

April 2004

Due\$ are Past Due: If your address label shows anything other than M2004 or PERM, we'll be happy to receive your dues at the next meeting. Dues are payable January 1 each year, **and past due as of the end of the March business meeting.** Whether you mail your payment or bring it in person, **please include the form that was previously provided.** It's the only way we can keep track of your payment. **If your dues are not paid,** you will no longer receive the ASTRAL PROJECTIONS or the REFLECTOR. Last Chance!

ASTRAL PROJECTIONS II If you are not receiving the email version of our newsletter, you are missing out! The paper copy is on only one piece of paper. The email version is expanding! We want members to send in star party reports; news, photos, whatever, and it will be added. If you are not receiving the email version send your email address to NEWS@astra-NJ.org Tell us that you want to receive our email newsletter. Don't miss out.

Membership Cards are sent out with the April Newsletter. If you would like them earlier, please volunteer to help send them out.

March Meeting Review Barry Malpas of the United Astronomy Clubs of New Jersey, our Guest Speaker, did two presentations "An Overview of Jenny Jump" and "The History of Women in Astronomy."

April Meeting: The April 2004 meeting will be Friday, April 9th, at 8:00 PM. Mauro Bacolo & Ro Spedaliere will present the Night Sky Network! Participation in the Night Sky Network is open to all club members. If you are interested in participating, inform Mauro, Ro or Tito. We will be voting on whether or not to join the United Astronomy Clubs of New Jersey, and we will discuss Astronomy/Space Day.

Upcoming Events:

Laser Light Shows at the Planetarium April 9th & 10th

The Northeast Astronomy Forum will be held on April 17 and 18 this year. <http://www.rocklandastronomy.com/neaf>

Astronomy/Space Day: Events to be held Sat May 8th at the Planetarium.

Star Party Dates: Potential star party dates are listed below. Activities will begin around sunset (see times listed). All sessions are at Coyle Field except as noted. Coyle Field is not an "Official" club sponsored site, as the insurance provided by the College does not cover Coyle Field; come at your own risk. These parties are arranged privately. See our message board.

<u>Date</u>		<u>Moon Phase</u>	<u>Sunset</u>	<u>Special Event</u>
Apr 11	Sat	LQ	7:32 PM EST	
Apr 18	Sat	1 day before NM	7:39 PM EST	
Apr 25	Sat	1Q	7:46 PM EST	

For Sale: 102-mm f/5.5 "semi-apo" short focus refractor tube assembly. Comes with removable dew cap, Crayford focuser, and 2" draw tube for large eyepieces or camera. Excellent traveling scope. \$250. Contact Phil Zollner at 732-905-0889.

For Sale: New as shown at the Sept. meeting, eyepieces that I already have or eye relief shorter than I want with my eyeglasses. Meade Series 4000 Eyepieces: 4-element Super Plössls; 52 deg. apparent field; parfocal; at 50% off the Meade price: 6.4 mm, 9.7 mm, 12.4 mm, each \$40. Contact Randy Walton at the meeting or at (732) 458-3465.

Randy Walton is trying to put together a group purchase of the Herald-Bobroff Astro-Atlas. To get the discount we must group order a min. of 5 by the end of March. When it came from Australia, it was \$130. It has 214 charts in a number of series. It is setup like a series of road maps that give more information as you go from state to county to city maps. He plans to have a copy at the March meeting. If you think you may want to order bring \$87.95 cash, or check to the meeting. Any discount will be refunded. No orders without payment. See <http://www.lymax.com/hbaa>

