

Society News

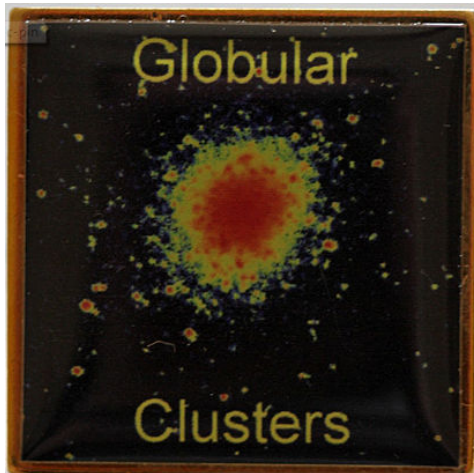
Festival/Meeting Confusion

First an apology for the confusion over the date of the June meeting in Newport. I forgot to change the date in the NZ calendar although I did mention the possible traffic congestion on the Festival weekend which I hope gave people a clue to the error.

I managed to email all those members who use such things but at such late notice was unable to notify those who receive NZ by post - sorry!

Chairman Awarded

Faith Jordan has, this week, received an award for the Globular Cluster Program. A large envelope duly arrived containing a nice letter from Bob Kerr, a certificate and the award pin.



Faith said “Some people look down their noses at observing awards but who cares what they think? Observe however you think fit, not how others tell you to. And if you can get a nice bit of bling in the process then what’s not to like?”

Faith added “I am now waiting to hear from the Binocular Deep Sky award co-ordinator; I sent the observations off to her about two weeks before the Globular Cluster observations but so far I’ve not heard anything back. All in good time...”

More at: http://www.fjastronomy.com/?page_id=1359

Brian Curd
Observatory Director

VAS Website: www.wightastronomy.org

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

The Editor New Zenith
35 Forest Road
Winford
Sandown PO36 0JY

Tel: 01983 864303 or email: editor@wightastronomy.org

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

VAS Registered Office

Castle Haven Cottage, Castle Haven Lane, Niton Undercliff, Isle of Wight, PO38 2ND

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. Telescope and night sky training. Contact Barry Bates 01983 872979
Thursday, 19.30hrs	Members and Public. Informal meeting and observing.

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Monthly Meeting Calendar 2012

Check the website for up to the minute information.

Travel for our monthly speakers is sponsored by:		
		
Date	Subject	Speaker
22 June	Member's Forum and Special Project Presentation	
27 July	Binoculars for Astronomy	Richard Flux
24 Aug	Observing Galaxies - Faith Jordan AGM Meeting Starts at 19.00hrs	
28 Sep	The future is out of this world	Dr Stuart Eves
26 Oct	TBA	Owen Brazell
23 Nov	Mapping the Universe	Dr Rita Tojeiro

All details correct at time of publication.

AGM

Please don't forget the Society AGM in August

It's your chance to elect the committee for the next year and perhaps even stand for election yourself

An election form is attached to this NZ

VAS Contacts 2012

Chairman	Faith Jordan chairman@wightastronomy.org
Secretary	Rebecca Mitchelmore secretary@wightastronomy.org
Treasurer	Frank Alfrey treasurer@wightastronomy.org
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	Barry Bates
Programme Organiser	Elaine Spear progorg@wightastronomy.org
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Garlic Festival



