Monthly Notices of the Everglades Astronomical Society

Naples, FL
November 2014

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President's Message

We had great attendance at the FAK, and our sidewalk astronomy event for the City of Naples' annual Halloween "Spooktacular" on 5th Avenue was a huge success. Fifth Ave. was closed to traffic and crowds were estimated at 20,000. We probably touched 1,000 people of all ages with either a stop at our canopy to look at meteorites, a look through a telescope at the moon or showing live on a TV screen. A special thanks to all those that helped out. None of us had any breaks and basically stood the entire time from 4:30-9:30pm. Lots of tired feet, backs and voices! Unfortunately, we already know there will be no major targets for next year's event.

Please check our website calendar, website and newsletter for upcoming events and consider helping if you can.

The National Park Service is also starting back with night sky evening programs. The programs are lead for a third winter season by Luke Gommermann from Big Cypress National Preserve. Programs take place near the end of Seagrape Drive, behind the Big Cypress Swamp Welcome Center off of US 41. Dates as follows:

December 6, 2014, at 6:30 PM (evening of the 4th annual Swamp Heritage Festival)
January 23, 2015, at 7:00 PM
February 21, 2015, at 7:30 PM
March 20, 2015, at 8:00 PM

As a reminder, Winter Star Party tickets have gone on sale to the general public. Attendance should be up again and will probably sell out early. If interested, don't waste time and get your ticket! Link is below. I plan on attending the entire week.
https://www.regonline.com/builder/site/Default.aspx?EventID=1569282

Clear Skies,
President Todd Strackbein

Dates for the "Fak"

Usually the best times to go out to the Fakahatchee Strand viewing site are moonless nights. Below is a list of upcoming Saturday nights that you will often find fellow club members out there enjoying the skies with you (weather permitting).

Date	Moonrise	Moonset
November 15	12:35 a.m.	1:24 p.m.
November 22	6:49 a.m.	6:03 p.m.

Sky Events

October 30 - First quarter
November 5 - Taurids meteor shower
November 6 - Full moon
November 14 - Last quarter
November 22 - New Moon

Next Meeting

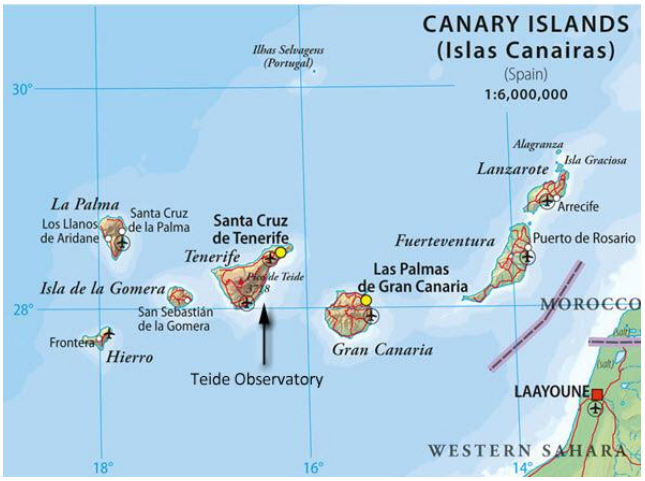
November 18, 2014: Time 7:00 – 9:00 pm
Norris Center, Cambier Park

Robotic Telescope
By Martin Zombeck

Don't have a telescope? Make observations from the comfort of your home. There are many robotic telescopes on the web for amateurs to use. This article is about one such system that I have used and can recommend: The University of Bradford Robotic Telescope of Mt. Teide in Tenerife, Canary Islands. The Telescope consists of three optical systems providing different fields of view (FOV).

Teide Observatory Complex, Tenerife, Canary Islands, Spain.

The Bradford Robotic Telescope installation is part of the Observatorio del Teide site of the Instituto de Astrofisica de Canarias, in Tenerife, Canary Islands, Spain. The Teide Observatory on Tenerife and its sister observatory on La Palma are the best sites in Europe and are two of the best sites in the world for astronomy. The Teide Observatory is situated on the northern part of the Mt. Teide Volcano caldera.



