

Society News

Well here we are in August again, AGM time. Most of the existing Committee members have agreed to stand for another year and we can see from the “postbag” that, despite publishing nomination forms in the last few NZs, just one other person has put their name in the hat to join us.

It is disappointing that members don’t step forward to help with the running of VAS, even if it’s just for a year, but I’m not sure what more can be done to encourage them. The Committee are a bunch of ordinary members, we don’t have supernatural abilities, and most of us just donate our time to keeping VAS running. We are amateurs!

VAS faces some difficulties in the year to come and needs your support. Our income is decreasing and our expenditure is forever growing - we are certainly not broke but, the loss of income from the Garlic Festival will have a significant effect on our finances. It means that we will be making some cutbacks and some increases to our charges.

We are committed to continuing:

- Monthly meetings with high quality speakers
- A monthly journal
- An active and well-equipped observatory
- Public outreach events

Once again, this is your Society, please think about joining the Committee to see VAS get over this “hump in the road” and move forward.



*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
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Tel: **01983 296128** or email: editor@wightastronomy.org

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

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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
28 Aug	AGM - 7pm Sharp Astro Photography and AGM	Simon Plumley
25 Sep	Photographing the Aurora	Elizabeth Cunningham
23 Oct	TBA	TBA
27 Nov	<i>Medley of talks & discussion:</i> <ul style="list-style-type: none"> • Goldilocks Planets • OBAFGKM (how the classification of stars has developed). • Night Vision • Arcturus 	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

None

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

Astronomers aren't anti-light

We just want:

***The right light
In the right place
At the right time***

VAS Contacts 2014/15

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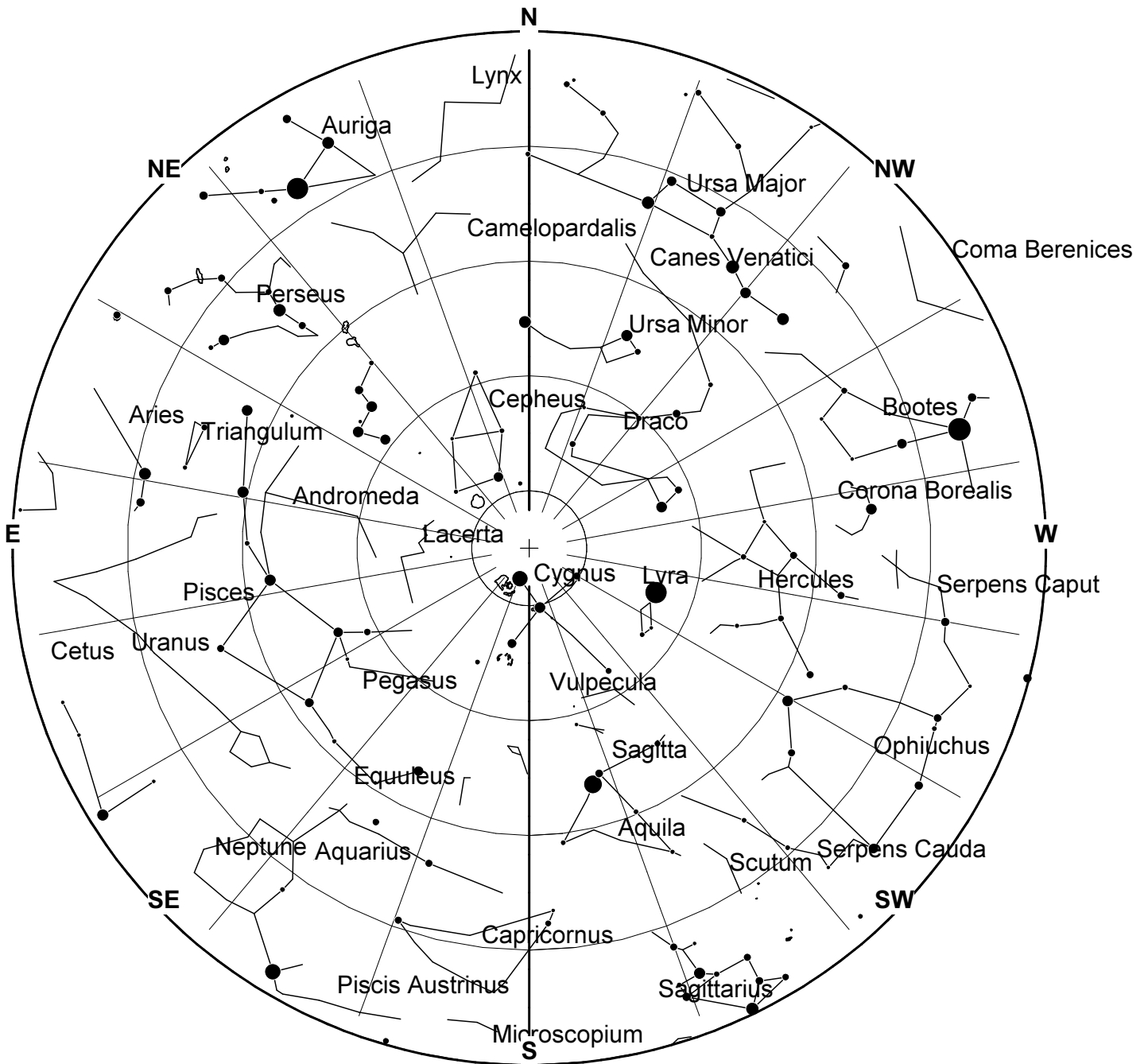
Important

