

JANNAF INTERAGENCY PROPULSION COMMITTEE JOINT ARMY-NAVY-NASA-AIR FORCE

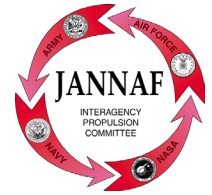
Green Monopropellant Alternatives to Hydrazine

Joint JANNAF / NIRPS

Technical Interchange Meeting (TIM)

4 - 5 August 2015

Meeting Invitation



NIRPS

The Jackson Center
Huntsville, Alabama
4 - 5 August 2015



Last updated 6/30/15

GMAH TIM Meeting Invitation - August 2015

You are invited to attend the August 2015 **Green Monopropellant Alternatives to Hydrazine Technical Interchange Meeting** (GMAH TIM), hosted by the Joint Army-Navy-NASA-Air Force (JANNAF) Interagency Propulsion Committee and the National Institute for Rocket Propulsion Systems (NIRPS). This meeting will be held **Tuesday and Wednesday, 4 - 5 August 2015**, at the **Jackson Center in Huntsville, Alabama**.

The Program Chair for the meeting is **Mr. Joel W. Robinson**, NASA Marshall Space Flight Center, Huntsville, AL. A complete list of Program Committee Members can be found on page 4.

The **JANNAF Interagency Propulsion Committee** coordinates fundamental research, exploratory development, and advanced development programs; standardizes procedures for nomenclature; promotes and facilitates the exchange of technical information; and accomplishes problem solving in the areas of joint agency interest on propulsion systems for missiles, rockets, boosters, spacecraft, satellites, and guns.

The **National Institute for Rocket Propulsion Systems (NIRPS)** supports the preservation and advancement of the nation's rocket propulsion industrial base to ensure that it continues to serve its vital role in national security, space exploration, economic growth, and education. The Institute stewards U.S. leadership in rocket propulsion by: collaborating and cooperating with the government, commercial and academic propulsion communities to most effectively use national capabilities and resources, monitoring public- and private-sector rocket propulsion activities to define and strengthen a healthy rocket propulsion industrial base, Facilitating technical solutions for today's challenges, evaluating and recommending new technologies for further development, and providing the information required by national decision-makers so that policies and other instruments of the government support the sustainment, and where appropriate, the advancement of the nation's civil, defense, and commercial propulsion capabilities.

Meeting Site

All sessions will be held at the Jackson Center in Huntsville, Alabama. The Jackson Center is located 11 miles from the Huntsville International Airport.

Hotel Information

Room blocks have not been arranged for the August 2015 GMAH Technical Interchange Meeting. Attendees are responsible for reserving their own rooms for the meeting. [Click here](#) for a list of hotels located near the Jackson Center.

Transportation and Parking

Free parking is available at the Jackson Center. Please be aware that the hotels near the Jackson Center do not offer an airport shuttle or a shuttle service to nearby businesses such as the Jackson Center. If you will not have your own car, you will most likely need to rent a car or use a taxi service.

NASA Conference Tracking System

For NASA civil servants and their support contractors, please register with your Center travel point of contact in the NASA Conference Tracking System (NCTS). The NCTS code for this TIM is 23284-15.

Security/Attendance Requirements

The overall security classification of this meeting is Unclassified.

Attendance is restricted to **U.S. citizens qualified to receive unclassified, limited-distribution information**. To qualify, the attendee must be employed by a DoD, DoE, or NASA facility, or with a DoD, DoE, or NASA contractor facility eligible for receipt of militarily-critical technical data. No foreign nationals will be permitted to attend. **To register, you must have a JANNAF Secure Portal account.** Review the registration instructions on page 3 and visit the [Registration page](#) of the meeting website for additional information and important links.

Questions concerning attendance eligibility should be directed to the CADRE Facility Security Officer, Mary Gannaway, at (410) 992-7304, ext. 211 or mtg@jhu.edu.

CADRE provides technical and administrative support to the JANNAF Interagency Propulsion Committee
JHU Center for Aerospace-Defense Research and Engineering - 10630 Little Patuxent Parkway, Suite 202, Columbia, MD 21044-3286
Telephone: (410) 992-7300 - Telefax (410) 730-4969 - Email: cadre@cadre.jhu.edu - www.cadre.jhu.edu

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Registration

There is no registration fee to attend the GMAH TIM. However, all attendance requirements must still be met (see Security/Attendance Requirements, previous page).

Pre-registration is strongly recommended.

STEP #1

Create a Portal Account (www.jannaf.org)

To register for the GMAH TIM, **you must first have a JANNAF Secure Portal account.** Please allow sufficient time for completion of the Portal Account application and approval process. For more information and instructions, please visit the [FAQ page](#) on the meeting website.

