September 16, 2011

Dr. Lewis Thomas Memorial

This General Membership Meeting will be dedicated to Dr. Lewis Thomas who passed away in May, 2011. In addition to honoring Dr. Thomas, AAI will also be honoring other long time members who have recently passed away, including: Henry and Mary Adams, Dave and Gloria Kuchinsky, George Chaplenko, and Julius Zsako.

8:00pm @ The Roy Smith Theater

October 21, 2011

On the Geometry of Orbits

Dr. Alberto Guzman, *City College New York*

Alberto Guzman was born in Puerto Rico but has spent most of his life looking at the illuminated skies of New York City. He attended City College of New York and the University of Chicago where he received his doctorate in mathematics. He is Professor of Mathematics Emeritus at City College in New York. His current interests include the history of mathematics and the monthly "Ask the Skywatcher" column in AAI's *The Asterism* newsletter. He has been a member of AAI since 2002. Dr. Guzman will focus on the geometric characteristics of the four curves that are possible orbits under gravity: the circle, the ellipse, the parabola and the hyperbola.

8:00pm @ The Main Lecture Hall

November 18, 2011

Solar Radio Research and the EOVSA Project: Your Stimulus Tax Dollars at Work

Dr. Dale Gary, *New Jersey Institute of Technology*

In 2009, the National Science Foundation received $3 billion in stimulus funds with instructions to spend it within one fiscal year. In response, a special program, "Major Research Instrumentation--Recovery and Reinvestment" (MRI-R-squared) was announced. Through that program, AAI member Dale Gary was awarded $5.1 million for a major expansion of NJIT's solar radio observatory, the Owens Valley Solar Array. This project, called the Expanded Owens Valley Solar Array (EOVSA), is to be completed in time for the current solar cycle maximum in 2013. This talk describes some of today's most compelling solar research problems, what kind of instrument is needed to address these problems, and how EOVSA is designed to play a major role in a new era of radio solar physics.

Dr. Gary received his B.S. from the University of Michigan and his Ph.D. from the University of Colorado, Boulder, and he worked for 15 years at Caltech before coming to NJIT in 1997. He is a leader in the use of solar radio data for examining the conditions under which solar radio bursts affect cellular telephone signals, and he has been involved in the recent discovery that these bursts can cause the failure of GPS receivers. His research has been essential to understanding how these solar events occur. He has authored more than 130 articles in scholarly journals, and he is the current president of United Astronomy Clubs of New Jersey. He is also Distinguished Professor of Physics at NJIT and is Director of the Owens Valley Solar Array near Big Pine, California.

8:00pm @ The Roy Smith Theater

December 16, 2011

The Icy Moons of Saturn

Andy Poniros, NASA/JPL Solar System Ambassador

This presentation is a trip through the Saturn System using many striking images and scientific data collected by the Cassini spacecraft and Huygens probe. It features Saturn's moons, Titan and Enceladus, plus several other icy moons as well as the planet itself and its rings. Some of the amazing discoveries made by the Cassini Science Team will be included. Andy received an ASEE in Electrical Engineering from Norwalk State Technical College in 1974, and has worked as a Medical Imaging Engineer for 37 years. Andy is NASA Lunar Rock Kit Demonstration Certified, a Science Reporter for WPKN Radio (WPKN.org), and is a member of The Astronomical Society of New Haven.

8:00pm @ The Roy Smith Theater

January 20, 2012

The Search for Extrasolar Planets

Dr. Carlton Pryor, Rutgers University, Department of Astronomy and Physics

We now know of many more planets orbiting other stars than we do planets in our own solar system. The number of known extrasolar planets is growing rapidly, but this field of research is still very young. Dr. Pryor will describe how common extrasolar planets are thought to be. He will describe the kinds of planets and planetary systems that have been found so far. Dr. Pryor will end his talk by describing how Earth-like planets that could support life as we know it are likely be found in the next few decades. He is currently a Professor of Astronomy at Rutgers having received his B.S. at Caltech and his M.A. and Ph.D. in Astronomy at Harvard.