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

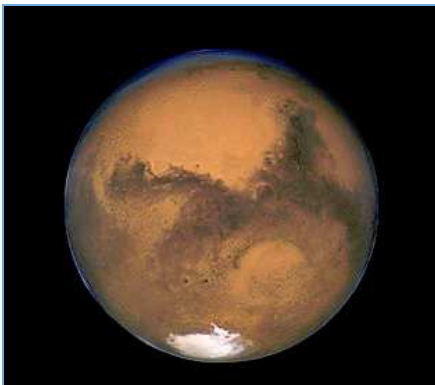
On several recent occasions, lights, heaters and the Meade LX200 have been left on!

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

September 2015 Sky Map



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







Mars is the fourth planet from the Sun and the second smallest planet in the Solar System, after Mercury. **Mars** is host to seven functioning spacecraft: five in orbit—2001 Mars Odyssey, Mars Express, Mars Reconnaissance Orbiter, MAVEN and Mars Orbiter Mission—and two on the surface—Mars Exploration Rover Opportunity and the Mars Science Laboratory Curiosity. Observations by the Mars Reconnaissance Orbiter have revealed possible flowing water during the warmest months on Mars. In 2013, NASA's Curiosity rover discovered that Mars's soil contains between 1.5% and 3% water by mass (albeit attached to other compounds and thus not freely accessible).

*This article is licensed under the [GNU Free Documentation License](https://www.gnu.org/licenses/old-licenses/gpl-2.0.html).
It uses material from the Wikipedia article "Mars".*

September 2015 Night Sky

Moon Phases

New	First Qtr	Full	Last Qtr
			
13th	21st	28th	5th

Planets

Mercury

For the first half of the month Mercury puts in a rather poor appearance in the evening sky. It can be found about a hand span to the left of the setting Sun, but is very low down on the horizon at sunset, setting about 30 mins after the Sun on the first and about 15 mins after on the 15th when the Moon is about 5° above and slightly to the left.

Venus

After spending the first part of the year as the “evening star” Venus has now passed into the morning sky. In the same way as the autumn is a poor time for observing the planets in the evening sky, it is a good time to observe them in the morning sky. It will be a very conspicuous in the east before sunrise for the rest of the year. A thin crescent moon is close by on the 10th.

Mars

Mars passes from Cancer into Leo this month, and around the 25th is close to Regulus the brightest star in Leo at the base of the backward question mark. At this time it also lies about midway between the much brighter Venus and Jupiter. On the 11th the crescent moon lies about 5 degrees directly below Mars on a line between Venus and Jupiter.

Jupiter

During the second week of the month Jupiter should become visible in the bright pre-dawn sky. Follow a line from the much brighter and higher Venus towards the point where the Sun will rise above the horizon to find it. After the second week it will be bright enough to be easily seen by casual observers.

Saturn

Saturn can be seen low in the southwest as the sky darkens. It is not well placed for observation; being so low down the view will be spoiled somewhat by atmospheric turbulence.

Uranus

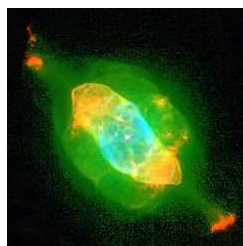
Uranus is easily seen through a pair of binoculars. This month it is best observed after midnight when it will have climbed high enough in the sky to clear the haze. Look for it close to the 5th magnitude star Zeta Piscium. On the 1st

Uranus lies very close the similar brightness 88 Piscium, it is just a little to the right of the star. As the month goes by it will mover further to the right, and by the month end the threesome will make a little set square pattern with Zeta and Uranus marking the hypotenuse of the triangle.

Neptune

Neptune starts the month about half way between the stars Lambda and Sigma Aquarii. On the 5th it passes very close by the 7th magnitude Hiparcus catalogue star HIP11910. Neptune is about a magnitude fainter than the star. As the month progresses it moves about 30 arc minutes towards Sigma Aquarii.

Deep Sky



NGC7009 The Saturn Nebula
RA 21h 5m Dec -11° 20'
mag 8.3

Originally discovered by William Herschel in 1782 and named by Lord Rosse who saw its elongated shape for the first time. This tiny nebula is one of the few that can show some hint of colour, usually reported as light green. The high brightness allows the use of fairly high magnification and being so small this is needed if the Saturn shape is to be seen.



M72 Globular Cluster
RA 20h 54m Dec -12° 31'
mag 10.0

Visually a rather small globular but it can be forgiven its apparent size when you consider that it is on the other side of the galaxy from us. It can be just seen in binoculars and a small to medium sized telescope with some magnification is needed to resolve any of the stars. It is not as tightly packed in the core as many globulars.



M39 Open Cluster
RA 21h 32m Dec 48° 32' mag 4.5

The Milky Way is full of star clusters, many are dimmed by intervening dusts or are so surrounded by other stars that it can be difficult to identify them. M39 can be spotted with the naked eye under good conditions, it is large, about the size of the full moon, so binoculars or a rich field telescope are the best instruments to use to observe this triangular shaped cluster.

