Back Bay Observer

The Official Newsletter of the Back Bay Amateur Astronomers
P.O. Box 9877, Virginia Beach, VA 23450-9877

EPHEMERALS OCTOBER 2008

DATE	WHEN	WHAT & WHERE
2	7:30p	BBAA Meeting @ TCC in Virginia Beach
4	7:30p	Girl Scout Jamboree @ The TED
24	Dusk	Skywatch @ NWRP Equestrian Area
24/25	Dusk	East Coast Star Party
11/1	Dusk	Nightwatch @ Chippokes Plantation
		That's All Folks!

CONTENTS

Looking Up!

I hope all of you had a chance to visit some of those websites and read a few of those "other" amateur astronomy periodicals I mentioned last month. The past four weeks have certainly been conducive to reading as the clouds and rain have usurped our clear skies and literally cancelled regional star parties for the past 2-3 months. OK, I swear I did not get any new telescopes or equipment. Does a new tent or phone qualify? <G>

Kidding aside, we are about to embark on even greater emphasis on public outreach as the IYA2009 is coming on fast and we need all of our members aboard to lighten the load on all. Your club officers have noted a fall off on broad member attendance at the monthly meetings and with summer over, I am hoping to see more of you at TCC. We enjoyed a trip to the observatory at our last meeting and got to see and look through their new 6" wonder refractor – a Takahashi TOA-150. What a light canon! We may be able to set up a real time video link to the planetarium in the future. It should be great to watch the planets and DSO's on those cold winter months from those comfortable seats in the planetarium. I'll nominate the club cheer leader to stand in the observatory and guide the scope! All for Georgie say……Aye!

Ted Forte and Brandon are moving along with their RRRT asteroid search project. Their preliminary data was impressive and we hope they can present some of their work to the club next spring. Others are pitching in too with their time and effort to help. Matt McLaughlin has been a frequent flyer up on the mountain working with Drs. McDavid and Salgado to further remove the last remaining kinks in the remote system. Thanks Matt and your gas station too!

Boardwalk Astronomy though frequently clouded out was a great success in its first year. We hope that this high club and public participation event will be on our plate again next summer. The City of VB have been gracious hosts and tried their best to accommodate club members. Security has been very good and public attendance…. awesome! And the club gets a contribution to our scholarship fund from each event. Talk about a win, win.

Our beleaguered VP, Chuck Jagow, is hard at work keeping us all on course and juggling our growing club agenda together with editing and publishing this newsletter every month. Questions regarding our schedules can be found on the last page, our Yahoo website, via emailing to the membership, or direct emails to me, Chuck, Matt, and Neil. We'll try our best to keep you in touch.

Here's hoping to see more of you at the October Meeting at TCC. We need your input to help us accomplish our club mission and to enjoy this great passion of astronomy with your friends.

Bruce "Doc" Bodner

September's Meeting Minutes

Members in Attendance:

There were 18 members in attendance at the August meeting of the Back Bay Amateur Astronomers held at the Cox Communications campus in Chesapeake, VA.

Neill Alford, Bruce Bodner, Jordan Bramble, Kenny Broun, Gerry Carver, Hannah Chacon, Lisa Chacon, Larry Channel, Ted Forte, Don Ives, Chuck Jagow, Karen Jagow, Georgie June, Ben Loyola, Matt McLaughlin, Jim Miller, George Reynolds and Kevin Swann.

Treasurer's Report:

The Club treasurer reported the following club fund balances.

$4,516.28 Total
$2,116.80 Scholarship Fund.
_____
$2,399.48 Available For Club Operations

Secretary's Report:

Meeting minutes are posted on the club website and club newsletter.

Old Business:

None

New Business:

Announcements and observing reports:

September 10th, the last Boardwalk Astronomy for this season.

Night Hike will probably be cancelled for this month.

Michael Pritchard from the Bayside library in Virginia Beach has submitted an outreach request. The event will be held in November or early December.

GardenStars should be restarting on October 10th.

Two new members joined at the September meeting. Introducing Hannah and Lisa Chacon. Welcome to the BBAA!!!

