

The Focal Point

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The Atlanta Astronomy Club
Established 1947
June 2011

Editor: Tom Faber

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June General Meeting

Join us for the June meeting of the Atlanta Astronomy Club on Friday June 17th at 8PM. Refreshments will be provided starting around 7:30PM. The location of the meeting is in the planetarium in the Math and Science Building on the Emory University Campus. There will be a talk by a guest speaker, and announcements of upcoming club events. The meeting will run for about 2 hours. If you have any announcements you want to make during the meeting, please contact our President Mark Banks, so that he can schedule the time for you during the meeting. His contact information is on page 7.

The Program:

Our speaker for the June meeting will be AAC Treasurer Sharon Carruthers. Sharon will present a talk about "Planet X." This month our meeting will be in the planetarium in the Math and Science Building. The best place to park is the parking deck next to the Math & Science building. It provides easy access to the Math and Science Building. There is a Barnes and Noble and other shops on the top floor of the parking deck, so there are some nearby things to do while waiting for the meeting to start.

This parking deck can be accessed from Dowman Drive or from Oxford Road. For maps of the campus see <http://map.emory.edu>.

Speaker Bio:

Sharon Carruthers is a long time member of the AAC and has been the club Treasurer for a number of years. Sharon is very active public outreach events including giving the talks at GASP (Georgia Astronomy in State Parks) events



Photo by Tom Faber

for nearly 10 years, and volunteering every year at the Woodruff Boy Scout Camp Summer Camps, which helps the scouts earn their astronomy badges. Sharon has been a staff member of the Peach State Star Gaze for many years and has been instrumental in making the PSSG's happen. This past year Sharon and her husband Peter Macumber assembled a kitchen and did most of the cooking to provide meals for the PSSG attendees.

Upcoming AAC Meetings:

July 15th - Speaker and topic TBA.

Aug 19th - Former AAC member Art Russell will present a talk about planetary nebulae.

Future meetings are tentatively scheduled for September 9, October 14, and November 11. Meeting locations, speakers, and talk topics will be announced at a later date.

The Next AAC Board Meeting

There will be a short Board meeting of the Atlanta Astronomy Club on Friday, June 17th at 7:30PM at Emory University in the Math and Science building before the general membership meeting. The main topic on the agenda will be the election of a new Board Chair. The meeting will last no more than half an hour so as to be done in time for the general meeting at 8PM.

Woodruff Volunteer Needed

by Sharon Carruthers, AAC Treasurer

The summer scout camping season is upon us. Perhaps we can inspire you to help out at the Woodruff Boy Scout Camp (near Blue Ridge) Summer Camp this year by implanting the idea early. In exchange for the Club's use of the Astronomy field at the Woodruff Camp, the AAC volunteers to go up once a week during their summer camping session and give the campers an opportunity to look through a telescope as part of their Astronomy Merit badge.

The viewing nights are Thursdays, and the campers usually are there between 9:00 - 11:00 p.m. It is advisable to bring your own telescope; but we have a 10" Dob on site; and I usually leave one of my smaller Dobs up there during the summer. We get from 15 to 60 boys each night; between the ages of 10 - 16.

If you could volunteer one or more nights to help us out, it would be very much appreciated both by the scouts and the AAC. Contact me or Daniel Herron (see page 7), if you wish to volunteer or have any questions.

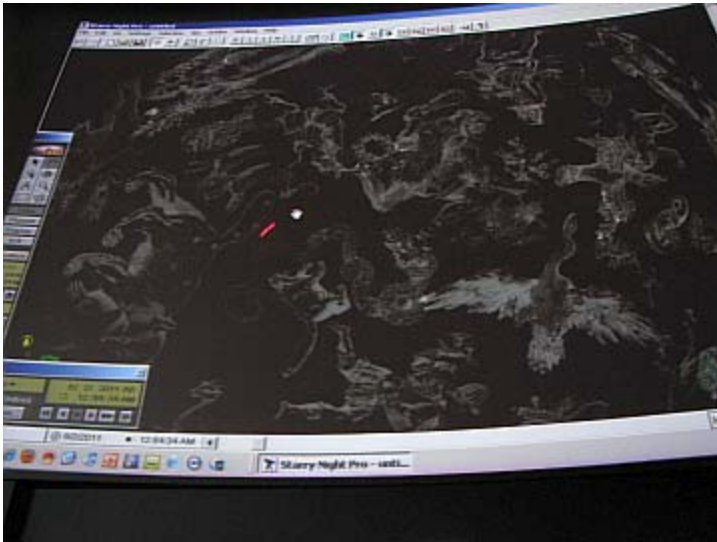
Camp Dates: June 9, June 16, June 23, June 30, July 7, July 14, July 21, July 28.

May General Meeting Minutes

by Pixie Bruner, AAC Recording Secretary.

