

**August Meeting of the Charlie Elliott Chapter - Atlanta Astronomy Club  
August 23, 2014**

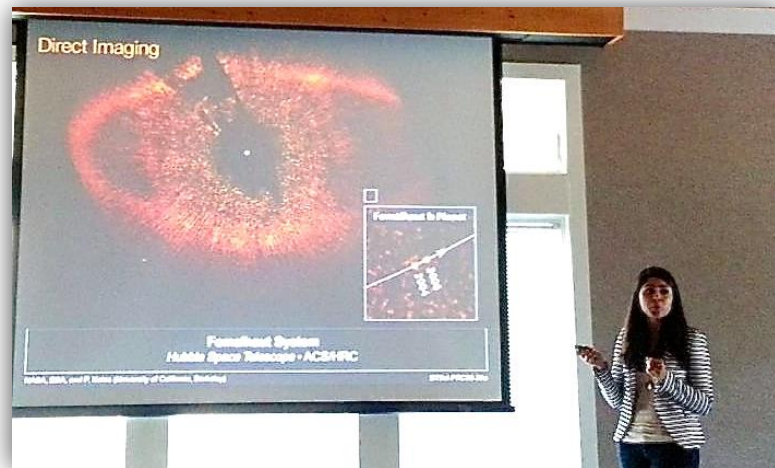
Prepared by Van Macatee – Chapter Secretary

This month's meeting convened at 6:30 PM at the Charlie Elliott Wildlife Center Conference Center Room B with 47 members and guests in attendance.

After introductions and opening comments, Steve Siedentop handed the floor over to John Towne, Chapter Observing Supervisor, who covered this month's 'What's Up' presentation for September which focuses on the constellation Cygnus, the upcoming MARS/MOON/SATURN Conjunction on August 31<sup>st</sup>, and the possibility of spotting the Zodiacal Lights between September 21<sup>st</sup> and October 9<sup>th</sup> (dark site required). John then challenged us all to start one of the many observing programs offered by the Astronomical League. They are great programs guaranteed to increase your knowledge of the night skies. <http://www.astroleague.org>

John's presentation can be found on the club's web site;  
<http://ceastronomy.org/blog/wp-content/uploads/2014/08/Charlie-Elliott-Whats-Up-August-2014.pdf>

Nicole Cabrera, (NSF Graduate Fellow, Department of Astronomy Georgia State University) then delivered a wonderful and informative presentation on the ongoing search for exoplanets. Over the last 10 years and especially in the last 2-3, there has been an explosion of exoplanet discoveries. Nicole described the three methods currently employed to search for exoplanets; Direct (photographic), Transit (measuring the drop in apparent light from the host star), and Doppler (spectroscopy based radial velocity changes as measure in red/blue shift). There are currently over 1,000 verified exoplanets and thousands more that have been identified as candidates that are awaiting ground based telescopic validation. Within this new and emerging science is a new set of burning questions.



Although astronomers have been discovering exoplanets since the 1990's, only recently have we found a planetary system that resembles our own. While our Solar System is structured with small, rocky planets close to the Sun and gas giants much

farther away, most exoplanetary systems that we've found contain "Hot Jupiters," which are gas giants that orbit very close to their star. This seems to violate current theories regarding planet formation and therefore leaves us wondering anew about our own solar system.

How do we explain this strange phenomenon, when our own Solar System gives us no clues? Did the Hot Jupiters form in-situ, or did they migrate from farther out in the system? Why is our Solar System so different and why did it take us so long to find our "twin?" Nicole discussed the challenges of explaining Hot Jupiters and a new method that could help us understand their origins as well as the formation timescales for giant planets.

Nicole fielded many questions from the room including how amateurs could participate in the science. To this later question, she indicated that spectroscopy and/or crowd sourcing might be a fruitful method of collaboration, especially regarding the growing library of candidate exoplanets waiting for verification. Steve, Ken Poshedly and Nicole agreed to further discuss this exciting and emerging aspect of astronomy using ALPO and other amateur resources. I suspect we will hear more about this topic soon.



Nicole is embarking on a new research project using telescopes in Hawaii and France in tandem to solve the puzzle of close orbiting Hot Jupiters. We wish her luck and expect great things from her in the future! Working in Hawaii and France is tough duty but she assured us all that she is up to the challenge!



Steve adjourned the meeting to the Jon Wood Astronomy field where over 75 members and guests gathered to look through one of the almost 2 dozen telescopes set up. The evening

started began with high temps, humidity and clouds but soon the temps cooled and the clouds began to break up. All enjoyed views of Saturn, Mars and numerous deep sky objects. By midnight, the clouds were completely gone and the camera shutters were firing away!

Our next meeting will take place on September 20<sup>th</sup> and will feature our quarterly potluck dinner.

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