New Zenith



The Monthly Newsletter of the Vectis Astronomical Society

Vol 23 Issue 2 — March 2015

When Printed, this Newsletter costs VAS at least £1

Society News

AONB/VAS Stargazing Event

The event held on Monday 16th February went ahead despite the appalling weather forecast. I am pleased to report that we were subject to the random weather usually experienced on the Island and that the skies cleared soon after 18.00hrs and we were treated to excellent views of Jupiter, the Orion Nebula and Andromeda.

Many thanks to all those who helped in any way and special thanks to Fiona, Joel and Margaret from the AONB for their support.

The event was very well supported by about 140 visitors and it was good to see so many families making the effort to attend. We hope to hold another joint event with AONB later in the year so please, *watch this space!*

Match funded grant from NPS&CA

I am pleased to report that the recent application by VAS to the Newchurch Parish Sports & Community Association, for help with a purchase of a specialised telescope and mount for astrophotography has been successful.

Here's a list of what we intend to buy:

- 1. Altair Astro 107 102mm F7 Ed Triplet 715mm
- 2. Planostar 0.79 focal reducer for scope above
- 3. Skywatcher HEQ5 Pro Mount
- 4. APM finder scope
- 5. Rings/brackets to fit finder scope
- 6. Canon and Nikon T mounts
- 7. HEQ5 replacement bolts
- 8. Battery power supply
- 9. Finder Eyepiece 24mm

This is a very significant addition to the equipment available at the observatory and will only be made available to those members trained in its use.

We will be arranging course in the very near future and then the equipment will be available to supervised visits from camera clubs and schools etc.

Brian Curd

VAS Website: 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

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

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2015					
Date	Subject	Speaker			
27 Feb	Basketballs and Beyond - Wonders of the Cosmos	Jane A Green			
27 Mar	Stars over the Nile - Ancient Egyptian Skylore and observing				
24 Apr	Our Dynamic Sun	Helen Mason			
22 May	Are We Alone?	Stephen Tonkin			
26 Jun	TBA	Haley Gomez			
24 Jul	Light - Astronomical Applications of Spectroscopy	James Fradgley			
28 Aug	Astro Photography and AGM	Simon Plumley			
25 Sep	Photographing the Aurora	Elizabeth Cunningham			
23 Oct	EUCLID and the Expanding Universe	Tom Kitching			
27 Nov	ТВА	James Fradgley			
Please check wightastronomy.org/meetings/ for the latest information					

Telescope Training

Any member who would like training on the observatory Meade LX200 should contact

Barry Bates on 872979

Observatory Visits Booked

Monday 2nd March

Ist Ryde & Binstead Scouts 1800-1930

It would be appreciated if members could avoid using the observatory at these times.

How to waste time!

I can't remember how I got there, but if you need something to read on a wet afternoon have a look at the Wikipedia page "List of paradoxes". *Good Luck!*

http://en.wikipedia.org/wiki/List_of_paradoxes

VAS Contacts 2014/15				
President	Barry Bates president@wightastronomy.org			
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NZ Distribution	Brian Bond distribution@wightastronomy.org			
Others	Mark Williams & Nigel Lee			