Girl Scout Jamboree will be held in early October at the Ted Constance center in Norfolk. BBAA will participate in the activities, as we did last year.

Kent Blackwell will once again be host to the East Coast Star Party in Coinjock. The dates this year are October 24th thru October 26.

This months presentation was a presentation of the BBC's -- The Sky At Night. The show title was "Rise Of The Phoenix". It was about NASA's Phoenix Mars mission.

Once the presentation was completed; the meeting was adjourned at 8:30 PM, Thursday, September 4, 2008.

Until Next Time!!!

Matt McLaughlin

2008 EAST COAST STAR & HALLOWEEN PARTY

OCTOBER 24 & 25

Star Party Admittance $15.00 per person.

Approximately 45 miles south of Tidewater, VA area.

Driving south on US 158, cross the Joseph Palmer Knapp Bridge at Coinjock. Turn left at foot of bridge.

Driving north on US 158, take Waterlilly exit before crossing the Joseph Palmer Knapp Bridge at Coinjock.

Waterlilly exit Campground is approximately 7 miles down Waterlilly Road .

Portable restroom conveniently located near observing area Showers and campground store located ¼- mile from the observing area You may camp near your telescope No AC is available in the observing field If you have an R/V needing A/C hookup additional charges may apply.

BE SURE TO LOOK YOUR SCARIEST FOR THE HALLOWEEN CONTEST! $20 CASH PRIZE FOR BEST OUTFIT FOR THOSE UNDER 16 YEARS OF AGE $50 CASH PRIZE FOR BEST ADULT AGE 16 AND OVER!

ITINERARY

FRIDAY:

1:00 PM Registration starts and continues all weekend.
7:00 PM Casual stargazing begins, coffee & snacks served all night

SATURDAY:

10:00 AM Brunch at Mel's Diner in Grandy NC (optional)
3:30 PM Cookout at the observing site, in case of inclement weather, all activities will take place in the campground recreation hall. Kent will supply hamburgers & hotdogs, and soft drinks - you may bring a dish if you wish.
5:00 PM The ECSP Spooky Halloween Contest
5:30 PM Door prize drawings. Casual observing begins after door prizes are gone. Coffee & snacks served all night