Photos by Tom Faber

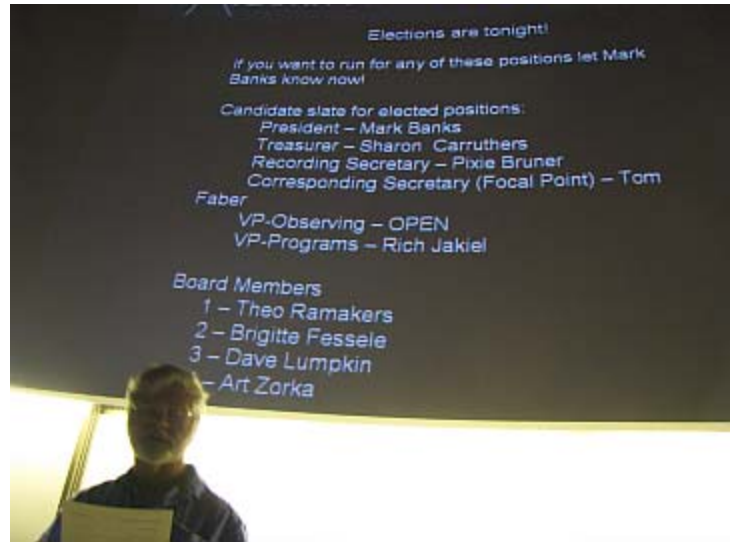
The Atlanta Astronomy Club held its May meeting on Friday, May 20th at Emory University's White Hall. Light refreshments were hosted by Sharon, and we thank her for her time and effort to provide snacks and soft drinks to hungry stargazers. The meeting was started at 8:00 PM by President Mark Banks. There were a total 42 members and guests in attendance. Our speaker for the evening was Phillip Sacco (photo below) who presented an interesting talk on "Archeo-Astronomy" and dealt with the myths of the constellations and unscientific historical observation of constellations over several eras of time in the Northern Hemisphere (photo bottom). It was a delightful and lively presentation.



Sharon Carruthers shall be presenting on "Planet X" at the club's June meeting. "Planet X" is both scientific fun and also funny science. The next Board meeting will be rescheduled due to conflicts with Emory as host location and various other options for locations to hold public AAC meetings were discussed in brief. New locations shall be announced once finalized but venues will be changing occasionally. There are several possibilities being looked into. July's speaker is to be announced. Richard Jakiel will surely find someone to educate and entertain us. He is currently

working on bringing Les Johnson of NASA to present a talk on unmanned space missions and Jim Hill on Cultural Astronomy. The speaker roster is looking impressive for amateur astronomers in Atlanta. AAC Alumnus Art Russell has agreed to present on planetary nebulae in August and that looks to be another fascinating and visually stunning topic.

The Elections for the 2011 Board for the AAC were held, voting was by aye or nay and were unanimous (photo below). All positions remained the same as before except for the following- the new Recording Secretary is Pixie Bruner. The new Board Members are Theo Ramakers, Brigitte Fessele, David Lumpkin and Art Zorka. Daniel Herron spoke on upcoming sidewalk events, the club site and *The Focal Point* shall have details, including a GASP event in Tugaloo State Park that is coming soon, kicking off the camping and park astronomy season. In June, there is a Saturn Workshop at Tellus Museum in Cartersville, GA. Upcoming events of interest to astronomers are always listed in *The Focal Point* and on the AAC website, Volunteers are always welcome and needed for events so please give back with your free time to show your appreciation and love of the skies. Once again, laughter and brain damage were caused by Mark Banks door prize mind-boggling trivia question and the second question was able to be answered and the lucky correct responder received a copy of Steven Hawking's *A Brief History of Time*. We look forward to seeing you next month and wish you clear skies!



President Mark Banks announce the slate of candidates for the election.

The Astronomical League

As a member of the **Atlanta Astronomy Club** you are automatically also a member of the **Astronomical League**, a nation wide affiliation of astronomy clubs. Membership in the AL provides a number of benefits for you. They include:

- * You will receive *The Reflector*, the AL's quarterly newsletter.
- * You can use the Book Service, through which you can buy astronomy-related books at a 10% discount.
- * You can participate in the Astronomical League's 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, the Herschel 400 Club, the Deep Sky Binocular Club, and many others.

To learn more about the Astronomical League and its benefits for you, visit <http://www.astroleague.org> You may also contact the AAC's Astronomical League Correspondent Art Zorka for more information about the AL's Observing Clubs at artzorka@yahoo.com or by phone at 404-633-8822.

