



Club News

November, 2002

John Kocijanski, Editor

Jim McKeegan, President
John Kocijanski, Vice President
Bud Wertheim, Treasurer

The club needs a new secretary. The duties of the post include keeping minutes of meetings and observation sessions as well as possibly helping out with the newsletter. Anyone interested?

John Kocijanski wrote a review of his new Orion XT 4.5 dobsonian reflector for Cloudy Nights.com. Check it out at <http://www.cloudynights.com/reviews3/xt4-2.htm>

The observation session on October 5th was held. Ten people participated. The galaxies M31, M32, and M110 in Andromeda were viewed. All three could be seen in the same field of view in a few of the telescopes present. The Wild Duck Cluster (M11) was viewed through different telescopes present. This is an open star cluster. Both the Dumbbell Nebula (M27) and Little Dumbbell Nebula (M76) were viewed. Both are planetary nebulae, which are dying sun-sized stars. Uranus was also seen.

A few members of the club went to Televue/Vixen Day at Highpoint Scientific on October 26th. Al Nagler was showing off his Televue telescopes and accessories. New Vixen telescopes were also shown. The event seemed to be well attended. Mark Rosengarten had an opportunity to set up his Televue 76 and Coronado solar filter when the sun broke through to show some people a hydrogen alpha view of the sun. The following is his report.

The sun peeked through just before 5 PM at Highpoint Scientific, just as we had given up all hope of doing any solar observing. I ran out to the car and set up my trusty TV76 with the Coronado SolarMax 40 and brought it up high into the parking lot. I proclaimed "The sun's here if anybody wants it!" I looked through to see a relatively quiescent sun with a few small prominences, but it was still quite pretty. I went inside to borrow a 9 mm Nagler (that's one great thing about Highpoint, you get to try it before you buy it) and people followed me out. Slowly at first, but then more and more as they realized what was going on. Someone lent me an 8.6 mm Meade Ultrawide, and it did a decent job, but everyone agreed that the best views, though small, were through the 13mm Nagler. The oohs and aahs continued to build. One person opined that

my 40 showed a nicer image than his 60, but I think he was just trying to be nice. :) Interesting note...the guy who makes the bodies for the SolarMax 40 also makes the Telepod head and the Sol Searcher. He had 500 unmade Sol Searchers in a box in his car. Kinda neat to meet the people responsible for the different aspects of your equipment. Al Nagler was on hand (though he did not come out to look at the sun), and he was genial and helpful and generally the same wonderful soul we have come to expect. The crowd was large, diverse and cheery...much more so than one would have expected from such a dreary day combined with a gathering of eager amateur skywatchers. A good time was had by all. I just wish I had taken a photo of the line of people waiting for a peek of the sun!

Mark

John Barbarite also went to Televue/Vixen Day and won a 10mm Televue Radian eyepiece as a door prize.

Here is an email and response that was sent by John Kocijanski about Televue/Vixen Day.

Hello. I just wanted to let you know that I enjoyed your Televue/Vixen Day. Other members of our club who went enjoyed it as well. We were wondering if you ever thought of having a local club day or a star party with local clubs at your facility. It would be a great opportunity for astronomers in our area.

John Kocijanski

Vice President

Catskills Astronomy Club

Thanks for your kind words John! We have something like that in the plans for April of next year. Once we work out all of the details we will let the clubs know.

Thanks again

High Point Scientific.

The October 26th observation session was cancelled due to cloudy skies.

The November club observation sessions are on the 2nd and 30th. Since the 30th falls on Thanksgiving weekend we may want to switch that date to the 9th. The moon will be first crescent.

