

Program Schedule for Friday & Saturday Sept. 21-22, 2012

Time	Activity	Details	Presenter/ Sponsor	Location	Notes
6 pm Ongoing every 20-30 minutes	Various Astronomy Movies	Short professional quality video vignettes on astronomy, space exploration, and NASA missions. The Metropark Trailer is located near the Parking lot and accommodates small groups.	Kensington Metropark	Mobile Learning Center Trailer	Cloudy or clear
6:00 PM to sunset	Solar (Sun) Viewing	Visitors will be able to look through solar filtered telescopes at the sun and possibly sunspots and solar prominences. (NEVER look directly into the Sun either naked eye or through a telescope without using an approved solar filter).	All Clubs	At Telescopes with Yellow Balloons	Clear skies only
6 pm - Ongoing	Space Exploration Displays	Posters, handouts and various and Make & Take Activities related to space and astronomy.	The Detroit Science Center Outreach Team	Pavilion	Cloudy or clear
6pm – Ongoing	Astronomy eqpt., books, etc	Astronomy related items available for purchase	The Great Red Spot, Camera Mart	Pavilion	Cloudy or clear
6 pm- 10 pm Every ½ hour	Night Sky Planetarium Presentation	The night sky simulation tours the constellations for the current evening sky using a portable planetarium. Free tickets available for each time slot at the Detroit Science Center vendor table. (Audience size limits)	Don Klaser & Todd Slisher- The Michigan Science Center: Starlab Portable Planetarium	Dome near Tent	Cloudy or clear
6:15 PM	Comet Talk / Comet Making Demonstration	Learn about these special celestial visitors and what a comet is made up of by watching how a comet can be made from dry ice and common household ingredients. Extremely family friendly.	Bob Hotaling & Mike Broughton - Kensington Metropark Nature Center Interpreters	Tent	Cloudy or clear
7:00 PM	“Rescue of Andromeda”	Discover the Greek hero within us all, and story behind several fall constellations, as you witness the rescue of the Princess Andromeda. Youth volunteers from the audience will act out the scenes from ancient mythology. Bring your camera. There are no rehearsals, we just jump in and have fun.	Mike Broughton - Kensington Metropark Nature Center	Tent	Cloudy or clear
7:30 PM	Our Vanishing Night	Why can't you see very many stars from your neighborhood? Learn about how light pollution is making it harder to see stars and other astronomical objects, and what you can do to help reverse the trend.	Norbert Vance - Professor at EMU	Tent	Cloudy or clear
7:50 PM	How Cold is Outer Space?	We show how cold space can get through a series of fast moving demonstrations using liquid nitrogen and everyday common objects. Our most popular session for all ages. (Demonstration)	John Potts , Detroit Science Center- Friday; Kevin Dehne , Assoc .Prof. Delta College- Saturday	Tent	Cloudy or clear
8:30 PM	Astronomy 101 & 3D Movie	In the tradition of "Science for Poets," this is a painless astro-primer for anyone who has ever gazed at the night sky. Beginning with the moon and the planets, and ending in the infinite reaches of intergalactic space. Concludes with a short 3D Movie tour through the constellations.	Bob MacFarland -Seven Ponds & Ford Amateur Astronomy Clubs & Dave D'Onofrio – Warren Astronomical Society	Tent	Cloudy or clear
9:00 PM	Keynote Speaker, Hubble, Space Station, & Beyond”	We will hear see photos, videos and hear stories of Astronaut Feustel's repair missions to the Hubble space station, his work on the ISS and his reflections concerning the future of manned space missions.	Astronaut Andrew Feustel, Ph.D. – NASA, (Lake Orion, MI)	Tent	Cloudy or clear
10:00 PM	Tour of the Constellations	Want to learn how to find your way around the night sky? If it is clear, you can locate the major summer constellations from this tour of the night sky and hear the mythology stories of the ancients who named them.	Bob Victor -MSU Abrams Planetarium; Kevin Dehne – Assoc. Prof. Delta College	On the sidewalk at the Beach	Cloudy or clear
Dusk-10:30	Skytour Scavenger Hunt	Using a worksheet, children move around our telescopes and binoculars to view the moon, planet(s), nebulas, star clusters and galaxies. Upon completion, a prize is awarded for ages 3 to 17 yrs.	Work sheets & Prizes for completion at club tables-Pavillion	At Telescopes	Clear skies only
Dusk-12:00	General Viewing	An opportunity to look through any of the telescopes: We expect to be able to see the Uranus, Neptune, and a great number of other fascinating objects such as galaxies, double stars, nebulas, and star clusters.	All Clubs	At Telescopes	Clear skies only