CE Chapter May Outreach Programs

by Theo Ramakers

May was a busy month for Charlie Elliott Chapter's outreach program. We did 8 events, starting with being three days at Memorial Middle School in Conyers where we made presentations in all 6th grade classes. We did a 20 minute presentation in every class room about the Sun and NASA's Stereo 360 mission. Then after they learned about what happens on the sun and the impact it has on life on earth, and why NASA launched the Stereo satellites, they went outside for the rest of the period and took a look at the sun through solar glasses, and our H-alpha and white light telescopes. Following this, they understood a lot more about the nearest star to Earth. After the events, both Frank Garner and Theo Ramakers received a certificate of appreciation signed by the principal of the school.

May is also the month where Charlie Elliott Wildlife Center celebrates its outdoor festival: JAKES Day. The Chapter participated in the event with presentations in the Visitors Center about the Sun and the Stereo 360 mission and let visitors take a look at the sun through our solar scopes. It was a great event as always.

Charlie Elliott was the venue for three more events for area schools which were visiting The Outdoor Discovery School at CE. Students from the Yargo Elementary school in Winder as well as students from the Excellent Montessori School in Lilburn learned about the Sun, our solar system, and some NASA missions. All this was followed up by giving the students the opportunity a look at "What's up there" and they saw the sun through solar glasses, H-alpha, and white light scopes. During the evening sessions they observed craters on the moon. And as they saw Saturn with a few of its moons, they realized how nice it would be if we on earth would have a few of them instead of only one. :-)



May Charlie Elliott Chapter Minutes

by Marie Lott, CE Chapter Recording Secretary

The May meeting of the Charlie Elliott Chapter of the Atlanta Astronomy Club was held on Saturday, May 7, 2011 in the Charlie Elliott Wildlife Center Visitor Center at 5 PM. Twenty-nine members and visitors were in attendance.

Five short workshops were presented: Night Sky Network tool kits by Frank Garner; Imaging the Sun by Theo Ramakers; Constructing the Denver Observing Chair by Dan Schmitt; Planning Your Observing with AstroPlanner by Steven Phillips; and Considerations for Deep Sky imaging by Tim Geib.



Frank & Theo demonstrate the NSN kits

Steven Philips presented "Observing 101", a highlight of current celestial events and observing targets. Mercury, Venus, Mars & Jupiter will all be rising shortly before dawn. Saturn is an evening riser this month. Six moons of Saturn will be visible after midnight on May 23. On May 31 there will be a beautiful gathering of the waning crescent Moon, Mercury, & Venus above the eastern horizon at dawn. In June look for Comet Garrard as it travels through Aquarius.

Small Telescope/Binocular Target List for May: Galaxies M51 (Whirlpool), M63 (Sunflower), M64 (Black Eye), M81 (Bode's), M82 (Cigar) & M101 (Pinwheel); Open Cluster M44; and 5 double stars: Alula Australis, Cor Caroli, Mizar, and Polaris.

This month's featured object: M97, a complex planetary nebula in Ursa Major, is often called the Owl Nebula due to its resemblance to an owl's face. This nebula, discovered by Pierre Méchain in 1781, formed approximately 6,000 years ago. The shape of



M97, the "Owl Nebula"

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this object is believed to be a cylindrical torus shell. The matter-poor ends of the shell make up the “eyes” of the owl.

The meeting closed with the elections of the new board. Theo Ramakers will continue as Outreach Coordinator and Webmaster. Steven Phillips will continue as Observing Supervisor and Marie Lott will continue as Secretary. The election of Chapter Director will take place at the next chapter meeting to be held at 5 PM on June 4th.

Observing was held on the Jon Wood field after the meeting. A large number of scopes (16) were set up and everyone enjoyed spectacular views of Saturn, star clusters, galaxies & nebulas in the clear night sky. At 9:11 PM observers were treated to a bright ISS passing close to the crescent moon. The moon set shortly after midnight and many people stayed out longer to enjoy the stars, some until after 2 AM.

Charlie Elliott Safety Zone

by Theo Ramakers

Safety Zone correction and field improvements at Charlie Elliott. For the last few years the observation field at Charlie Elliott was outside the Safety Zone. Although the field was included in the initial Safety Zone, incorrect placed markers placed it just outside the zone. Charlie Elliott management has redrawn the safety zone lines and some of the markers have already been replaced, with the final placement to be completed soon. Thanks to Marie Lott, Tim Geib, the Tisdales, Dan Schmitt and Theo for helping. Please refer to the picture for the new zone lines. In addition, Frank Garner and Theo Ramakers worked on the driveway to the field after they finished the outreach for the Yargo Elementary School. Frank brought his tractor and scraped/leveled the driveway while Theo compacted. The next day we had a load of gravel spread on top. Please drive slowly when entering, so we don't spin the gravel back on the road.



2012 - DOOM or DUMB?