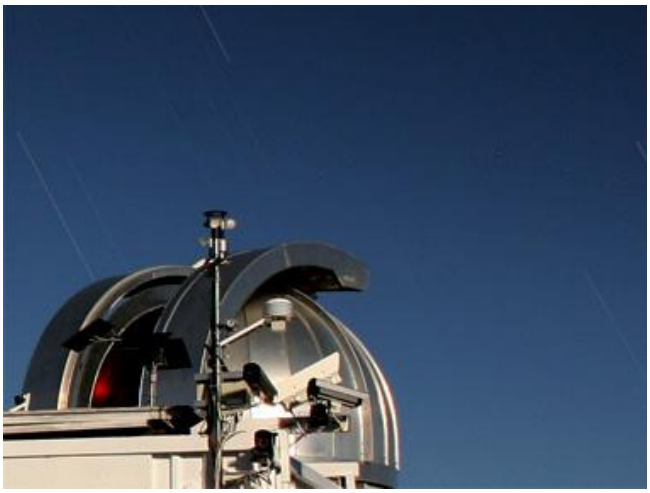
The Telescope coordinates are:
Latitude: 28° 17' 54" N
(approximately 2 degrees north of the Fak)
Longitude: 16° 30' 34" W
Altitude: 2,400 meters (7,874 feet)

Teide Observatory

Bradford Robotic Telescope Operation and Characteristics

The Bradford Robotic Telescope is mainly a service instrument that requires little or no knowledge of astronomy to use. The images are taken when the conditions are right. There is a monthly fee of about $5. The exact fee depends on the conversion rate between dollars and pounds (3.00 GBP per month is the fee). One can have up to 10 observations queued up to be taken at any time. The observations are automatically scheduled and one is notified by e-mail when an observation has been completed.

The observatory consists of a 14-inch diameter Cassegrain reflecting telescope and camera and two additional cameras, all on an equatorial mount. There are also 12 different filters. Control is provided by a sophisticated scheduling system that makes sure the image gets taken at the best time.



Telescope Dome

Telescope Mount

There are four instruments on the mount:

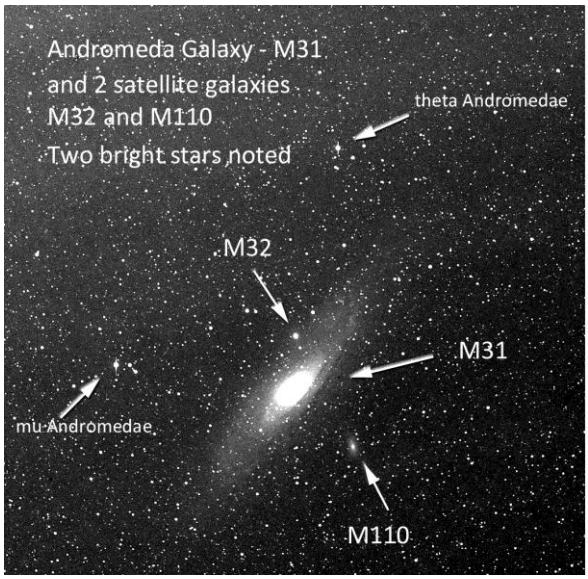
1. **Constellation Camera** - this optical system (CCD camera) provides the largest field of view (approx. 40 degrees square). It is designed to image an area of the sky that is big enough to show individual constellations. It can also be used to image the Milky Way.

2. **Cluster Camera** - This optical system (CCD camera) is large enough (FOV approx 4.3 degrees square) to cover many important stellar clusters, and sensitive enough to show background stars in an image of the moon. A typical target for this system would be the Pleiades (also known as M45) or a large globular cluster such as M15.

3. **Galaxy Telescope** - This optical system is a reflecting telescope (14 in. Schmidt-Cassegrain Celestron) and a CCD camera. It can be used to image any visible Messier object, many NGC objects, small star fields and planets. It also provides detailed close-up images of the moon. The FOV is approx. 24 arc minutes square.

