

THE BLUE MOON OBSERVER

OCTOBER, 2017

The October general meeting of DPAS will be held on Tuesday, October 3 at 7 PM at the Ray and Ruthie Astronomy Center. Steve Ransom-Jones will star in the main presentation: “The Crab Nebula Mystery”. Your editor will discuss the Astronomy Basics of the Month.



Door Peninsula Astronomical Society

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Notes from our September 5th General Meeting

The atmosphere was charged with memories of the Eclipse – happy, enthusiastic faces on the 28 people attending. **Gary Henkelmann** called it right: the “overwhelming interest in the eclipse”, citing the crowd of 1,000 people who came to the grounds to see and to learn. He noted the work done by **Dave Lenius**, **Jim Maki**, **Steve Ransom-Jones** and **me**, at a time when Jim had said we’d expected maybe a dozen or two to show up. Gary also mentioned with gratitude the refreshment break prepared by **Val Maki**, laid out by Jim. (Val even gave me the recipe for her delicious English Muffin treats, with the elusive taste of mayo and curry powder (!) lurking under the sliced olives, the shredded cheddar cheese, the chopped onions and the mushrooms. “So easy to make”, she said.) With his three or four pages of notes on things to report, Gary brought up the NCRAL conference on May 4-5, 2018, the Astronomical League being the largest such with 16,500 members over 280 astronomy organizations, of which we are part of the North Central Region, and Jacque Axland is in charge of running the meeting, to be

held at The Leathem-Smith Lodge. We are expecting 60-100 members of the Region to be here. He announced that The Dark Ranger, Kevin Poe, a National Park Ranger at Bryce Canyon, will be here September 16-17, presenting to students at the TJ Walker Middle School, Sevastopol and Southern Door, a public presentation at the Southern Door Community Auditorium and the Boys and Girls Club of Sturgeon Bay before a campfire at the Collins Learning Center before joining us at the Observatory for observation of the sky and an early morning departure after this exhausting trip! **Dave Lenius** spoke about the viewing topics schema he has set up for each month’s observations, beginning with such as the *Blue Snowball* (!) but with globular clusters, nebulae, planets, the moons of Jupiter and other such objects of magnitude 7 and better. It’ll be exciting and targeted viewing! Gary, back on to page 3 or 4, with the note that Voyager on this day, September 5, had been flying for 4 years, 17 hours and 15 minutes – a long way to call home. Our next meeting is set for **October 3**.

Part 2 of our meeting: **Dave Lenius continued on page 3**



Who We Are

DPAS is a local club and chapter of the Astronomical League. We are also a club member of the International Dark-Sky Association and the Night Sky Network, teaching arm of the Astronomical Society of the Pacific. We meet on the first Tuesday of every month, with rare exception. Meetings are held at the Ray & Ruthie Stonecipher Astronomy Center unless otherwise announced. We operate and maintain the Leif Everson Observatory which houses a 14" Celestron Schmidt-Cassegrain telescope on a sophisticated tracking mount controlled by computer, a weather station housed in the observatory with current readings shown on our web site:

www.doorastronomy.org

The StarGarden near the observatory is used for viewing the sky with unaided vision, binoculars and members' telescopes. There are also binocular mounts set in concrete which allow viewers of different heights to view an object through the same binocular.

The Ray & Ruthie Stonecipher Astronomy Center, shown on the right at the top of this page, provides for storage, projects, meetings, warm-up and toilet facilities. It also houses a StarLab, an inflatable planetarium with a sophisticated projection system. The planetarium is available for group presentations.

An Analemmatic Sundial was dedicated on October 20, 2012.

The "astronomy campus" as described here is reached by taking Utah Street east to the stop sign and turning left through the gate onto Stargazer Way. Set your GPS to 2200 Utah.