Peter Burgess

Advertising in NZ

If you would like to advertise in New Zenith, you can have a space like this for £50 per year

Only four slots are available

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

Totland Stargazing

We are organising a Stargazing evening for 45 Phd students from Southampton University at the Youth Hostel in Totland on Monday 21st Sept

A draft itinerary is:

7.00pm BBQ and set up scopes.

8.30pm Brian to do a start up talk and intro to the sky

9.00pm Start observing

We need lots of members with scopes, so please let me know if you are willing and able to help

Elaine Spear

elainespear1@gmail.com

Engineers Clean Mirror with Carbon Dioxide Snow



Just like drivers sometimes use snow to clean their car mirrors in winter, two Exelis Inc. engineers are practicing “snow cleaning” on a test telescope mirror for the James Webb Space Telescope at NASA’s Goddard Space Flight Center in Greenbelt, Maryland. By shooting carbon dioxide snow at the surface, engineers are able to clean large telescope mirrors without scratching them.

“The snow-like crystals (carbon dioxide snow) knock contaminate particulates and molecules off the mirror,” said Lee Feinberg, NASA optical telescope element manager. This technique will only be used if the James Webb Space Telescope’s mirror is contaminated during integration and testing.

The Webb telescope is the scientific successor to NASA’s Hubble Space Telescope. It will be the most powerful space telescope ever built. With a mirror seven times as large as Hubble’s and infrared capability, Webb will be capturing light from 13.5 billion light years away. To do this, its mirror must be kept super clean.

“Small dust particles or molecules can impact the science that can be done with the Webb,” said Feinberg. “So cleanliness especially on the mirrors is critical.”

Webb is an international project led by NASA with its partners, the European Space Agency and the Canadian Space Agency.

Image credit: NASA/Chris Gunn

Text credit: Laura Betz, NASA's Goddard Space Flight Center, Greenbelt, Maryland

Distortion

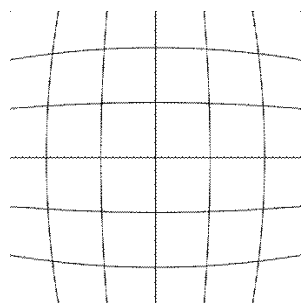
Distortion is the most easily recognised aberration as it deforms the image as a whole, since straight lines of an object are rendered as curved lines.

Distortion affects the shape of the image rather than its sharpness and is caused by the fact that the power of a spherical surface increases towards its periphery. Instead of remaining constant, the magnification increases as the eye uses wider and wider zones of a spherical lens.

In other words, distortion arises from a difference in image scale across a field of view. If the image scale decreases at the edge of the field, the centre of the image appears to bulge outward. This is called barrel distortion. If the image scale is larger at the edge of the field than at the centre, the corners of an image appear to bend outward. This is called pincushion distortion.

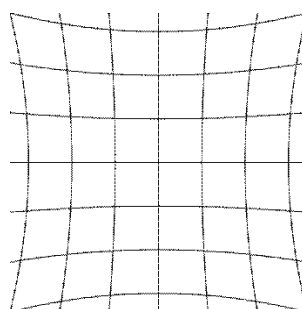
The images below show the effects of distortion on a square-grid target viewed through convex and concave lenses. Concave lenses produce barrel distortion and is often reported by short sighted people who view through peripheral zones of their spectacle lenses. Convex lenses produce pincushion distortion - the type of distortion typically seen with a strong magnifier.

Barrel distortion



In barrel distortion, image magnification decreases with distance from the optical axis. The apparent effect is that of an image which has been mapped around a sphere (or barrel). In a zoom lens barrel distortion appears in the middle of the lens's focal length range and is worst at the wide-angle end of the range.

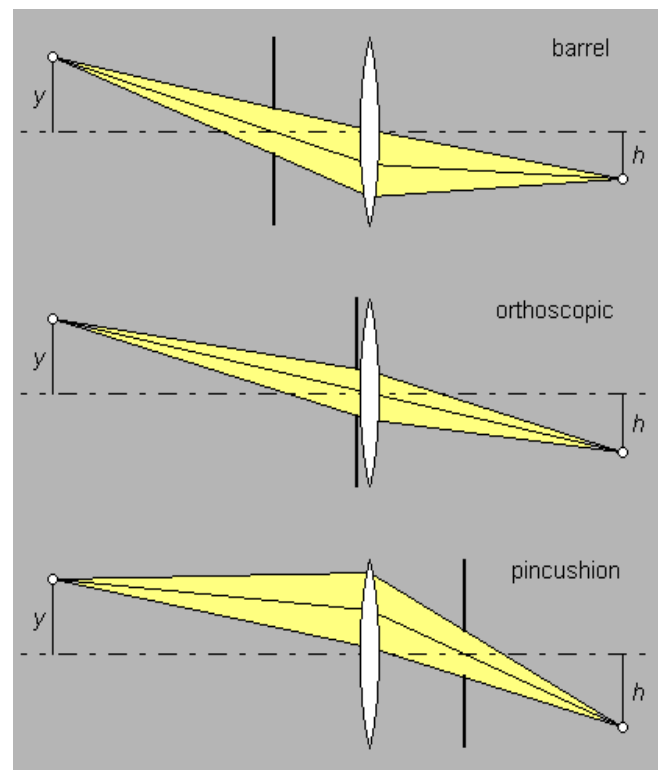
Pincushion distortion



In pincushion distortion, image magnification increases with the distance from the optical axis. The visible effect is that lines that do not go through the centre of the image are bowed inwards, towards the centre of the image, like a pincushion.