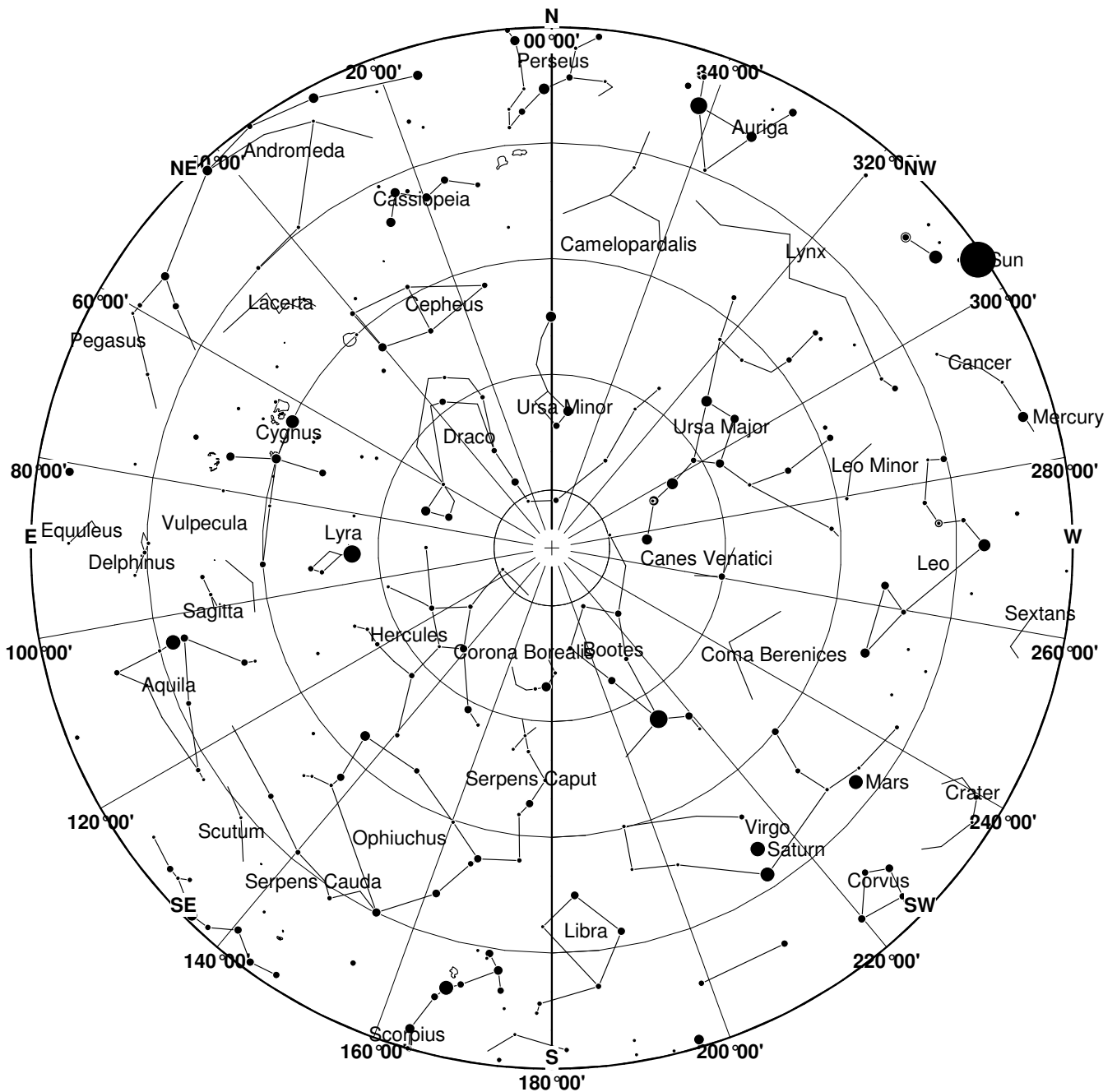
The Garlic Festival this year is to be held on the weekend of 18th-19th August 2012.

I'm sure most VAS members realise this is our single most important fund raising opportunity of the year.

As well as providing marshals for the event, VAS will also have a Society information tent.

Assuming you don't mind being on your feet for most of the day and can help during the weekend, please contact Richard Flux - richard.Flux@iow.nhs.uk

July 2012 Sky Map



View from Newchurch Isle of Wight UK - 2100hrs - 15 July 2012



The Omega Nebula, also known as the Swan Nebula, Checkmark Nebula, Lobster Nebula, and the Horseshoe Nebula (catalogued as M17 and as NGC 6618) is an H II region in the constellation Sagittarius. It was discovered by Philippe Loys de Chéseaux in 1745. Messier catalogued it in 1764. It is located in the rich starfields of the Sagittarius area of the Milky Way.

It is between 5,000 and 6,000 light-years from Earth and it spans some 15 light-years in diameter. The cloud of interstellar matter of which this nebula is a part is roughly 40 light-years in diameter.

This article is licensed under the [GNU Free Documentation License](https://www.gnu.org/licenses/fdl.html).