By Sharon Carruthers, AAC Treasurer

Part 4 - Nancy Lieder & Planet X

Much of the current Planet X Domsday scenarios seem to have originated with Nancy Lieder who began posting to Usenet astronomy groups in the early 1990's, claiming that aliens exist, and that Planet X would pass by Earth in May 2003. (The claim that brought her the most infamy was that Hale-Bopp was not a comet but part of a dis-info campaign led by NASA and “the powers that be” to distract people from the impending arrival of Planet X.) She started a website, ZetaTalk in 1995 to promote her views on Planet X, with a hub site *Troubled Times* which promotes survival skills for the upcoming disaster.

Not much is known about Lieder. Reputedly, she was a manager at a computer consulting firm, but retired to a farm in Wisconsin in 1999, to practice the self sufficiency that would see her through the upcoming upheaval. She has written no books (though some of her followers have), but promotes her ideas through ZetaTalk and YouTube videos.

Lieder claims that as a child she was abducted by Zetas (aliens from Zeta Reticuli ¹), who first implanted a communication device in her, then modified her DNA so that they could communicate telepathically with her. It is obvious that her ideas are based on Stichtin's writings (in 1996 she wrote “Planet X does exist, and it is the 12th Planet, one and the same.”) but claims that her knowledge comes from “revelation” from the Zetas. (Stichtin denied any connection between his work and various claims of a coming apocalypse - he believed that Nibiru would not return until 2090.)

Lieder describes Planet X as a brown dwarf, roughly 4-5 times the size of the Earth and 23 times its mass, with a tail of moons and surrounded by red dust. Its closest approach was due on May 27, 2003. Planet X's gravitational/magnetic pull on Earth would stop its diurnal rotation for exactly 5.9 terrestrial days, which would destabilize the Earth's physical pole, physically flipping the Earth on its side, then back again. This in turn would disrupt the Earth's magnetic core and lead to subsequent displacement of the Earth's crust - and earthquakes, volcanic eruptions, tsunamis, etc. She predicts the death of up to 90% of the Earth's population.

When this did not happen in 2003, Lieder said that The Zetas told a “White Lie” about the date to prevent the “authorities” from using martial law to confine people in cities where they would die. She claims that Planet X did enter the Solar System around then, swung around the Sun and is now on its way towards its encounter with Earth. She has been cagey about setting a new date for the encounter but her followers seem to have settled on the Mayan date (Dec 2012) as the time of the encounter.

Much of the “evidence” put forward are pictures of a smaller second sun beside the Sun (obviously internal camera lens reflections); objects on Solar & Heliospheric Observatory (SOHO) images, and every tectonic event and coronal mass ejection is claimed to be the “beginning of the end”. Some believe that the South Pole Telescope, a micro/millimeter wave telescope, was built to track Planet X as it approaches from the south. Believers comb the Microsoft Virtual Observatory and Google Sky, claiming that blank spots are where images of Planet X were deleted.

Most of Lieder's claims about the orbital motion of Planet X fail for the same reasons as Velikovsky's and Stichtin's (an object careening through the Solar System would either settle in a stable orbit or be ejected within a few passes; it would cause detectable perturbations in the motions of the other planets), so I will not repeat them again.

Planet X is a Brown Dwarf (BD)- BD's are “failed” stars. Stars condense from the collapse of a gas cloud and begin to heat up under gravitational pressure. Larger stars (from 0.8 solar masses or 80 times Jupiter's mass) will begin nuclear fusion. Stars smaller than this will get hot, from 1,000 - 2,500 C. deg, but not hot enough to sustain fusion (fusion may initiate but

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rapidly stop because there is not enough material to keep it going). They are low magnitude stars, as they do not emit visible light, but they do reflect light and emit heat that would be detectable in infrared. The first BD discovered was Gliese 229b, that shines in at 25th magnitude star from a distance of 18 light years. If Gliese 229b was in our solar system, even at Pluto's orbit (40 AU) it would be a 2nd magnitude star, as bright as Polaris. As it moved towards the Sun, its magnitude would increase to at least that of Jupiter and Saturn. As both Planet X's size (4-5 times Earth's size) and mass (23 times Earth's mass) are well below Jupiter's (Jupiter is 11 times Earth's radius and 310 times its mass), it cannot be a Brown Dwarf. And, of course, no extra planet has ever been observed in our Solar System by any professional or amateur astronomer.

Rotational Stoppage - Lieder claims that the Earth will stop rotating on its axis for 5.9 days due to the magnetic field of Planet X passing by it. (She seems to think that planetary magnetic fields act like bar magnets. They repel each other until one is removed.) However, planetary magnetic fields are not strong enough to have this kind of effect on each other.

