

SPÉIR

No.2 Spring 06

Astronomy with a Kerry Twist

MORE THAN MEETS THE EYE

The mysterious and elusive world of dark matter and energy



JUPITER RISING



METEORS & HOW TO SEE THEM



CHOOSING AND USING BINOCULARS

News Roundup
The Spring Sky
Club Photos
Recent Observing
Virtual Lunar Atlas
Follow the Bear

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Welcome to SPÉIR

Hi All. We made it, you now hold in your hands the second issue of Spéir. Kerry Astronomy Club's quarterly publication. Issue one seemed to have gone down well enough, so we are striving to continue in the same vein for issue two. In this issue, Marian Gunning continues her educational and informative "whats a..." articles. We look at the greatest mysteries of modern cosmology, dark matter and dark energy and try to explain it in simple terms. You will find a guide to the night sky for the coming months, a brief guide to observing Jupiter, an article on choosing binoculars for astronomy, reviews of free software and much more. If you are new to the club, welcome, and we look forward to seeing you at one of our observing sessions or talks in the near future. If you are thinking of joining and wondering what its all about, we hope this newsletter will give you an idea about Kerry Astronomy Club and our activities. Until the next time

Cheers

Trevor O'Donoghue

KAC NEWS

Recent Visitors to our website may have noticed some changes. There are now some Google ads on each page. While not the prettiest, these ads help pay for the cost of the .com and the hosting for the site and may even provide us with a few extra Euro. Next time you visit the site, why not click on one and help fund Kerry Astronomy Club.

We are also in the process of setting up a secure payment facility on the website so that we can accept memberships or donations online. If there is anything else people would like to see on the website or wish to contribute in any way just let us know. All help will be greatly appreciated. Since the last issue We also held our AGM. It was well attended even though it occurred on Valentines night. There is nothing exciting to report, Finances are healthy, people seem happy with the monthly meetings and the observing sessions. The general consensus seems to be carry on as before.

Binoculars for Astronomy

The beginning astronomer, who longs for the sleek appearance of a telescope, often overlooks binoculars as an astronomical instrument. This is a pity, as first

telescopes are often nowhere as near as good optically or as versatile as a pair of binoculars. Pick them up, step outside and you are ready for a nights observing. Galaxies, open clusters, globular clusters, nebulae, double stars, planets, the moon and rich star fields can all be observed with a humble pair of binoculars. If you fancy a quick look at the moon, a cluster, a conjunction or spot a gap in the clouds, then binoculars are perfect for the job. The fact that you are using both eyes means that what you see, seems more real than in a telescope, after all, two eyes are better than one.

Almost every household has a pair of binoculars lying around and almost every set will provide you with astronomical views. Binoculars come in many shapes and sizes, and will have numbers such as 10X50, 8X25, 7X40 or 15X70 stamped on them. These numbers are the key to understanding binoculars. The first number is the magnification; the second is the diameter of the objective lens, so for example, a set of 10X50 will magnify 10 times, while the diameter of the large (front or objective) lens is 50mm. The effectiveness of binoculars is largely based on the size of the objective lens, not on the magnification. The larger the lens, the more light the binocular will gather. This means that you can see fainter stars, have better contrast better resolution and brighter images than a binocular with a smaller lens. So try and get as large an objective lens as possible.

The magnification of a binocular is important but not as important as aperture for astronomical viewing. As magnification increases you will be able to see more detail, clusters resolve into individual stars as opposed to a hazy patch; you will be able to split double stars into their components. There are also disadvantages to having high magnification in binoculars. As the magnification increases, the image gets fainter, the field of view gets smaller, and it becomes increasingly difficult to hold the binoculars steady. As you reach a magnification of about X15, you really need to mount the binoculars on a tripod to keep them steady. When you mount binoculars on a tripod, you can see way, way more, as the image is not shaking around as much.