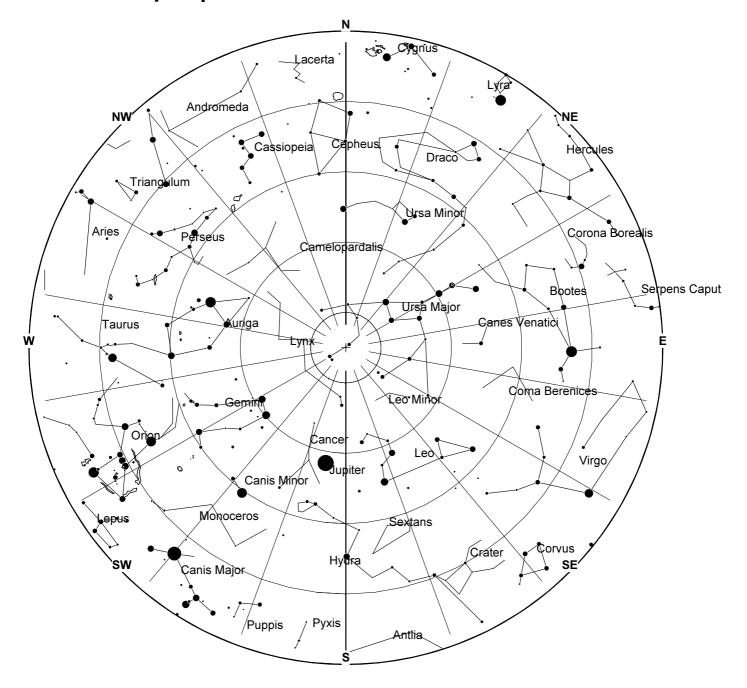
Important

Members using the observatory outside normal Thursday meetings MUST enter a line or two in the Observatory Log Book.

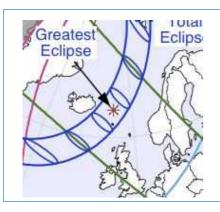
On several recent occasions, lights, heaters and the Meade LX200 have been left on!

When you leave the observatory please ensure it is secure and all lights, heaters and telescopes are TURNED OFF.

March 2015 Sky Map



View from Newchurch Isle of Wight UK - 2200hrs - 15 March 2015



Solar Eclipse March 2015: As observed from the Earth, a solar eclipse occurs when the Moon passes in front of the Sun. The type of solar eclipse event depends on the distance of the Moon from the Earth during the event. A total solar eclipse occurs when the Earth intersects the umbra portion of the Moon's shadow. When the umbra does not reach the surface of the Earth, the Sun is only partially occulted, resulting in an annular eclipse. Partial solar eclipses occur when the viewer is inside the penumbra.

The eclipse magnitude is the fraction of the Sun's diameter that is covered by the Moon. For a total eclipse, this value is always greater than or equal to one. In both annular and total eclipses, the eclipse magnitude is the ratio of the angular sizes of the Moon to the Sun.

This article is licensed under the **GNU Free Documentation License**. It uses material from the Wikipedia article "Eclipse".

March 2015 Night Sky

Moon Phases

New	First Qtr	Full	Last Qtr
Mar 20th	Mar 27th	Mar 5th	Mar 13th

Total Eclipse

During the morning of March 20th the shadow of the Moon passes over the North Atlantic, starting a little east of Newfoundland, passing to the south east of Iceland at maximum eclipse before heading towards the North Pole.

From here in southern England the eclipse starts at 08:26 and is over by 10:37. Maximum eclipse occurs at 09:32 when just a thin sliver of the Sun's disk remains visible.

Even though only a small fraction of the Sun will be visible it is still bright enough to cause eye damage. Do not look directly at the sun during the eclipse. The only completely safe way to observe is by indirect viewing; projection or using a video camera.

Equinox

A few minutes after the eclipse at 10:44 the sun crosses the equator on its way north marking the Spring or Vernal Equinox. At this time day and night are equal as the Sun rises at the North Pole and sets on the south.

Planets

Mercury - Mercury completes its very poor morning apparition during the first few days of the month before passing between us and the Sun. It will make a much better appearance in the evening sky next month.

Venus - Venus is now well established as the brilliant Evening Star in the western sky after sunset. A 2 day old crescent moon passes close by on the 22nd.

Mars - It may be possible to spot Mars low down in the west as the sky darkens after sunset, but it is too far away and close to the horizon for any serious observation. The red planet is now lost to us until its reappearance in the morning sky in the autumn.