8:00pm @ The Main Lecture Hall

February 17, 2012

Turning Dust to Gold: Building a Future on the Moon and Mars

Dr. Hyam Benaroya, Rutgers University, Mechanical and Aerospace Engineering Department

Our continued prosperity and survival as a species will depend in part upon space exploration and manned settlement on other worlds like the Moon and Mars. But what will these settlements look like? How can man commercially utilize the resources of the Moon and Mars? How will colonies be built, and how will humanity evolve on the Moon, Mars, and beyond? At Rutgers, Dr. Benaroya studies challenging environments like off-shore drilling, aircraft design, and lunar surface structures for manned habitation. He has recently completed a book titled, "Turning Dust to Gold: Building a Future on the Moon and Mars". His talk will focus on lunar and Martian settlements. Professor Benaroya received his B.E. from Cooper Union in New York, and his M.A. and Ph.D. from the University of Pennsylvania.

8:00pm @ The Main Lecture Hall

www.asterism.org ★★★ **Info@asterism.org**

March 16, 2012

The Cosmic Challenge: The Ultimate Observing List for Amateurs

Phil Harrington, astronomy author and educator

Listing more than 500 sky targets in 187 challenges, this observing guide will test novice astronomers and advanced veterans alike. Its unique mix of Solar System and deep-sky targets will have observers hunting for the Apollo lunar landing sites, searching for satellites orbiting the outermost planets, and exploring hundreds of star clusters, nebulae, distant galaxies, and quasars. The guide introduces objects often overlooked in other observing guides, and it features targets visible in a variety of conditions, from the inner city to the dark countryside. Challenges are provided for the naked eye, binoculars, and the largest backyard telescopes. Phil has been an amateur astronomer since 1968, and is an adjunct professor at Suffolk County Community College in Seldon, New York where he teaches courses in stellar and planetary astronomy. He is a founding member of the Westport Connecticut Astronomical Society and is one of the coordinators of the annual Astronomer's Conjunction held every summer in Northfield, Massachusetts. He is also a contributing editor for *Astronomy* magazine, and he has written the magazine's monthly "Binocular Universe" column. In addition, he has written for *Sky and Telescope* and *Deep Sky* magazines.

8:00pm @ The Roy Smith Theater

April 20, 2012

The Cosmic Microwave Background: From Curiosity to Tool

Dr. Michele Limon, Columbia University

Discovered in 1965, the Cosmic Microwave Background is the relic thermal radiation from the hot *Big Bang* that gave birth to our Universe. The CMB has developed into a powerful tool for studying the evolution of the Universe. Dr. Limon will discuss the major theoretical and observational milestones of the past 50 years, the current state of the art in CMB research, and he will speculate on future results. Dr. Limon holds a doctorate in physics from the *Universita degli Studi* in Milan, Italy, and is currently a Research Associate at the Columbia University Astrophysics Laboratory in New York where he is working on QIET and EBEX. Both are experiments dedicated to the study of the polarization of the CMB.

8:00pm @ The Main Lecture Hall

May 18, 2012

AAI reserves this month's meeting for speakers from among our membership who would like to share their research, astroimaging, telescope-making and other activities. The election of Officers will also take place.

8:00pm @ The Main Lecture Hall

After The Meetings...

Following these meetings, AAI invites you to join us at William Miller Sperry Observatory for refreshments and a chance to look through our two large telescopes (weather permitting). Meet our members, ask questions, view our displays, and visit our sales counter. Sperry Observatory is open every Friday from 7:30 p.m. to 10:30 p.m.

Amateur Astronomers, Inc.

William Miller Sperry Observatory

William Miller Sperry Observatory began with a $150,000 endowment to Union County College by Mrs. Frederick W. Beinecke and son, William. It was dedicated on May 21, 1967 in honor of her father, William M. Sperry. The east dome holds a 10-inch f/15 refractor and the west dome is home to a 24-inch f/11 Cassegrain reflector. Founded on November 14, 1949, AAI makes its home at Sperry Observatory. With over 200 members, AAI is one of the largest astronomy clubs in the United States. The club supports a wide range of free functions in service of UCC, our members, and the general public.

Activities

The telescopes are opened every Friday evening for free celestial viewing. A presentation for general audiences on some topic in astronomy is given at 8:30 p.m. A schedule of events can be found at www.asterism.org. Click "Public Talks". With prior arrangements, special talks for youth groups (including scout badge programs) can be arranged for 7:30 p.m. All presentations are free, and there is plenty of free parking at the Observatory.