Ideally for astronomy, you would want to have an objective lens with a diameter of at least 40mm, but the higher the better. Some people swear by 7X40, but I would prefer an objective lens of at least 50mm. As

for magnification, I find X10 ideal. For your first pair of Binoculars, I would recommend a set of 10X50. This size is light, portable, has high enough magnification, good aperture, can be hand held, has a very generous field of view of around 5.5 – 6.5 degrees. The larger the field of view the better the experience. At 5.5 you feel as if you are among the stars. A pair of 10X50's under a dark sky will show you most of the messier list, countless clusters and more. There are some other points to consider when buying binoculars. The glass should be multi coated, and the prisms should be BaK4. Check binoculars before buying, to see if the images are aligned and can be focused together. Also check the exit pupil, which is the part you look through, they should be perfect circles.

If you wear glasses, you should consider another factor, which is the eye relief. The greater the eye relief the easier it will be to use spectacles with binoculars. You will also want to be able to adjust the focus of both eyepieces relative to each other. This is known as dioptre adjustment. In essence, you focus one eye using the focus wheel in the centre, and focus the other eye by twisting the eyepiece, until both eyes are in perfect focus.

Finally, you may decide that binoculars are perfect for you, and you could not be bothered with the hassle of telescopes. Some people do not even own a telescope, just have a few pairs of binoculars. Big binoculars are falling in price, so are now a viable option for a lot of people. Common binocular sizes are 15X70, 20X80 and 25X100's

A final piece of advice when using binoculars is to take the caps off..

Trevor O'Donoghue



Name	Dates	Peak date	ZHR	Rating
Leonids	Nov 14-Nov 21	Nov 17	variable	Irregular
Geminids	Dec 7-Dec 17	Dec 14	120	Strong
Quadrantids	Jan 1-Jan 5	Jan 3	120	Strong
Perseids	Jul 17-Aug 24	Aug 12	90	Strong
Eta Aquarids	Apr 19-May 28	May 6	60	Strong
Arietids	May 22-Jul 2	Jun 7	54	Weak
South Delta Aquarids	Jul 12-Aug 19	Jul 28	20	Strong
Orionids	Oct 2-Nov 7	Oct 21	20	Strong
Lyrids	Apr 15-Apr 28	Apr 22	15	Strong
Alpha Aurigids	Aug 25-Sep 5	Sep 1	10	Medium
Ursids	Dec 17-Dec 26	Dec 22	10	Strong

WHAT'S A.... Meteor

The second in a series of articles bringing the universe to you in simple easy to understand terms

The sight of an unexpected shooting star never fails to excite the observer, whether it is a once off, blink and you'll miss it or a glorious shower with spectacular fireballs.

The term 'Shooting star' is a misnomer. In fact what we are observing is earth passing through cometary dust particles shed by a comet which at some time in the past orbited our sun. The fine dust is weakly held together in the comet's nucleus by gravity. Recent research suggests that the primary source of cometary dust is more likely to be the total disintegration of a comet. These dust particles can be smaller than a grain of sand and can only be seen when they enter earth's upper atmosphere at speeds of up to 70km per second. The resulting friction when they collide with air molecules causes the bright streaks and trails we see in night skies.

There are two types of meteor –

Sporadic – which can appear from any point at any time

Shower – caused by cometary debris. Numeration is calculated by the number of meteors observed by the naked eye during one hour. This is called Zenith Hourly Rate (zhr). Those not observed by naked eye are called micrometeors and are not included in zhr. Meteors in a particular shower all appear to radiate from the same point in or near a constellation. This point is called the radiant. Showers are named after the constellation in which the radiant lies.

Meteor trails can provide a reflector for radio communications. The 1958 Journal of Atmospheric and Terrestrial Physics xii.329 states "At an early stage it became apparent that reflections from meteor trails play an important part in vhf ioniseric forward scattering." Put in simple terms – because of curvature of the earth radio

signals can not be transmitted over long distances. However it is possible to reflect vhf signals via meteor trails to a receiver up to 2000km away. This reflection of data lasts only a short period of time (a couple of minutes max) but provides useful information to astronomers on the meteor shower itself and in the field of communications for sending small amounts of data over long distance. For the rest of us meteor showers can be enjoyed by anyone, no expensive equipment necessary and if conditions are favourable (clear skies, moon-light free and maximum zhr occurs during the dark night hours) we can be lucky enough to see a celestial extravaganza. The tables above give some information on some of the largest meteor showers in the year, their dates and max ZHR. There is a lot of further information on meteor showers visible from Ireland available on our website courtesy of Marian Gunning. I highly recommend you download it.

