

# Astro Flyer



NOVEMBER 2018

Club News

Hello All,

The meeting of the Shoalhaven Astronomers on November 16th will be the last formal meeting for the year. The Christmas Party dinner will be held at the Bomaderry Bowling Club on December 8th at 6 PM. There will be a trivia event and a silent auction. Please see Tracey or Frank at the November meeting to tell what you might bring for the Auction at the Christmas dinner.

The Ephemeris, **Astronomy 2019**, will be available at November meeting for a cost of \$24, a saving of \$6 over the cost at Newsagents.

No regular meeting at the Uni. in December. Regular meetings resume at the Uni. in January, 2019.

Frank Gross, president.

**Consternation among a few members at the appropriateness of the public lecture on the Electric Universe. Special Committee meeting see over page...**

**Next monthly meeting will be held at the Shoalhaven Campus of the Uni of W'Gong, George Evans Road off Yawal Road, West Nowra, November 16th, 7pm for 7.30 start.**

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## MOON PHASES



**New Moon 7 Dec    First Quarter 16 Nov    Full Moon 23 Nov    Last Quarter 30 Nov**

## Viewing Nights

Club viewing nights are selected to provide viewers with the best possible conditions for good viewing. They are held on specific Saturdays at different locations around Nowra.

The next club viewing night will be on **Sun 9 Dec** at Wuncor Road, Falls Creek at dusk, weather permitting.

More viewing nights Page 8

## **Consternation among a few members at the appropriateness of the public lecture on the Electric Universe!!**

There was some consternation among a few members at the appropriateness of the public lecture given at the Uni in October. Some said it should have been at a regular monthly meeting and not a public lecture, others just didn't like it. I personally enjoyed the lecture as an alternative view on the scheme of things in the universe. I still don't believe in the EU theory as there are too many hard facts which support mainstream astronomy as it is. I believe our club should not cause bickering and angst among our members. Because of this the Shoalhaven Astronomers committee had an extraordinary meeting and set up guidelines to vet future lectures for the club:

### **The main issues raised by members seem to be:**

- Members would have been more comfortable if the presentation was given at our normal meeting,
- Members were uncomfortable that such a controversial presentation was open to the public,
- There may be a perception in the community that Shoalhaven Astronomers was promoting and supporting the contents of the lecture,
- At least 2 members of the public left with derogatory comments about the presentation,
- We need to remain our credibility in the eyes of the Community,
- We need to ensure we keep the University on-side, which is an institution based on teaching evidence based material,

Concern that at least 2 high school student were lectured on topic that may contradict what they are being taught for their exams.

Having heard the above concerns, the committee members personally feel uncomfortable that we were a party to openly promoting to the public views which our members may not have all agreed with.

We believe the best way forward is for the Committee to consider adopting a standard/protocol/procedure for the approval of speakers at our Public Meetings, and this may take the form of:

1. **The speaker must be approved by the Committee,**
2. **The speaker must submit a resume**
3. **The speaker must have qualifications and/or experience in the topic**
4. **The Shoalhaven Astronomical Inc must qualify whether it endorses the presentation, or includes a firm disclaimer on all advertising material, and at the event.**

**Frank Gross, President**

I found this article on the Electric Universe on the internet. Ed Kaye

[https://rationalwiki.org/wiki/Electric\\_Universe](https://rationalwiki.org/wiki/Electric_Universe)

**OUT THERE**  
**Bob Turnbull OBSERVATION OFFICER**

**NOVEMBER - DECEMBER**

Unfortunately we've had a long cloudy nights period and almost all of the features in the last months OUT THERE were un viewable. Hopefully we should see a few breaks in the night sky which will give us a better viewing season.

**PLANETS**

**MERCURY**

Returns to the dawn sky in December and reaches its greatest elongation west of the Sun on December the 15<sup>th</sup>. As the month progresses JUPITER rises to meet MERCURY on the 22<sup>nd</sup> at 0.8 degrees apart.

**VENUS**

Is in Virgo in the dawn sky for half of December in Virgo, then moves to Libra. There is a good view on the fourth of December, when the waning Moon will be 4 degrees from Venus.

**MARS**

Spends two thirds of December in Aquarius, then moves into Pisces. At months end it will be close to the Circlet of Pisces.