Thanks, DPAS

I recently retired to Door County and found that there is an astronomy club there - Door Peninsula Astronomical Society (DPAS). I joined it even though I am only an armchair astronomer as I have a hard time staying up late and don't have a telescope. The meetings are informative and it's a great group of people. When they mention they were setting up a trip to the total eclipse August 21 near St. Louis I was all for it. It would give me a chance to take a road trip with my wife and daughter to see a pollibly once in a lifetime event. We haadn't taken a family road trip in 20 years since a "4 corners" southwest trip in an RV; we picked up our daughter who just graduated from grad school at UW Madison and we were off. We stopped at a few sites along he way to St. Louis like Cahokia Indian Mounds in southern Illinois and even stopped at a Cracker Barrel for standard huge "on the road" lunch. The DPAS group met the night before to talk about details and discuss the local Network news that was the buzz - get plenty of gas and food for the upcoming eclipse/apocalypse - it's going to be crazy - the most photographed and witnessed predictable natural event in

history. We got up early on the 21st expecting the worst - I opened the curtains to check the world and - nothing - no major auto traffic, everything looked normal. We checked with another couple who left early to the viewing site and they said the only thing they noticed was a longer line at the McDonalds drive thru. We got our things together and headed out to the viewing site about an hour and a half SW of St. Louis, allowing an extra hour or so because of traffic. But there were no traffic problems a all as we made out=r way to the site - but as we got closer we noticed people selling solar glasses for \$4/pair whereas we got ours free from DPAS and they were asking for %40 to park in an un-shaded asphalt parking lot when it was 96F and humid. We got concerned what we were in for. But the site our DPAS pres. (Gary Henkelmann) set up was ideal - a grassy shaded hill that a resident allows us to use - even opened her house to the group for a bathroom. DPAS members were already there and had their hopes set up in anticipation. Then the moment approached when the moon started to eclipse the sun and there was a lot of "ooohing" and "ahhhhing". But when the moon totally *continued on page 6*



DPAS BOARD

Gary Henkelmann, President
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Thomas Minahan, Vice President,
 Outreach Coordinator, and Board
 Secretary

Susan Basten, Secretary, Treasurer ,
 ALCOR, and Membership Chairperson
treasurer@doorastronomy.org

John J. Beck, Past President and
 Editor
editor@doorastronomy.org

Jim Maki, Academic Coordinator

John W. Beck, Webmaster

Mike Egan, David Lenius, Jacque
 Axland, and Steve Ransom-Jones,
 Members at Large

Ray Stonecipher, in spirit

In addition, Barbara Henkelmann
 serves as the DPAS Archivist.

The business of the DPAS is largely
 conducted at the Board meetings to
 leave the general meetings open for
 programs. The Board meetings are
 scheduled for 7 PM on Monday, 8
 days prior to the following general
 meeting, at the Astronomy Center.
 Members of DPAS are invited to
 attend Board meetings.

Meeting notes from first page

addressing **telescope mounts**. Why
 are they important? Because the
 telescope is only as good as the
 tripod and the mount.

They smooth and control the
 telescope and photography. And they
 can do a great job tracking the
 movement of the earth under our feet
 as we watch. Basically, there are two
 directions it can move: the altitude
 (up and down) and the azimuth
 (horizontal). And several ways of
 accomplishing this: the fork mount,
 the fork mount on an angled block
 (which sets the altitude's attitude, if
 you will, by pre-setting the
 telescope's rotational base to be
 that of the equator – both the
 upright and the angled are shown
 in the *Advocate's* picture of Kevin
 Poe, advertising the September 2
 announcement of Kevin Poe's
 presentation, the Dobsonian, and
 the German Equatorial mount,
 which is the best for stability and
 photography. Scopes with the “go
 to” function programmed in can
 find any celestial object once the
 program is loaded with two or
 three known objects. All shown
 with good pictures and live demos
 from the scopes in the classroom.
 To it all, he added the note of
 realism: that one never really has to
 learn the sky with the automatic
 upgrade.

Gary then told the story of how
 they found their location for
 viewing the eclipse: through the
 Chamber of Commerce and the
 “eclipse ambassador” to the farm
 with the 2nd highest hill in Franklin
 County, the owners were ready for
 them, replete with welcoming
 cheese curds, and they set up shop.