An optical system typically has many openings, or structures that limit the ray bundles (ray bundles are also known as pencils of light). These structures may be the edge of a lens or mirror, or a ring or other fixture that holds an optical element in place, or may be a special element such as a diaphragm placed in the optical path to limit the light admitted by the system. In general, these structures are called stops, and the aperture stop is the stop that determines the ray cone angle, or equivalently the brightness, at an image point.

A common cause of distortion is the introduction of a stop in a system of (thin) lenses, e.g. to reduce spherical aberration or astigmatism. The position of such a stop determines the amount and the sign of the distortion.



Note that the image size h differs for a constant object size y .

The position of the stop in the lens can greatly influence the amount of distortion. In a simple lens, if the stop is near the lens, there is little distortion, but if it's located far in front of or behind the lens, then distortion is more likely.

The position of the image point is given by the intersection of the chief ray, which passes through the centre of the stop, and is characteristic of the light cones in front of and behind the stop. When the stop is located at the lens, the chief ray passes through the optical centre, and leaves the lens at the same angle at which it entered. Such a system does not distort the image and is called orthoscopic. With the stop in front or in rear, the chief ray is refracted. The image and object distances, measured

along the chief ray, differ from the orthoscopic case. The ratio of these distances determines the image magnification h/y , which is smaller with the stop in front and larger with a rear stop. Straight lines will be distorted when the magnification h/y is a function of the off-axis distance y .

The top configuration leads to a situation where h/y decreases toward the image corners: barrel distortion. The bottom configuration leads to a situation where h/y increases toward the image corners: pincushion distortion.

The size of the stop has no effect on the distortion, as the chief ray does not alter its route when the aperture is made smaller or larger. In the absence of the stop, the lens suffers from spherical aberration, coma, and astigmatism.

Distortion is most commonly seen in zoom lenses, particularly zooms of wide range near the extremes of their range. Wide angle are more likely to exhibit barrel distortion while telephoto lenses can exhibit pincushion distortion.

Distortion can also vary with focal distance: some lenses exhibit distortion when focusing on nearby objects, but are distortion free when focused on objects near infinity. The aberration is minimised by a symmetrical lens design, which is (near) orthoscopic.

In photography, distortion is generally referred to an optical aberration that deforms and bends physically straight lines and makes them appear curvy in images. The effects of distortion are easily seen in many wide-angle camera lenses. A photograph, which includes straight lines, (such as a brick wall) will easily display the curving of lines associated with distortion.

Distortion is one of the least problematic aberrations for telescopes, as it is typically only large over very wide fields. Very wide field binoculars may show some noticeable distortion, especially less expensive pairs. Over the small fields used by telescopes, distortion is normally negligible. Even wide field telescopes cover small angles compared to photographic lenses. While a 2° or 3° field is considered wide for a telescope, a 24mm camera lens covers 84° and a 14mm lens covers an enormous 114° .

Distortion is normally measured as a percentage. An 8" f/10 SCT exhibits 0.04% pincushion distortion, while an 80mm f/7.5 doublet refractor has just 0.0016% barrel distortion. For comparison, a typical wide-angle camera lens has around 1% distortion.

It is important to keep in mind that distortion varies with wavelength, as wavelength changes, so does the level of distortion

Distortion is mostly only a problem in photography, and for some imagers straight lines are of low importance as their subject does not have them. Some strive for perfection and spend lots of effort in post image-processing. Others search for lenses that deliver perfect images from the onset. However, as mentioned before, correcting one aberration can give rise to another. There is often a compromise, and one has to weigh up the odds, and decide which type of aberration is acceptable.

Elaine Spear

Next Month: Field Curvature

ISS Photos used in Light Pollution Study

In a remarkable new study, scientists from the Universidad Complutense de Madrid, Spain and the Cégep de Sherbrooke in Canada, together with members of the public, have worked on a project called Cities at Night. The aim is to produce a global colour map of the Earth at night from pictures taken by astronauts on the International Space Station using a standard digital camera.

Starting in July 2014, this huge project required the cataloguing of over 130 000 images — the ISS's entire high-resolution archive — and geo-referencing them to place them on a map. The images were also calibrated using the stars in the background sky over the ISS, as well as ground-based measurements of the night sky brightness.

More at: <http://www.iau.org/>

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£750 ono

Deep Sky & Planetary Delights

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+

EQ5 mount and drives - £200

ETX 's & various scopes

Call Paul England, VAS member

on 07771550893

Windows 10?

For two or three years I have been using Windows 7 and, with a few tweaks, it has served me quite well. I resisted the temptation to move to Windows 8 and more recently 8.1 as I saw no reason to make another change. In fact, since they were released I have, more or less, made a complete switch to Apple OSX.

The only reason I keep a Windows machine at all is to run FrameMaker (the application used to produce this newsletter) and Family Tree Maker (I am too tight to buy the Mac version!).

