

Society News

Sorry for the Delay!

We seem to have a never ending tourist season this year, and a few additions to my job description means I have been extremely busy for the past few weeks. I'm afraid this edition of NZ took rather a back seat, sorry.

Subscription Time...

All VAS subscriptions are due on October 1st

Please read the note on page 9

Busy Period Approaching

It seems all the Scouts, Guides, Beavers and Brownies all want to get their stargazing badges at this time of year. Please check the dates (page 2) when the observatory is booked for these events and please, if possible, do your best to avoid clashes.

October Monthly Meeting

Instead of our usual October meeting, this year on Friday 27th October we will hold a public open evening in conjunction with AONB and CPRE.

As usual, we need members to help with the event and would very much like to have as many telescopes as possible being used. In addition, help providing refreshments etc would be great.

Remember, it's not unusual for us to see almost 100 visitors to events like this!

Please contact any committee member if you can help.

*Brian Curd
Editor New Zenith.*

VAS Website: wightastronomy.org

Submissions or letters to New Zenith are always welcome and should be sent to:

**The Editor, New Zenith
Carpenter's Cottage
Dennett Road
Bembridge
Isle of Wight PO35 5XF**

Tel: **01983 872875** or email: editor@wightastronomy.org

Material for the next issue by the 6th of the month please.

The Vectis Astronomical Society and the Editor of the New Zenith accept no responsibility for advice, information or opinion expressed by contributors.

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Observatory Diary

Monday, 19.30hrs	Members Only and by arrangement Telescope and night sky training. Please contact Martyn Weaver 07855 116490
Thursday	Members (19.30hrs) and Public (20.00hrs). Informal meeting and observing

VAS Website: wightastronomy.org

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PLEASE NOTE:
All monthly meetings are now held at the Newchurch Pavilion next to the Observatory

2017 Monthly Meetings

Date	Subject	Speaker
Please check wightastronomy.org/meetings/ for the latest information		
27 Oct	VAS - AONB -CPRE Public Open Evening	
24 Nov	TBA	TBA

Observatory Visits Booked

17.30 Mon 2nd Oct	Wootton Brownies
17.30 Mon 16th Oct	Newchurch Beavers
19.00 Wed 22nd Nov	Newport Scouts
Please phone me for the current situation (number on the front page)	
It would be appreciated if members could avoid using the observatory at these times.	

VAS subscriptions are due on October 1st

Please read the note on page 9

VAS Contacts 2016/17

President	Barry Bates president@wightastronomy.org
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NZ Distribution	Graham Osborne
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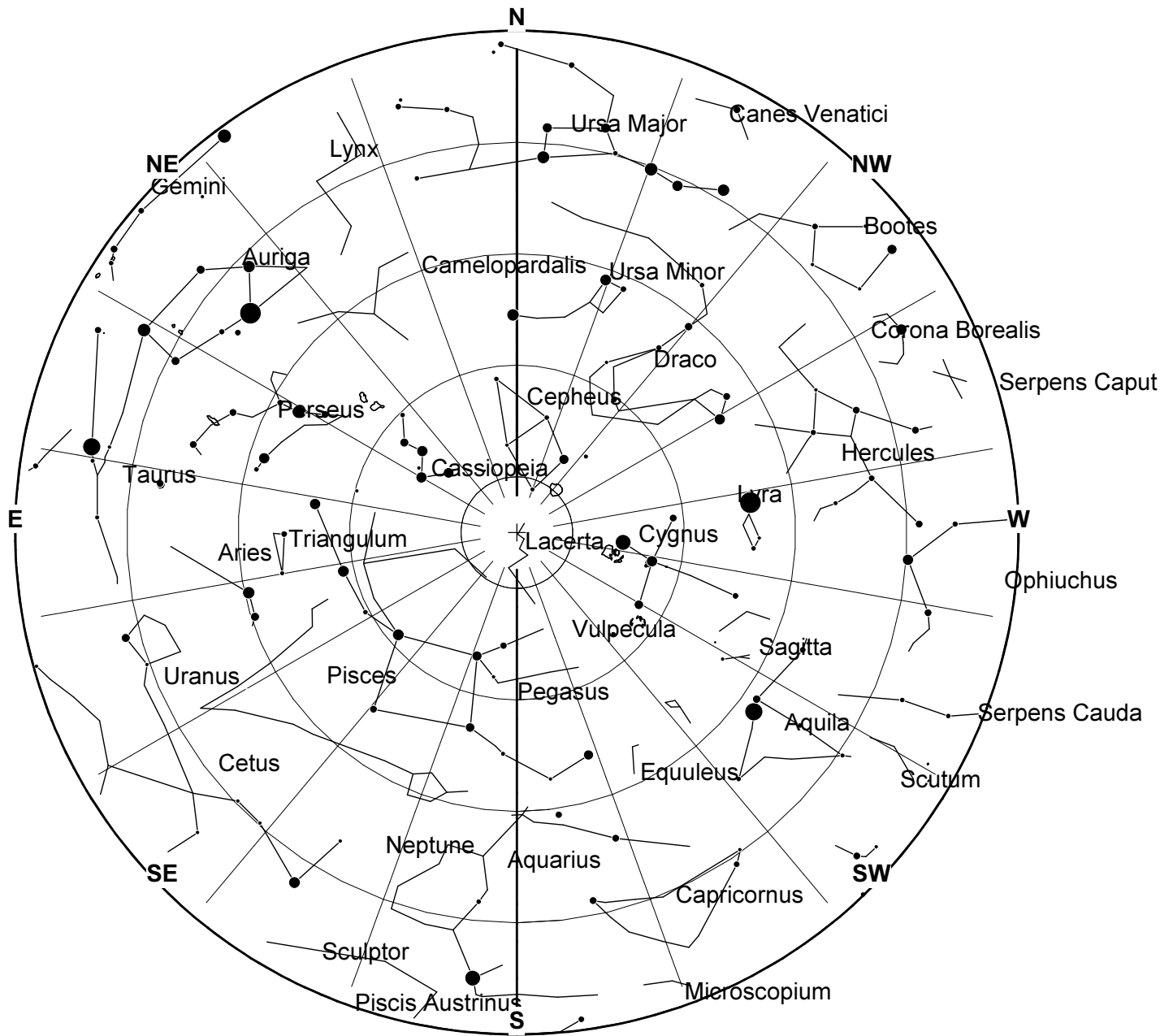
Important