It uses material from the Wikipedia article "The Omega Nebula"

July 2012 Night Sky

Moon Phases

New	1 st Qtr	Full	Last Qtr
19th	26th	3rd	11th

Planets

Mercury

The first few days of the month sees Mercury dive down towards the Sun and superior conjunction on the 29th.

Venus

Visible against the stars of Taurus low down in the eastern sky before dawn Venus is the brilliant morning star. On the 7th it is a little over a degree above the bright red star Aldebaran. There is a photo opportunity with the Moon and Jupiter on the morning 16th and 17th.

Mars

Mars is low down in the west southwest after sunset. It is nothing like as bright as it was earlier in the year at opposition, it is however still easily visible to the naked eye and still shows a distinct red colour. It is now quite a small object only, about 6 arc in diameter so seeing any surface features will be a challenge. It will however show a distinctly gibbous phase.

Jupiter

Jupiter is close to Venus low down in the east at the start of the month. On the 15th Jupiter and its moons are occulted by the waning crescent Moon. The event starts at 02:50 with the disappearance of the Galilean moon Europa. Jupiter itself starts to pass behind the Moon at 02:55 reappearing some 12 minutes later. The whole event is over by 03:21 with the emergence of Callisto. Our latitude is just about right such that at 03:04 the east most moon, Callisto meets the bright crescent just as Europa the west most moon reappears from behind the dark side. To witness this event will require a good eastern horizon; it starts when the Moon is only about 7 degrees above the horizon.

Saturn

It seems like Saturn has joined Virgo permanently, it has hardly moved away from Spica for months now. It is getting to be a more difficult object as the month

progresses, bright and easily visible, but the seeing will make any observation difficult.

Uranus & Neptune

The two outer planets rather too low down during the hours of darkness for easy observation.

Meteors

The peak of the Alpha Cygnids occurs on the 21st.

There are three peaks of activity to the Capricornids meteor stream this month. The first on the 8th is affected by the waning gibbous moon. The remaining peaks on the 15th and 26th are much more favourable for observation.

The Delta Aquarids peak on the 28th with a predicted rate of 20 per hour.

Deep Sky objects

M17 The Omega Nebula **RA 18h 21m Dec -16° 11' mag 7**

If it were not for the Orion Nebula this would be the great show piece of the sky. Binoculars show the curved shape of this giant glowing gas cloud and stellar nursery. Some times called The Swan nebula, the swan swimming upside down through the Milky Way becomes more obvious through a small telescope.

M24 Sagittarius Star Cloud **RA 18h 16m Dec 18° 43'**

Probably the densest mass of stars you will ever see is contained within this 2 x 1 degree patch of sky towards the centre of our galaxy. A slight thinning in the density of gas and dust allows us a small peak towards the galactic core. This is an object for all instruments from a small pair of binoculars to a large telescope.

M14 Globular Cluster **RA 17h 38m Dec -3° 15' mag 7.6**

Despite its magnitude this is quite a difficult binocular object, it is quite large but does not have a particularly well condensed core. This means that the available light is spread out rather thinly. Larger aperture telescopes are needed to resolve some of the cluster stars.

Peter Burgess

Essays from a beginner:

On Blankets

Blankets play an important but largely unsung part in my life as an amateur astronomer. I'd like to give them their due.

First, there is the evil blanket of cloud which has covered the Isle of Wight for weeks and weeks recently. *!@**!*

Second, and even in better weather, there is the cloud which spreads itself relentlessly from the West at the end of a fine day. It is available on many occasions in any given month. This is not a good blanket.

Third, there is the blanket I tried putting round my knees to sit to the telescope. If, like me, you have to keep hopping up and down to use the finderscope, or to get a filter you forgot to bring out with you, this can only end in a Clouseau-esque moment where the blanket and the legs of the stool and the controller and the string on the red torch and your power cable all become animate, and furtively tie themselves into the Gordian knot (and you can imagine how it ended). This kind of blanket is a big mistake. I now have two pairs of thermal leggings instead.

Fourth, there is the thick huge blanket which goes underneath and above me as I lie in a garden recliner, watching a fine Perseid show. This is a good blanket, but it doesn't get much use. About once every four years actually...