**JUPITER**

Returns to the morning Eastern sky in December, moving into Scorpius, then into Ophiuchus, midmonth.

**SATURN**

Is low in the early morning western twilight, before it becomes too close to the Sun for safe observation.

**URANUS**

Leaves Aries, returning to Pisces, early in December, transiting the meridian in midmonth.

**COMET 46P/Wirtanen**

May brighten 5<sup>th</sup> to 4<sup>th</sup> magnitude this month as it nears the Earth. It begins December in Cetus, being visible all night, then moves rapidly through Eridanus, Cetus, Taurus, Perseus and Auriga, finishing in Lynx by end of month. On the evening of the 16<sup>th</sup>, while In Taurus, Wirtanen passes between the Hyades and Pleiades star clusters. At end of month it will be seen low in the northern sky, in the late evening and gone early morning.

HAPPY FESTIVE SEASON TO ALL OF YOU AND HOPING TO SEE YOU AT OUR CLUB CHRISTMAS PARTY!

BOB TURNBULL  
OBSERVATION OFFICER

### The Visual Astronomer

Part 1.

*Eugene O'Connor*

In this new series I will try to share the joys and frustrations of viewing the night sky all the year round. Some viewing will be at the eyepiece of a telescope, some with binoculars and many sessions will just involve the human eye.

It is my belief, having spent many years outdoors on clear nights studying the wonders of the night sky, that with experience many delicate details of objects in the cosmos can often be revealed in amateur scopes which even the best telescopes in the world or in space can wipe out through overexposure. For this reason, I find that the drawings made visually at his scope by club member Harry Roberts can reveal detail I cannot find in the best pictures. I offer the following as an introduction to *The Visual Astronomer*.



**Comet McNaught convinces me.** (January 21<sup>st</sup>, 2007.)

I have been a serious comet sceptic until now. A half hour of mesmerizing viewing this evening changed all that. I was, unfortunately, weaned on some great comets in the past, including my very first comet, Arend-Roland, in Ireland around 1957, where I observed it's bright tail several evenings in a row naked eye; subsequently I spotted Ikeya Seki as a huge band of brightness pre-dawn in African skies in 1965. Later comets from Australian skies, such as Hyakuutaki, (spotted as a delicate sword of silver in predawn skies, Hale-Bopp, a blazing ball of light very low in my evening N.E. skies as it was wowing northern viewers and the over-hyped Halley, a fuzzball comet looking poorly alongside Omega Centauri did not quite live up to earlier comets. However, my fourth sighting of McNaught on January 21<sup>st</sup> 2007 finally rang bells and took me back to pictures I saw as a boy of some great comets at the turn of previous century such as Donati with its massive scimitar of light over the Paris skies.

Using 25X100 binox tonight and as darkness came over our first clear horizon for weeks, I found comet McNaught an easy object, appearing after Venus emerged. It was then naked eye and the tail seemed two or three degrees and curved to the south. Ten minutes later, by 9 p.m. local time or  $\frac{3}{4}$  of an hour after sunset the tail had extended way beyond my large binoculars. My 8X35 gave the best view, as the glowing nucleus grew pink in the gloaming and the tail splayed upward in a massive diverging curve. Finally, all optical devices were put aside as eyes alone could capture the full extent of a huge tail that easily curved through 30° of sky. This view equalled any photo I have yet seen of this comet, with the exception of the discoverer's own images taken from the clear skies of Siding Springs on the evening of January 19<sup>th</sup> (available to view meeting night). I thought of many things in these closing moments as I gazed in awe at my best comet ever: how unexpected and unpredictable comets are; how our ancestors must have been both amazed and fearful about their sudden appearance from nowhere and how often the most amazing sights in the sky do not require the addition of modern equipment or optical aid.

May we all live to see and be surprised with many more great comets before we die.

## Sky Objects By Eugene O'Connor

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*( I penned the above article in January 2007 which some comet catchers might find of interest . This coming meeting will feature presentations and discussion on comets)*

## Astro Events from Frank Gross

### The Mysterious Star That Appears To Be Older Than The Universe

The oldest known star seems to be older than the universe itself, but a fresh study is facilitating to clear up this apparent enigma.