Members using the observatory **MUST** enter a line or two in the Observatory Log Book.

On several occasions, lights, heaters and the Meade LX200 have been left on!

When leaving, please ensure all is secure and all lights, heaters and telescopes are **TURNED OFF**.

October 2017 Sky Map



View from Newchurch Isle of Wight UK - 2200hrs - 15 October 2017







Cassiopeia is a constellation in the northern sky, named after the vain queen Cassiopeia in Greek mythology, who boasted about her unrivalled beauty. Cassiopeia was one of the 48 constellations listed by the 2nd-century Greek astronomer Ptolemy, and it remains one of the 88 modern constellations today. It is easily recognizable due to its distinctive 'W' shape, formed by five bright stars. It is opposite the Plough. In the UK it is visible all year-round.

At magnitude 2.2, Alpha Cassiopeiae, or Schedar, is generally the brightest star in Cassiopeia, though is often shaded by Gamma Cassiopeiae, which has brightened to magnitude 1.6 on occasion. The constellation hosts some of the most luminous stars known. The semiregular variable PZ Cassiopeiae is one of the largest known stars. Cassiopeia A is a supernova remnant and the brightest extrasolar radio source in the sky at frequencies above 1 GHz. A rich section of the Milky Way runs through Cassiopeia, with young luminous galactic disc stars, and nebulae. IC 10 is an irregular galaxy that is the closest known starburst galaxy and the only one in the Local Group of galaxies.

*This article is licensed under the [GNU Free Documentation License](https://www.gnu.org/licenses/fdl.html).
It uses material from the Wikipedia article "Cassiopeia".*

October 2017 Night Sky

Moon Phases

New	First Qtr	Full	Last Qtr
			
19th	27th	5th	12th

Planets

Mercury - At mid month Mercury starts a very poor evening apparition. On the 18th it is in close conjunction with Jupiter, but with only 6 degrees separation from the Sun it will not be possible to observe this event from our latitude. During this apparition Mercury will be at best about 5 degrees above the horizon at sunset.

Venus - Venus is rapidly sinking towards the horizon as it heads towards conjunction with the Sun early next year. Look for it low in the east just before sunrise; it is bright enough that if it is very clear it can still be seen even after the Sun is above the horizon.

Mars - Mars rises about an hour before the Sun. Look low down in the east to spot the red planet. On the 6th Mars and Venus are in close conjunction.

Jupiter - It is not possible to observe Jupiter this month, during the last week of the month it will be in very close conjunction with the Sun, with a separation of only 22 arcseconds.

Saturn - Those who have a good western horizon will be able to spot Saturn as it sinks towards the south western horizon after sunset. It is too low down now for any serious observation.

Uranus - About 3 times the diameter of the full moon above and to the right of the fourth magnitude star Omicron Piscium is the planet Uranus. At just over a magnitude fainter, Uranus is brighter than any closer star. Being the brightest of the outer planets is easy to find when you know where to look. Use the finder chart in August New Zenith as a guide.

Neptune - Neptune is to be found about 1/2 degree, the diameter of the full moon, to the south and east of the star Lambda Aquarii. At mid evening, it is well placed in the south. It is visible with a pair of 10x50 binoculars, but there are no nearby bright guide stars.

Deep Sky



NGC7662 Planetary Nebula
RA 23h 26m Dec 42° 32'
mag 8.3

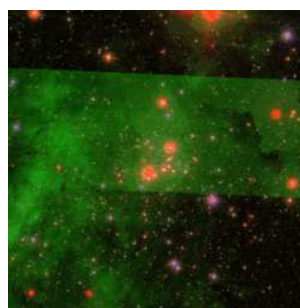
A small but relatively bright planetary nebula sometimes referred to as the blue snowball. The planetary is only about a quarter the size of the famous Ring Nebula, but being bright takes magnification well. A large telescope is needed to reveal a central void and the 13th magnitude white dwarf that powers the surrounding nebula.



NGC6946 Galaxy
RA 20h 35m Dec 60° 11'
mag 9.7

Located just off the plane of the Milky Way, the intervening material in our own galaxy helps makes this face on spiral galaxy a rather challenging object.