Fifth, there are the ancient picnic blankets which I can peg onto washing lines strung along my garden boundaries; I can then hoist them into the air with props, to reduce stray light from neighbouring premises. The lines are fixed to existing garden features and one end can be unhooked, making them inconspicuous by day, and if I forget to take the blankets down until the next morning - well, it just looks like overspill washing, and the neighbours already know I am a "Bit Odd". These are excellent blankets, though only worth bothering with for a few days each month, as no clothes prop in my possession is long enough to obscure the light of the moon.

Sixth, and last, there is the electric blanket my daughter gave me two Christmases ago. I use this every single time I've been out observing, and it is the best blanket of all. Aaaaaahhhh.

Rebecca Mitchelmore

Observatory Computers

Over the years we have had a variety of computers at the observatory, and, all things electronic they have a very limited lifespan.

Interfaces change, operating systems are updated and perhaps most importantly, applications take up more disk space and demand ever faster processors to run. In an effort to bring our equipment up to date and make it easier to use and connect to the various peripheral equipment owned and brought along by members; we have this week ordered two new PCs which should make things much easier.

Specifications:

CPU	Intel Core i3 2100
Operating System:	Microsoft® Windows 7 Home Premium 64-bit
Motherboard:	NEW! Asus P8H61-MX
RAM:	4GB DDR3 1333mhz (1x 4GB)
Hard Drive:	500GB S-ATAII 3.0Gb/s
Optical Drive:	22x DVD±RW DL S-ATA
Graphics card:	Onboard Intel GMA4500
Sound card:	Onboard 7.1 Audio
Keyboard and Mouse:	Keyboard, mouse and speakers
Monitor:	21.5" Widescreen LCD
Case:	NEW! EZCool Mesh ATX
PSU:	500W PSU
Warranty:	3 Year Bronze Warranty

These two machines should bring us kicking and screaming into the 21st century and while they are not the fastest machines available they do represent a large from the ageing Pentium 3 & 4 machines we have at the moment.

There are reviews of the company and machines [here](#)

For anyone concerned about the price, they were £399.00 (inc. VAT) each!

Brian Curd

Tobias Mayer (1723-1762): The man in John Harrison's shadow



Members will be aware of the injustice of 'Robert Hooke in the shadow of Newton', but might not even have heard of Tobias Mayer!

Tuesday 21st August 2012 from 19.30 to 21.00 at the Medina Valley Centre (PO30 5TE) is a unique opportunity to hear about

Mayer who was awarded second prize (£3000) by the Board of Longitude for the 'lunar distance method'.

The speaker is Prof Dr Armin Hüttermann who has been visiting the Medina Valley Centre for a number of years with his students. This year he is finally retiring and August will be his last visit to the Island. In his spare time, Prof Hüttermann curates the Tobias Mayer museum. Professors Mayer and Hüttermann share a special interest in cartography, and had Mayer lived beyond the age of 39 he would have completed the first exact lunar globe. In particular, Prof Hüttermann will address the question - 'why is the lunar globe of importance?'

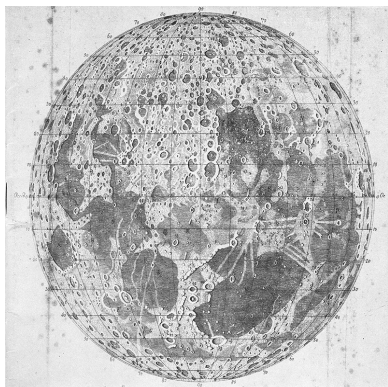
Places to hear the talk are limited to 25 and must be booked.

Please email info@medinavalleycentre.org.uk or phone Sandie on 01983 522195.

Seats are free but there will be a box for donations to the centre (a Christian educational charity).

If you would like further information please email Paul Bingham at IOWPAULB@aol.com.

For 65 years Tobias Mayer's small map was the best in the world.