STEP #2

Once you have your JANNAF Secure Portal Account:

1. Go to the [Registration page](#) of the meeting website and click on "Register for the GMAH TIM."
2. Log in to your Portal account.

STEP #3

Complete the brief online Registration Questionnaire.

After your responses to the Registration Questionnaire have been entered in the meeting database, you'll receive an email confirming your registration for the GMAH TIM.

On-Site Check-In Desk

The On-Site Check-In Desk will be located in the lobby of the Jackson Center. Pre-registered attendees must show photo identification before receiving their badge and materials. **Pre-registration is strongly recommended to ensure that all attendance requirements have been met prior to arrival.** The On-Site Check-In desk will be open Tuesday and Wednesday, 4 - 5 August, beginning at 7:00 a.m. and closing at the end of sessions each day.

Attire

There is no official dress code for the GMAH TIM. However, most attendees wear business or business casual attire. When packing, keep in mind that it can be difficult to regulate the temperature in meeting rooms to everyone's liking, and any changes may not be noticeable quickly, so it is best to bring a light sweater or jacket and dress in layers.

Dining

Attendees have the option of pre-ordering Continental Breakfast (\$5 plus tax) and/or a Box Lunch (\$9 plus tax) from the Jackson Center for the Tuesday and Wednesday sessions. **Orders must be placed by Friday, 31 July 2015.** Unfortunately the Jackson Center will not be able to accept orders after this date. For more information or to place an order, go to the [Site Info & Meal Options page](#) of the meeting website.

Approximately 45 minutes has been built into the program for lunch each day. More information about lunch options outside the Jackson Center can be found on the [Site Info & Meal Options page](#) of the website. Coffee and snack items will also be available for cash purchase throughout each day.

Networking Night

Attendees are invited to dine together at the [Commerce Kitchen Restaurant](#) at 7:00 p.m. on 4 August (location subject to change). Simply order your preferences from the menu and pay that night. Please indicate your intent to attend this optional group dinner when you complete the online Registration Questionnaire so that we can let the restaurant know how many to expect. Transportation is on your own and directions will be provided.

Meeting Proceedings

Proceedings from this meeting will be published by the Center for Aerospace-Defense Research and Engineering. Presentations will be available at no charge to Government attendees (DoD, DoE and NASA) via the new JANNAF Digital Online Collection (JDOC) Database, accessible through your account on the JANNAF Secure Portal. Industry and academic attendees will be able to access the presentations from the GMAH TIM by subscribing to JDOC. For information about subscriptions, please contact Hwei-Ru Chen at (410) 992-7300, ext. 212. Please allow 12 weeks following the conclusion of the GMAH TIM for the presentations to be posted on JDOC.

Questions

Questions concerning this program should be directed to Shelley Cohen at (410) 992-7302, ext. 215 or email: scohen@cadre.jhu.edu. Questions pertaining to registering via the JANNAF Secure Portal should be directed to Tricia Reider at (410) 992-7300, or email: cadre@cadre.jhu.edu.

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Attendee Timeline	
On or Before	Task
20 July 2015	Complete application for JANNAF Secure Portal
22 July 2015	Follow up with FSO or HR contact re: Secure Portal application
30 July 2015	Complete online Registration Questionnaire
31 July 2015	Last day to Pre-purchase Continental Breakfast and/or Lunch

Program Committee Members

PROGRAM CHAIR

Mr. Joel W. Robinson
NASA Marshall Space Flight Center
Huntsville, AL

PROGRAM COMMITTEE MEMBERS

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Upcoming JANNAF Meetings

Green Monopropellant Alternatives to Hydrazine

Joint JANNAF / NIRPS
Technical Interchange Meeting
August 4-5, 2015
The Jackson Center
Huntsville, Alabama

43rd Structures and Mechanical Behavior; 39th Propellant and Explosives Development and Characterization;

30th Rocket Nozzle Technology;
28th Safety and Environmental Protection
Joint Subcommittee Meeting
December 7-11, 2015
Salt Lake City, Utah

63rd JANNAF Propulsion Meeting;
Programmatic and Industrial Base;
47th Combustion;
35th Airbreathing Propulsion;
35th Exhaust Plume and Signatures;
39th Propulsion Systems Hazards
Joint Subcommittee Meeting
Spring 2016
Location to be announced

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Technical Program

The Green Monopropellant Alternatives to Hydrazine TIM program currently consists of 9 technical sessions, with 37 presentations. There will also be a keynote presentation and poster presentations.

Detailed agendas of the technical sessions, as well as a list of posters, are provided in the Preliminary Program (Distribution Statement C). You must have a JANNAF Secure Portal account to access that document. For more information about obtaining a JANNAF Secure Portal account, visit the [FAQ page](#) on the meeting website. If you already have a JANNAF Secure Portal account, go to the [Program page](#) of the meeting website, click on the Preliminary Program link (left side of page), and then log into your Portal account to view, download or print the file.