Earlier study had projected that the Milky Way galaxy's so-called "Methuselah star" is up to 16 billion years old. That's a problem, as most scientists agree that the Big Bang that made the universe happened about 13.8 billion years ago. Now a team of astrophysicists has derived a new, less ridiculous age for the Methuselah star, combining information about its distance, brightness, composition and structure.

"Put all of those constituents together, and you get an age of 14.5 billion years, with a remaining doubt that makes the star's age compatible with the age of the cosmos," study chief author Howard Bond, of Pennsylvania State University and the Space Telescope Science Institute in Baltimore, said in an announcement.

The uncertainty Bond refers to is plus or minus 800 million years, which means the star could truly be 13.7 billion years old — younger than the cosmos as it's presently understood, though just barely.

A mysterious, fast-moving star:

Bond and his team utilized NASA's Hubble Space Telescope to study the Methuselah star, which is more officially known as HD 140283. Researchers have known about HD 140283 for more than 100 years, as it journeys across the sky at a comparatively rapid clip. The star moves at around 800,000 mph (1.3 million km/h) and covers the width of the full moon in the sky every 1,500 years or so, scientists said.

The star is just passing through the Earth's neck of the galactic woods and will ultimately rocket back out to the Milky Way's halo, a populace of earliest stars that surrounds the galaxy's acquainted spiral disk. The Methuselah star, which is just now swelling into a red giant, was perhaps born in a dwarf galaxy that the nascent Milky Way gobbled up more than 12 billion years ago, scientists said. The star's long, looping orbit is possibly a residue of that intense act of cannibalism.

## Astro Events from Frank Gross

Cont...2

Distance makes the difference:

Hubble's calculations permitted the astrophysicists to polish the distance to HD 140283 using the principle of parallax, in which a change in an observers' location — in this case, Hubble's variable position in Earth orbit — translates into a shift in the deceptive position of an object.

They discovered that Methuselah lies 190.1 light-years away. With the star's distance known more accurately, the team was capable of working out Methuselah's intrinsic brightness, a need for calculating its age.

The researchers also applied present theory to learn more about the Methuselah star's burn rate, composition and internal structure, which also shed light on its possible age. For an instant, HD 140283 has a comparatively high oxygen-to-iron ratio, which takes the star's age down from some of the former estimates, scientists said.

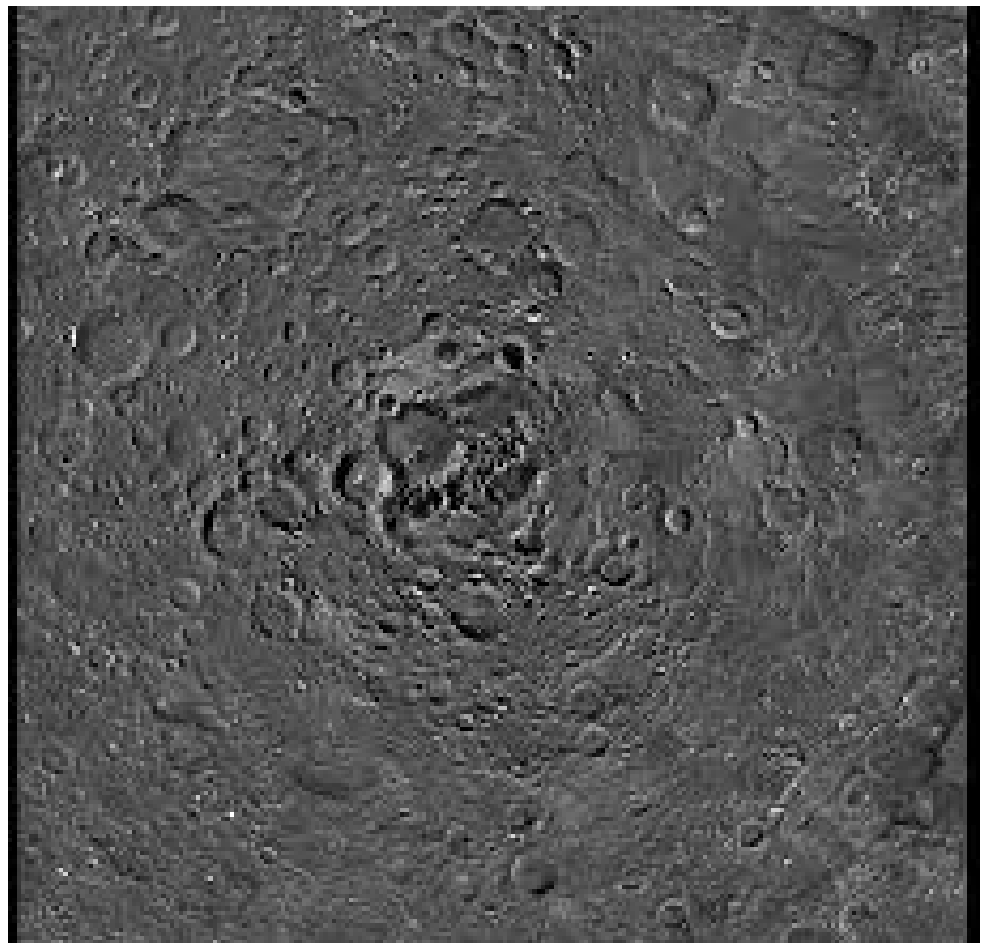
In the end, the astrophysicists estimated that HD 140283 was born 14.5 billion years ago, plus or minus 800 million years. Additional studies could help bring the Methuselah star's age down even more, making it clearly younger than the universe, scientists said.