Anyhow, recently Windows 7 had been offering me a FREE upgrade to Windows 10 so I accepted, intending to keep the installation somewhere on my disc and upgrade later at a time convenient to me (and within the 1 year free period). That didn't happen though! Almost as soon as I had downloaded it, I must have clicked on "Install Now" or agreed to let the system upgrade when it was ready. That was not clever as I was now reliant on my daily, automated backup should anything go wrong!

It was alarming to get home from work one day and see that the process was 75% complete - obviously I let it complete and then I set about searching the web for the experiences of others before clicking on any more buttons!

My Computer Details

I have is a pretty standard, fast, modern PC

- Dell i5 Quad Core 3.2GHz
- 1Tb Hard Drive
- 16Gb Ram
- Onboard Intel graphics and an additional AMD Radeon HD7000 Graphics Card
- It was running Windows 7 Home Premium 64bit

The details in this article refer mainly to my machine. You may have a different experience.

For example:

- There are some known issues for those using nVidia graphic cards
- Windows 10 seems to download to any machine before checking that it will install and run on the hardware!

***Please do your homework before upgrading!
and for safety, take a full system backup first!***

I have "upgraded" a PC at the observatory which you are welcome to try before upgrading your own.

What Happened Next?

When the installation had completed, the system asked me to accept terms and conditions.

Now is the time to tread carefully:

1. **You don't need a Microsoft account to continue** and I suggest you **don't** create one. Strangely, you have to click on "Create Account" to get to a page which offers the option "Sign in without a Microsoft account".
2. "Express Settings" are the default but **I recommend taking your time and stepping through the "Customized Setup" instead.**
3. Most security settings are set to provide Microsoft with information about your use of the computer and the internet. **Think carefully about what you choose to disclose - I switched every option to either OFF or BASIC.**
There is a full walkthrough of this at <http://www.howtogeek.com/>

The rest of the setup continued without problems. All hardware, files, passwords and installed programs were recognised and worked straight away (*well, after a couple of automatic restarts*).

The single remaining problem was restoring a sensible Start button - *the very thing MS told us was coming back!*

I never liked the Windows 7 Start button and this one is much worse! Clicking it produced a menu taking up about a third of my screen with pictures of loads of Apps I would never use, and all my favourite applications were presented in one long list - to me it looked pretty much like Windows 8.1, childish.

There is an easy solution though. Download "Classic Shell" from <http://www.classicshell.net/>. Take your time to explore the options and you'll be able to get your Start options and menus exactly how you like them and ignore all the irrelevant bits.

All in all Windows 10 seems stable and quicker than 7. Start up times are much improved - I don't like the very "flat" look much but I guess I'll get used to that given time.

There is an option to roll back to W7 or 8 within 30 days but I think I'll stick with it.

All in all a painless experience, unexpected, but nothing to rave about. *Your mileage may vary!*