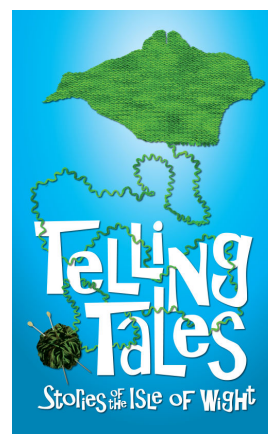
Moon Rocks and Folk Tales

If you have an iPad then download a free Open University book called "Moon Rocks" from iTunes Book Store. The book includes video and audio clips from the Apollo missions, also a virtual microscope to view the crystals within thin sections of moon rock.



The book is a great example of text books to come and is well worth a look.

Whilst I'm on the subject of new books, and since Brian needed more articles, Ventnor Community Cafe Writers have published an e-book available from Amazon Kindle store called *Telling Tales: Stories of the Isle of Wight*. I've managed to influence my fellow writers to such an extent that there is a brief mention of astronomy in two of the stories.



You might already know that it is possible to read Kindle Books by downloading an app onto your computer, smart phone or tablet, but just in case here's a [link to the download page](#).

Sue Curd

Lecture report 25 May 2012

History: How Sir James Jeans helped to lift spirits in the aftermath of the Great War

Dr. Guy Moore (VAS member)



Sir James Hopwood Jeans (1877-1946)

Summarizing - we won the war - so why did our spirits need lifting? This might look like a history lesson, but it's more about how Sir James Jeans responded to the needs of individuals, with astronomy playing a vital role during the rise of sound broadcasting in the 1920s - hence no pictures here as a tribute to radio, although I showed 55 in this lecture! A proliferation of astronomical societies is a part of his legacy, plus a Europe now linked by the ESA.

Before the Great War was a time of individual freedom and exuberant invention, based on Newtonian mechanics, reaching back to the Industrial Revolution - with railways, big ships, floating docks, bridges, Bessemer steel, plus thousands of small inventions and patents. Some thought that science had revealed all there was to know. The Wright brothers flight was 1903 and the world air speed record in 1910 was 55 mph. In the midst of this quietly comes Einstein's '*On the Electrodynamics of Moving Bodies*' of 1905 - not called Relativity then, but when it was, it led to serious social consequences as we shall see.

1907 saw the famous $e=mc^2$ equation, significant only within scientific circles. Edwin Hubble, freshly qualified from Chicago in maths and astronomy, rounded off his education at Oxford, doing more maths followed by jurisprudence. The *Daily Mail* Round Britain Air Race of 1911 illustrates a carefree attitude to life, pilots often stepped out of aero-wreckage and brambles - heroes of the developing age - sometimes pursued by angry bulls. Life in cities, connected by trains, telephones and national newspapers, was very local. The Exeter City Council, contemplating if the motor-car had a future, voted to install electric trams.

Aircraft became essential machinery in the Great War, triggered in 1914 by an assassination, Austria declaring war on Serbia, and with European alliances and treaties, Britain entered a bigger war when the Germans crossed Belgium. I chose pictures from old books and museum catalogues to illustrate the personal aspects, the Pals brigades in the trenches; women and schoolgirls making bandages and kit; what it was like to man a machine-gun in a bomber, *etc.* Meanwhile, in America, astronomers are measuring the heat coming from stars using thermocouples in their telescopes. They enter the war in 1917, some troops getting sunk by U-boats before arrival, but airships directed fire into this menace, fetching up oil and steel plates. Hubble braved the dangers, arriving in Northern France serving as an officer and ballistics expert. But by 1918, women's working groups are looking glum. The world death toll is 10 million with 20 million wounded. Influenza, affecting young adults, kills quarter of a million in Britain. Who will teach the younger generations? Survivors scarcely speak of gas attacks, the carnage, what they saw or had to do. Shell shock wasn't recognized. Soldiers shot for cowardice, after many personal campaigns, eventually get reprieves only within recent decades.

