

VAAS Mission

The mission of VAAS is to be a forum for cooperation and collaboration between the clubs of the Commonwealth of Virginia. Through annual meetings, attendees come away with new friendships, fresh ideas, and knowledge of what other societies are doing around the state and beyond.

VAAS was founded as a result of a joint meeting in 1975 between the Richmond and original Norfolk Astronomical Society. The annual event is open to societies and the interested public across Virginia and surrounding states. Hosting of the event is passed around participating Virginia societies. A fixed host rotation was implemented after 1995 when for the 2 years prior the convention host society faltered on having the event.

Registration and other fees

PURPOSE OF FEE	COST
Registration (per person)	\$5.00
Evening Cookout (weather permitting)	\$10.00
YRSP Parking (pay to YRSP Ranger)	\$3.00

All registration will be handled at the door. Registration helps the host to offset the expenses of room rental, refreshments, printed materials, and other costs.

Speaker Schedule

TIME	ACTIVITY
10:30 AM	Registration Opens
11:00 AM	Jill Prince (NASA): The Mars Phoenix Lander Mission
12:00 PM	Lunch (on your own)
1:00 PM	Kent Blackwell: Arctic Circle Total Solar Eclipse
2:00 PM	Dave North (NASA): Altair: NASA's Next Lunar Lander
3:00 PM	Dr. Andrew Clegg (NSF): Future Ground-Based Astronomical Observatories
4:00 PM	VAAS Business / Door Prize Drawing
5:00 PM	Caravan to York River State Park.

Directions to James City County Library

Take exit 231A (Norge) off Interstate 64. Library is located 1/4-mile on left.

Directions to York River State Park

From James City County Library, drive 1.8 miles north on Croaker Road (SR-607), then take right onto Riverview Road (SR606). Drive 1.6 miles to entrance of park. Take left turn into park for 2.1 miles. At ranger gate, pay \$3.00 per vehicle, and park in parking lot on right. Shelter #3 is located to the right (east) of the Visitor Center.

Our Sponsors and Door Prizes

NASA Langley Research Center

<http://www.larc.nasa.gov/>

10 light book bags
NASA meatball stickers
STS-126 mission stickers
crew lunar operations postcards
crew exploration vehicle postcards
5 rubber Orion capsules
5 Crafting Flight books
STS-126 mission posters

Norfolk Astronomical Society

<http://norfolkastronomical.org/>

Book: Cosmos - A Field Guide by Giles Sparrow
Software: Redshift 5 Planetarium cdrom (WIN)

Roanoke Valley Astronomical Society

<http://rvasclub.org/>

Observing Notebook: The Astronomer's Journal

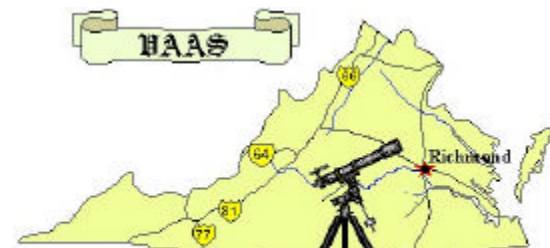
Astronomy Magazine (Kalmbach Publishing)

<http://www.astronomy.com/>

1 year subscription to Astronomy

VAAS 2008

32nd Convention



Virginia Association of Astronomical Societies

Saturday, September 20, 2008

10:30 AM - 4:30 PM

James City County Library

7770 Croaker Road

Williamsburg, VA 21388

Observing Session / Cookout:

(Weather Permitting)

York River State Park

Hosted by



Norfolk Astronomical Society

<http://norfolkastronomical.org>

Virginia Peninsula Astronomy/Stargazers

<http://tech.groups.yahoo.com/group/vpas/>

The Mars Phoenix Lander Mission

Jill Prince, NASA Langley Research Center

In the quest for life on other planets, Mars has been a keystone in the foundation of planetary exploration. Historically, Mars has been a formidable destination and sending robotic pioneers to the planet has been extremely challenging. Since the first launch in the mid 1960's, less than half of the attempts to reach Mars have been successful. In the past decade Mars delivery efforts have attempted to change those statistics, including the most recent successful landing of the Mars Phoenix on May 25, 2008. Similar to any mission to extraterrestrial planets, Phoenix had many obstacles to overcome. Like all other Mars entry, descent, and landing missions, engineers and scientists had to wait through the "7 minutes of terror" before determining mission success. The Phoenix entry, descent, and landing was successful and continues to pave the way for future exploration of Mars and other planets.