The Earth rotates (and orbits) due to the initial energy from the rotating proto-planetary disk from which it formed. It would only stop if *all* this energy was transferred to another object by impacting it or by being converted to another form of energy, such as heat (Conservation of Energy). Earth would either have to destructively impact Planet X or literally melt if its rotation stopped (and it would be unlikely that all its rotational energy would be used up, so it would still rotate but much more slowly). After all the energy is dissipated by these events, there would be none left in either object to re-initiate rotation 5.9 days later.

A sudden rotational stoppage would be a **planet killer**, not a temporary inconvenience that you could survive by moving to Wisconsin.

The Pole Shift - The *magnetic* pole has slowly moved about 10 km a year since it was discovered in 1831. *Magnetic* pole reversals have happened in the past, the last over 780,000 years ago, but can take up to 1,000 years to happen. Scientists find no evidence that these *magnetic* reversals caused massive tectonic changes like earthquakes or volcanic eruptions (though I suppose that species that use the magnetic lines of force to migrate may have a hard time). Lieder claims that the magnetic field on Planet X will cause a *physical* pole shift, first tipping Earth from 10 - 20 degrees, over then letting it pop back to its normal position and rotation. As with the rotational stoppage, this would require massive, planet killing amounts of energy to be transferred. Once tipped, it would stay tipped without a transfer of more energy.

Bad Science & Conspiracy!!!!!! - While Velikovsky and Stichtin gave lip service to science (though mangled beyond all recognition), Lieder ignores science (she admits her incompetence in astronomy). Her truth is purely by "revelations" from her Zetas. Since reality has refuted her since 1997 (when she refused to even go out to look at Hale-Bopp since it didn't exist), conspiracy and government cover-ups have been her mainstay. NASA and governments know the truth but are covering up. Public observatories close their doors so that people cannot see Planet X in a telescope. Debunkers, such as Phil Plait (the Bad Astronomer), and professional and amateur astronomers that deny they see Planet X, are paid dis-information agents.

There is more emotion than science behind Lieder's claims. She, like almost all other conspiracy believers, share common traits:

a) They are either one of the "chosen few" who are selected to know the truth; or are wise enough to figure out what the ignorant masses (the "sheeple") haven't

b) They use science, not as a methodology to hone their critical faculties, but as a thin veneer to make their beliefs sound respectable. Scientific ignorance abounds in believers. Claiming that Planet X is a Brown Dwarf to make it sound "sciencey", but failing to actually learn what a BD is typical. So is confounding a magnetic pole shift with a physical pole shift.



c) They believe that "the government knows the truth but isn't telling". Anti-government paranoia runs deep in these claims, since a cover-up is the only way to rationalize away the lack of evidence.

d) Doomsdayism is common. The event will precipitate the END of The WORLD (or The BEGINNING of a NEW AGE for some optimists). Common occurrences (tornadoes, earthquakes, solar flares) are seen as on the increase (though statistically, they aren't) and evidence that the event has started. I suppose this reflects an angst at the hardships of life; or a hope that when you go, the world goes with you. The eagerness for apocalyptic disasters baffles me.

Next month: The Mayan calendar and 2012 (finally!)

1) Zeta Reticuli is favored as the home planet of aliens. Apparently this due to Betty and Barney Hill, who, while under hypnotism, claimed to have been abducted by "grey" aliens in 1961. During their time on the space ship, where the aliens performed medical tests (no anal probes!), Betty was shown the location of their planet on a star chart, that was subsequently matched to Zeta Reticuli by believers. Their story, told in "The Interrupted Journey", was the first well publicized account of alien abduction, and has most of the now classic elements of alien abduction - missing time, lost memories, medical tests, and gray ET - like aliens. Carl Sagan did a debunking of their case

(Opinions expressed in this series are those of the author; not of the Atlanta Astronomy Club, its Board, its membership, nor the editors of the *Focal Point*.) *Editor's Note: But they do happen to be my opinion.*

How To See A Space Shuttle Launch

or Saying Hello and then Farewell to the Space Shuttle

by Daniel Herron, AAC Observing Chair

We first tried to see a Shuttle launch in 2005. It was the return to flight launch of Discovery (STS-114) but it was delayed and we missed it. Then in 2006 we tried to see Atlantis (STS-115) but that was scrubbed due to tropical storm Ernesto so no luck there! We gave it a rest for a couple of years and on May 21, 2008, Misty and I drove down to see our first Shuttle launch from Titusville's Space View Park. It was STS-124 and it was the Shuttle Discovery. I wrote an entry about it on my website and ended that entry with: "What an exciting event. The drive, the heat, the sunburns, and the wait - it was all worth it. I would do it all again in an instant."