Then showed some pictures, taken by
John W Beck (Dr Beck's son, known
 as “W” or “Young John”), showing
 the eclipse as it formed, right through
 that magical moment of totality! And
 shots taken from his “tame” drone,
 showing the entire crowd! Really
 beautiful! **Holly's** husband showed us
 a streamer taken out in Mitchell,
 Oregon, at Painted Hills State Park,
 by the East Bay Astronomical
 Society, with darkness sweeping
 across the people watching and the
 landscaping, with the moment of
 totality punctuated by cheers and
 people hugging, and a shot of our
 darkened star in its neighborhood of
 other stars, a light in the background
 responding to the dark by turning on,
 then off as the shadow of totality
 passed. Just a couple of minutes of
 absolute beauty.

All this was digested with smiles,
 amplified by the refreshments,
 catered by Jim and made by Val, as
 noted up top. Thanks, Val!

Tom Minahan took the floor to
 present **A Lite Look @ Gravity**, a
 wonderful power-point typology of
 Newton's discovery of the law of
 nature which single-handedly formed
 the basis for understanding not only
 gravitational attraction, but also the
 curvature of space-time, gravitational
 waves, the tides, acceleration and
 other such. He began with
 gravitational mass equaling inertial
 mass and the interrelationships
 involved in the straightforward
 equation: $F = G \times m_1 \times m_2 / r^2$ where
 F is the force between the two
 masses, G is the gravitational
 constant, and r is the distance
 between the two masses.

Tom then explained the question:
continued on page 4



Astronomy Quiz

1. How far away is the large Magellanic Galaxy?
2. Does Jupiter have a magnetic field?
3. Why did William Pickering upset Percival Lowell?
4. Is Stephan's Quintet a musical group?
5. In which constellation is the Vernal Equinox?
6. Which well known star is a Yellow Dwarf?
7. In which constellation is the Butterfly Cluster?
8. Which terrestrial planet has two captured asteroid as moons?
9. Where is Utopia Planitia?
10. A meteorite made of pyroxene comes from where?

Contributed by the late Ray Stonecipher in July, 2012.

Meeting notes from page 3

why the square? He did so with an array, first of 2 r, which (I cannot say it nor can I duplicate it!) which is a square of four quadrants, two across and two down, then 3 r, a square of nine sections, 3 across and 3 down. That pattern of squares follows throughout: 5 r would be 5 across and 5 down, or 25. OK. There was a nexus which I missed, but he noted how mass influences how hard it is to get something moving: pushing a car is more difficult than pushing something across a table. So he drew an equivalence of measuring mass: pushing it ... or weighing it. The first is inertial mass, the second is gravitational mass. Or, in words, free fall and gravitational force are indistinguishable, so that acceleration and gravity are equal. Einstein's "*Gedankenexperiment*" – thought experiment – conjured up 2-D Flatlanders – not Illinoisans, but people, themselves flat, living on a flat world. Again, another connection that came and went, we are people living in a 3-D world and with another dimension, that of time. Einstein's thought experiment took him to imagine gravity-as-space as a rubber sheet, where matter (mass) tells you how to curve and curved space tells you how to move. Here is where power point wins: picture an elevator in motion and light coming in a hole on one side and exiting across the elevator. To an outside observer, the light would appear to bend as it transverse the elevator. Remember, acceleration equals gravity. Tom briefly addressed the search for gravitational waves: both longitudinal and transverse, and the luck and difficulty of finding them. He had pointed playfully toward his head several times as he respectfully said: *Einstein* or *Newton*. And he was so

right in doing so: it is easier to accept what they have said and thought than to rethink it!

Mike Egan

Welcome New Members

Three memberships have been recently added:

Michael and Linda Wember
David and Janet Daniel
Kay Nelson

Welcome to DPAS!

The Board also welcomes Katie Rock as a NCRAL committee member.

Viewing Nights

Viewing nights remaining in 2017 are:

October 21
November 18
December 16

Astronomy Day

Our Astronomy Day celebration will take place on October 14 from 1 PM to 4 PM. Activities will include demonstrations of comets and craters. If clouds cooperate, solar viewing will be provided. All activities will be at the astronomy campus.