Brian Curd

The Lonely Mountain

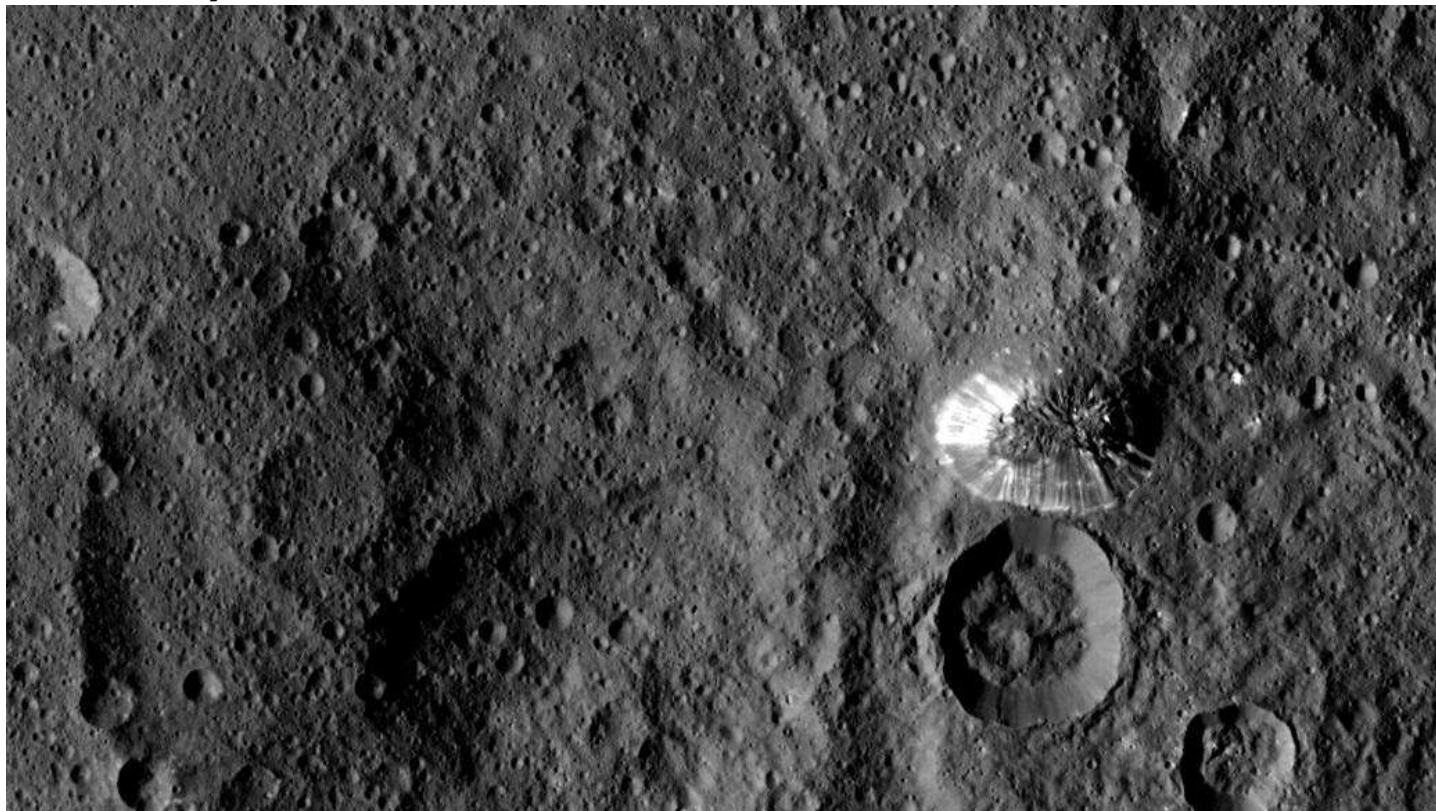


Image Credit: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA

NASA's Dawn spacecraft spotted this tall, conical mountain on Ceres from a distance of 915 miles (1,470 kilometers). The mountain, located in the southern hemisphere, stands 4 miles (6 kilometers) high. Its perimeter is sharply defined, with almost no accumulated debris at the base of the brightly streaked slope.

The image was taken on August 19, 2015. The resolution of the image is 450 feet (140 meters) per pixel.

Dawn's mission is managed by NASA's Jet Propulsion Laboratory for NASA's Science Mission Directorate in Washington. Dawn is a project of the directorate's Discovery Program, managed by NASA's Marshall Space Flight Center in Huntsville, Alabama. UCLA is responsible for overall Dawn mission science. Orbital ATK, Inc., in Dulles, Virginia, designed and built the spacecraft. The German Aerospace Center, the Max Planck Institute for Solar System Research, the Italian Space Agency and the Italian National Astrophysical Institute are international partners on the mission team. For a complete list of acknowledgments, see <http://dawn.jpl.nasa.gov/mission>.

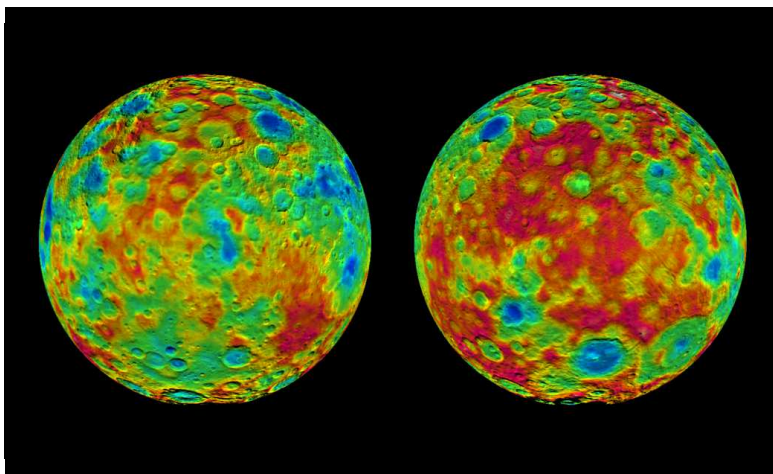
For more information about the Dawn mission, visit <http://dawn.jpl.nasa.gov>.

This pair of images shows colour-coded maps from NASA's Dawn mission, revealing the highs and lows of topography on the surface of dwarf planet Ceres.

The map at left is centered on terrain at 60 degrees east longitude; the map at right is centered on 240 degrees east longitude.

The colour scale extends about 5 miles (7.5 kilometers) below the surface in indigo to 5 miles (7.5 kilometers) above the surface in white.

The topographic map was constructed from analyzing images from Dawn's framing camera taken from varying sun and viewing angles. The map was combined with an image mosaic of Ceres and projected as an orthographic projection.



NASA: There is No Asteroid Threatening Earth



Numerous recent blogs and web postings are erroneously claiming that an asteroid will impact Earth, sometime between Sept. 15 and 28, 2015. On one of those dates, as rumours go, there will be an impact - "evidently" near Puerto Rico - causing wanton destruction to the Atlantic and Gulf coasts of the United States and Mexico, as well as Central and South America.

That's the rumour that has gone viral - now here are the facts.

"There is no scientific basis - not one shred of evidence - that an asteroid or any other celestial object will impact Earth on those dates," said Paul Chodas, manager of NASA's Near-Earth Object office at the Jet Propulsion Laboratory in Pasadena, California.

In fact, NASA's Near-Earth Object Observations Program says there have been no asteroids or comets observed that would impact Earth anytime in the foreseeable future. All known Potentially Hazardous Asteroids have less than a 0.01% chance of impacting Earth in the next 100 years.