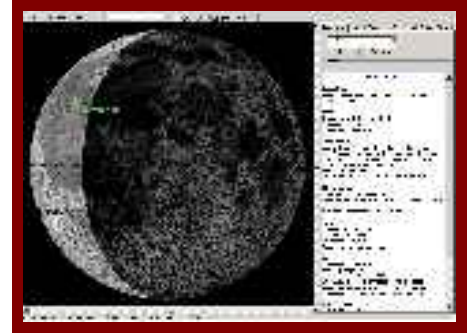
Marian Gunning

NASA'S MARS RECONNAISSANCE ORBITER AT MARS

By the time you are reading this, NASA's mars reconnaissance orbiter will have arrived at mars. Over the course of the next six months, it will continue adjusting its orbit through a process called aerobraking, where the spacecraft skims through the Martian atmosphere, slowing it down a little bit each time. In addition to the high resolution images and scientific data it will capture, the spacecraft will help the rovers and future landers communicate back to Earth.



SPÉIR REVIEW



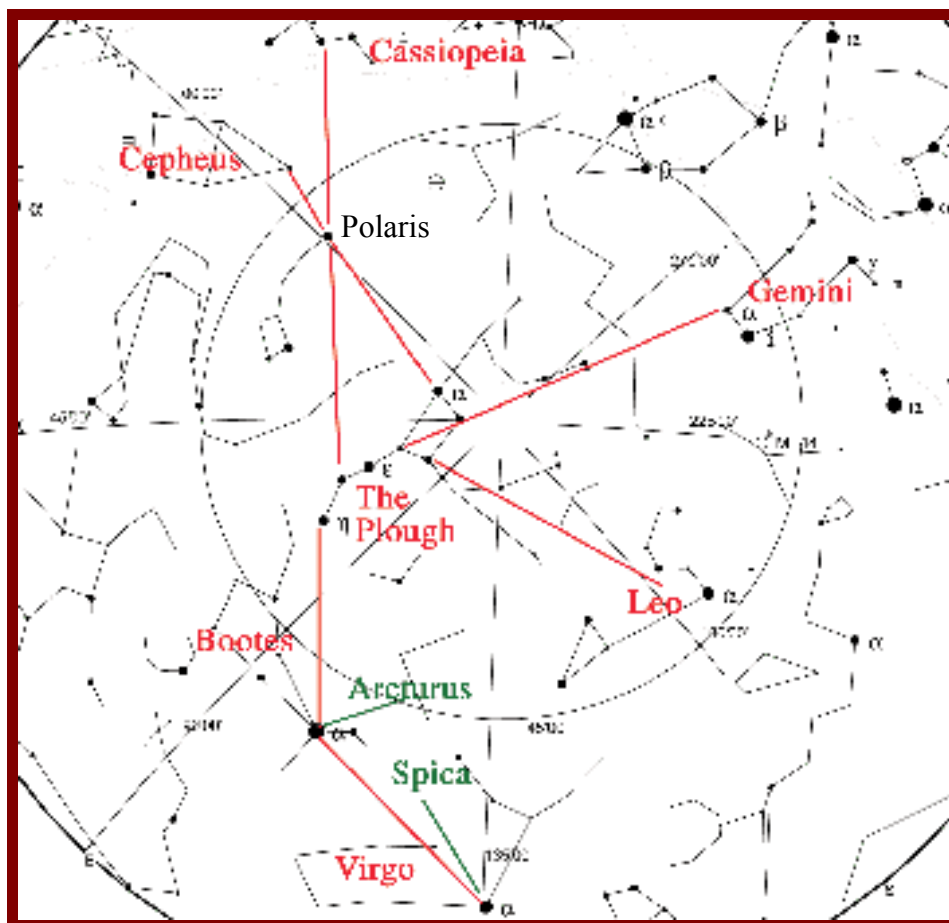
VIRTUAL MOON ATLAS,

is a computer programme that allows the user to identify features on the moon. Virtual Moon Atlas is free to download and is available at www.astrosurf.com/avl/. The program comes in 4 versions from the "light" version to the "Pro" version. The light or the basic Version should be suitable for most users. The interface and use of the program is extremely simple, on the left of the screen is a real time map of the moon, and on the right is an information panel. Simply point your mouse to a feature that takes your interest and click and you are presented with lots of information on the feature. In the image above, I clicked on the crater Aristarchus and found out it was formed 425,000 years ago, measures 41kmX41km, is 3000 metres high and am told is best observed 4 days after first quarter or three days after last quarter. It even tells me that 50mm is the minimum recommended aperture to see it. There is a lot more information available. The programme also allows you to zoom in or out, flip the image vertically or horizontally or both, depending on your choice of telescope or binoculars. Next time you are observing the moon, why not use this programme to help find your way around it better.

Trevor O'Donoghue

NASA AIMS FOR MAY SHUTTLE FLIGHT

Space Shuttle project manager Wayne Hale said NASA is aiming to get the shuttle into orbit during its May 10th to 22nd launch window. A lot of work is still being done to ensure that there is no further problems with falling bits of foam. Hale said he was optimistic about making the May launch window, although a serious time delay could see the launch postponed until its next launch window in July. The main objectives for this shuttle mission are continued shuttle safety testing and a trip to the international space station.



FOLLOW THE BEAR

The plough, the big dipper, the frying pan, all names for part of the constellation known as Ursa Major or the Great Bear.

The plough, along with Orion are probably the best known, groupings of stars to beginning Astronomers and the general public.