And we have, 6 instants to be precise. It started innocently (if not crazily) enough. I got the idea in my head to try to see each of the remaining Shuttles launch. I had just seen Discovery go up, so all that was left was to see Atlantis and Endeavour launch. Endeavour (STS-126) launched that November and it was a night launch so that was a bonus, then Atlantis

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(STS-125) launched the following May. Not too bad, one year, goal complete! Then we got the Shuttle retirement plans and I got a crazy idea to try to see each Shuttle's final launch, and I somehow convinced Misty to agree to it! After a failed attempt to see Discovery (STS-119) go up - it got scrubbed 30mins after we arrived in Florida and would not launch for a few days, we decided to not try again until the last launches.

Fast forward to May 2010 and we went down to see Atlantis (STS-132) launch. This was supposed to be Atlantis' last launch so we checked it off the list and said "two more to go". It was a nail biter too as there was a ball bearing found on the pad and it almost scrubbed the launch. But it went up and was a beautiful launch. A few weeks later NASA announced plans to fly Atlantis again as the last Shuttle launch.

Then we drove down to see Discovery's last launch in February of 2011. I had spent a week in September down in Florida for the rollout of Discovery to the pad on 9/20/2010, and NASA Family Day the following weekend. I was bummed because I had to travel for work and would miss the planned launch on November 1st. However, due to issue with the external tank it was continuously scrubbed and eventually moved to February 2011. We were able to drive down again and this time we were in front of the VAB to see it launch after almost being scrubbed by a computer error in range control (two more seconds and it would not have gone up!). WHEW!

Discovery behind us we once again had two more to see. Endeavour was planned to launch on April 29, 2011, and after I drove down (arriving at 4am the morning before the 5pm launch) we got what sleep we could, woke and got to the busses and half way to the launch viewing area it was scrubbed due to problems with heaters for the auxiliary power units. We headed home after we found out it would be a few days and after a week or so the launch was moved to May 16. We headed down once again to see Endeavour's final launch from the Saturn V VIP viewing area and she launched on time on May 16 (photos right). It was cloudy and she disappeared into the cloud deck 30 seconds after launch, but it was still a sight to see!

That leaves only one more. Atlantis (STS-135) is currently scheduled for Launch on July 8+. We do plan to go see her go up and wish her crew GODSPEED.

So what tips do I have for anyone heading down for the final launch?

Plan ahead and know where you will be viewing it from. If you are not able to get on site at Kennedy Space center then Titusville's Space View Park is the best offsite viewing area and there is no charge to go or park. Regardless of where you are viewing from get there as early as possible, people campout at the offsite areas and the parks fill up early. Also be prepared to deal with heavy traffic after the launch. Decide to either be stuck in traffic for hours (YES HOURS) or stay put and chill until the traffic dies down. For Discovery's STS-133 Launch we heard it took 6 hours to get from Titusville to Orlando after the launch. For Atlantis' STS-132 Launch it took us 3 hours to get back to where we caught the bus (a 30 min drive) and 2 hours to get to where we were staying from there (a 15 min drive).

Get a hotel early and maybe look in Jacksonville or Daytona for rooms. Be prepared to be there a few days past the launch in case it gets scrubbed. Have a backup plan (beach, Disney parks, etc; to alleviate the frustration in case of a scrub). The first launch we went to we stayed in Jacksonville. You will pay a premium to stay in Titusville and the surrounding areas and they have weird cancellation policies (which you might have to do). We left the launch viewing area in Titusville and headed north on US-1 (everyone else was heading west to I-95) for a few miles and then turned west to I-95. We had little or no traffic getting to dinner in Daytona before heading to our room in Jacksonville. Avoid staying in Orlando if you can, there are only two good roads (528 and 50) that lead to Orlando and one is a toll road (528).



Take plenty of food, drinks, sunscreen, chairs, umbrellas, etc; with you. You may be sitting a long time and you may not have shade nearby, it could rain, etc. Also nearby businesses may run out of provisions or raise prices. Stay hydrated and take it easy. Also games or other forms of entertainment are nice to pass the time (movies on IPAD!).

Even though I will not follow my own advice here I suggest you just watch the launch. Most of the launches I have seen



Photos by Daniel Herron.

through my camera's lens and each time I wished that I had just watched the launch and enjoyed it. The next launch I may set my remote up to just snap shots of Atlantis leaving the pad so I can just watch the last one go up. We will see. It will all be over in two and a half minutes after ignition so get ready beforehand. Two minutes before launch have your camera on and all set to take the shots you want. Take a few test shots and see how they turn out, and leave it on and set. That last minute goes by fast and it is not the time to be messing with stuff. Also manually focus your camera if you can, nothing would be worse than the auto focus deciding to focus on a bird in the foreground instead of the shuttle and if you are rapid firing the camera it will take shots faster. Also do not use any filters (UV or Polarizing, etc) that extra layer of flat glass can reflect stuff into your pictures (two shuttle plumes for instance). Stay up to date of Launch news at SpaceFlightnow.com, use twitter and Facebook to follow NASA tweets (@NASA #NASATweetup #STS135, etc) and feeds to keep up with launch changes. Setup Google alerts to catch interesting articles on the launches, NASA, Shuttles.