Jupiter - The brightest object in the eastern sky after sunset is Jupiter. It is still very well placed for observation, but will very soon be racing towards the western horizon

Saturn - Saturn is an early morning object, rising at about 2am and remaining visible low in the southern sky among the stars of Scorpius until sunrise.

Uranus & Neptune - Both the outer planets are too close to Sun to be visible until later in the year.

Deep Sky



MI08 Galaxy RA IIh I2m Dec 55° 38' mag II.0

This edge on galaxy is quite easy to find being just below the bottom of the bowl of the Big

Dipper at about 1.5 degrees from Merak, the pointer farthest from the pole star. Like M82 it shows signs of disturbance with a similar mottling of new star formation along its length.



M97 The Owl Nebula RA 11h 15m Dec 54° 58' mag 12

This faint planetary nebula can be found by following the line of the Big Dipper from Merak to Phecda for about 2 degrees then moving away from the dipper by about 3/4 of a degree.

To become a planetary nebula is the fate that awaits our own star as it runs out of fuel, casts off its outer layers and contracts into a white dwarf. For a brief period the ultra violet radiation from the star causes the shell of gas to glow at it disperses into space and eventually fades away. A large telescope and dark skies are needed to see the owl's eyes, two dark voids in the gas.



M35 Open Cluster RA 6h 9m Dec 24° 20' mag 5.5

A large bright cluster in which Lord Ross counted three hundred stars. Some of the brighter members form a V shape pointing almost to the

centre of the cluster and snaking up the other side is a long curved chain like a very shallow S.

A little to the south west in the same low power telescopic field is NGC2158, a small triangular shaped cluster.

Peter Burgess

Wight Science

As well as monthly lectures arranged by VAS, there are other organisations on the Island holding regular events which may be of interest to members. We are hoping to provide a calendar of any such events each month so, if you know of anything which you think should be included here, please let me know.

Not for profit events only please.

Cafe Scientifique

Monday 9th March 2015

7_{pm}

Shanklin Conservative Club – Regency Suite
The Unique Properties of Water
Dr Patricia Hunt Department of Chemistry

Dr Patricia Hunt, Department of Chemistry, Imperial College London



Thursday 26 March 2015

7.00 for 7.30 pm

Bargeman's Rest, Newport – Sail Loft

Modern Medical Imaging: getting the
right treatment to the right patient

Dr Martin Christlieb, Department of Oncology,

Dr Martin Christlieb, Department of Oncology University of Oxford

Cafe Scientifique Monday 13th April 2015 7pm

Shanklin Conservative Club - Regency Suite

The Standard Models in Particle Physics

Professor Steve F King, High Energy Physics theory group of the School of Physics and Astronomy, Southampton University

Cafe Scientifique details are at:

http://cafescientifique.onthewight.com/

IET details are at:

http://mycommunity.theiet.org/communities/home/ I73#.VHOvQlusXwM

FOR SALE

Skywatcher SKP13065EQ2

I 30mm (5.1in) reflector

Hardly used due to light pollution in Ryde!

Complete and boxed (as new)

£130 new, sensible offers please

Contact Paul or Sheila 611063



Credit: http://www.sciencecartoonsplus.com/index.php





Island Planetarium @Fort Victoria

The Island's Telescope Professionals

Serious Stuff

TAL 200mm Newtonian Reflector OTA 180mm Maksutov Cassegrain OTA EQ 5 mount and drives

Various Used ETX 's

Also starter scopes and accessories

Discounts and deals for VAS members

Call Paul England – VAS Member on 761555 - leave a message if I am not there Or - enquiry @islandastronomy.co.uk

Citizen Scientists Lead Astronomers to Mystery Objects in Space



Volunteers using the web-based Milky Way Project brought star-forming features nicknamed "yellowballs" to the attention of researchers. Image Credit: NASA/JPL-Caltech

Sometimes it takes a village to find new and unusual objects in space. Volunteers scanning tens of thousands of starry images from NASA's Spitzer Space Telescope, using the Web-based Milky Way Project, recently stumbled upon a new class of curiosities that had gone largely unrecognized before: yellow balls. The rounded features are not actually yellow - they just appear that way in the infrared, colour-assigned Spitzer images.