The seven stars that make up the plough are the easiest stars to recognise in the constellation of Ursa Major. If you can spot these stars, you can use them to find your way to a number of other constellations, and find North. Look at the diagram above and you will see the plough. If you draw an imaginary line through the two end stars you will end up at the north star, which is known as Polaris. The two end stars are known as the pointer stars, because they point to the north star. The north star itself is part of another constellation known as the little bear or Ursa Minor. This looks like a smaller upside down version of the plough. If you continue this line through the north star you will come to a faint constellation known as Cepheus. To me this looks like a drawing a child would make of a house, a triangle on top on a square, with the point of the triangle pointing at the north star.

The plough can easily be used to find another two constellations, Bootes and Virgo. The brightest star in Bootes is

Arcturus and the brightest in Virgo is Spica.

There is a saying which goes

"Arc on to Arcturus, speed on to Spica."

This saying relates to the handle of the plough. If you follow its curve around you will come to the bright star Arcturus in Bootes and if you keep going you will reach Spica in Virgo. Bootes is easily recognised by its distinctive kite shape.

To find the constellation Cassiopeia, draw an imaginary line from the second star in the plough through the north star and you will reach Cassiopeia, with its distinctive "W" shape. There are many more constellations that can be found from the plough, the chart has details of a few.

Learning these constellations, and the constellations that can be found from Orion will form the basis for learning your way around the sky. In time you will see them as old friends, and as you spot Orion rising early on an Autumn morning, you will know winter is here. Similarly when Arcturus and later Spica are visible at reasonable hours, you can be sure spring is under way. So next time you are wondering "what star is that"...Follow the bear.

Trevor O'Donoghue

THE DARK STUFF

The latest buzz words in cosmology which have entered popular culture are "Dark Matter" and "Dark Energy". They are the holy grail of cosmology. Like the holy grail, every one is looking for them but no one knows what they are looking for.

Dark Energy and Dark matter seem to be able to sort out any and all inconsistencies in the latest cosmological models, from the big bang and the expansion of the universe to rotation of galaxies to the amount of "stuff" in the universe. So what exactly is Dark Energy and Dark Matter...Well, the short answer is that no one knows, however their hypothetical effects are much better understood and we can study these effects to get an idea of what they are.