Question marks appeared over the point of all this destruction. '*Modern History*' by Paul Johnson (1983 Weidenfeld and Nicolson) starts with, "The modern world began on 29 May 1919 when photographs of a solar eclipse, taken on the island of Principe off West Africa and at Sobral in Brazil, confirmed the truth of a new theory of the Universe". But for scientists, this is the wrong theory, the Atomic Age depends on $e=mc^2$ of 1907. The bending of light by the Sun has no significance here, but scientists especially the very far-sighted Eddington, one of few who understood Einstein, saw science as able to bridge European differences. The eclipse of 1919 was a brilliant opportunity to usher in a new age which historians, politicians and social workers would understand. But as Johnson makes clear, Einstein's theory, known by then as "Relativity" (it could have been called "The Theory of Absolute Space" instead) very regrettably reinforced Relativism with disastrous social consequences. Just as Darwinism fuelled the racial and class theories of Hitler and Marx, so also Relativity mistakenly fuelled ideas of no

absolutes, no moral responsibility, no free will, and a lack of purpose (see Johnson). Artistic and intellectual classes, not adept with slide-rules or scientific understanding, fell victim to the belief that the rug had been pulled from under Newton; everything achieved so far became giddy within a psychological disorientation - the world isn't how it seems, the Enlightenment was an illusion. Steered into yet more trouble by Bertrand Russell's '*The ABC of Relativity*' (a hopeless book, like many others that fail to teach basics) they become deeply influenced by Freud, whose theories only much later become dismissed by the Nobel laureate Sir Peter Medawar. It is Jeans who turns the social tide by translating the 'proper science' (*i.e.* 'falsifiable rather than pliable') of astronomical research into something the young, the old and the war-weary can grab with welcome eagerness, giving them new inspiration and purpose.

Sir James Jeans (1877-1946, lived in Dorking), a mathematical wrangler at Cambridge University, published his '*Dynamical Theory of Gases*' in 1916. Given that the equations of just a few bodies in gravitational orbits cannot be solved, whereas gas molecules in millions can be handled by maths, Jeans turns to dealing with stars as if they behave like gas molecules. I illustrated the connection using pictures of trains with mail bags thrown between them on parallel tracks. The bags convey speeding-up and slowing-down forces between the trains (modelling 'viscosity') and stars moving radially in rotating discs do the same. Although Sir James Jeans may have vanished into his mathematics in 1916, within a few years (influenced by Hubble's discoveries) he emerges as a popular expositor of astronomy soon after the BBC had started issuing wireless receiving licences in 1922. He targets all the families eating tea at their firesides in Winter, or listening to Murphy portable radios in the forests in the Summer - and don't forget a Continental audience too! And Jeans fires off, in beautiful language, salvo after salvo, everything needed to bring hope and inspiration into a truly modern world. So how does Jeans appeal to his listeners - don't switch off! - indicating they can easily understand the modern world and its purpose, with the help of astronomy? Quoting from Jeans's lecture given to the Royal Society of Arts, published as '*Eos*' in 1928, he does it like this:-

p12: "Humanity is at the very beginning of its existence - a new-born babe, with all the unexplored potentialities of babyhood ; and until the last few moments (compared to the 300,000 years of its existence, already explained) **its interest has been centred, absolutely and exclusively, on its cradle and feeding-bottle... it is learning to focus its eyes on distant objects...**" and p17: "**If the world was not made to surround its cradle, what purpose can it serve? If the lights of the great ships in the harbour were not designed to light its nursery at night, what can they possibly be for? And, most interesting problem of all, if the world is such a big affair, can there be other cradles and other babies?"**

Editor's Note: Guy included many other references to James Jeans explanations which for space reasons have had to be cut from the article - The full text of his article can be [downloaded here](#).

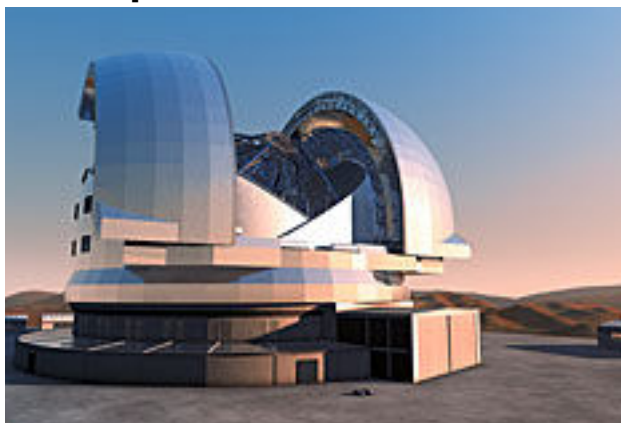
Sir James Jeans finishes '*Eos*' with, p88: "And ever the age old question obtrudes itself as to whether the infant has any means of knowing that it is not dreaming all the time. The picture it sees may be merely a creation **of its own mind, in which nothing really exists except itself; the universe which we study with such care may be a dream, and we brain-cells in the mind of the dreamer.**" But look back to what Jeans says about swans versus unconscious stars which cannot self-adjust - it seems to me that in passing this playful piece of philosophy (called 'solipsism' - so difficult to disprove) onto the listener, he hopes that it will be personally tossed out, correctly, as utter nonsense. In doing so, something else is unconsciously thrown out too - all the psycho-babble of the 1920s (originating from the Continent) in which dream interpretation also played quite a role. In short, Jeans very much succeeds in boosting the spirits at this time, crystallizing astronomical realities for children, adults, the war-weary, and teachers of the future!