Of the books in our library the following are out or new:

40. Turn Left At Orion: A Hundred Night Sky Objects To See In A Small Telescope And How To Find Them by Guy Consolmagno and Dan Davis 1989 – **on loan**

New books to the list:

41. Steven Hawking's Universe by John Boslough – an introduction to the most remarkable scientist of our time – 158 pages – 1985

42. Astronomy with Binoculars by James Muirden – 170 pages – 1984

43. The Cambridge Photographic Atlas of the Planets by GA Briggs and FW Taylor – 255 pages – 1982

44. The Telescope and The World of Astronomy by Marvin Riemer – 229 pages – 1967

45. Time Warps by John Gribbin – 205 pages – 1979 – Is time travel possible?

46. Cosmic Ecology by George Seielstad – 169 pages – 1983 – The view from the outside in.

In addition to books, there is a selection of Stardate audio CDs to borrow. Stardate is a short radio program concerning some aspect of astronomy broadcast each day on various NPR stations. Stardate is produced by the McDonald Observatory at the University of Texas at Austin. Each CD has each of the daily programs for that month on it. Below is a listing of what is currently available. If you want to borrow a CD the email John at kocis@catskill.net or call at 791-5240 and it can be brought it to the next observation session or indoor meeting.

1. 1998 – October, November , December

2. 1999 - April – May, September – December

3. 2000 - January – May, September – December

4. 2001 - January – March, May, September- December

5. 2002 - January, February, March, April, May

Our club telescope is also available to be loaned out to members. It is an eight inch Meade reflector on an equatorial mount. Contact John at kocis@catskill.net or gerickson@sullivan.suny.edu if you are interested in borrowing it. You can also call John at 791-5240. It is currently on loan.

A computer with astronomy software has been donated to the club for members to use. It is a Power Macintosh 6100 with a monitor, CD player, keyboard, and mouse. The planetarium programs Voyager 2 and Starry Night Backyard are installed on it. It also has the satellite tracking program Orbitrak installed that allows you to plot the paths of earth orbiting satellites on a star field created with the Voyager 2 program with instructions for use. There are also various tutorial programs that are viewed with Hypercard Player or Hyperstudio Player on different subjects in astronomy as well as other miscellaneous astronomy programs. There is also a collection of various astronomical images on it that can be viewed as a slide show. A CD version of an Astronomy textbook is also available to use with it. It also comes with a dot matrix printer in case you want to print out a star chart. Contact John at kocis@catskill.net or call at 791-5240 if you want to borrow it. It can be brought to an observation session or indoor meeting. It is currently on loan.

Astronomy News:

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SCIENTISTS BOOST MOON TALLY AT URANUS

A new moon of the planet Uranus has been discovered and

confirmed by a team of astronomers including Dr. Christophe Dumas of NASA's Jet Propulsion Laboratory, Pasadena, Calif.

This most-recently discovered natural satellite, named S/2001 U 1, brings the total number of confirmed uranian moons to 21. S/2001 U 1 and five others like it have very irregular, eccentric orbits that do not share the same orbital plane as the larger moons of Uranus. Ranging in size from 10 to 20 kilometers (about 6 to 12 miles), these moons are thought to be remnants of ancient collisions that occurred at the early stage of planetary formation.

"The irregular satellites like S/2001 U 1 are very difficult to find because they are faint and tend to be very distant from the planet," Dumas said. "It is hard to distinguish them from the background stars, and this requires special observing techniques. Because these objects formed far from the Sun, they are probably similar in composition to the most primitive objects of the solar system."

Identifying S/2001 U1 as a moon and mapping its orbit required intense effort and observation from several telescopes located in North and South America. It was first spotted by Drs. Matthew Holman of the Harvard-Smithsonian Center for Astrophysics, Cambridge, Mass., and J.J. Kavelaars, now at Dominion Astrophysical Observatory, Victoria, British Columbia, Canada, in August 2001 in images obtained at Cerro Tololo Observatory in Chile. Dumas and Dr. Phil Nicholson from Cornell University, Ithaca, N.Y., re-observed it from Palomar Observatory, near San Diego, Calif., a month later. The object was then followed from Chile again, using the 8- meter (26-foot) European Southern Observatory telescopes.