It all started in 1933 when a Swiss astrophysicist, Fritz Zwicky, working at the Californian Institute of Technology in the US was studying the Coma Cluster of Galaxies. By studying their motion and interaction in relation to one another he was able to estimate the amount of stuff that should be in these galaxies. The reality however, was a different matter entirely (excuse the pun). When the mass of these galaxies was measured by direct observations of size and brightness, it turned out to be way less than was needed to tally with their speedy orbits. Zwicky hypothesised on the existence of an unseen substance that could account for the missing matter and gravitational effects, and so Dark matter began its long road into the world of everyday theoretical cosmology.

There is other evidence for dark matter and it comes again from the study of galaxies. Scientist studying the rotation of stars within galaxies have noted that the orbital speed of stars far from the centre of the galaxy are vastly greater than can be explained by the visible matter alone. Also most stars in spiral galaxies orbit at roughly the same speed, irrespective of their distance from the centre of the galaxy. This points to an unseen mass to ensure that the known laws of gravity are adhered to. Another strong source of evidence comes from the structure of the Universe. It is now generally accepted that the universe began with a big bang about 13.7 billion years ago.

After the big bang, matter formed, and in turn stars, galaxies and clusters of galaxies. The problem is

that the initial temperature and pressure of the early universe was far too high for matter to collapse and form stars and galaxies. Insert some dark matter into the mix and hey presto, the conditions are right for the formation of matter, stars and galaxies. Modern observations and computer simulations seem to reinforce the idea of dark matter on an ongoing basis.

There are a number of types of Dark matter being proposed.

Hot dark matter, Warm dark matter, Cold dark matter and Baryonic dark matter. Most of the dark matter is believed to be made from exotic

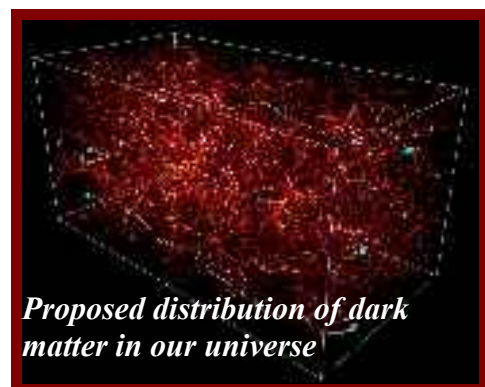


A halo of dark matter surrounds a spiral galaxy

particles that we have yet to discover. Some of the most popular contenders for the building blocks of dark matter are axions, wimps, simps and gravitinos.

All this dark matter must be hiding somewhere. Some say it lies in a halo, around galaxies, others say it is in abundance intergalactic space and yet even others saw they have tracked down entire galaxies made from dark matter.

Some scientists are not convinced, being of the view that there is no such thing as dark matter. They think that it is our understanding of gravity which is incomplete and needs to be modified to work on a galactic scale. In other words, maybe Einstein and Newton are not 100% correct. This is extremely hard for most scientist to swallow and



Proposed distribution of dark matter in our universe

so dark matter seems to be here to stay for the time being.

Dark Energy is a much more recent phenomenon. In 1998 some astronomers studying supernovas in distant galaxies stumbled onto one of the greatest discoveries in modern cosmology. They observed that the supernovas were dimmer than they should have been. The only way for that to happen, the astronomers realised, was if the galaxies and supernovas were much further away than had been presumed. This could only be possible if the expansion of the universe had sped up at some time in the past. It had been known for a while that the universe was expanding, but it was thought that the expansion was slowing down due to gravity. It was proposed that eventually we would have a "big crunch" where the universe would collapse on itself. Their discovery in 1998 that the universe was expanding, at an accelerating rate changed the face of modern Cosmology. Something had to be causing the universe to expand at an accelerating rate, because gravity should ensure that the acceleration of the universe was decreasing, or at best static. This problem led to the birth of dark energy. Dark energy is a hypothetical form of energy that has a negative pressure. Dark energy is a force that causes the universe to expand. In the early



universe, gravity was trying to slow down the acceleration of the universe and dark energy was trying to increase the acceleration, they held each other in check but the universe kept expanding from the initial blast of the big bang. Because The universe was expanding, the gravitational effects were becoming less and less. At a point about 5 billion years ago, Dark energy became stronger than gravity and so the expansion of the Universe accelerated. Now that dark energy is flinging the universe apart at faster

and faster speeds, the process will continue indefinitely, until the universe ends up in what is known as "The Big Chill", Brrrrr.....But luckily for us on earth, our sun will have expanded well before that time and destroyed the planet.