Trying to view a launch can be one of the most tiresome, frustrating, heart stopping, exciting and amazing things you can do and seeing the last one will just add to that. What a bittersweet moment it will be. Hope to see you down there!

The Challenge Of The Herschel 400

by Art Zorka, AAC ALCor

Today I submitted my viewing records and notes, and applied for the Herschel 400 Observing Club award. Yes, even the ALCor has to turn it in to somebody.

When I started observing the Herschel 400, I was prepared for sheer boredom. Everyone I spoke with told me that it was a list of objects, most of which were not worth viewing. Many, or most, would be dim, small and fuzzy. I would have to fight drudgery trying to get through it. However, it was because of a technique I learned in SCUBA diving that kept me on target and excited all the way through.

Most people SCUBA dive for the sheer sport and visual beauty. That certainly is a major attraction. However, when I told people that I enjoyed diving in Lake Lanier, the usual response was a screwed-up face followed by, "I hate it there. You can't see your hand in front of your face. It is filled with fallen trees and branches, old automobiles and sunken boats. And you can't see them until you are on top of them. You can only see a cubic foot at a time and it is too dangerous." But, that was just what excited me.

During my training in rescue diving, underwater navigation skills are a necessity. Learning to find that which you cannot see, under extreme conditions, requires specialized skills. Using a map, compass and a depth gauge, along with recognizing speed and distance, in an invisible environment, are skills that take time to develop.

These skills find a perfect home in the Herschel 400 list. I found that gauging speed and distance was similar to using the Telrad reticle, measuring distance in Star Hopping. Using a map and compass is very different in the sky than on land, but only because the earth is apparently so large. But to revolve around the North Pole would create the same result as revolving around the North Celestial Pole. I just had to visualize the difference in the sky for it to make sense.

The biggest challenge was to recognize one object from the other, when more than one appeared in my field of view. In this case, a photograph of the NGC object was extremely helpful. Here, I used an NGC CCD photo catalog. In some cases, it was the only way I could have known whether or not I was viewing the intended target. It was always gratifying when I used the catalog to verify my correct first impression.

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The **Atlanta Astronomy Club, Inc.**, the South's largest and oldest astronomical society, meets at **8:00 P.M.** on the Friday closest to full moon of each month at Emory University's White Hall or occasionally at other locations or times. Membership fees are **\$30 (\$42)** for a family or single person membership. College Students membership fee is **\$15 (\$27)**. These fees are for a one year membership (\$12 per year extra charge to receive a printed *Focal Point* by mail).

Magazine subscriptions to *Sky & Telescope* or *Astronomy* can be purchased through the club for a reduced rate. The fees are **\$33** for *Sky & Telescope* and **\$34** for *Astronomy*. Renewal forms will be sent to you by the magazines. Send the renewal form along with your check to the Atlanta Astronomy Club treasurer.

The Club address: Atlanta Astronomy Club, Inc., P.O. Box 76155, Atlanta, GA 30358-1155.

AAC Web Page: <http://www.AtlantaAstronomy.Org>. Send suggestions, comments, or ideas about the website to webmaster@AtlantaAstronomy.org. Also send information on upcoming observing events, meetings, and other events to the webmaster.

Completing the list was not easy. It took years. But I made it fun and gratifying. I looked forward to every clear night I could get out with my telescope, Sky Atlas and list of objects. There were times it was frustrating. But I am so glad I did it, and I'm glad it is behind me.

It was the most fun I never want to do again.

Atlanta Astronomy Club Online

While this newsletter is the official information source for the Atlanta Astronomy Club, it is only up to date the day it is printed. So if you want more up to date information, go to our club's website. The website contains pictures, directions, membership applications, events updates and other information. <http://www.atlantaastronomy.org> You can also follow the AAC on Facebook by joining the AAC group, and on Twitter at <http://twitter.com/atlaastro>.

AAC Officers and Contacts

President: Mark Banks President@AtlantaAstronomy.org

Program Chair: Richard Jakiel Programs@AtlantaAstronomy.org

Observing Chair: Daniel Herron Observing@AtlantaAstronomy.org

Corresponding Secretary: Tom Faber
Focalpoint@AtlantaAstronomy.org

Treasurer: Sharon Carruthers Treasurer@AtlantaAstronomy.org

Recording Secretary: Pixie Bruner
Secretary@AtlantaAstronomy.org

Board: Brigitte Fessele, Contact info TBA

Board: David Lumpkin, Contact info TBA

Board: Theo Ramakers 770-464-3777
webmaster@CEastronomy.org

Board: Art Zorka 404-633-8822 (H) 404-247-2474 (C)
artzorka@yahoo.com

ALCor: Art Zorka 404-633-8822 (H) 404-247-2474 (C)
artzorka@yahoo.com

Elliott Chapter Director: Open - director@ceastronomy.org

Elliott Observing Supervisor: Steven Phillips 770-601-9816
observing@ceastronomy.org