The Near-Earth Object office at JPL is a key group involved with the international collaboration of astronomers and scientists who keep watch on the sky with their telescopes, looking for asteroids that could do harm to our planet and predicting their paths through space for the foreseeable future. If there were any observations on anything headed our way, Chodas and his colleagues would know about it.

"If there were any object large enough to do that type of destruction in September, we would have seen something of it by now," he stated.

Another thing Chodas and his team do know - this isn't the first time a wild, unsubstantiated claim of a celestial object about to impact Earth has been made, and

unfortunately, it probably won't be the last. It seems to be a perennial favorite of the World Wide Web.

In 2011 there were rumours about the so-called "doomsday" comet Elenin, which never posed any danger of harming Earth and broke up into a stream of small debris out in space. Then there were Internet assertions surrounding the end of the Mayan calendar on Dec. 21, 2012, insisting the world would end with a large asteroid impact. And just this year, asteroids 2004 BL86 and 2014 YB35 were said to be on dangerous near-Earth trajectories, but their flybys of our planet in January and March went without incident - just as NASA said they would.

"Again, there is no existing evidence that an asteroid or any other celestial object is on a trajectory that will impact Earth," said Chodas. "In fact, not a single one of the known objects has any credible chance of hitting our planet over the next century."

NASA detects, tracks and characterizes asteroids and comets passing 30 million miles of Earth using both ground- and space-based telescopes. The Near-Earth Object Observations Program, commonly called "Spaceguard," discovers these objects, characterizes the physical nature of a subset of them, and predicts their paths to determine if any could be potentially hazardous to our planet. There are no known credible impact threats to date - only the continuous and harmless in-fall of meteoroids, tiny asteroids that burn up in the atmosphere.

JPL hosts the office for Near-Earth Object orbit analysis for NASA's Near Earth Object Observations Program of the Science Mission Directorate in Washington. JPL is a division of the California Institute of Technology in Pasadena.

More information about asteroids and near-Earth objects is at:

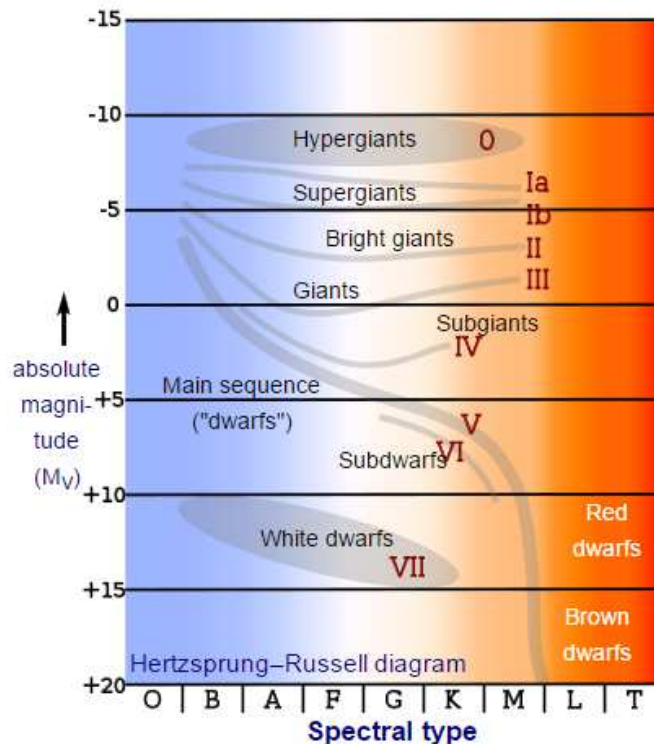
<http://neo.jpl.nasa.gov>

<http://www.jpl.nasa.gov/asteroidwatch>,

and on Twitter: @asteroidwatch



Star Classification

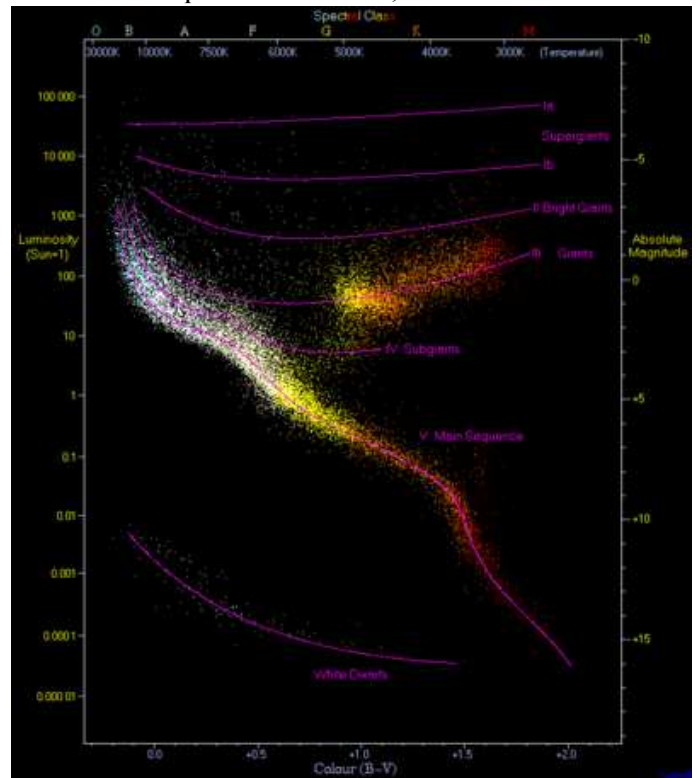


In astronomy, stellar classification is the classification of stars based on their spectral characteristics. Light from the star is analyzed by splitting it with a prism or diffraction grating into a spectrum exhibiting the rainbow of colors interspersed with absorption lines. Each line indicates an ion of a certain chemical element, with the line strength indicating the abundance of that ion. The relative abundance of the different ions varies with the temperature of the photosphere. The spectral class of a star is a short code summarizing the ionization state, giving an objective measure of the photosphere's temperature and density.