April Celestial Events: supplied by Randy Walton

Day	Date	Time (LMT)	Event
Thu.	1	14:17	Moon Rise
		18:25	Sunset
Fri.	2	21:00	Venus 0.6 deg. S of the Pleiades
Sun.	4	2:00	Daylight Saving Time Begins
		19:27	Sunset
Mon.	5	6:51	Moon Set
		7:03	Full Moon
		19:59	Moon Rise
Tue.	6	0:54	Double shadow transit on Jupiter
Sun.	11	2:10	Moon Rise
		11:04	Moon Set
		23:46	Last Quarter Moon
Tue.	13	3:31	Double shadow transit on Jupiter
Mon.	19	6:23	Moon Rise
		9:21	New Moon
		20:02	Moon Set
Thu.	22	0:00	Lyrid meteors peak
Fri.	23	8:21	Moon Rise
		22:00	Mars 2.7 deg. below Moon with Venus nearby
Tue.	27	2:31	Moon Set
		11:54	Moon Rise
		13:32	First Quarter Moon
Thu.	29	14:05	Moon Rise
		23:00	Jupiter 3 deg. S of Moon
Fri.	30	4:02	Moon Set
		19:54	Sunset

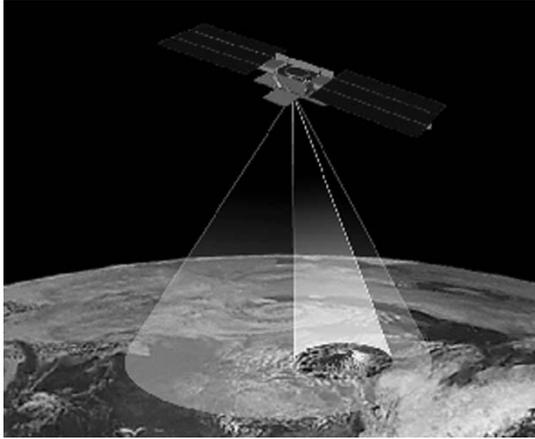
Astronomy Courses: Planetarium staff offers a number of mini-courses on astronomy. Call the OCC Department of Continuing and Professional Education, 732/255-0404, for information or to register.

Newsletter Deadline: Material for *ASTRAL Projections* must be received 21 days before the next meeting. E-mail to newsletter@astra-nj.org or mail to: Paul Gitto 1200 Coolidge Ave. Whiting NJ 08759.

Planetarium office: 732/255-0343 weekdays 9 AM - 4 PM. Hot line: 732/255-0342. Touch 5 for ASTRA.

Visit our Web page at <http://astra-nj.org> Visit the Planetarium page at <http://ocean.edu/planet.htm>

Executive Board: President - John Endreson; Vice President-Secretary - Paul Gitto; Treasurer - Ro Spedalieri; Webmaster - Paul Gitto; Newsletter Editor – Bob Salvatore



Sciencecraft

by Patrick L. Barry and Tony Phillips

Probes that can distinguish between "interesting" things and "boring" things are vital for deep space exploration, say JPL scientists.

Along with his colleagues in NASA's Space Technology 6 Project (ST6), JPL's Steven Chien is working to develop an artificial intelligence technology that does just that. They call it the Autonomous Sciencecraft Experiment, and it's one of many next-generation satellite technologies emerging from NASA's New Millennium Program.

As humanity expands its exploration of the outer solar system-or even neighboring solar systems! -The probes we send suffer from two unavoidable handicaps. First, commands radioed by mission scientists on Earth take a long time to reach the probe: six hours for the planned New Horizons mission to Pluto, for example.

Second, the great distance also means that data beamed back by the probe trickles to Earth at a lower bandwidth-often much less than an old 28.8 kbps modem. Waiting for hundreds or thousands of multi-megabyte scientific images to download could take weeks. And often many of those images will be "boring," that is, they won't contain anything new or important for scientists to puzzle over. That's certainly not the most efficient way of using a multi-million dollar probe.

Even worse, what if one of those images showed something extremely "interesting"-a rare event like a volcanic eruption or an unexpected feature like glaciers of methane ice? By the time scientists see the images, hours or days would have passed, and it may be too late to tell the probe to take a closer look.

But how can a probe's computer brain possibly decide what's "interesting" to scientists and what's not?