"The volunteers started chatting about the yellow balls they kept seeing in the images of our galaxy, and this brought the features to our attention," said Grace Wolf-Chase of the Adler Planetarium in Chicago. A colourful, 122-foot (37-meter) Spitzer mosaic of the Milky Way hangs at the planetarium, showcasing our galaxy's bubbling brew of stars. The yellow balls in this mosaic appear small but are actually several hundred to thousands of times the size of our solar system.

"With prompting by the volunteers, we analyzed the yellow balls and figured out that they are a new way to detect the early stages of massive star formation," said Charles Kerton of Iowa State University, Ames. "The simple question of 'Hmm, what's that?' led us to this discovery." Kerton is lead author, and Wolf-Chase a coauthor, of a new study on the findings in the Astrophysical Journal.

The Milky Way Project is one of many so-called citizen scientist projects making up the Zooniverse website, which relies on crowdsourcing to help process scientific data. So far, more than 70 scientific papers have resulted from volunteers using Zooniverse, four of which are tied to the Milky Way Project. In 2009, volunteers using a Zooniverse project called Galaxy Zoo began chatting about unusual objects they dubbed "green peas." Their efforts led to the discovery of a class of compact galaxies that churned out extreme numbers of stars.

In the Milky Way Project, volunteers scan through images that Spitzer took of the thick plane of our galaxy, where newborn stars are igniting in swaths of dust. The infrared wavelengths detected by Spitzer have been assigned visible colors we can see with our eyes. In addition to the yellow balls, there are many green bubbles with red centers, populating a landscape of swirling gas and dust. These bubbles are the result of massive newborn stars blowing out cavities in their surroundings. The green bubble rims are made largely of organic molecules called polycyclic aromatic hydrocarbons (PAHs), cleared away by blasts of radiation and winds from the central star. Dust warmed by the star appears red in the center of the bubbles.

More at: www.nasa.gov

Microsoft is Open-Sourcing WorldWide Telescope in 2015

Why is this great news?

Millions of people rely on WorldWide Telescope (WWT) as their unified astronomical image and data environment for exploratory research, teaching, and public outreach. With OpenWWT, any individual or organization will be able to adapt and extend the functionality of WorldWide Telescope to meet any research or educational need. Extensions to the software will continuously enhance astronomical research, formal and informal learning, and public outreach.

What is WWT, and where did it come from?

WorldWide Telescope began in 2007 as a research project, led from within Microsoft Research. Early partners included astronomers and educators from Caltech, Harvard, Johns Hopkins, Northwestern, the University of Chicago, and several NASA facilities. Thanks to these collaborations and Microsoft's leadership, WWT has reached its goal of creating a free unified contextual visualization of the Universe with global reach that lets users explore multispectral imagery, all of which is deeply connected to scholarly publications and online research databases.

The WWT software was designed with rich interactivity in mind. Guided tours which can be created within the program, offer scripted paths through the 3D environment, allowing media-rich interactive stories to be told, about anything from star formation to the discovery of the large scale structure of the Universe. On the web, WWT is used as both as a standalone program and as an API, in teaching and in research - where it offers unparalleled options for sharing and contextualizing data sets, on the "2D" multispectral sky and/or within the "3D" Universe.

How can you help?

Open-sourcing WWT will allow the people who can best imagine how WWT should evolve to meet the expanding research and teaching challenges in astronomy to guide and foster future development. The OpenWWT Consortium's members are institutions who will guide WWT's transition from Microsoft Research to a new host organization. The Consortium and hosting organization will work with the broader astronomical community on a three-part mission of:

- 1. advancing astronomical research,
- 2. improving formal and informal astronomy education; and
- 3. enhancing public outreach.

http://www.worldwidetelescope.org/

Does Dark Matter Cause Mass Extinctions and Geologic Upheavals?