Kent Blackwell, Organizer 757-495-4663 e-mail: kent@exis.net

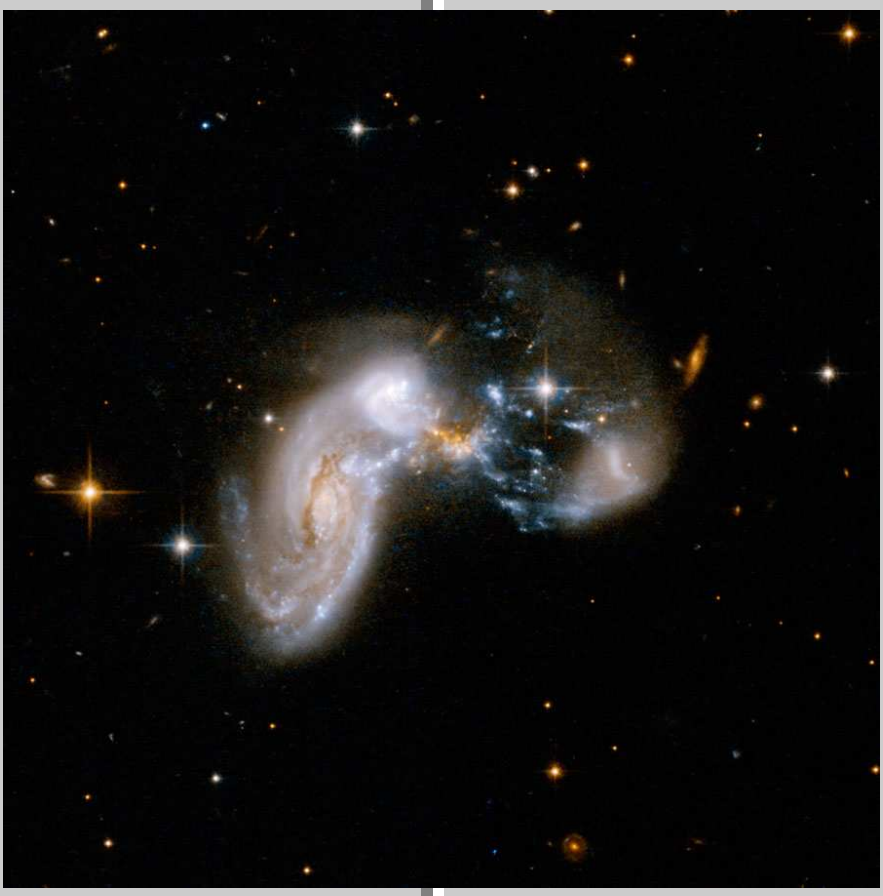
NASA's Space Place

Extreme Starburst

by Dr. Tony Phillips

A star is born. A star is born. A star is born.

Repeat that phrase 4000 times and you start to get an idea what life is like in distant galaxy J100054+023436.



Astronomers using NASA's Spitzer Space Telescope and ground-based observatories have found that the galaxy gives birth to as many as 4000 stars a year. For comparison, in the same period of time the Milky Way produces only about 10. This makes J100054+023436 an extreme starburst galaxy.

"We call it the 'Baby Boom galaxy," says Peter Capak of NASA's Spitzer Science Center at the California Institute of Technology in Pasadena, CA. "It is undergoing a major baby boom, producing most of its stars all at once. If our human population was produced in a similar boom, then almost all people alive today would be the same age."

Capak is lead author of a paper entitled "Spectroscopic Confirmation of an Extreme Starburst at Redshift 4.547" detailing the discovery in the July 10th issue of *Astrophysical Journal Letters*.

The galaxy appears to be a merger, a "train wreck" of two or more galaxies crashing together. The crash is what produces the baby boom. Clouds of interstellar gas within the two galaxies press against one another and collapse to form stars, dozens to hundreds at a time.

This isn't the first time astronomers have witnessed a galaxy producing so many stars. "There are some other extreme starburst galaxies in the local universe," says Capek. But the Baby Boom galaxy is special because it is not local. It lies about 12.3 billion light years from Earth, which means we are seeing it as it was 12.3 billion years ago. The universe itself is no older than 14 billion years, so this galaxy is just a youngster (Capak likens it to a 6-year-old human) previously thought to be incapable of such rapid-fire star production.

The Baby Boom galaxy poses a challenge to the Hierarchical Model of galaxy evolution favored by many astronomers. According to the Hierarchical Model, galaxies grow by merging; Add two small galaxies together, and you get a bigger galaxy. In the early years of the universe, all galaxies were small, and they produced correspondingly small bursts of star formation when they merged. "Yet in J100054+023436, we see an extreme starburst. The merging galaxies must be pretty large."

Capak and colleagues are busy looking for more Baby Boomers "to see if this is a one-off case or a common

Image Caption:
The "Baby Boom" galaxy loosely resembles the galaxy shown here, called Zw II 96, in this Hubble Space Telescope image. This galaxy is only 500 million light-years away, while the Baby Boom galaxy is 12.3 billion light-years away.

BBAA INFO

The BBAA meet the first Thursday of every month. While school is in session we meet at the VA Beach TCC campus.

The October meeting will be on Thursday October 2nd at 7:30 PM at the new Science building of the Advanced Technology Center on the Virginia Beach TCC campus in Virginia Beach. The meetings are usually held in classroom JC12 or the Planetarium.

WHERE IS THE MEETING?

TIDEWATER COMMUNITY COLLEGE CAMPUS

The TCC Campus is located in Virginia Beach off of Princess Anne road. The following should help you locate the campus.

FROM Interstate I-64:

Proceed to the I64 / I264 junction and take I264 East .
Take the S. Independence Exit, 17A, right hand lane and proceed (.000000040879639 AU) (3.8 mi).
Turn LEFT onto Princess Anne road and proceed (.000000011833579 AU) (1.1 mi).
Turn LEFT onto Concert Drive and proceed (.000000001426233 AU) (700').
Turn LEFT and then turn RIGHT on University Drive go (.000000002151559 AU) (0.2mi).
Proceed to College Crescent and then park in one of the lots in front of the Advanced Technology Center.