My final picture was that of a soldier with a smile, from 1918, sitting by the wreckage of a bombed-out building, signposted "**DIVISIONAL CANTEEN**", reminding us that it was time for our tea break - very well deserved having so patiently sat through all this - many thanks! And thanks also to The Ryde Bookshop, a valuable source of history, astronomy, and other subjects, in its many rooms, and thanks to the IoW public libraries.

Dr Guy Moore

*“Life exists in the
universe only
because the carbon
atom possesses
certain exceptional
properties”
Sir James Jeans*

The European Extremely Large Telescope



Artist's Impression

The world's biggest eye on the sky

Extremely Large Telescopes are considered worldwide as one of the highest priorities in ground-based astronomy. They will vastly advance astrophysical knowledge, allowing detailed studies of subjects including planets around other stars, the first objects in the Universe, super-massive black holes, and the nature and distribution of the dark matter and dark energy which dominate the Universe.

Since the end of 2005 ESO has been working together with its user community of European astronomers and astrophysicists to define the new giant telescope needed by the middle of the next decade. More than 100 astronomers from all European countries have been involved throughout 2006, helping the ESO Project Offices to produce a novel concept, in which performance, cost, schedule and risk were carefully evaluated.

Dubbed E-ELT for European Extremely Large Telescope, this revolutionary new ground-based telescope concept will have a 40-metre-class main mirror and will be the largest optical/near-infrared telescope in the world: "the world's biggest eye on the sky".

Science with the E-ELT

With the start of operations planned for early in the next decade, the E-ELT will tackle the biggest scientific challenges of our time, and aim for a number of notable firsts, including tracking down Earth-like planets around other stars in the "habitable zones" where life could exist — one of the Holy Grails of modern observational astronomy. It will also perform "stellar archaeology" in nearby galaxies, as well as make fundamental contributions to cosmology by measuring the properties of the first stars and galaxies and probing the nature of dark matter and dark energy. On top of this astronomers are also planning for the unexpected — new and unforeseeable

questions will surely arise from the new discoveries made with the E-ELT.

Science goals

General purpose extremely large aperture optical/infrared telescope. Some science areas are to be high redshift galaxies, star formation, exoplanets and protoplanetary systems.

The E-ELT in numbers

- Main mirror diameter: 39.3 metres
- Light collecting area: 978 square metres

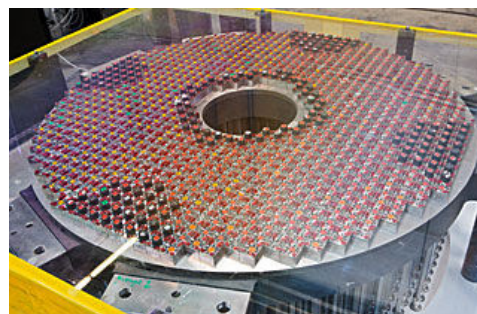
39.3-metre diameter

With its main mirror as large as 39.3 metres in diameter, this will be the largest telescope to observe in visible-light. It will be four to five times larger than the present-day state-of-the-art facilities of this kind, and will collect about 15 times more light. It will also be much larger than the two other extremely large telescopes in planning, the Thirty-Meter Telescope and the Giant Magellan Telescope.