Most stars are currently classified under the Morgan-Keenan (MK) system using the letters O, B, A, F, G, K, and M, a sequence from the hottest (O type) to the coolest (M type). Each letter class is then subdivided using a numeric digit with 0 being hottest and 9 being coolest (e.g. A8, A9, F0, F1 form a sequence from hotter to cooler). The sequence has been expanded with classes for other stars and star-like objects that do not fit in the classical system, such as class D for white dwarfs and class C for carbon stars.

In the MK system a luminosity class is added to the spectral class using Roman numerals. This is based on the width of certain absorption lines in the star's spectrum which vary with the density of the atmosphere and so distinguish giant stars from dwarfs. Luminosity class 0 or Ia+ stars for hypergiants, class I stars for supergiants, class II for bright giants, class III for regular giants, class IV for sub-giants, class V for main-sequence stars, class sd for sub-dwarfs, and class D for white dwarfs. The full spectral

class for the Sun is then G2V, indicating a main-sequence star with a temperature around 5,800K.



Hertzsprung-Russell diagram with 22,000 stars plotted from the Hipparcos Catalogue and 1,000 from the Gliese Catalogue of nearby stars. Stars tend to fall only into certain regions of the diagram. The most prominent is the diagonal, going from the upper-left (hot and bright) to the lower-right (cooler and less bright), called the main sequence. In the lower-left is where white dwarfs are found, and above the main sequence are the subgiants, giants and supergiants. The Sun is found on the main sequence at luminosity 1 (absolute magnitude 4.8) and B-V colour index 0.66 (temperature 5780 K, spectral type G2V)

The Hertzsprung-Russell diagram, abbreviated H-R diagram or HRD, is a scatter graph of stars showing the relationship between the stars' absolute magnitudes or luminosities versus their spectral classifications or effective temperatures. More simply, it plots each star on a graph measuring the star's brightness against its temperature (colour). It does not map any locations of stars.

The diagram was created circa 1910 by Ejnar Hertzsprung and Henry Norris Russell and represents a major step towards an understanding of stellar evolution or "the way in which stars undergo sequences of dynamic and radical changes over time".

More information here: <https://en.wikipedia.org/>

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LINKS, COMMENTS AND OBSERVATIONS

Australian Astronomy Decadal Plan 2016-2025

The National Committee for Astronomy (NCA) of the Australian Academy of Science carries out a formal strategic planning process on a 10-year time scale. This provides the opportunity for Australian astronomy to carry out a stock take of its capabilities, assess its impact both nationally and internationally, provide a vision for the future, and to set priorities and develop strategies on how that vision might be implemented.

The exposure draft of the Decadal Plan for Australian Astronomy 2016-2025 can be downloaded [here](#).

More at: <http://australianastronomydecadalplan.org/>

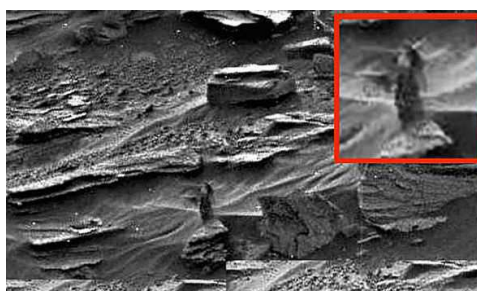
Lost for Words?

Ever tried explaining something complex to a young child? Sometimes it's hard not to use complicated language, particularly if you know something about the subject already. Well, Wikipedia has a special area to help, it's called Simple English Wikipedia and to quote from its front page "We use Simple English words and grammar here. The Simple English Wikipedia is for everyone!"

It contains 114,542 articles so there's bound to be something you'll find useful in there!

Link: https://simple.wikipedia.org/wiki/Main_Page

Nurse, they're out of bed again!



The Daily Express (Aug 11) reported that this photo shows a human like figure on Mars.

Alien life hunter Scott C Waring posted: "The woman seems to have breasts...indicated by the shadow on its chest."

"We also see two arms that are lighter in colour and what looks like a head with long hair."



Again on the 25 Aug, after this photo was discovered, The Daily Express reported,, that "Pictures published by NASA, after being taken by its Curiosity Rover probe, which is traversing the surface of the Red Planet, have been posted online as proof of 'mini aliens'".

It is the latest in a string of sightings of so-called evidence of aliens on Mars in official Nasa pictures, following the alleged discovery of a tiny alien woman earlier this month.

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

"The quantum is the greatest mystery we've got. Never in my life was I more up a tree than today"

John Wheeler

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

Sir Christopher Wren

"The universe seems neither benign nor hostile, merely indifferent."

Dr. Carl Sagan

"The solar system consists of Jupiter plus debris"

Isaac Asimov