At a distance of about 10M light years it is relatively close by galactic standards, but this does not make it any easier to see. Use as large an instrument as you can on this galaxy to reveal the structure in the spiral arms. This galaxy has hosted 8 supernovae in the past 90 years, something of a record. After observing this galaxy or if the sky or your eyes fail you, stop by at the nearby open cluster NGC6939. At low power both object will be in the same field of view.



NGC6910 Open Cluster
RA 20h 23m Dec 40° 48'
mag 7.4

NGC6910 is a small cluster located about 1/2 degree north of Sadr the central star of Cygnus. The brighter members make a cluster of three short spokes.

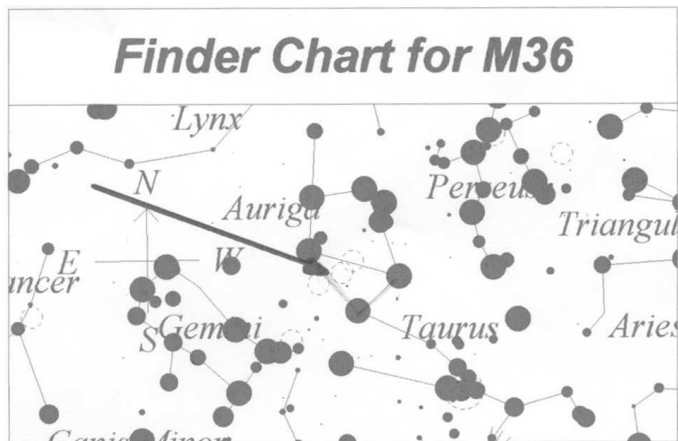
Peter Burgess

My 100 Best Night Sky Sights

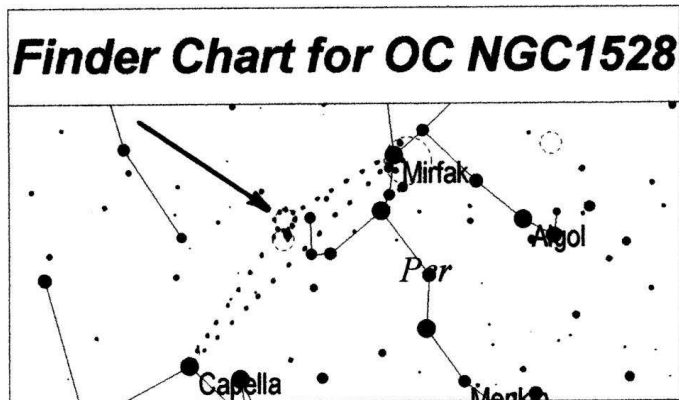
Of all the objects contained in the Messier catalogue, three-quarters are represented by Spiral Galaxies, Globular and Galactic Clusters in almost equal proportions. However, with the modest apertures available to the majority of amateur astronomers the last named are by far the easiest to observe, and many find them to be the most beautiful sights in the sky. It's for these reasons that a preponderance of open clusters is found in my list (25 to be exact) but only 14 are Messier clusters. The remaining 11 weren't recorded by him but in my opinion are superior to 13 of those that he did

Galactic Clusters

M36 is one of four fine open clusters in Auriga, three of which were listed by Messier and one inexplicably omitted as it's no less 'comet-like' than the others, but more on this later. M36 lies inside the irregular polygon which is the most easily recognised part of the constellation, with the bright yellow star Capella at its apex. At mag 6 it's quite easy to see in binoculars although due to its small size, about 40% x the Moon, it will only seem like a small, hazy patch of light. Train any telescope upon it however, and it's transformed into an impressive array of between 20 and 50 stars depending on the aperture employed, a dozen or so significantly brighter than the rest. If you carefully scan the lower half of the polygon through binoculars you'll notice two fuzzy patches - M36 is the smaller of the two a little SE of the other - M38. This is primarily a winter constellation.



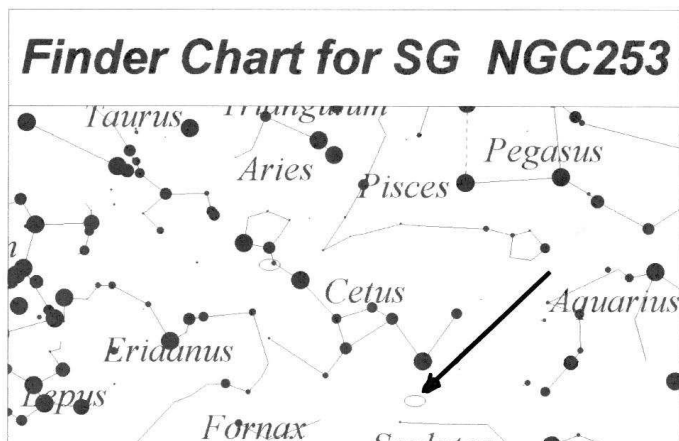
High in early and mid-winter skies is Perseus on whose right shoulder (top left of the constellation as we look at it) is a group of three open clusters one of which, NGC1528, is a beauty. The smallest telescope should show a dozen or so of the brightest stars together with a few faint ones, arranged in two groups E and W and on a good night 7 or 10 x 50 binoculars will pick out three or four of the stars against a fuzzy background. Through my 10" the population rises to around 40 in an area rather less than the



full moon with two distinct groups of the fainter stars arranged in parallel curves flanked by the brighter cluster members. This is one of those clusters where the juxtaposition of stars and voids can conjure up graphical images to those prepared to give free reign to their imagination.