From September to April, AAI sponsors a talk by a prominent scientist on the subject of astronomy. The talks are given in the Roy Smith Theater or the Main Lecture Hall of the College. Admission is Free.

Public Star Parties

Star parties are informal observing sessions which bring AAI members and the public together to view a wide variety of celestial objects with club and member telescopes. All public star parties are held at Sperry Observatory.

2011		2012	
September 30	January 27	May 11	September 7
October 28	February 24	June 22	October 5
November 11	March 23	July 20	November 9
December 9	April 13	August 10	December 7

Members-Only Star Parties

Star parties for AAI members-only are held at our Barry Malpas Observatory at the dark sky site of the United Astronomy Clubs of New Jersey (www.uacnj.org), of which, AAI is a member.

2011		2012	
September 24	January 21	May 19	September 15
October 29	February 18	June 16	October 13
November 26	March 24	July 21	November 10
December 17	April 21	August 18	December 15

Membership in AAI

Anyone 12 years of age or older who has an interest in astronomy may apply for membership. Annual dues are $21 with Sustaining ($31) and Sponsoring ($46) levels available. There is a one-time $3.00 application fee for new members. Additional family members who live at the same address may apply for $5 each. Group rate subscriptions to *Sky & Telescope* and *Astronomy* magazines are available.

Officers of the Corporation (2011-2012)

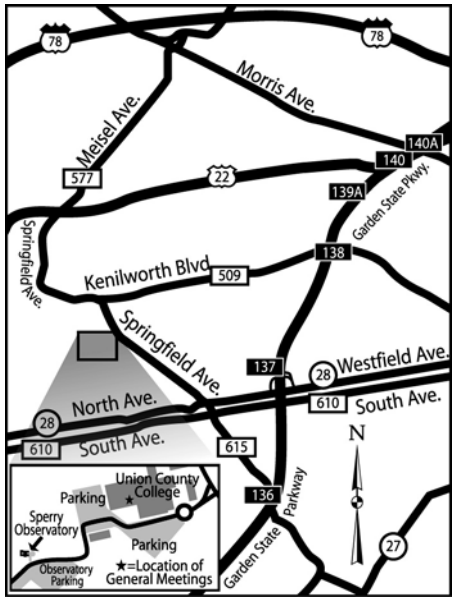
President	Vice President	Treasurer
Richard Greenstein	David Satkowski	Marcus Valdez Jr.

Recording Secretary	Corresponding Secretary
Alan P. Witzgall	Joe Arcaro

Board of Trustees

Chairperson, 2009-2012 ..... Mary Ducca
2010-2013 ..... Aaron Zuckerman
2011-2014 ..... Brian McGuinness

Visit www.asterism.org for more info!



William Miller Sperry Observatory

Hours Open to the Public

Fridays 7:30 p.m. to 10:30 p.m.

Admission and Parking

All programs are presented FREE of charge. Plenty of free parking at the Observatory.

Location and Directions

The William Miller Sperry Observatory is located on the Cranford Campus of Union County College (see map above). Monthly General Membership Meetings are held at the Roy Smith Theater or Main Lecture Hall at the College (see map above for location and inside brochure for specific meeting venues).

For More Information

www.asterism.org ★★★ info@asterism.org
Telephone & Sky Info Hotline at 908-276-STAR (7827)
Mailing Address: AAI, P.O. Box 111, Garwood, NJ 07027-0111

About the Cover Image

The Andromeda Galaxy (M31) and its companion galaxies (M32 and M110). At a magnitude of 3.4, the Andromeda Galaxy is one of the brightest Messier objects, making it visible to the naked eye on moonless nights even when viewed from areas with moderate light pollution. Although it appears more than six times as wide as the full Moon when photographed through a larger telescope, only the brighter central region is visible to the naked eye or when viewed using a binocular or a small telescope. The image is composed of 15 exposures of 180 seconds each. The images were combined in Maxim DL and post-processed in Photoshop.

Amateur Astronomers, Inc.

2011-2012

General Membership Meeting Speaker Schedule

The Andromeda Galaxy was imaged by Helder Jacinto at the Jenny Jump State Forest on September 5, 2010. The camera was an Orion Star Shoot Pro V2 on a 120mm Orion EON telescope with CGEM mount.
Read the details on the back panel of this brochure.