attendees who are not US persons should provide additional information according to the table below.*

- Full Legal Name
- Agency/Company Affiliation and Position with Agency/Company
- Country of citizenship and any relevant US status information (e.g. ‘green card’)
- Preferred track
- Any dietary restrictions (While we cannot guarantee these can be accommodated, every effort will be made to do so. If your special needs cannot be satisfied by our caterer, we will inform you.)

<u>Category</u>	<u>Register by</u>	<u>Additional information to provide</u>
US Person	March 21, 2012	(no additional information)
<i>Not</i> a US citizen, but a Legal Permanent Resident (“Green Card holder”)	March 15, 2012	<ul style="list-style-type: none"> ○ Full Legal Name ○ Dual citizen and neither citizenship is the United States (yes or no) ○ Alien Registration Number ○ Country of birth
<i>Not</i> US citizen (excluding individuals with valid green cards), and <i>not</i> from a country on the Designated Countries list*	March 10, 2012	<ul style="list-style-type: none"> ○ Full Legal Name ○ Organization Address ○ Country of Citizenship ○ Country of birth ○ Birth date ○ Country of Passport Issuance ○ Passport Number ○ Passport Expiration Date ○ Visa Type ○ Visa Expiration Date ○ Country of Employer
Not US citizen, and from a country on the Designated Countries list*	March 1, 2012	<ul style="list-style-type: none"> ○ Full Legal Name ○ Organization Address ○ Country of Citizenship ○ Country of birth ○ Birth date ○ Country of Passport Issuance ○ Passport Number ○ Passport Expiration Date ○ Visa Type ○ Visa Expiration Date ○ Country of Employer

* Designated Countries List, those with which the United States has no diplomatic relations, countries determined by Department of State to support terrorism, countries under Sanction or Embargo by the United States and countries of Missile Technology Concern

Workshop check-in procedures will be provided with confirmation of your registration.

Additional Information:

Information about past workshops and the Space Operations and Support Technical committee can be found on our website, at: <https://info.aiaa.org/tac/SMG/SOSTC/>