The Shoreline Observer

The Shoreline Amateur Astronomical Association Newsletter

Celestial Highlights: July	Upcoming SAAA Events	
July 8th	Club Meeting: TBA	
First quarter		
July 15th	Where, TDA	
Full moon	Observing Session: TBA (see page 6)	
July 23rd	Board Meeting: Wednesday , July 6 6:00 PM	
Last quarter	Herrick District Library	
July 30th	Hemlock Crossing, July 30, Tour the Night Sky	
New moon	Hermoek crossing sury so rout the hight sky	

Inside this Newsletter

Board meeting minutes	2
Hemlock Crossing Outreach	2
Software review	3
Milky Way Twin	3
Beginner' Corner	4
Something from NASA	5
Women In Astronomy	6
Oval Office	6
The picture	→

Eclipsed Moonlight



<u>Fun Facts</u> The Earth gets 100 tons heavier every day due to falling space dust.

Board meeting minutes

SAAA Board Meeting Minutes - June 02, 2011

The June 2011 Board meeting took place on Wednesday, June 2nd at Herrick District Library-South.

In attendance: Russell Hills, Frank Roldan, and George Miller.

Old Business Items

Frank created new name badges to identify members at outreach events. The IRS Form 1023 application for 503(c)(3) non-profit status has been completed. Frank has distributed copies for Board review. Members have pledged \$350.00 towards the \$400.00 application fee.

Outreach Events

Past Events:

May 26th Park Hill Elementary School 4th Grade class (Grand Haven Public Schools). Frank discussed an astronomer's work, and gave a presentation on telescopes, and constellations.

May 26th Park Township Astronomy Program. Russ, Frank, Jim, and Doug Mandrick educated 29 attendees about "Constellations and Their Lore". They also discussed basic telescopes and constructed star clocks and planispheres.

Upcoming Events:

June 10th SAAA General Meeting at 7:00pm at Macatawa Bay Middle School.

June 17th at 9:30pm: "Tour the Night Sky" telescope viewing at Hemlock Crossing County Park TBD: TriPonds Family Campground. Short notice is OK. Power is available in the viewing field.

July 30th at 9:00pm: "Tour the Night Sky" telescope viewing at Hemlock Crossing County Park.

August 20th 10:00am-4:00pm: "Astro Saturday" at Hemlock Crossing County Park. This will include a walk through a scale model of the solar system.

New Business Items

T	reasury	Report:				
A	ccount	balance	as o	f Mav	04.	2011:

Account balance as of May 04, 2011:	\$516.08
Reimbursement to Russ for banner:	<u>-\$40.00</u>
Account balance as of June 01, 2011:	\$476.08

The SAAA Forum has been retired, due to lack of interest and use. Members will begin using "Google Docs" for creating and sharing meeting Minutes, After-Action Reports, etc.

We will try to arrange more Sidewalk Astronomy sessions this summer, perhaps with little advance notice when the weather looks favorable. Outings may be held at Hemlock Crossings County Park, TriPonds Family Campground, or at Curtis Center Park downtown Holland.

We should more actively engage visitors, with the intent of having them attend meetings and enrolling in our Association. None of the 29 attendees of the Park Township event signed up for our mailing list.

We discussed having our annual Christmas party at a different venue, and perhaps hold it in January, after the busy holidays.

George Miller – Secretary June 06, 2011

Hemlock Crossing

We had a very successful outreach at Hemlock Crossing. Thanks to Russell Hills, Frank Roldán, Jim Reier, George Miller, Larry Logsdon, Doug Sutherland, Robin Hudson. Here we are setting up.

We setup in the bus loading zone this worked out very nicelv.



From Chip,

My only suggestion for next time, is that we close off the parking area/ road just before the buss parking area so there isn't anyone parking and driving past the scopes during the program. We could probably just put in a couple fence posts and run some flagging between them.

We had 50 some guests come out despite the bad weather We even had a family show up with their own telescope. Despite the bad weather everyone had a grand time



Page 3

AstroByte Logging System

You can find it here

AstroByte Logging Software is a database system designed to help you keep all of your viewing sessions documented. It also produces report logs, and reports to assist in the field. This software will be distributed as FreeWare.

The AstroByte Logging System is an easy to use database



to keep all your astronomical observations together in one package. It contains over 10,000 of the best pre-selected objects along with a form to enter new selections. It keeps track of objects, which you have observed, along with objects that you still need to observe to fill a catalog.

Contains 6 different Database entry forms: Complete Messier Catalog The SAC 7.2 Deep Sky Database Solar System Logging Form and more! Contains 40 printable reports.