Locate NGC1528 at the apex of a shallow triangle, the base line of which is formed by the bright Capella in Auriga and Alpha Persei (Mirfak).

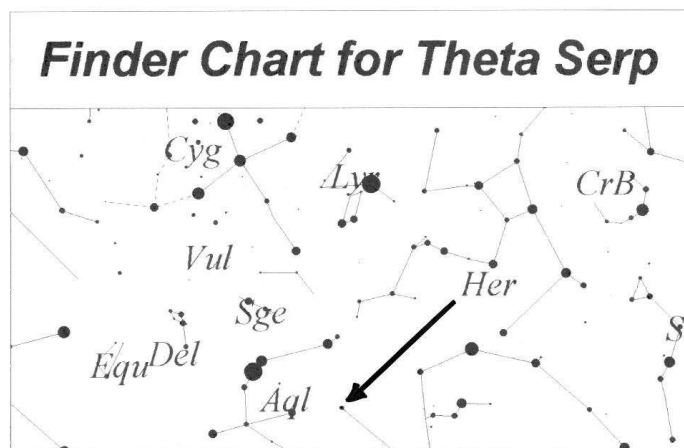
Spiral Galaxy



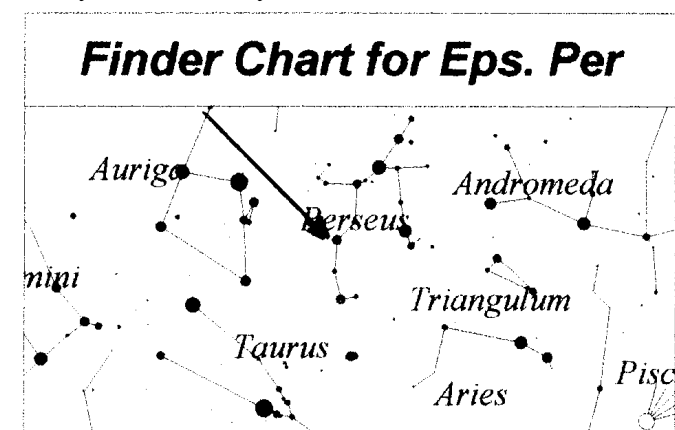
NGC253 Sculptor. Remembering that many Messier galaxies are difficult to observe from our location, this non-Messier spiral comes as something of a surprise. For a start it's fairly low in the sky, just 25° above our southern horizon at its culmination in October, which means we look at it through a lot of atmosphere - a great hindrance to galaxy observing. Also it's quite extensive which again works against ones ability to see an object clearly. Fortunately NGC253 has a relatively high surface brightness which compensates somewhat for these disadvantages. True it's still faint, but with few exceptions all galaxies are and it's surprisingly well seen for such an extended object at this altitude, although it probably needs a 6" telescope to see without using averted vision. Through my SCT it displays the unmistakable shape of a spiral galaxy seen almost edge-on and completely fills the field

of view of a 13.8mm wide angle eyepiece - another indication of its relative brightness as this eyepiece gives a magnification of x180 at f10, much higher than is usually employed for faint, extended objects. NGC253 is close to the South Galactic Pole, remote from any bright stars so use a star map and the finder chart to locate it.

Double Stars



Theta Serpentis. If you're out enjoying the late night summer skies it's worth seeking out this fine pair. Due south of Lyra and one and a half widths of your fist WSW of the bright star Altair (the southerly star of the 'Summer Triangle'). Alya is situated at the north eastern tip of Serpens Cauda and consists of near identical twin stars, both pure white and positioned on a horizontal plane. Less than half a magnitude different from each other in brightness (mags 4.6 and 5.0), they appear the same and are nicely separated by 22 arc seconds, which means that any telescope will split them easily. Use any magnification you like to find which view is most pleasing - generally I prefer to use the lowest power that will separate them cleanly with black sky in between.



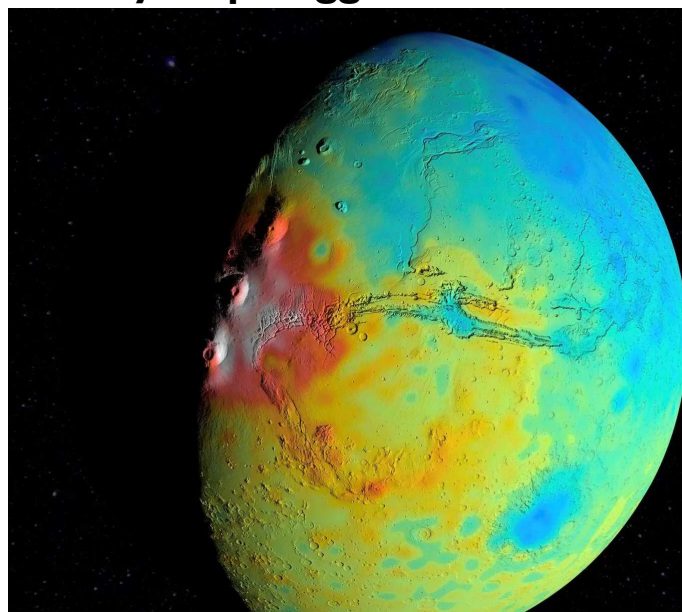
Epsilon Persei. A complete opposite of Alya is this excellent example of great contrast in brightness in a close, but unrelated pair of stars. The brighter of the two is a mag 2.9 beacon of white light whilst the other, less than 9 arc seconds away, is a dim blue mag 8.1. This combination of