The discovery of the moon was a collaboration of 11 astronomers, led by Holman; Kavelaars; Dr. Brett Gladman,

University of British Columbia, Vancouver, Canada; and Dr. Jean-Marc Petit, Observatoire de Besançon, Besançon, France.

JPL is a division of the California Institute of Technology in Pasadena.

<http://news.bbc.co.uk/1/hi/sci/tech/2347663.stm>

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HUBBLE SPOTS AN ICY WORLD FAR BEYOND PLUTO

NASA's Hubble Space Telescope has measured the largest object in the solar system seen since the discovery of Pluto 72 years ago.

Approximately half the size of Pluto, the icy world 2002 LM60, dubbed "Quaoar" (pronounced kwa-whar) by its discoverers, is the farthest object in the solar system ever to be resolved by a telescope. It was initially detected by a ground-based telescope as simply a dot of light, until astronomers aimed Hubble's powerful telescope at it.

Quaoar is about 4 billion miles away from Earth, well over a billion miles farther away than Pluto. Unlike Pluto, its orbit around the Sun is circular, even more so than most of the planetary-class bodies in the solar system.

Although smaller than Pluto, Quaoar is greater in volume than all the asteroids combined (though probably only one-third the mass of the asteroid belt, because it's icy rather than rocky). Quaoar's composition is theorized to be largely ices mixed with rock, not unlike the makeup of a comet, though 100 million times greater in volume.

This finding yields important new insights into the origin and dynamics of the planets, and the mysterious population of bodies dwelling in the solar system's final frontier: the elusive, icy Kuiper Belt beyond Neptune.

Michael Brown and Chadwick Trujillo of the California Institute of Technology, Pasadena, Calif. are reporting the findings today at the 34th annual meeting of the Division for Planetary Sciences of the American Astronomical Society in Birmingham, Ala.

Earlier this year, Trujillo and Brown used the Palomar Oschin Schmidt telescope to discover Quaoar as an 18.5-magnitude object creeping across the summer constellation Ophiuchus (it's less than 1/100,000 the brightness of the faintest star seen by the human eye). Brown had to do follow-up observations using Hubble's new Advanced Camera for Surveys

on July 5 and August 1, 2002, to measure the object's true angular size of 40 milliarcseconds, corresponding to a diameter of about 800 miles (1300 kilometers). Only Hubble has the sharpness needed to actually resolve the disk of the distant world, leading to the first-ever direct measurement of the true size of a Kuiper Belt Object (KBO).

Like Pluto, Quaoar dwells in the Kuiper Belt, an icy debris field of comet-like bodies extending 7 billion miles beyond Neptune's orbit. Over the past decade more than 500 icy bodies have been found in the Kuiper Belt. With a few exceptions all have been significantly smaller than Pluto.

Previous record holders are a KBO called Varuna, and an object called 2002 AW197, each approximately 540 miles across (900 kilometers). Unlike dimensions derived from Hubble's direct observations, these diameters are deduced from measuring the objects' temperatures and calculating a size based on assumptions about the KBOs' reflectivity, so

the uncertainty in true size is much greater.

This latest large KBO is too new to have been officially named by the International Astronomical Union. Trujillo and Brown have proposed naming it after a creation god of the Native American Tongva tribe, the original inhabitants of the Los Angeles basin. According to legend, Quaoar “came down from heaven; and, after reducing chaos to order, laid out the world on the back of seven giants. He then created the lower animals, and then mankind.”

Quaoar’s “icy dwarf” cousin, Pluto, was discovered in 1930 in the course of a 15-year search for trans-Neptunian planets. It wasn’t realized until much later that Pluto actually was the largest of the known Kuiper Belt objects. The Kuiper Belt wasn’t theorized until 1950, after comet orbits provided telltale evidence of a vast nesting ground for comets just beyond Neptune. The first recognized Kuiper Belt objects were not discovered until the early 1990s. This new object is by far the “biggest fish” astronomers have snagged in KBO surveys. Brown predicts, within a few years, even larger KBOs will be found, and Hubble will be invaluable for follow-up observations to pin down sizes.