Technical Program Schedule - Tuesday, 4 August	
8:00 a.m. - 8:10 a.m.	Welcome
8:10 a.m. - 8:20 a.m.	TIM Introductory Remarks
8:20 a.m. - 9:35 a.m.	Session 1: Ground Operations, Production & Storage of Hydrazine
9:35 a.m. - 9:50 a.m.	Break; View Posters
9:50 a.m. - 11:30 a.m.	Session 2: Enabling Spacecraft Missions
11:30 a.m. - 12:15 p.m.	Lunch Break and Guest Speaker
12:15 p.m. - 1:30 p.m.	Session 3: Commercial Spacecraft Advantages & Disadvantages
1:30 p.m. - 1:45 p.m.	Break; View Posters
1:45 p.m. - 3:25 p.m.	Session 4: Long-term Storage, Handling and Transport
3:25 p.m. - 3:40 p.m.	Break; View Posters
3:40 p.m. - 5:05 p.m.	Session 5: International Participation (Invited)
5:05 p.m. - 5:10 p.m.	Closeout Discussion
7:00 p.m. - ?	Networking Night: Dinner at local restaurant (optional)

Technical Program Schedule - Wednesday, 5 August	
8:00 a.m. - 10:05 a.m.	Session 6: Ignition Techniques
10:05 a.m. - 10:20 a.m.	Break; View Posters
10:20 a.m. - 11:35 a.m.	Session 7 (part 1): Stability and Performance
11:35 a.m. - 12:20 p.m.	Lunch Break
12:20 p.m. - 1:10 p.m.	Session 7 (part 2): Stability and Performance - <i>continued</i>
1:10 p.m. - 1:25 p.m.	Break; View Posters
1:25 p.m. - 3:30 p.m.	Session 8: Materials Durability and Compatibility
3:30 p.m. - 3:45 p.m.	Break; View Posters
3:45 p.m. - 5:50 p.m.	Session 9: Component Fabrication and Test
5:50 p.m. - 6:00 p.m.	Closeout Discussion

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Program Highlights

Introductory Remarks

Teresa Vanhooser, Deputy Director of NASA's Marshall Space Flight Center in Huntsville, Alabama, will give introductory remarks at the GMAH TIM on Tuesday, 4 August at 8:10 a.m.

Ms. Vanhooser started her NASA career at Marshall in 1980 as an engineer in the Ground Systems Analysis Branch, where she was responsible for defining, developing and documenting requirements for integration and testing of payloads for the Spacelab carrier, used to conduct science experiments in the shuttle's payload bay.

She served in the Flight Projects Office in a variety of leadership positions including mission manager of the Microgravity Science Laboratory-1 flown onboard a shuttle. She was appointed to Senior Executive Service in 2000 serving as deputy director of the Flight Projects Directorate and eventually as the co-deputy director of the Marshall Engineering Directorate.

In 2007, Ms. Vanhooser supported and eventually led the Ares Projects at MSFC. Following the conclusion of Ares, she was named manager of the Flight Programs & Partnerships Office.

Named to the position of Deputy Center Director in November 2012, Vanhooser assists Marshall Center Director Patrick Scheuermann in managing one of NASA's largest field installations, with nearly 6,000 on- and near-site civil service and contractor employees — including those at NASA's Michoud Assembly Facility in New Orleans — and an annual budget of approximately \$2.5 billion. Vanhooser helps oversee a broad range of propulsion, scientific and space transportation activities contributing to the nation's space program.

Guest Speaker

Our guest speaker during the lunch break on Tuesday, 4 August will be **Dr. Jeffrey Sheehy**, who currently serves as the **Senior Technical Officer of the Space Technology Mission Directorate (STMD)**, advising the Associate Administrator and Deputy Associate Administrators on technology investment planning for the STMD portfolio.

Dr. Sheehy will speak on the topic of "**NASA's Interest in Green Monopropellants.**" Attendees are encouraged to pre-order a box lunch from the Jackson Center (see the [Site Info & Meal Options page](#) of the website for more information and the order link) no later than Friday, 31 July, in order to hear Dr. Sheehy's talk, beginning at 11:45 a.m.

Dr. Sheehy has nearly 25 years of experience in aerospace technology research, development, and demonstration at NASA and the Air Force Research Laboratory (AFRL). Jeff started out at NASA-ARC performing theoretical and computational chemical physics research on problems relevant to astrophysics, materials science, and space vehicle thermal protection. During his time at AFRL, he was chief of the Propellants Branch, and team lead of the High Energy Density Matter Program. While at MSFC, he was deputy chief engineer on the Orion Launch Abort System, and chief engineer for the Technology Demonstration Mission Program Office.