Research by New York University Biology Professor Michael Rampino concludes that Earth's infrequent but predictable path around and through our Galaxy's disc may have a direct and significant effect on geological and biological phenomena occurring on Earth. In a new paper in Monthly Notices of the Royal Astronomical Society, he concludes that movement through dark matter may perturb the orbits of comets and lead to additional heating in the Earth's core, both of which could be connected with mass extinction events.

The Galactic disc is the region of the Milky Way galaxy where our solar system resides. It is crowded with stars and clouds of gas and dust, and also a concentration of elusive dark matter – small subatomic particles that can be detected only by their gravitational effects.

Previous studies have shown that Earth rotates around the disc-shaped Galaxy once every 250 million years. But the Earth's path around the Galaxy is wavy, with the Sun and planets weaving through the crowded disc approximately every 30 million years. Analysing the pattern of the Earth's passes through the Galactic disc, Rampino notes that these disc passages seem to correlate with times of comet impacts and mass extinctions of life. The famous comet strike 66 million ago that led to the extinction of the dinosaurs is just one example.

What causes this correlation between Earth's passes through the Galactic disc, and the impacts and extinctions that seem to follow?

While travelling through the disc, the dark matter concentrated there disturbs the pathways of comets typically orbiting far from the Earth in the outer Solar System, Rampino points out. This means that comets that would normally travel at great distances from the Earth instead take unusual paths, causing some of them to collide with the planet.

Read more at: Royal Astronomical Society

Dark matter is a hypothetical kind of matter that cannot be seen with telescopes but accounts for most of the matter in the Universe. The existence and properties of dark matter are inferred from its gravitational effects on visible matter, radiation, and the large-scale structure of the Universe.

http://en.wikipedia.org/wiki/Dark matter

A Brummie's View of Dark Sky Observing

(or why you should come to the Isle of Wight!)

At the IOW



M13 60sec ISO400 (Culver Down)



Paul & I, Set-up on Culver Down



Ring Nebula 60sec ISO400 (Culver Down)

A star gazing night at The Clent Hills II miles SW of B'ham city centre & the view from our Dome



Sky glow on Clent at 9pm 17/1/12 - 40s@ISO200



Central B'ham from 10 storeys up on Aston University

A brief history.....

I live in the Birmingham suburb of Harborne which is about 3 miles South West of the city centre, I used to work long hours for the NHS often not finishing to 7 or 8pm, so needed a hobby that fitted in with my lifestyle but still allowed me to relax after work when it was normally dark.

After a little thought, I decided to rediscover my childhood passion for astronomy, this was about 8 years ago so I was out in my own garden on most clear nights, foolishly I went about it on my own not joining the local Birmingham Astronomical Society (BAS) until about 4 years ago.

As I'm a visual astronomer results at home were OK on bright objects with double stars being my favourite target, but with the sky glow in my garden I struggle to see much below 3rd magnitude with the naked eye so most DSOs were invisible. Then my wife suggested I take my smaller 4" scope with us for one of our regular holidays to Shanklin, despite being summer I still managed to get

some good views of Scorpius including the Cat's Eyes just from the hotel balcony (it's below my horizon in Harborne).

One of the benefits of my long NHS service was the 33 days holiday which we tended to used as six separate holidays often out of season and in the form of cheap four night mid week 'Sun' specials in various places around the country, so we booked some caravan holidays at various locations on the Island and spent at least 2 nights every holiday up on the downs above Brading or in the car park on Culver Down to great success.

We then enrolled on a star gazing weekend at the Planetarium in Fort Victoria with a biking mate of mine (motorcycling is my other hobby). Whilst he wasn't converted to astronomy he did like the place and coined the phrase it's like 'Shropshire by the Sea'. We all had a great time thanks to Paul and Andrew, viewing objects I'd only ever seen as images before!