magnitude difference and close proximity makes the pair difficult for small instruments - the dim star is subsumed in the glow of the other - but a 6" telescope at high power on a night of steady seeing should have no trouble. With my 10" the two are well separated at x100 although the light from the bright member spreads across the intervening sky. At x180 there is clear, dark sky between them and the contrast in brightness is spectacular, well worth a little of your time on any night from November to February. Epsilon Persei is two fists SW of bright yellow Alpha Aurigae (Capella again).

Bert Paice

Originally published in NZ - May 1998

Mars May Have a Porous Crust, Gravity Map Suggests



This view of Mars shows Valles Marineris, with Tharsis Montes to the west. The map shows the thickness of Mars' crust, based on modeling of the Red Planet's gravity field by scientists at NASA's Goddard Space Flight Center.

Credit: NASA/Goddard/UMBC/MIT/E. Mazarico

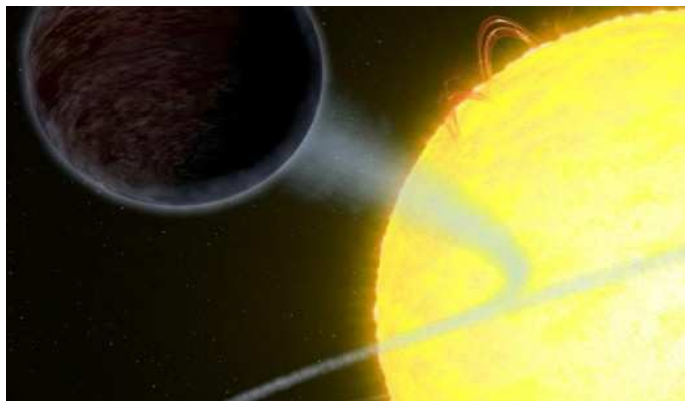
NASA scientists are one step closer to understanding the evolution of Mars. New evidence shows that the Red Planet's outer crust, which is about 30 miles (50 kilometers) thick, is porous and not as dense as previously thought.

"A lower density could have important implications about Mars' formation," Sander Goossens, a researcher at NASA's Goddard Space Flight Center (GSFC) in Maryland and lead author of the new study, said in a statement from NASA.

Read More at: <https://www.space.com/>

Hubble Spots “Pitch Black” Planet Lurking Beyond our Solar System

WASP-12b orbits a Sun-like star 1,400 light-years from Earth and is “black as fresh asphalt”.



NASA’s Hubble telescope has discovered an exoplanet that reflects almost no light - making it appear pitch black.

The exoplanet is called WASP-12b and it orbits a Sun-like star (WASP-12a) 1,400 light-years from Earth. Since being discovered in 2008, the exoplanet has become one of the best studied exoplanets ever, and these discoveries add to what astronomers know about distant worlds.

In particular, the WASP-12b study sheds new light on what the atmosphere around WASP-12b is like, and how that compares to other exoplanets of a similar size. The results are in stark contrast to observations seen around similarly sized exoplanets meaning astronomers can expand their knowledge of bodies outside the solar system.

The discovery was made using the Space Telescope Imaging Spectrograph (STIS) on the NASA/ESA Hubble Space Telescope, by an international team from McGill University and the University of Exeter. The researchers used the telescope to measure an albedo to reveal how much light the exoplanet WASP-12b reflected during an eclipse in October 2016. This was when the planet was near full phase and passed behind its star, making it the perfect time to determine the albedo because it involved directly measuring the amount of light being reflected.

This required a precision 10x greater than traditional transit observations, which is one of the Hubble Space Telescope's Imaging Spectrograph's strengths, letting scientists measure the albedo of WASP-12b at different wavelengths.

More at: <http://www.alphr.com/>

Solar Eclipse of 21st August 2017



In August I was fortunate enough to go over to the United States to view the Solar Eclipse in the state of Idaho. After arriving and spending the night in Salt Lake City, we travelled north to our eclipse accommodation in the State Capital of Idaho Falls. Our observing site was around 20 miles north of the city, in the shadow of one of the local ‘Buttes’ (a small hill surrounded by an open plain).

We arrived around 7.00a.m. but the area was already packed with cars & observers even at that early hour. The local Sheriff soon appeared, and we were eventually directed to a roped off area with room for our four coaches. I found myself joining a small group from our coach, only one of which had seen an Eclipse before. We in turn were joined by our local company’s tour guide and the bus driver. With our sheet giving the relevant timings, we settled down to wait. First Contact arrived as expected and myself and the other experienced ‘eclipse chaser’ took time to ensure others in our group had the correct eye protection on.

The Total phase duly arrived, and like all previous eclipses, was a wonderful site. At our location, it lasted for just two and a half minutes, and was truly a spectacular with the corona appearing to ring the moon. I noticed that it didn’t get as dark for this event as with other eclipses, due to the moon being more away from the earth, but not so far as to cause the Eclipse to be Annular.