"What you really want is a probe that can identify changes or unique features and focus on those things on its own, rather than just taking images indiscriminately," says Arthur Chmielewski, one of Chien's colleagues at JPL.

Indeed, that's what Chien's software does. It looks for things that change. A mission to Jupiter's icy moon Europa, for instance, might zero in on newly-formed cracks in the ice. Using artificial intelligence to set priorities, the probe could capture a complete movie of growing fractures rather than a single haphazard snapshot.

Until scientists can actually travel to deep space and explore distant worlds in person, they'll need spacecraft "out there" that can do some of the thinking for them. Sciencecraft is leading the way.

Learn more about Sciencecraft at nmp.nasa.gov/st6. Kids can make a "Star Finder" for this month and learn about another of the ST6 technologies at spaceplace.nasa.gov/st6starfinder/st6starfinder.htm.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Welcome to the Night Sky Network!



Welcome to the network of amateur astronomy clubs who share the excitement of the night sky and the amazing world of astronomy with their communities!

Please feel free to explore the Night Sky Network website. For all participants, you will find these main sections on the [Participant Home Page](#):

- A featured news article and the News Archive
- My Activities
- Night Sky Network Resources

Under "Night Sky Network Resources" you may download the Night Sky Network logos from the [ToolKit Downloads](#) for posting on your website and club literature to identify your club as a Night Sky Network member. After the ToolKits are shipped, "ToolKit Downloads" will include pages from the PlanetQuest Outreach ToolKit manual you might want to use in your events, such as the "Where are the Distant Worlds?" star maps.

Take a look at the [FAQs](#), which will be expanded as members post questions to the Discussion Board that may apply to all members.

We encourage you to post questions you may have or want to discuss on the [Discussion Board](#). Only use the "Contact" button at the bottom of each page to request assistance from a Night Sky Network Administrator.

Under "My Activities", take a look at the "Event Log" form under "Download Event Log Form". After the PlanetQuest Outreach ToolKit is shipped and you start using the ToolKit in your events, you will use the online version of this form to report on the events where the ToolKit was used. ToolKits are scheduled to be shipped the first three weeks of March.

Welcome again and get ready to share your stories of astronomy outreach adventures!

Marni Berendsen
Night Sky Network Administrator

Congratulations to Tucson Amateur Astronomy Association and Eugene Astronomical Society



THANK YOU FROM JPL PLANETQUEST EDUCATION TEAM!

Teresa Lappin (left) of the Tucson Amateur Astronomy Association and Jean Grendler (right) of the Eugene Astronomical Society were selected to be the Night Sky Network representatives at the JPL Open House weekend in Pasadena, California in May 2004.

As the Night Sky Network launches nationwide, we want to acknowledge and express our appreciation for the help and advice of all the astronomy clubs involved in the development of the Night Sky Network program and the PlanetQuest Outreach ToolKit:

Teresa's and Jean's clubs were drawn from among these clubs that so generously contributed their time to the development of this program.

Watch for more drawings for special bonuses for all Night Sky Network participants in the coming months!



**Astronomical League
Observing Clubs**

The Observing Clubs offer encouragement and certificates of accomplishment for demonstrating observing skills with a variety of instruments and objects. These include the Messier Club, Binocular Messier Club and the Herschel 400 Club, the Deep Sky Binocular Club, the Southern Skies Binocular Club, the Meteor Club, the Double Star Club, and the newly formed Lunar Club. Each Club offers a certificate based upon achieving certain observing goals. These are usually in the form of a specific number of objects of a specific group with a given type of instrument. Occasionally there are multiple levels of accomplishment within the club. There is no time limit for completing the required observing, but good record keeping is required. When you have reached the requisite number of objects, your observing logs are examined by the appropriate authority and you will receive a certificate and pin to proclaim to all that you have reached your goal. Many local astronomical societies even post lists of those who have obtained their certificates. For more information go to their web site at: <http://www.astroleague.org/al/obsclubs/obsclub.html>