Buoyed by this success we booked a holiday in North Devon at Combe Martin just on the edge of the Exmoor, by now I had subscribed to the Sky at Night magazine and was aware of Exmoor's Dark Sky status, so off we went complete with scope, in car for a four night break. Yes, you guessed it rained most days and if it wasn't raining it overcast particularly at night, so the scope stayed in the car, disheartened we booked another short break on the Island, in a Log Cabin at Gurnard Pines in early November.

This time I took my 8" Dob with a massive three bed cabin with just the two of us in it, I was able to keep it in an unheated room close to the south facing covered veranda. The sky was wonderful, helped by the fact it was late season & most of the site's lights were either off or went off at 11pm, so we had four superb nights without actually moving anywhere!

Still determined to see what a 'real' dark sky site looked like the following year we booked a short break in Ayr, Scotland less than hour's drive from the legendary Galloway Forest dark site, again the weather was rubbish indeed it was even worse than at Exmoor, raining the whole time and we soon ran out of things to do, then faced a long 5hr drive home. At that point we decided to give up on dark sky sites and just take the scopes with us every time we came across to the Island.

Later, on a dull and rainy club night a discussion ensued about the merits of going to any 'local' dark sky sites (all are at least 45mins drive away from us in city) over 'home' astronomy particular in relation to imaging DSO objects. I then suggested a 3rd option, why not combine a holiday on the Isle of Wight with some dark sky stargazing, like I'd been doing for the last few years or, if you'd got money to burn then, try Sark in the Channel Isles!

That lead to a pal of mine Paul (primarily an imager) coming with us for a short break in March. He liked it so much he joined us for the next three breaks on the Island, one of which included a couple of nights stargazing by the chines off the Military Road which we both found totally amazing plus another one of Paul and Andrew's star gazing weekends.

Yvonne and I are back again in mid March with yet another BAS member who we're sure will be amazed by your clear, dark skies and no doubt 'wowed' by your beautifully unspoiled Island to explore in the day time!

We look forward to you obtaining full dark sky status later this year, in the meanwhile a bit more astronomical publicity in the tourist guides wouldn't go a miss too!

Pete Thick

Birmingham Astronomical Society

Editors note: Thanks Pete, your comment about publicity is noted, look out for something in Summer 2015

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Complete with:

25mm wide angle eyepiece
10mm eyepiece
Barlow lens
90 degree diagonal mirror
Tabletop tripod
Carry case
& Full instructions

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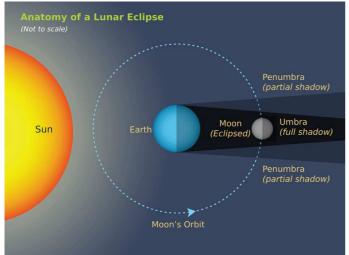
Artwork can be created or you can supply it.

Don't forget that member's who take the electronic version see a full colour version

Contact the Editor for information

Details on the Front Page

Moon Misconceptions



It might be expected that once every month, when the Moon passes between Earth and the Sun during a new moon, its shadow would fall on Earth causing a solar eclipse, but this does not happen every month. Nor is it true that during every full moon, the Earth's shadow falls on the Moon, causing a lunar eclipse. Solar and lunar eclipses are not observed every month because the plane of the Moon's orbit around the Earth is tilted by about five degrees with respect to the plane of Earth's orbit around the Sun (the plane of the ecliptic). Thus, when new and full moons occur, the Moon usually lies to the north or south of a direct line through the Earth and Sun.

Although an eclipse can only occur when the Moon is either new (solar) or full (lunar), it must also be positioned very near the intersection of Earth's orbit plane about the Sun and the Moon's orbit plane about the Earth (that is, at one of its nodes). This happens about twice per year, and so there are between four and seven eclipses in a calendar year. Most of these events are quite insignificant; major eclipses of the Moon or Sun are less frequent.