This Eclipse was of the Saros 145 series, which first started in 1639 January 4th and will end in 3009 April 17th. It will have a Total Duration of 1370.29 years. It has long been known that Eclipses repeat approximately every 6585.3 days (i.e. 18 years, 11 days & 8 hours). It was the same Saros that crossed between Land’s End and Turkey in August 1999, hence it repeated a third the way around our Earth – 8 hours being a third of a day. It will repeat again in 2035 September 2nd in China, Korea, Japan and the Pacific Ocean.

PLEASE NOTE: A Saros is basically a way of identifying the Eclipse and numbering it. Around seven different eclipses can be seen in a 10 year period.

Graham Osborne

Experts Gather for Europe's First Dark Sky Conference



The three-day event is taking place in Gatehouse of Fleet in Dumfries and Galloway.

The nearby Galloway Forest Park was the first area in Europe to achieve dark sky park status.

Organisers said they hoped the conference would further help to cement south west Scotland's reputation as a premier destination for stargazing.

The conference will bring together some of the world's top dark sky experts with the aim of promoting rural development, tourism and tackling light pollution issues.

Astronomers, town planners, lighting specialists, environmentalist and academics will attend to discuss the benefits that dark sky status can bring.

Environment Secretary Roseanna Cunningham gave the keynote speech. "Scotland's natural environment, including its dark sky places, is one of its unique selling points and one that we should never take for granted," she said.

"Dark sky places have an important part to play in raising awareness of light pollution and its effects on people and the environment."

"However, we can share best practice and use more efficient technologies to reduce energy consumption and overall light pollution."

She said dark sky places could improve the environment and provide a "big attraction" for stargazers from all over the world, helping to boost the economy. "It's a win win situation," she said.

Dark sky Rangers

The conference has been organised by Galloway and Southern Ayrshire Biosphere (GSAB), the International Dark Sky Association (IDSA) and Forest Enterprise Scotland (FES), which manages the Galloway Forest Dark Sky Park.

FES visitor services manager Keith Muir said a lot had been achieved since the park reached dark sky status.

"We set it up on the back of bringing people into the south west of Scotland over the winter months," he said.

He said an impact study in 2012/13 had shown it was generating about £500,000 for the local economy.

However, with the introduction of dark sky rangers and more events he believes that figure will have risen further.

"It has developed greatly and I would estimate we are easily up around about the £800,000 mark a year now just on dark skies alone and that's a big thing," he said.

More at: <http://www.bbc.co.uk/>

**ORION'S
BELT IS A
BIG WAIST
OF SPACE!**

Isle of Wight Dark Skies Campaign

A meeting was held at Barton Manor on Monday 18th September, between the AONB, the CPRE and VAS. Also present was Jonathan Bacon, ex Isle of Wight councillor and the new chairman of the AONB, to confirm a commitment to continue with the Isle of Wight Dark Skies Campaign. This has been in abeyance since the Isle of Wight Council elections in May when there were significant changes to the councillors.

However, since then contact has been made with the new councillor responsible for the environment, under which Dark Skies comes. He is John Hobart and is very keen on the campaign, having supported it before, he is also a member of the CPRE. He was also present at the meeting.

Following an update and review of the campaign, particularly for Jonathan and John's benefit, but also to remind the others, a plan was drawn up to consider what needs to be done and who should be responsible for it. One of these tasks was to get back in touch with John Barentine of the IDSA in America to confirm to that organisation that we are on stream again and to get their continuing support. (*Bryn Davis to do this - done*)

Another urgent task is to draft a paper proposing amendments to the planning regulations about standards for dark skies. A draft from the Galloway Dark Sky area has been obtained and will hopefully provide us with a good start. This is the stage we were at before so we hope we can get real progress now.

We plan to have another meeting in November, and I shall report further then.

Bryn Davis

Some Dark Sky links:

<http://www.darkwightskies.com>

<http://www.darksky.org/>

<http://www.britastro.org/dark-skies/>

<http://wightaonb.org.uk/explore/dark-skies/>

<https://www.hillarys.co.uk/skyglow/>

It's That Time Of Year Again!

Memories of summer warmth are fading and its getting dark earlier. So its time to think of star gazing.

And renewing VAS Subscriptions. Our existing subscriptions expire at the end of September.

At the AGM it was announced that although subscription income had been flat for 2016/17, Brian had again performed a sterling job obtaining donations for all his hard work doing Outreach talks. With tight budgetary control exercised by Simon Plumley the VAS Accounts were declared as stable. Your Committee therefore proposed that Subscriptions should remain unchanged for 2017/18 and this was agreed by the members present.

The rates for 2017/18 due 1 OCTOBER are:	
Ordinary membership	£30:00 pa
Senior (60+)	£24:00 pa
Student (under 18 or in full time education)	£12:00 pa
Family (2 Adults and 2 children)	£50:00 pa This is new this year

Payment may be made by Cash or Cheque payable to Vectis Astronomical Society at the Observatory or the month end talk.

Cheques may be sent to:

**The Membership Secretary
Butterflies
Alverstone Garden Village
PO36 0JD**

If you have a Standing Order please check the amount as some members did not change their Standing Orders when the rates were changed in 2015.