4. **Guide Telescope**

Example Observation



M31, October 9, 2014, Cluster Camera, 120 seconds observation and requested over the internet from York, Maine.

The website for the Bradford Robotic Telescope: http://www.telescope.org/. A professional online program to find the optimum date to observe a particular object can be found at http://catserver.ing.iac.es/staralt/index.php. The program, *Object Visibility- STARALT*, is provided by the Isaac Newton Group of Telescopes. Staralt is a program that shows the observability of objects in various ways: either you can plot altitude against time for a particular night (Staralt), or plot the path of your objects across the sky for a particular night (Startrack), or plot how altitude changes over a year (Starobs), or get a table with the best observing date for each object (Starmult). You can select an observing site from a list of international observatories or use the coordinates of your own site (The FAK, for example). You can also enter multiple objects. The output of Starmult for the optimum dates for observing M31 (Andromeda), M51 (Whirlpool Galaxy) and M1 (Crab Nebula) from the Mt. Teide observatory is shown here.

Optimum Observability
Teide Observatory 343.5033E 28.2917N Year 2014
Min. elevation = 10 deg.

Name	Date	UTrise	UTculm.	HoursUp	UTset	Mdist.	Mill.
M31	28Sep	R18h29m	C 1h17m	H12h 2m	S 8h 6m	131	21%
M51	13Apr	R17h59m	C 1h 7m	H11h11m	S 8h15m	54	98%
M1	12Dec	R19h12m	C 1h13m	H12h 2m	S 7h15m	70	63%

* * *

Fak and Other Photos

Bubble Nebula and M52 Open Cluster by Chuck Pavlick; William Optics FLT 110 f/7 w/field flattener; AP Mach 1; SBIG 8300 c; 4 @ 600 seconds; Fakahatchee Strand.

Halloween Spooktacular Event - Mutant Ninja Turtle stops trick-or-treating to look at the sun. Photo by Jackie Richards.

Mary Ann Wallace and Todd Strackbein at their scopes during the Halloween Spooktacular event. Photo by Jackie Richards.


Halloween Spooktacular event – Denise Scheppe answering questions at the EAS booth. Photo by Todd Strackbein.


Halloween Spooktacular Event – Bart Thomas' home-made sun-viewing device. Photo by Jackie Richards.


Denise Sabatini showing meteorites at the Halloween Spooktacular event. Photo by Todd Strackbein.

Halloween Spooktacular event – Rick Piper assisting with viewing the sun and moon. Photo by Jackie Richards.


Charlie Paul, Bart Thomas and Rick Piper at their scopes – Halloween Spooktacular event. Photo by Todd Strackbein.

Rick Piper showing the moon on a TV screen as seen through his telescope – Halloween Spooktacular event. Photo by Todd Strackbein.

Jackie Richards at her scope at the Halloween Spooktacular event. Photo by Todd Strackbein.

Ted Wolfe assisting viewers at Todd Strackbein's scope at the Halloween Spooktacular event. Photo by Todd Strackbein.

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Items For Sale or Trade or Wanted:
http://www.naples.net/clubs/eas/equipment_sales.html

Useful links (software, telescope making, telescope and equipment suppliers, astronomical data sources, iPhone and iPad Apps and more):
http://www.naples.net/clubs/eas/links.html

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EAS 2015 DUES

For the bargain price of only $20.00 per family, all this can be yours this year:

- Meet with your fellow astronomy enthusiasts at least 10 times a year;
- Learn about astronomy and telescopes. Check out our club scope;
- Many opportunities to view planets, nebulae and other celestial objects (even if you don't have your own telescope); and
- Enjoy the many astronomy programs at our regular monthly meetings.

Don't miss out! Fill out this form (please print clearly) and send it with your $20 check to the Everglades Astronomical Society, P. O. Box 1868, Marco Island, Florida, 34146.

Name: _____

Address: _____

_____

Phone: _____

Email: _____