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Lunar Regolith Simulant Development & Characterization

2009 Lunar Regolith Simulant Workshop - March 17-20

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Dear Colleagues,

The Marshall Space Flight Center (MSFC) will conduct the third Lunar Regolith Simulant Workshop in Huntsville, Alabama, on March 17-20, 2009. The focus of this Workshop will be on Lunar Regolith Simulant Development and Characterization, in addition to Simulant User Needs Assessments. This Workshop is geared towards anyone that will need to use simulants, such as technology developers, engineers, scientists, and human health researchers. For those that write SBIR or other proposal solicitations and for those responding to calls that may require simulants, the Workshop will provide a better understanding of simulant choices, availability, and costs. All lunar simulant development activities, including those previously performed under the In Situ Resource Utilization (ISRU) Project, have been merged by the Exploration Technology Development Program (ETDP) and reside under the Dust Management Project (DMP), managed by Mark Hyatt at Glenn Research Center (GRC). The lunar regolith simulant development effort encompasses regolith grain sizes from nanometers (i.e., dust) up to centimeters (i.e., coarse), and is led by MSFC working in conjunction with several partners for the Dust Project.

The Workshop will be structured as follows:

- **March 17** - Lunar Regolith/Simulant 101 Course
- **March 18** - Presentations covering status of Simulant Development, Simulant Characterization/Properties, Figures of Merit (FoM) Demonstration, Simulant Documentation, Simulant Uses, Project/Research User Needs and Applications, and Q&A Panel Session
- **March 19** - Break-Out/Splinter Sessions with Simulant Developers, Lunar Regolith/Simulant Experts, and Simulant Users
- **March 20** - Reserved for One-on-One Meetings between Simulant Users and Simulant Experts by Request

The one day "101" Course is designed to educate or re-familiarize individuals on several topics pertaining to regolith and simulants. Course instructors include experts from various organizations including NASA, United States Geological Survey (USGS), industry, and academia well versed in lunar geology and simulant development. Topics include: basic geology terminology; the history of the Moon; description of lunar regolith, lunar regions, and their properties; discussion of lunar samples/data collected during Apollo and other missions; properties such as size, shape, composition, and density (the Figures of Merit); simulant feedstock; simulant processing; and simulant properties.

The other days of the Workshop are arranged to ensure communication and dialogue among all parties involved. In addition to the simulant users learning about the most recent simulant development activities, it is important that the simulant developers also understand more about the users' needs for simulants including their research objectives; how simulants will be utilized; quantities needed; and estimated need dates. This information is an important component in defining future budgets and risks to technology infusion for the various programs and projects.

A social is planned for the evening of March 18th at the US Space & Rocket Center's new Davidson Center. Several of the hardware items developed and used to explore the Moon are currently on display. Some of the items include a full-scale Saturn V rocket and a lunar moon buggy.

[Registration for the Workshop is now open.](#) (For NASA and NASA contractors, please note that it has been determined by NASA Headquarters that this Workshop does NOT fall under the definition of a "conference" so conference attendance restrictions do not apply.) Please indicate on the registration form whether you plan to attend the 101 Course or the Workshop technical interchange meetings or both, as well as the social. Course material will be handed out to all "101" participants in the class. The Workshop Agenda will be posted on the website in the near future along with other pertinent information.

In order to maximize the time spent at the Workshop, lunch will be ordered and delivered to the facility. Menu choices from selected restaurants will be made available to you at the Workshop and payment (cash) will be collected. All registered attendees will be receiving an email starting Tuesday, March 9 with a lunch menu, with RSVP expected by that Friday.

All Workshop participants will be required to provide the following for the badging process as specified on the registration site: 1) your name; 2) company name; 3) citizenship(s); and 4) project or research area(s) which can be noted in the "Division" or "Expertise" area. All participants should be mindful that foreign nationals are invited to the Workshop and, therefore, presentations and discussions should be cleared through Export Control. For those presenting, there will be standard audio/visual equipment.

A brief list of hotels and information about local attractions are included in Attachment A. The map and directions to the Workshop are included in Attachment B. This information is also on the website.

Please contact [Ms. Lynn Machamer](#), 256-544-3546, should you have any questions regarding the Workshop. We anticipate a productive workshop and look forward to seeing you there.

Best Regards,
Carole McLemore
Exploration Advanced Capabilities Office
MSFC ISFR/ISRU/Dust Project Lead

Simulant Users' Survey

Assist us in understanding what simulant properties and simulant fidelities are needed in order to develop a simulant whereby you can perform your development, testing, and verification objectives according to your schedule needs.

List of Attendees

For more information, please contact:

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