If you prefer to pay by Bank Transfer the Account details are:

**Vectis Astronomical Society
Sort Code 30 95 99
Account No 00037505**

Norman Osborn - Membership Secretary

Hurricane Damages Giant Radio Telescope - Why It Matters



Staff at the Arecibo Observatory in Puerto Rico are safe, but the storm destroyed a key instrument, and conditions in surrounding towns are still unknown.

After a tense 36 hours, scientists and ham radio operators have confirmed that the Arecibo Observatory in Puerto Rico—arguably the world’s most iconic radio telescope, which has a dish stretching a thousand feet across—has come through Hurricane Maria mostly intact, but with some significant damage.

More importantly, the observatory’s staff sheltering on-site are safe.

Though the initial reports are reliable, it will take a while for teams to reach the site and assess the extent of the hurricane’s impact, which includes the loss of a smaller, 12-meter dish as well as substantial damage to the main dish. (Find out why this hurricane season has been so catastrophic.)

The information comes from Arecibo telescope operator Ángel Vazquez, who managed to get to the site and communicate via short-wave radio in the early evening of September 21.

Because of the storm, a 96-foot line feed antenna—which helps focus, receive, and transmit radio waves—broke in half and fell about 500 feet into the huge dish below, puncturing it in several places, says Pennsylvania State University’s Jim Breakall, who talked with Vazquez.

A fixture of the observatory since 1966, that line feed weighs about ten thousand pounds and is easily visible in images of the telescope as the pointy thing hanging off the platform. It was once used to detect mountains on the surface of Venus, and it is still crucial for studies of the part

of Earth’s atmosphere called the ionosphere, says former observatory director Frank Drake, who is also my dad.

“It allows the Arecibo telescope to achieve the most sensitivity of any radar telescope in the world,” Drake says, noting that it’s not clear how much time or money could be needed for repairs. “The end result is that the telescope will not be fully operative for some time at all wavelengths.”

Radio Quiet

On September 20, Hurricane Maria came ashore as a Category 4 storm and traversed Puerto Rico, flooding towns, toppling bridges, demolishing buildings and blasting the island with winds exceeding 150 miles an hour.

Even now, nearly 48 hours after Maria went through, reports from many parts of the island are devastatingly sparse. Electricity is nonexistent, phone lines are mostly down, and roads are blocked, complicating both communications and rescue operations.

As it exited the island, Maria’s eye passed within miles of the seaside town of Arecibo—and the giant radio telescope, which is nestled in a sinkhole to the south, set among a bubbling landscape of forested mountains.

Arecibo’s staff had begun hurricane preparations at least a day before, but around 11 p.m. on September 19, power and on-site communications went out. A website keeping track of wind speeds went offline, and though staff promised to continue communicating over cell phones for as long as possible, by 8 a.m. the next day, power and phone lines had gone out, too.

Then, there was nothing but eerie silence for more than 24 hours.

Vazquez, who sheltered at home as the storm passed through, was at last able to make it to the observatory via one access road, check in with the staff there, and relay information to anxious colleagues on the mainland.

“Great news! [Princeton University professor] Joe Taylor talked to Angel Vazquez, who made contact with the observatory via ham radio. Everybody there is safe and sound,” reported Arecibo deputy director Joan Schmelz.

However, it’s not yet clear how staff who weathered the storm in town are doing, or what conditions are like for local communities. Reports suggest that the road up to the facility is covered in debris and is largely inaccessible.

More at: <http://news.nationalgeographic.com/>

Expect the unexpected from the big-data boom in radio astronomy



Antennas of the Australian SKA Pathfinder (ASKAP) at CSIRO's Murchison Radio-astronomy Observatory in Western Australia. Credit: CSIRO, Author provided

Radio astronomy is undergoing a major boost, with new technology gathering data on objects in our universe faster than astronomers can analyse.

But once that data is scrutinised it could lead to some amazing new discoveries, as I explain in my review of the state of radio astronomy, published today in *Nature Astronomy*.

Over the next few years, we will see the universe in a very different light, and we are likely to make completely unexpected discoveries.

Radio telescopes view the sky using radio waves and mainly see jets of electrons travelling at the speed of light, propelled by super-massive black holes. That gives a very different view to the one we see when observing a clear night sky using visible light, which mainly sees light from stars.

Black holes were only found in science fiction before radio astronomers discovered them in quasars. It now seems that most galaxies, including our own Milky Way, have a super-massive black hole at their centre.

From early discoveries

Radio waves from space were detected by the American Karl Jansky in the 1930s. Since then, radio telescopes – such as the 64-metre dish at Parkes, in New South Wales – increased the number of known radio sources in the sky from one (in 1940) to a few hundred thousand.

Then, around the turn of the millennium, four projects driven by new technology suddenly increased the number of known radio sources from a few hundred thousand to about 2.5 million. They were the Westerbork Northern Sky Survey (WENSS), NRAO VLA Sky Survey (NVSS), Faint

Images of the Radio Sky at Twenty-cm (FIRST and the Sydney University Molonglo Sky Survey (SUMSS in The Netherlands, United States and Australia).

For almost the next two decades there was no significant increase in this number, because nobody could significantly improve on what those four projects had done.