Almost 1000 segments

It is not possible, nor advised, to build such a large mirror in one piece. Instead, the 39.3-metre diameter primary mirror will be composed of about 1000 hexagonal segments, about 1.4 metre wide and 5 cm thick. The whole concept of the telescope is in fact to be modular, so that pieces can be manufactured in large quantities, thereby drastically reducing the cost. Only this approach makes the E-ELT possible within a restricted budget.

The E-ELT will gather 100,000,000 times more light than the human eye, 8,000,000 times more than Galileo's telescope, and 26 times more than a single VLT Unit Telescope. In fact, the E-ELT will gather more light than all of the existing 8–10-metre class telescopes on the planet, combined.



There is a lot more information about this project on the [European Southern Observatory website](#) including many pictures and a video.

THE BACK PAGE

LINKS, COMMENTS AND OBSERVATIONS

Data from NASA's Voyager 1 Point to Interstellar Future

ScienceDaily (June 15, 2012) — Data from NASA's Voyager 1 spacecraft indicate that the venerable deep-space explorer has encountered a region in space where the intensity of charged particles from beyond our solar system has markedly increased. Voyager scientists looking at this rapid rise draw closer to an inevitable but historic conclusion -- that humanity's first emissary to interstellar space is on the edge of our solar system.

"The laws of physics say that someday Voyager will become the first human-made object to enter interstellar space, but we still do not know exactly when that someday will be," said Ed Stone, Voyager project scientist at the California Institute of Technology in Pasadena. "The latest data indicate that we are clearly in a new region where things are changing more quickly. It is very exciting. We are approaching the solar system's frontier."

<http://www.sciencedaily.com/releases/2012/06/120615114827.htm>

Imaging with a Celestron SCT

There's a bit of a buzz about a new product called Hyperstar. It's a modification to the Celestron SCT which removes the secondary and replaces it with a lens, a camera can then be fitted to the lens to give remarkably fast astrophotography.

<http://starizona.com/acb/hyperstar/index.aspx>

Competition for 'earliest galaxy' claims

Honolulu - A team of Japanese astronomers using telescopes on Hawaii say they've seen the oldest galaxy, a discovery that's competing with other "earliest galaxy" claims.

The Japanese team calculates its galaxy was formed 12.91 billion light-years ago, and their research will be published in the *Astrophysical Journal*. The scientists with the National Astronomical Observatory of Japan used the Subaru and Keck telescopes on the summit of Mauna Kea.

Richard Ellis of the California Institute of Technology, an influential expert in cosmology and galaxy formation, said the latest work as more convincing than some other galaxy discoveries.

He said the Japanese claim is more "watertight," using methods that everyone can agree on. But he said it's not much of a change from a similar finding by the same team last year.

Still, "it's the most distant bullet-proof one that everybody believes," Ellis said.

In 2010, a French team using Nasa's Hubble Space Telescope claimed to have discovered a galaxy from 13.1 billion light-years ago and last year a California team using Hubble said they saw a galaxy from 13.2 billion light-years ago. Both Hubble teams published findings in the journal *Nature*.

[Read more here](#)

Observatory

For your own safety, when visiting the VAS observatory, 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

New Zenith welcomes letters, articles or pictures related to all aspects of astronomy. Contributions to the Editor at the email or postal address on the front page.

"Production of useful work is limited by the laws of thermodynamics, but the production of useless work seems to be unlimited."
Donald Simanek

Quotations

"Photons have mass? I didn't even know they were Catholic"
Woody Allen

"Those people who think they know everything are a great annoyance to those of us who do"
Isaac Asimov

"Computers in the future may perhaps only weigh 1.5 tons"
Popular Mechanics, 1949

VAS Officers and Committee Nominations 2012/13

For those wishing to stand for election at the AGM of the Society to be held on Friday 24th August 2012 at 7.00pm.

Name and Address of Nominee:

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Standing for

- Chairman
- Treasurer
- Secretary
- Observatory Director
- Membership Secretary
- Program Organiser
- Observatory Outreach Co-ordinator
- Committee

Proposed by:

Seconded by:

Signature of Nominee:.....

Notes

1. No person can be elected to more than one position.
2. Only adult fully paid-up members may stand for election (or propose or second).
3. All completed nomination forms to be received by the Secretary in writing at least 7 days before the AGM.
4. The Committee consists of not less than six members.