Electronic images, illustrations, animation, and additional information are available at:

<http://opposite.stsci.edu/pubinfo/pr/2002/17>

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Mid Evening Observing Highlights for November

The Keystone of Hercules is setting in the west. The Summer Triangle (Vega, Altair, and Deneb) is in the western sky. The Great Square of Pegasus is directly overhead with M31 (the Andromeda Galaxy) almost overhead. Taurus and Auriga are rising in the east. Later in the month Orion will be rising in the east. The Big Dipper is low on the northern horizon. Uranus and Neptune can be found in the southern

sky in Capricorn. Saturn is rising on the eastern horizon.

Full moon is on November 20th and new moon is on November 4th. The Leonid meteor shower peaks on November 19th. The full moon will interfere with viewing. The meteors are associated with the Comet Temple-Tuttle. It may be the last chance this century to see a Leonid meteor storm. The Southern Taurid meteor shower peaks on November 5th.

Observations and Photographs

This is a new section of our newsletter for members to submit their own observations and photographs. If you are interested in submitting an observation or photograph please contact John at kocis@catskill.net.

The picture below is of Capella and the Kids in Auriga taken by John Kocijanski using an Olympus OM-1 with a 400mm telephoto lens piggy-backed on a Celestron C8.



BARLOW BOB'S CORNER

Barlow Bob is a member of the Rockland Astronomy Club.

Bring the Sun across the sky.

All the animals had gathered in the woods to see what they could do about it being dark all the time. The fox claimed, he heard that in the east they had light all the time and it was called the sun. He said "Maybe we could steal some of it and bring it across to the west. But I don't want to go; someone else will have to do it.

Opossum said, "I'll go; I have a very big bushy tail, and I can hide the sun in it and bring it back. The animals thought this was great, so off opossum went. As he went toward the east it got brighter and brighter and opossum started to squint. His eyes got smaller and smaller.

And if you notice the opossum today, his eyes are very small and squinty. And he only comes out at night. When he got to the sun, he grabbed a piece of it, hid it in the big bushy tail and started back toward the west. Only, the sun was so-o-o-o hot that it burned all the hair of poor opossums tail.

That's why the opossum has no hair on his tail today.

The buzzard then said "I'm not as stupid as the opossum, I won't put the sun in my beautiful tail feathers, I'll carry it on my head." So off he went, he flew high up in the sky, got a piece of the sun, and put it on top of his head. He headed back towards the west. The sun being so hot burned all his head feathers off.

That's why the buzzard has no head feathers today.

All the animals mumbled and grumbled when suddenly they heard a tiny little voice say. "I'll go, I'll go." The animals won

dered whose voice it was. They looked down in the grass and there was a grandmother spider. The animals laughed at her and wanted to know what she could possibly do, when the animals had failed. "But what difference does it make if I fail, I'm only a little spider." So the animals agreed to let her try. Grandmother spider gathered up a little bit of damp clay, and made it into a bowl. She carried the bowl with her towards the east, letting out a silk thread behind her, so she could find her way back. When she got there she took a piece of the sun and placed it in the bowl. She crawled back on her silk thread carrying the pot in front of her spreading the light from east to west. While she crawled back the sun baked her little clay pot. If you will notice even today a spider's web is shaped like the sun's disk and its rays. The spider will always spin her web in the morning, very early, before the sun is fully up.

"Thank you, Grandmother," the people said when she returned, "We will always honor you and we will always remember you."

From then on pottery making became women's work, and all pottery must be dried slowly in the shade before it is put in the heat of the firing ovens. Just as Grandmother spider's bowl dried in her hands, slowly, in the darkness, as she traveled toward the east, before the sun baked it.

This is a Cherokee tale.

Try to attend our observing sessions We've been having a lot of interested people come as all our viewings are open to the public. We are very interested in developing familiarity with the night sky. Our members set up telescopes of varied types and apertures so that you can gain technical information and assistance.