A lunar eclipse occurs when the Moon passes directly behind the Earth into its umbra (shadow). This can occur only when the Sun, Earth, and Moon are aligned (in "syzygy") exactly, or very closely so, with the Earth in the middle. Hence, a lunar eclipse can only occur the night of a full moon. The type and length of an eclipse depend upon the Moon's location relative to its orbital nodes.

Unlike a solar eclipse, which can only be viewed from a certain relatively small area of the world, a lunar eclipse may be viewed from anywhere on the night side of the Earth. A lunar eclipse lasts for a few hours, whereas a total solar eclipse lasts for only a few minutes at any given place, due to the smaller size of the moon's shadow. Also unlike solar eclipses, lunar eclipses are safe to view without any eye protection or special precautions, as they are dimmer than the full moon.

The next lunar eclipse is on 4 April 2015.

LHC Ready to Hunt Down Mystery Dark Matter Particles



An upgraded, more powerful Large Hadron Collider, slated to begin returning to service next month, should open the door to new realms of physics, including possibly a glimpse of so-called "dark matter" particles, which, along with an equally mysterious dark energy force, dominates the universe.

Dark matter is so named because it does not emit or absorb light - or any other electromagnetic radiation. Its presence is inferred by how its gravity impacts stars, galaxies, dust and other visible matter.

Scientists calculate that ordinary, visible matter accounts for about 5 percent of the universe. The rest is dark matter and a repulsive force called dark energy, which is accelerating the universe's expansion.

"What we know about dark matter is that it exists, and then very little after that," physicist Michael Williams, with the Massachusetts Institute of Technology, told Discovery News.

"It would be nice if we could start to understand what dark matter is and how it affects the galaxy and the evolution of the universe, but just opening the door in particle physics to whatever is on the other side... would be stepping into the unknown, which is exciting," he said.

A promising doorway into the new frontier is located at Europe's CERN particle physics laboratory near Geneva, home to the Large Hadron Collider, or LHC.

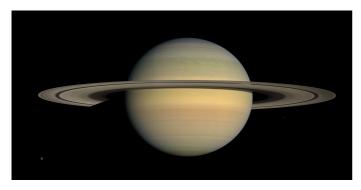
In 2012, researchers using the world's most powerful atom smasher discovered a new subatomic particle, the Higgs boson, which is believed to give matter its mass. The work led to the 2013 Nobel Prize in Physics for two scientists who theorized the particle's existence.

Read more at: http://space.com

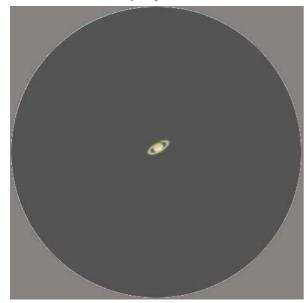
Your First Telescope

So, you've decided to take the plunge and buy a telescope - congratulations! Astronomy can be a life long pleasure, with the right equipment. How do you decide what to buy to ensure you don't end up with a stack of equipment you never use?

Would you be happy if you purchased a telescope with something like this on the box



to find that it was only capable of this?



Some words of advice:

- 1. Don't buy anything yet!
- 2. Join a club, or tag along on one of their observing sessions. This is the single best piece of advice I can give you. There is no substitute for spending time with real equipment out in the field. There's no substitute for experience
- 3. Learn to spot a few constellations and maybe a planet or two with the naked eye. If you can't point to M42, how do you expect to able to point a telescope (which has a much narrower field of view) there?

- 4. Subscribe to one of the three major magazines, Sky at Night, Sky and Telescope or Astronomy. These will get you started not only with finding celestial objects, it will also acquaint you with the variety of equipment out there
- 5. Get some decent warm clothing, you're going to spend some time outside!
- 6. Don't buy anything yet!

Try Binoculars

Your ideal first telescope may, in fact, not be a telescope at all, but a pair of binoculars.