The Science Building is immediately south of the ATC building. Walk toward the ATC entrance, but bear left, the Science building is straight ahead. Find the rounded part, this is the Planetarium. Locate the stairs nearest the planetarium and upstairs you will find classroom JC12 on the next floor.

COX COMMUNICATIONS CAMPUS

The COX Communications Campus is located in Chesapeake's Greenbrier section. The following should help you locate the facility.

FROM Interstate I-64:

Take exit 289B (between the Indian River & Battlefield exits).
South on Greenbrier Parkway (.7382 miles).
Turn RIGHT onto Eden Way West (.9231 miles).
Turn RIGHT on Crossways Blvd (.88901 miles).
Turn Right into the Cox Campus

The meeting is usually held in the Silver room located on the North side of the facility. Enter and tell the guard that you are with the BBAA and they will issue a badge and direct you to the room.

BBAA INTERNET LINKS

BBAA WEB SITE
http://www.backbayastro.org

YAHOO GROUP
http://groups.yahoo.com/group/backbayastro

BBAA OBSERVER NEWSLETTER
http://www.backbayastro.org/newsletters/newsletter.shtml

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What do you want to do?

OBSERVER INFO

The BBAA Observer is published monthly, the monochrome version is mailed to members who do not have Internet access. Members who do have Internet access can acquire the full color version on the Internet at:

http://www.backbayastro.org/newsletters/newsletter.shtml

Please submit articles and items of interest no later than the 15th of October for the November issue. Please submit all items to:

ObserverBBAA@cox.net / chuck@jagowds.com

OR

BBAA Observer
P.O. Box 9877
Virginia Beach, VA 23450-9877

PLANET PORTRAIT, OR NOT?

Editors Note:
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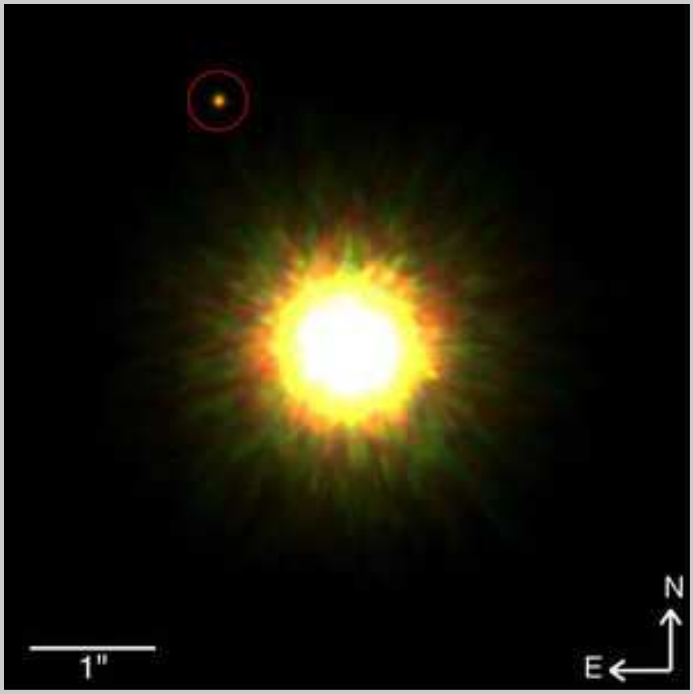
Chuck Jagow

Provided by Ray Villard

http://blogs.discovery.com/cosmic_ray/

Though we know of 309 planets orbiting other stars to date, not one of them has ever been directly photographed. Their presence has been inferred indirectly through their gravitational tug on a star, transits across the face of the star, and gravitational microlensing.