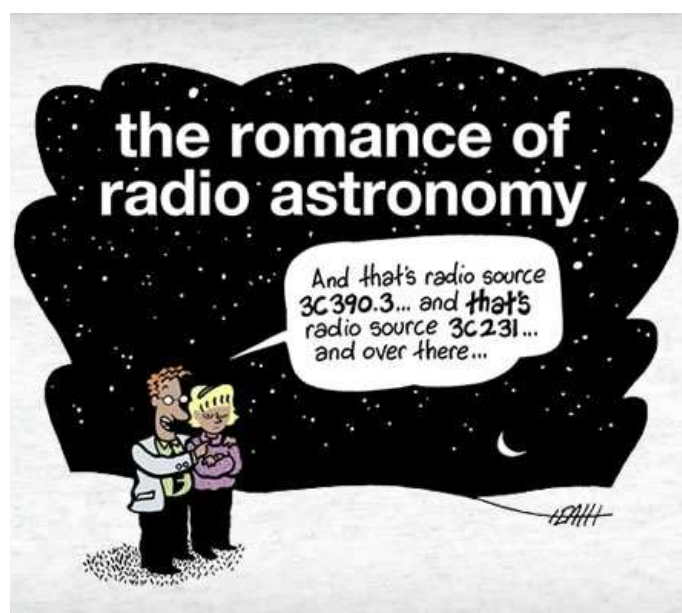
A group of new telescopes in Australia, The Netherlands, the United States, India and South Africa are about to unleash new technologies that will generate another surge in our knowledge of the radio sky.

Leading them, in terms of numbers of sources, is Australia's Evolutionary Map of the Universe (EMU) project, running on CSIRO's new A\$188-million Australian Square Kilometre Array Pathfinder (ASKAP) telescope in Western Australia.

For ASKAP, the new technology is CSIRO's revolutionary phased array feed, which allows ASKAP to view enormous areas of the sky at once.

As a result, EMU alone will raise the number of radio sources to about 70 million, compared to the 2.5 million sources discovered so far by all radio telescopes in the world over the entire history of radio astronomy.

Read more at: <https://phys.org/>



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LINKS, COMMENTS AND OBSERVATIONS

Common Astronomy Myths

1. Contrary to popular believe, Venusian is not the term to describe Venus and Venus related things. The correct term is Cytherean, which comes from Cytheria – the small island where Aphrodite emerged from a shell. Furthermore, Venusian is also not correct in that it doesn't follow the pattern used for other planets – if you aren't referring to Venus as the Cytherian planet you should call it the Venerean planet.
2. A very popular myth (which has even been repeated as fact by members of the Green party in the New Zealand parliament) states that crimes and accidents increase in number during a full moon. While it is almost impossible to debunk such a myth, there are no statistics relating to the incidence of crimes which supports this wacky theory.
3. Copernicus was not the first person to state that the Earth revolves around the sun. That theory was first taught by unknown ancient thinkers. While we don't know their names, we do know for certain that, from as early as the seventh century BC, it was suggested in Sanskrit documents.
4. NASA did not spend millions of dollars trying to develop a pen to write in space when they could just have used pencils. First off, they did use pencils (like the cosmonauts) rather than trying to develop a pen, but when a smart man developed (at his own expense) a pressurized pen that not only would work in space but under the ocean as well, NASA purchased 400 of the pens at the cost of \$6 per pen (they are now about \$50 per pen and you can buy them online). The Soviets also bought his pens. To this day, both nations still use the Fisher Space Pen (named after its inventor Paul Fisher).
5. The Great wall of China is not visible from space with the naked eye even in a low Earth orbit. However, many other man-made objects are (such as bridges and dams).
6. If you stand in the bottom of a deep well in broad daylight, you cannot see the stars. This is actually an ancient myth – it was mentioned by Aristotle. But in reality, it is not true. Logically thinking, the further down a well you are, the smaller the top of the well appears – and consequently the darkness of the walls combines with that to make the opening appear dazzlingly bright – not dark as it would need to be to see the stars.
7. Most rocket launches in the US do not go from Cape Canaveral. Most of them are launched from Merritt Island in Brevard County, Florida, where NASA's JFK Space Center is found. All shuttle launches have occurred, or do occur, at Merritt Island while only a small number of rockets were launched from the now decommissioned Launch Complex, which is in Cape Canaveral. The last manned spaceflight from Cape Canaveral was over thirty years ago.
8. Mercury is the closest planet to the sun but, despite this, it is not the hottest. The planet with the highest mean surface temperature is actually Venus – a consequence of its mostly carbon-dioxide atmosphere.

Observatory

When visiting the VAS observatory, for your own safety, please bring a torch. Also, please make sure you close and lock the car park gate if you are the last to leave - if you need the combination to the lock, please contact a member of the committee.

Articles Needed

NZ needs letters, articles, reviews or pictures related to astronomy. Send to the Editor, contact details on the front page.

*“My wife’s an earth sign.
I’m a water sign.
Together we make mud”*
Henny Youngman

“Interestingly, according to modern astronomers, space is finite. This is a very comforting thought, particularly for people who cannot remember where they left things”
Woody Allen

“Issuing an insurance policy against abduction by aliens seems a pretty safe bet”
Stephen Hawking

“At night, the sky is pure astronomy”
Nicole Krauss