Everyone from GLAAC hopes to see you next year at AATB on Sept 27&28, 2013.



Dr. Andrew Feustel is a geophysicist employed as a NASA astronaut. He was first selected as a mission specialist in July, 2000. He served on the crew of Space Shuttle STS-125, the final Space Shuttle mission to the Hubble Space Telescope. The mission successfully extended and improved the observatory's capabilities through 2014. In completing his first space mission, Feustel logged

almost 13 days in space and a total of 20 hours and 58 minutes in three EVAs.

In May 2011, he flew on Space Shuttle Endeavour's final mission for STS-134 to the International Space Station. The mission also delivered the Alpha Magnetic Spectrometer (AMS), a state-of-the-art cosmic ray particle physics detector designed to examine fundamental issues about matter and the origin and structure of the universe.

Raised and educated in Lake Orion, Michigan, Andrew received college degrees at Oakland Community College, Perdue University, and his Ph.D. in Geological Sciences, specializing in Seismology, Queen's University, Kingston, Ontario. He married the former Indira Devi Bhatnagar of Ontario. Drew enjoys auto restoration, guitar, water and snow skiing and Kart racing with their two boys. His parents live in Michigan, and Indira's parents reside in Ontario.

Astronomy at the Beach is Financially Underwritten

by: Camera Mart; Co-Op Services Credit Union; The Cranbrook Institute of Science; The Eastern Michigan University Planetarium; Eaton Corporation; The Ford Amateur Astronomy Club; Henry Ford Community College; the Huron-Clinton Kensington Metropark; The Great Red Spot Astronomy Products; The Seven Ponds Astronomy Club; The University of Michigan Dearborn; The University Lowbrow Astronomers; The Warren Astronomical Society; and Wayne State University.

**This program provided by a donation from
Jack and Cecelia Brisbin.**

GLAAC & Kensington Metropark Welcome You to The 16th Annual Astronomy at the Beach



Who We Are: GLAAC (*Great Lakes Association of Astronomy Clubs*) is a loose association of amateur Astronomy Clubs in Southeastern Michigan who band together each year to provide an enjoyable, family oriented activity that focuses on our hobby, Astronomy and Space Sciences. Our primary aim is to have fun by learning about Astronomy and Space Sciences, educating others through talks and star parties, and sharing our resources with others who share our interest, including local schools, scouts, and other organizations. We are made up of:

[The Astronomy Club at Eastern Michigan University](http://emu.collegiatelink.net/organization/astronomy-club-at-eastern-michigan-university)

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[The Ford Amateur Astronomy Club](http://www.fordastronomyclub.com); www.fordastronomyclub.com

[The Oakland Astronomy Club](http://oaklandastronomy.org); oaklandastronomy.org

[The Seven Ponds Astronomy Club](http://bhmich.com/sevenpondsac); bhmich.com/sevenpondsac

[The Sunset Astronomical Society](http://sunsetastronomicalsociety.com); sunsetastronomicalsociety.com

[The University Lowbrow Astronomers](http://umich.edu/~lowbrows); umich.edu/~lowbrows

[The Warren Astronomical Society](http://warrenastro.org); warrenastro.org