Milky Way's Twin Found --What Do You Think the Chances Are of a Human Level Civilization (or Beyond) Existing There?



"If we had the technology to escape the Milky Way and could look down on it from intergalactic space, this view is close to the one we would see — striking spiral arms wrapping around a dense, elongated nucleus and a dusty disc," according to an ESO statement. "There is even a distorted companion galaxy — NGC 6744A, seen here as a smudge to the lower right of NGC 6744, which is reminiscent of one of the Milky Way's neighboring Magellanic Clouds."

The main difference between NGC 6744 and the Milky Way is the two galaxies' size. While our galaxy is roughly 100,000 light-years across, our "twin" galaxy extends to almost twice that diameter, researchers said.

The brilliant object is one of the largest and nearest spiral galaxies to Earth. It's about as bright as 60 billion suns, and its light spreads across a large area in the sky — about two-thirds the width of the full moon — making the galaxy visible as a hazy glow through a small telescope. The reddish spots along the spiral arms in NGC 6744 represent regions where new stars are being born.

The picture was created by combining four exposures taken through different filters that collected blue, yellow-green and red light and the glow coming from hydrogen gas. These are shown in the new picture as blue, green, orange and red, respectively.

What Do You Think the Chances Are of a Human Level or Beyond Civilization Existing There?

Image Credit: This picture of the nearby spiral galaxy NGC 6744, which could be the Milky Way's twin, was taken at the European Southern Observatory's La Silla Observatory in Chile.

BEGINNER'S CORNER

REFLECTOR TELESCOPE PRIMARY MIRROR CLEANING

By: Larry Logsdon

The questions always comes up, "when should I clean the primary mirror of my telescope". Not very often. If you've kept your mirror covered during storage you may go several years without cleaning. Just because you see a little dust on the mirror doesn't mean cleaning is necessary. When it becomes obvious the mirror is not reflecting properly, then cleaning may be due.

I'll cover the don'ts of mirror cleaning first.

DON'T try to vacuum the mirror surface.

DON'T physically touch the mirror surface with your finger or any object.

DON'T use commercial glass cleaners on the mirror.

DON'T place your mirror in a dish washer!

So you've checked out the DON'TS so now let's talk about cleaning. There are numerous approaches to this process but the general consensus follows.

- 1. I like using a plastic pan instead of the kitchen sink. If you use the sink, place a couple towels on the surface to protect the mirror. This step isn't necessary if using a plastic pan.
- 2. Place 2-4 drops of a mild detergent (Dawn is recommended by some) into a gallon of distilled water. Notice, distilled water not tap water or bottled water.
- 3. Place the mirror in the pan or sink, gently pour your detergent/water solution over the mirror so the liquid completely cover the mirror.
- 4. Let the mirror sit in the solution for 20 minutes.
- 5. Pour or drain the solution off the mirror and inspect the mirror surface to see if it is clean.
- 6. If you still see dirt, soak the mirror surface completely with another gallon of distilled water and detergent solution. Carefully using no pressure very gently drag pure surgical cotton balls across the mirror surface from center out. DO NOT apply pressure or use a circular motion. Use one cotton ball for each wiping.
- 7. Drain water from mirror surface, place mirror on a slant and rise with another gallon of distilled water.
- 8. Keep the mirror in the slanted position so water rolls off and mirror is dry.
- 9. Reinstall mirror in mirror cell. You might want to consider wearing cotton gloves so you avoid any finger prints on the mirror.
- 10. Now that you've completed this task, store your scope with both ends covered to avoid dusts from entering and settling on your clean mirror.

Page 4

Page 5

Mars 'remains in embryonic state'

By Jennifer Carpenter Science reporter, BBC News



Mars collided with relatively few rocky masses, hence its "embryonic" state, says researchers

Mars formed in record time, growing to its present size in a mere three million years, more quickly than scientists previously thought.

Its rapid formation could explain why the Red Planet is about one tenth the mass of Earth.

The study supports a 20-year-old theory that Mars remained small because it avoided collisions with planetary building material. In our early Solar System, well before planets had formed, a frisbee-shaped cloud of gas and dust encircled the Sun.

Scientists believe that the planets grew from material pulled together by electrostatic charges - the same force that's behind the "dust bunnies" under your bed. These proto-planetary dust balls grew and grew until they formed what scientists term "embryo" planets.

These rocky masses were large enough to exert a considerable gravitational force on surrounding material, including other nascent planets.

Nudging each other with their gravitational fields, the embryos were often thrown from their regular orbits, sometimes into the path of another large rocky mass. If collisions occurred, these nascent planets were either expelled from the Solar System or shattered into pieces. These pieces were often combined to form a larger planet. In fact, the Earth's Moon is thought to be the result of an embryo planet colliding with our own planet.