### Something Really Strange Is Going On At The Moon's North Pole

Unusual angle of the Moon showing its north pole region. Image Credit: ESA/SpaceX

Something weird is happening on moon's surface with shadows and it's not just the shadows themselves, though, it's where they are—since there shouldn't be any shadows at all at that particular place. The ESA took pictures of the Moon's North Pole from every imaginable angle over two years, assembling over 32,000 different shots.

The goal was to catch the pole spun in the direction of the sunlight from every path and ultimately be able to make a variety of the images that show every feature of the pole completely lit up. Yet, when scientists stitched it together, they found some parts stayed in a persistent shadow no matter what the direction of the light.



As these constant shadows never faded, in spite of every probable different lighting combination, scientists think that they might be the site of some extremely deep holes on the Moon that have never grasped any light at all. And that may make these shadows also a good bet for discovering lunar water in the form of ice.

## More Club News continued from page 1

Club/Social Viewing Nights are on Saturday evenings "just" Before Sunset. Viewing nights are for members and invited guests. The contingency plan for poor weather on the proposed viewing night is to meet the next night (a Sunday night) but consult Jack first on Landline: 44232255, Mobile:0407 018 982

**Woncur Road**, South Nowra (Head South down The Princes Highway, turn right at BTU Road, Woncur Road is the street first on the left).

**University Viewing site.** On the way to the university on George Evans Road go straight ahead through the second turning circle to the new viewing site.

### Dates for Club/Social Viewing Nights for 2018 On Saturday Nights As Follows:

Dec-9

## More Monthly Meeting Information

**The AGM was held at the July 2018 monthly meeting. Elected officials for 2018 - 2019**

President: Frank Gross  
Vice President: John Gould  
Secretary/Treasurer: Tracey Newcombe  
Public Officer; Frank Gross  
Observation Officer: Robert Turnbull  
Editor: Kaye Johnston  
Librarian: Chris O'Hanlon

The Committee: Robert Turnbull, Rudolf Henssen, Robert Spruyt, Jack Apfelbaum, Chris O'Hanlon, John Gould

Check out the Astro Flyer on the web site: [www.shoalhavenastronomers.asn.au](http://www.shoalhavenastronomers.asn.au)

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The deadline for Articles for the Astro Flyer is The First Friday of the Month.

Editor Kaye Johnston

## Club Video Projector Rental

The Video Projector is available for club members for a small rental fee. If a club member would like to project a football game, cricket game onto a wall for a party this is the way to go. You will get up to a 100 inch diagonal picture on a light coloured wall with the Epson video projector. The projector has an inbuilt speaker but you can add your own speaker units if necessary. The unit s very easy to use and instruction would be given before the borrowing (2 days) occurs. The rental price is set at present at \$15 for two days.