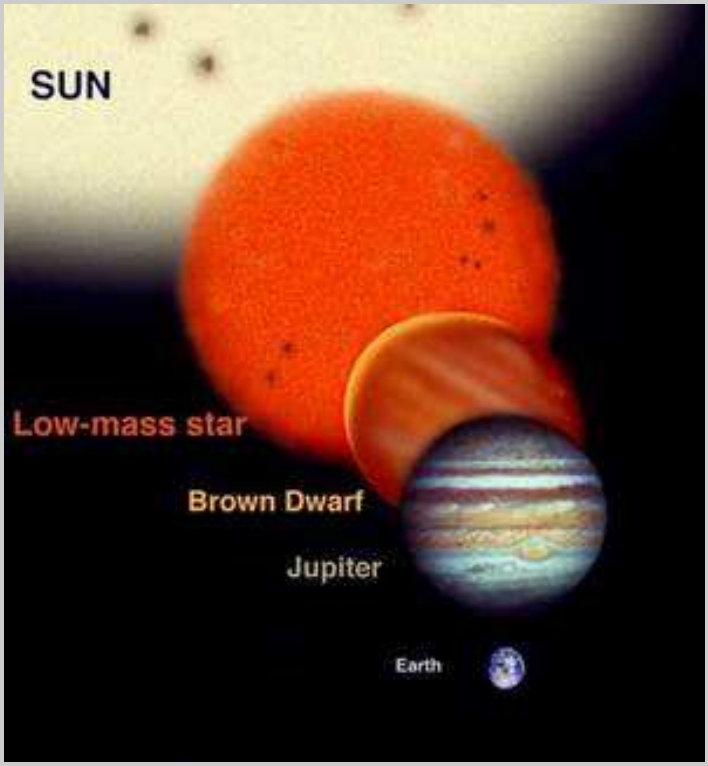
Taking a snapshot of one of these worlds has been one of the great holy grails of exoplanet research. The brilliant glare from a sun like star drowns out the feeble glow of reflected light off of a small planet. But under the right conditions a hot young Jupiter-sized planet, located very far from the central star, may be directly observable.

Now a team of astronomers from the University of Toronto, using the 8-meter Gemini telescope in Hawaii are claiming to have taken the very first infrared image of an exoplanet orbiting a sun like star.

Pending follow-up observations, the team is calling it a "planet candidate." The team doesn't know if the object is gravitationally tied to the star, like a dog on a leash. They will have to collect more observations to see if the object drifts against the background stars at the same rate as the parent star.

The planet candidate orbits a young star designated 1RXSJ160929.1-210524, located 500 light-years from Earth in the constellation Scorpius. Without any orbital or other dynamical information, scientists can only estimate its mass based on physical modeling from its colors and age (deduced in part from the age of the star). They estimate the object is eight times the mass of Jupiter - which puts it in the planet ballpark.

But when you consider the object's distance from the star, it's out of the planet ballpark. The object is 330 times father from the star than Earth is from the sun. This comes out to a staggering 30 billion miles! That's ten times farther than Pluto is from the sun.



Planets by definition form in a disk of dust and gas encircling a newborn star. The conventional wisdom is that planets build up through dust agglomerating in the disk and snowballing up to planet-sized bodies. This is done very efficiently close in to the star where material in swift orbits quickly collides and sticks together.

(Continued on page 7)

OBSERVERS CORNER

August 2008 - I was disappointed at the turnout for the BBAA Skywatch, but who am I to criticize? It's been months since I've shown my face at the event.

I made the mistake of making a list of objects to view. Naturally, I didn't look at any of them. Early on, Jupiter was gorgeous. By 9:00 pm Io ingressed in transit, and by 10:00 its shadow was visible.

I managed to see Palomar 8 in Sagittarius, but it was more difficult than I had remembered. But then, the last time I saw it was from Coinjock skies, with the 25" back in 2003! I tried seeing Palomar 12 but it was just too faint for my 10" scope.

Georgie June and I tried seeing Comet Boatini but it, too, was just too faint. The last time I observed it was July 13 but it's faded from 9.8 to 10.3 magnitude.

I showed M 5 to a TCC student named Martina. She was so impressed with the telescopes she proclaimed that she was going to go home and order an Orion 4.5" StarBlast. I hope she follows through. If we reached one person last night to inspire them on the road to observing we accomplished our goal.

Kent Blackwell

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BOOK REVIEW

Every now and then, read rarely, do I find a book worth recommending as required reading.