By modelling this process, astro-physicists can determine the size of planets they expect to form at a given distance from the Sun. Mars is an outlier; it should have grown to around the size of the Earth, but remains about one-tenth its size.

Because of Mars' small size, many scientists have long suspected that the Red Planet avoided the collisions that allowed other neighbouring planets to increase their girth.

Red Runt

By studying the chemical composition of meteorites, geochemist Dr Nicholas Dauphas of the University of Chicago in Illinois and Dr Ali Pourmand of the University of Miami in Florida joined forces to try to confirm this.

By measuring the concentration of elements Thorium and Hafnium in 44 space-rocks Dr Pourmand and Dauphas have come up with the most precise estimate of the time it took Mars to form.

Between 2 and 3 million years they suspect; short compared to the Earth, which is thought to have taken tens of millions of years to grow to its current size.

"We were pleasantly surprised because now we have precise evidence in support of the idea... that Mars is a stranded planetary embryo", Dr Pourmand told BBC News.

He thinks that Mars was around more or less in its current size when the Earth was beginning to form.

Given this, Mars could not have experienced the same type of growth as the Earth and Venus, says Dr Pourmand.

It's likely that Mars remains small because it deftly avoided colliding with other planets.

"The fact that Mars appears to have been left unscathed could just be down to luck," says astrophysicist Dr Duncan Forgan of the University of Edinburgh, UK.

He explains that while it is unlikely that a planet could escape collisions for such long periods, statistically one expects it to happen from time to time.

When modelling planetary dynamics, researchers find it easier to predict what happens in general, he says, but it is much more difficult to determine what happens in specific solar systems, or in specific cases like Mars.

http://www.bbc.co.uk/news/science-environment-13567381

June 2011

WOMEN IN ASTRONOMY – IV

By Martha K. Roldán

Agnes Mary Clerke (10 February 1842 -20 January 1907) was the daughter of John Willis Clerke, a judges registrar, and his wife Margaret. Agnes had an interest in Astronomy from an early age, and had begun to write about it before the age of 15. In 1861 her family moved to Dublin and in 1863 to Queenstown. Several years later she went to Italv where she stayed until 1877. At



Florence she studied at the public library and prepared herself for literary work. In 1877 she settled in London.

Her first important article, *Copernicus in Italy*, was published in the *Edinburgh Review* in October 1877. She achieved a worldwide reputation in 1885 with her exhaustive treatise, *A Popular History of Astronomy during the Nineteenth Century*. Clerke was not a practical astronomer, instead collating, interpreting and summarizing the results of astronomical research. In 1888 she spent three months at the Cape Observatory in South Africa as the guest of the director, Sir David Gill and his wife, and there became sufficiently familiar with spectroscopic work to be able to write about this newer branch of the science with increased clearness and confidence.

In 1892 she was awarded the Actonian Prize (given by Royal Institution to the best author of an essay, illustrative of the wisdom and beneficence of the Almighty, in such department as science). As a member of the British Astronomical Association she attended its meetings regularly, as well as those of the Royal Astronomical Society. In 1903, with Lady Huggins, she was elected an honorary member of the Royal Astronomical Society, a rank previously held only by two other women, Caroline Herschel and Mary Somerville.

Agnes had a sister, Ellen Mary Clerke (1840–1906) who also wrote about astronomy.

The lunar crater Clerke is named after her.

Page 5

Oval Office

Greetings everyone!

It seems that every time we schedule an observing session or outreach event the weather is not going to play. What I would like to start are short notice events. By short notice I mean, look at the weather on Wednesday, send out an e-mail and hope the weather will hold. We have several places we can go— Hemlock Crossing, downtown Holland and Tripods.

Last week we were scheduled to go out to <u>TriPonds</u> but once again the weather was not nice. I went down there to talk to Paul, the owner, and to take a look at the place. They have a HUGE open field with power that we can use and a lot of local campers. I think we will have a lot of fun going there.

We are in the final stages of filling out the 1023 (501 c(3)) paper work. Hopefully within a week or 2 we will be submitting the paperwork. Then it will take 3 to 6 months to get an answer..

I sent an e-mail to Chip out at Hemlock Crossing asking if we could hold our meetings there and then go into a club viewing session. The meeting would start at 8:30 and viewing session would end sometime after midnight

Thought for the Day:

" Individual commitment to a group effort - that is what makes a team work, a company work, a society work, a civilization work"

~ Vince Lombardi

We still need volunteers for a few jobs. editor-in-chief for this newsletter. Column Writer write a monthly column. Program Director schedule speakers for the meetings.

Russ