Ms Prince received a B.A. degree in Physics and Astronomy from Northwestern University in 1999. She immediately relocated to Hampton Roads and earned a M.S. degree in Mechanical Engineering from The George Washington University in 2001. Currently, Ms. Prince is an Aerospace Engineer in the Atmospheric Flight and Entry Systems Branch at NASA's Langley Research Center. Her primary area of expertise is atmospheric flight mechanics, and during the course of her short career to date she has played key roles and made significant contributions to several of NASA's Mars mission spacecraft. Most recently, she was responsible for the entry, descent, and landing simulation of the Mars Phoenix spacecraft that safely reached the surface of Mars on May 25 2008. Previously, she served as the Langley flight mechanics lead for the Mars Reconnaissance Orbiter (MRO) aerobraking operations team and provided extensive flight mechanics and mission simulation analyses for the aerobraking phase of flight. She was the recipient of the NASA Exceptional Achievement Medal for her work supporting the MRO aerobraking development and flight operations. Prior to MRO, she was a member of the LaRC Mars Odyssey aerobraking team, and she also supported the Mars Exploration Rover (MER) Entry, Descent, and Landing (EDL) Flight Mechanics Team, and helped successfully land the Spirit and Opportunity rovers on the surface on Mars by providing an

independent verification and validation of the primary mission simulation used for the EDL phase of the Mars Explorations Rovers. In addition to Mars exploration projects, Ms. Prince has supported multiple NASA and external agency planetary mission studies and proposal efforts including Mars, Venus, Titan, and Earth-entry Lunar sample return vehicle proposals.

Ms. Prince is currently serving as the Assistant Branch Head in the Atmospheric Flight and Entry Systems Branch at NASA Langley Research Center

Arctic Circle Total Solar Eclipse

Kent Blackwell, Avid Eclipse Chaser

Join Kent Blackwell as he tells his avid tale of adventure, sailing aboard the cruise ship M/V Discovery, visiting foreign lands and braving frigid temperatures, in an attempt to witness a total solar eclipse from the Arctic Circle last August 1, 2008.

Kent Blackwell has been an avid observer for over 40 years. He enjoys observing deep-sky objects with all sizes of telescopes. Although he owns a 25" telescope he's also an avid collector of optical equipment, ranging from WWII Japanese giant "big eyes" binoculars to vintage Unitron refracting telescopes. He has cataloged thousands of objects and has been writing observing notes for many years.

He has chased solar eclipses all around the world and has just returned from a journey to witness the last solar eclipse near the North Pole. He is currently making plans to visit China, South Korea and Japan for the 2009 solar eclipse, which will be the longest total solar eclipse until the year 2132.

Kent has had articles & photographs published in major magazines including Astronomy, Deep Sky Magazine, The Reflector, and Sky & Telescope. He has also had photographs published in Patrick Moore's book, Atlas Of The Universe.

Itty Bitty Radio Telescope

Mark G. Gibson, Raleigh Astronomy Club

The goal of this demonstration is to introduce the interested public to Radio Astronomy, using a 12 GHz radio telescope. The equipment is on loan from NRAO Greenbank. This outside demonstration will be conducted at various times during the day.

Altair: NASA's Next Lunar Lander

Dave North, NASA Langley Research Center

This talk is an overview of NASA's lunar lander project, including a detailed look at the lander design, a description of the missions, and lunar outpost concepts.

Mr. North received a B.S. degree in Aerospace Engineering from the University of Virginia in 1987 and a M.S. degree from the University of Texas at Austin in 1992. He is currently the vehicle configuration lead for the Altair lunar lander project at NASA's Langley Research Center. The Constellation / Altair lunar lander project team is responsible for designing the next human lunar lander which is scheduled for its first crewed flight to the moon in 2019. Mr. North previously worked at Pratt & Whitney from 1988 to 2000 on various rocket engine and jet engine design teams including the Space Shuttle Main Engine, the RL-10 rocket engine, and the F-100, F-135 and Joint Strike Fighter jet engines. He also worked at Siemens Westinghouse from 2000 to 2002 designing low-emissions combustors for industrial gas turbines.

Future Ground-Based Astronomical Observatories

Dr. Andrew W. Clegg, National Science Foundation

This talk will focus on the observatories presently funded by the National Science Foundation, and will take a look forward at the exciting new facilities that are in the pipeline, such as the Atacama Large Millimeter/submillimeter Array, the Advanced Technology Solar Telescope, the Large Synoptic Survey Telescope, and the Square Kilometer Array.

Dr. Andrew Clegg is Program Director for the Advanced Technologies and Instrumentation program and the Electromagnetic Spectrum Management program at the National Science Foundation. He is responsible for evaluating proposals for advanced astronomical detectors and new telescope technologies, and for protecting the radio interference environment in which the U.S. Government's radio telescopes operate. As an amateur astronomer in the 1970's he was a member of the original Norfolk Astronomical Society, and a founding member of the Back Bay Amateur Astronomers.