Some my remember a recent article in *S&T* that concerned Project Moonwatch back in 1957. The author of that article has produced a most insightful and interesting book on a forgotten chapter of the early space age and a lost era of innocence in American history.

For three years following the Soviet launch of the first satellite, Sputnik, American amateur scientists and astronomers had a chance to contribute in a meaningful way to a national effort of watching the skies to track satellites. Many names familiar to us now, and I won't spoil the surprise, started sky watching careers with Project Moonwatch.

Keep Watching the Skies, the title of the book, was taken from the last lines of the 1950's science fiction classic *The Thing*. This book is required reading for anyone interested in the roots of modern amateur astronomy and the culture that fostered a generation's interest in the night sky. It has been said that three events enabled the resurgence of modern astronomy: the dobsonian telescope, the CCD camera and the Internet. But this approach is simplistic and does not take into consideration the culture and history of the cold war that was the genesis of many people's interest in science.

Keep Watching the Skies brings first rate research and an accessible writing style to it's subject. I read the book cover to cover in two sittings and was sorry when it was over. I was just 4 years old when Moonwatch was started but I can recall a time when scientists were looked up to and the United States for a brief period believed that science would lead the way to a brave new world. Those dreams ended in the early sixties along with American innocence and naiveté.

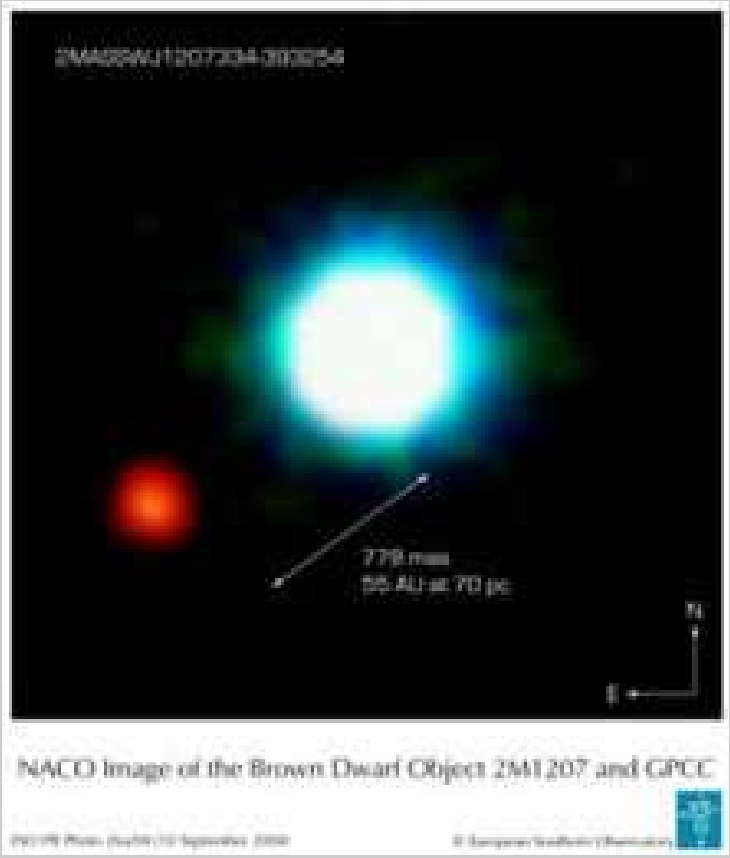
Keep Watching the Skies provides a window into that passing golden age of amateur astronomy. If you have an interest in how we got where we are today, this is the book for you. Run, don't walk to Amazon to get a copy.

Mark Ost

(Planet Portrait, Continued from page 5)

But material in a disk 30 billion miles from a star would be pretty spread out. The particles would follow lethargically slow orbits and take practically forever to successfully agglomerate into a Jupiter-sized body.

Even more problematic is that there is no observational evidence or theoretical prediction that that a disk of debris could extend that far from a star. The disk around the young star system Beta Pictoris, the original poster child for circumstellar disks, only has a radius of about 10 billion miles. Likewise theoretical models of our Sun's birth describe a solar nebula of comparable size.