Elliott Recording Secretary: Marie Lott mtlott@comcast.net

Elliott Coordinator: Alesia Rast Alesia_Rast@mail.dnr.state.ga.us

Elliott Webmaster: Theo Ramakers 770-464-3777
webmaster@CEastronomy.org

Georgia Astronomy in State Parks:

PSSG Chairman: Peter Macumber pmacumber@nightsky.org

PSSG Co-Chair: Joanne Cirincione
starrynights@AtlantaAstronomy.org

Sidewalk Astronomy: Brad Isley
sidewalkastronomy@AtlantaAstronomy.org

Light Trespass: Open - Contact Mark Banks if you would like to volunteer for this position

Woodruff Observ. Coordinator: Sharon Carruthers
Treasurer@AtlantaAstronomy.org

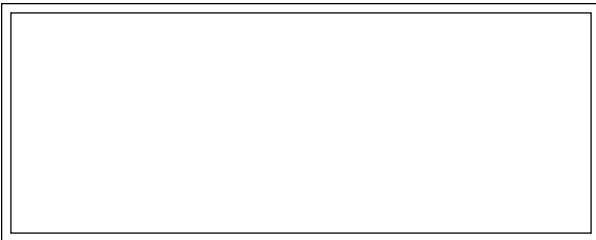
AAC Webmaster: Daniel Herron observing@AtlantaAstronomy.org

Calendar by Tom Faber (Times EDT/EST unless noted)

AAC Events are listed in BOLD

- June 8th, Wednesday: Moon First Quarter.
- June 9th, Thursday: **Woodruff Scout Program, 9-11PM** (every Thursday through July 28).
- June 11th, Saturday: **GASP at Tugaloo State Park.**
- June 12th, Sunday: Mercury Superior Conjunction.
- June 14th, Tuesday: Saturn Stationary.
- June 15th, Wednesday: Full Moon.
- June 17th, Friday: **AAC Meeting at Math & Science Bldg, Emory Univ, 8PM.**
- June 20th, Monday: Mars near Pleiades low in the eastern morning sky.
- June 21st, Tuesday: Solstice at 1:16PM EDT.
- June 23rd, Thursday: Moon Last Quarter.
- June 24th, Friday: **July Focal Point Deadline.**
- June 27th, Monday: June Bootids Meteors.
- June 28th, Tuesday: Moon between Mars and the Pleiades in the eastern morning sky. Pluto at Opposition. Latest Sunset in Atlanta (~8:52PM).
- July 1st, Friday: New Moon.
- July 2nd, Saturday: **Charlie Elliott Chapter Meeting - 5PM.**
- July 4th, Monday: Earth at Aphelion.
- July 8th, Friday: Moon First Quarter.
- July 15th, Friday: **AAC Meeting at location TBA, 8PM.** Full Moon.
- July 20th, Wednesday: Mercury at Greatest Elongation East
- July 22nd, Friday: **August Focal Point Deadline.**
- July 23rd, Saturday: Moon Last Quarter.
- July 30th, Saturday: **Charlie Elliott Chapter Meeting - 5PM.** New Moon. Southern Delta Aquarid Meteors.
- August 6th, Saturday: Moon First Quarter.
- August 13th, Saturday: Full Moon. Perseid Meteors.

FIRST CLASS



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The Focal Point

Newsletter of The Atlanta Astronomy Club, Inc.

FROM:

Tom Faber

2206 Tretridge Parkway

Alpharetta, GA 30022

We're here to help! Here's how to reach us:

Atlanta Astronomy Club

P.O. Box 76155

Atlanta, GA 30358-1155

www.atlantaastronomy.org

On Twitter at <http://twitter.com/atlastro>



Focal Point Deadline and Submission Information
Please send articles, pictures, and drawings in electronic format on anything astronomy, space, or sky related to Tom Faber at focalpoint@atlantaastronomy.org. Please send images separate from articles, not embedded in them. Articles are preferred as plain text files but Word documents or PDFs are okay. You can submit articles anytime up to the deadline. **The deadline for July is Friday, June 24th. Submissions will not be accepted after the deadline.**

Atlanta Astronomy Club Listserv

Subscribe to the Atlanta Astronomy Club Mailing List: The name of the list is: AstroAtlanta. The address for messages is: AstroAtlanta@yahoogroups.com. To add a subscription, send a message to: AstroAtlanta-subscribe@yahoogroups.com. This list is owned by Lemmy Abbey.