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## “Moon Bases”, Tuesday, March 19, 2019



### Bryan Palaszewski

Our speaker has worked at the NASA Glenn Research Center at Lewis Field since 1989 and is currently directing research on high performance propellants and atmospheric entry.

He is currently conducting analyses for the NASA Office of the Chief Technologist investigating nanometer-scale propellant additives for metallized gelled fuels for many space mission applications.

Recently, he led work related to human Mars entry, descent, and landing (EDL) where supersonic retro-propulsion (rocket deceleration) is planned for the final descent to the planet's surface. He is also investigating the mining of outer planet atmospheres and the challenges and benefits for future ambitious space missions.

Another past focus of his research is in nanoparticle metal additives for gelled liquid fuels, and solid hydrogen for atomic propellants for launch vehicles and interplanetary missions.

For six years, he led many studies of advanced space systems for orbital and interplanetary travel at the Jet Propulsion Laboratory, Pasadena, CA.

He was also the lead propulsion subsystem engineer on the Ocean Topography Experiment (TOPEX) for three years, as well as being involved other flight projects such as the Galileo Mission to Jupiter and the Cassini Mission to Saturn.

He holds a Master of Science Degree in Mechanical Engineering from the Massachusetts Institute of Technology and a Bachelors Degree in Mechanical Engineering from the City College of New York.

He has received the AIAA Sustained Service Award in 2004, and was chair of the AIAA Nuclear and Future Flight Propulsion Technical committee for 3 years beginning in 1997 and was also chair of this committee for the 2<sup>nd</sup> time from 2008 to 2011.

### Moon Bases Abstract

This presentation focuses on the early history, development, and future of moon bases and the related transportation vehicles for space exploration. It covers moon base concepts and proposed developments from the early days of lunar exploration to the uses of moon bases for the future of human exploration of the rest of the Solar System. The presentation is augmented with photographs of historical, current, and future moon base ideas and their past and proposed uses.

Bryan Palaszewski ([bryan.a.palaszewski@nasa.gov](mailto:bryan.a.palaszewski@nasa.gov))

### Location:

Shula's 2 Steak & Sports  
[DoubleTree by Hilton Hotel Cleveland - Independence](#)  
6200 Quarry Ln, Cleveland, OH 44131

**Phone:** (216) 901-7852

### Times:

Social Gathering: 5:30 – 6:00 pm  
Dinner: 6:00 – 7:00 pm  
Presentation: 7:00 – 8:00 pm

### Meal:

Dinner orders will be taken from the house menu

<https://www.shulas.com/shulas-2/cleveland/#1491407149596-ee25d46a-e7e6>



Please make reservations with Art Lazar by Wednesday, March 13<sup>th</sup> at [artlazar@oh.rr.com](mailto:artlazar@oh.rr.com).