NCRAL 2018

Jacque Axland, chairperson of the NCRAL 2018 committee to be hosted by DPAS, has led the preparation with a very good jump start. The speakers, meals, agenda and support services are arranged and soon the budget will be finalized so that the registration form can be published by the first of the year.



Poetry Corner

Poetry Corner

The night is dark; the sky is bright with stars
Some scattered, others fill the Milky Way
Lo Jupiter! Fair Saturn! Ruddy Mars!

Faint galaxies with spirals, bulges, bars
Cavort with nebulae as clusters play
The night is dark; the sky is bright with stars

Our Sun is hidden, yielding to the stars
Though Moon and Venus peek through blue by
day
Lo Jupiter! Fair Saturn! Ruddy Mars!

Away from streetlights, lights from yards and
cars
And darkness vanquishes the blue and gray
The night is dark; the sky is bright with stars

Like lightning bugs that children hold in jars
Reflecting satellites may join the fray
Lo Jupiter! Fair Saturn! Ruddy Mars!

To common folk as well as kings and tsars
For cleaner and for darker skies we pray
The night is dark; the sky is bright with stars
Lo Jupiter! Fair Saturn! Ruddy Mars!

A villanelle by John J. Beck

Previously published in the April, 2014 Blue
Moon Observer



DPAS and Friends at the Total Solar Eclipse 2017 Viewing Site
Drone photo by John W. Beck

The Dark Ranger Was Back

Kevin Poe, who presents under the title “The Dark Ranger”, was again sponsored in part by Door County Environmental Society and largely by DPAS for his return to Door County. In a whirlwind two days he visited three schools (Sturgeon Bay Middle School, Sevastopol and Southern Door) and again was well received by students and faculty. He gave a public presentation at the Southern Door Community Auditorium which, unfortunately was poorly attended. He met with a community official for consultation on street lighting and other light control measures in her village. Then he gave a presentation to the Boys & Girls Club of Door County at the Collins Learning Center. The program was open to the public. This was followed by a campfire

at the Crossroads and viewing at the StarGarden.

Kevin touched on many aspects of light pollution including lighting for safety, wasted energy from misdirected and excessive light, light trespass and how to avoid it, the effects of excessive and misdirected light on nature and even on human health, and the effects of light of different “color temperature” or wavelength. He even suggested ways in which children could make a positive impact by building light shields and making them available to individuals and businesses who use unshielded lights.

DPAS will continue work toward preserving our dark skies through providing information to the public and to decision-makers.



Astronomy Quiz Answers

1. 170,000 light years
2. Yes. A very powerful one.
3. His photographs of Mars showed no canals.
4. No. It's a disturbed cluster of five galaxies.
5. It's in Pisces.
6. The Sun.
7. It's in Scorpius.
8. Mars
9. It's a huge plain on the planet Mars.
10. Believed to come from Vesta.

Contributed by the late Ray Stonecipher in July, 2012.

Thanks continued from p 2

eclipsed the sun it was magnificent - the light changed quite quickly to something never before seen by me - otherworldly yellow/gray, bugs started making noise, and it was like a sundown all around the horizon from the hill we were on. We all were looking at the sun now without any equipment and looking at each other knowing that h]this was truly an amazing moment. I thought the Corona (Latin for "crown") was the most amazing thing - the aura of plasma that surrounds suns, millions of degrees F, hotter than the surface, and travels millions of kilometers into space. WOW - it was he fastest 2 1/2 minutes of my life. Then the diamond ring and the continuing comment of the moon across the sun. Then we all packed up the the trip back - and then we found the traffic problems as we got closer to any major highway ind St. Louis.

It was definitely worth the 10 Thur trip to the site - Thank You Gary Henkelmann and the DPAS folks for setting up the experience.

Dan & Marjorie Andrae



This young lady, Alexia Kramer, took eclipse images with her smartphone through the editor's Renaissance. She even captured a sunspot.