NACO Image of the Brown Dwarf Object 2M1207 and GPCC

In previous posts I described the simmering Pluto debate where astronomers continue arguing how small an object can be and still be called a planet. Now we will see a similar debate emerging at the other end of the plant scale: how big can an object be and still be a planet?

The rule of thumb that has been loosely chosen is about 15 Jupiter masses. Beyond that limit the object is massive enough to have undergone deuterium fusion at its core. That's not enough energy to qualify the object as a star, but instead a brown dwarf. Brown dwarfs are fundamentally different from planets in that they form like full-fledged stars, from the gravitational collapse of a cloud of hydrogen.

But the 15 mass boundary for a brown dwarf may be squishy. Maybe there could be objects of even lower mass that form like a star, but are so dinky that they do not have deuterium fusion. You might call them "black dwarfs."

So, in the absence of a remarkable new theory for planet formation at such a great distance from a star, the mystery object might be better explained as a low-mass brown dwarf.

This is not the first time astronomers have ventured into the murky twilight zone between super-planets vs. "miniature" dwarf.

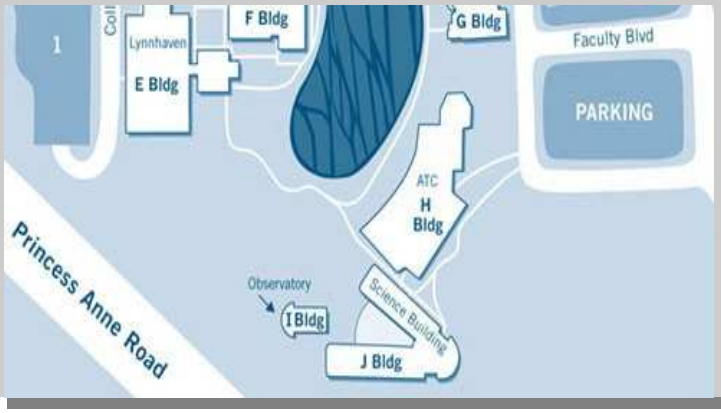
In 2005 the European Southern Observatory claimed to have imaged the first exoplanet. It orbits the brown dwarf 2M1027 at a separation distance of 5 billion miles. The problem is the "planet" estimated to be five times Jupiter's mass, is 20 percent the mass of the primary object. By comparison all the planets in the solar system put together are less than one percent the sun's mass. So this system really is a binary brown dwarf.

Given these uncertainties I would argue that the first truly definitive picture of an undisputable planet around a normal star has yet to appear. But given the rate of exoplanet discovery it's only a matter of time, and could likely happen sooner than later.

Artwork Credit Gemini Observatory/J. Lomberg

MAP TO THE TCC
BBAA MEETING LOCATION

Don't confuse the Adult Learning Center with the Advanced Technology Center, they are **NOT** the same buildings. The Adult Learning Center is the building is in front when you first turn off of Concert Drive, ignore it and turn right on University Drive and proceed to College Crescent where the parking lots begin. Then just walk South of the ATC and go in the Science Building and find the stairs closest to the planetarium and go upstairs to classroom JC12.



OCTOBER 2008

BBAA EVENTS	SPECIAL OUTREACH	ASTRONOMICAL EVENTS
02 = BBAA Monthly Meeting @ TCC Campus, Virginia Beach, 7:30 PM		
.	**04** = GIRL SCOUT JAMBOREE @ TED CONSTANT CENTER Norfolk, VA @ 8:00 PM– 11:00 PM - POC: Bruce Bodner	**07** = FIRST QUARTER
		14 = FULL MOON
24= SKYWATCH @ NWRP, Dusk **MAY BE CANCELLED DUE TO ECSP ! ! ! !**	**24 –25** = EAST COAST STAR PARTY @ COINJOCK, North Carolina @ Dusk– Dawn PM - POC: Kent Blackwell	**21** = LAST QUARTER
25 = CLOVERWATCH @ Franklin Fairgrounds, Dusk - POC Cliff Hedgepeth **ON HOLD ! ! ! !**		
11/1 = NIGHTWATCH @ Chippokes State Park, Dusk		**28** = NEW MOON