Most experienced astronomers keep a pair to hand, for quick peeks or for scanning the field of view before using their telescopes. The common recommendation is to get a pair of 7x50's, or at least, 7x35's.

The first number "7" is the magnification, the second "50" is the aperture (diameter) of each objective lens, in mm. You want the largest lenses you can comfortably hold. Many astronomers opt for 10x50's, although you should make sure in advance that you can hold them steady at that power.

- 1. Cheap binoculars are much more useful than cheap telescopes.
- 2. Good binoculars can last you a lifetime. You'll still need a pair of binoculars for quick peeks and scanning. As a result, binoculars tend to be something you buy only once or twice.
- 3. Finally, a "spotting scope" can be used for astronomical and terrestrial purposes and can be a good stepping stone to a first telescope.

VAS can help you

VAS have a good range of binoculars, telescopes and associated accessories which you are welcome to try. We have no commercial axe to grind and will do our best to give you understandable and impartial advice.

In Summary

- 1. Get as much advice as you can
- 2. Binoculars, even cheap ones, are almost always a good substitute for a cheap telescope
- 3. STAY AWAY from department store telescopes!

Never forget, the best telescope you can ever own is the one you use the most!



2015 - International Year of Light

On 20 December 2013, the UN General Assembly 68th Session proclaimed 2015 as the International Year of Light and Light-based Technologies (IYL 2015). The IYL 2015 Resolution in all official languages of the UN is available here.

In proclaiming an International Year focusing on the topic of light science and its applications, the UN has recognized the importance of raising global awareness about how light-based technologies promote sustainable development and provide solutions to global challenges in energy, education, agriculture and health. Light plays a vital role in our daily lives and is an imperative cross-cutting discipline of science in the 21st century. It has revolutionized medicine, opened up international communication via the Internet, and continues to be central to linking cultural, economic and political aspects of the global society.

IYL 2015 programs will promote improved public and political understanding of the central role of light in the modern world while also celebrating noteworthy anniversaries in 2015 - from the first studies of optics 1,000 years ago to discoveries in optical communications that power the Internet today.

This International Year will bring together many different stakeholders including scientific societies and unions, educational institutions, technology platforms, non-profit organizations and private sector partners.

Read more at: http://www.light2015.org/Home.html

VAS Representative at NPS&CA

As many members probably know, I am on the Management Committee of the Newchurch Parish Sports & Community Association (NPS&CA). In that position I am **not** a representative of VAS.

The NPS&CA need representatives from each club or association in the Parish to put forward suggestions and observations and to keep the Management Committee in check.

VAS need a representative - the duties are not onerous and mainly consist of attending a meeting in Newchurch once every 3 months.

The NPS&CA are important to the future of VAS so I'd love to hear from any member willing to volunteer.

Dark Skies Rep Needed

After supporting the Dark Skies project since its inception, Chris Wood is making some changes to his life and will be taking some time away from us for the next few months.

Firstly, I'd like to thank him for everything he has done and for his devotion to the project. Without his support, the project would certainly have failed, with it we have achieved encouragement and recognition across the Island, in particular from the AONB, the IW Council, CPRE, CDfS and the IDA. **Many thanks Chris**.

Secondly, while Chris is away I need someone to work with me on the project (probably one of Chris's biggest achievements!).

If you'd like to help, please get in touch and I'll explain what's involved.

Brian Curd

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

New Zenith needs letters, articles, reviews or pictures related to all aspects of astronomy.

Contributions to the Editor please at the email or postal address on the front page.

"The sun, with all those planets revolving around it and dependent on it, can still ripen a bunch of grapes as if it had nothing else in the universe to do"

Galileo Galilei

"We are using resources as if we had two planets, and not just one.

There can be no 'plan B' because there is no 'planet B'"

Ban Ki-moon

"A time will come when men will stretch out their eyes. They should see planets like our Earth"

Sir Christopher Wren