Einsteins famous equation $E=mc^2$ tells us that matter and energy are directly related. Cosmologists now speak of matter energy densities..In other words how much stuff there is. It turns our that we can only observe about 4 or 5 % of the universe, 26% is made up of dark matter, and 70% is dark energy. 96% of the universe is invisible and we cannot tell what the stuff is made from. We have some way to go yet, but then again, maybe we just don't understand gravity.

Trevor O'Donoghue

NEW HORIZONS

NASA's New Horizons spacecraft finally launched from Cape Canaveral, Florida on January 19th. Traveling away from Earth at a speed of 13 kilometers per second (8 miles per second), the small piano-sized spacecraft will encounter Pluto in July 2015 after a long 9-year journey. Along its way, New Horizons will pass by Jupiter in 2007 and continue its journey to the Kuiper belt after investigating Pluto and its moon Charon.

STARDUST

When NASA scientists first cracked open Stardust's return capsule, they weren't sure what they were going to see; lots of cometary particles or just a few? The results have exceeded everyone's expectations. The scientists estimate they have up to a million cometary particles in the aerogel collection trays, with several as large as the width of a human hair. NASA's Johnson Space Center will begin distributing particles to more than 150 researchers worldwide within the next week.

SINGLE STARS

For more than 200 years, astronomers thought that most of the stars in our galaxy had stellar companions. But a new study suggests the bulk of them are born alone and never have stellar company. Since planets are believed to be easier to form around single stars, the discovery could mean planets are more common as well.





Leo & the Lads

Pictured at the recent Connaught Star Party, held by Galway Astronomy Club are from left to Right: Kevin Lawlor, Leo Enright, Paddy Stack and Michael Scully. A lot of you will recognise Leo from his RTE days, he is now chairman of discover science and engineering, a government body set up to promote interest in science and engineering. Leo, one of many speakers, gave a lecture on mars and presented the latest images in stunning 3D

Jupiter Rising



Jupiter and its great red spot

Spring is upon us and at the time of writing Jupiter is beginning to make its presence felt in the early morning sky.

On the last day of Feb it will rise in the South East at 00:38. By the end of March Jupiter is rising at 22.29 and by the end of April it will rise at 20.15 in the East-South East, so as darkness descends Jupiter is well placed for viewing. Jupiter is one of those astronomical objects that will reward

any type of observation. Shining at mag -2.5, the only objects that will be brighter, are the Sun, Moon, and Venus. Sirius, the brightest star in the sky shines at mag -1.5. Jupiter is a full two and a half times brighter. Jupiter is like a brilliant beacon, urging further observation. Turn a pair of binoculars (any size) on Jupiter and you will be greeted by up to 4 pinpricks of light which are scattered about Jupiter. (If you are using binoculars, try and keep them steady by leaning on a wall or mounting them on a tripod.) These are the four Galilean moons, named after their discoverer Galileo Galilei. The interesting thing about these moons is that they move around the planet and will show noticeable movement over the space of a few hours. Look a few hours later and they will have all changed their position. It is fascinating to watch the moons move in their orbits around Jupiter from hour to hour and night to night. Some times a moon or two will be missing, this is because the moon on its orbit around Jupiter has slipped behind the planet as seen from Earth. The table below show orbital times in earth days of the four Galilean Moons.

Io	1.77 days
Europa	3.55 days
Ganymede	7.15 days
Callisto	16.69 days

Io is the most volcanically active body in the solar system, continually spewing out gases and lava. Europa on the other hand is an ice covered world, and there are strong suspicions that there are oceans under the ice, that may support life.

If you are the owner of a telescope, then a whole other level of observing opens up to you. Cloud bands on the disc of Jupiter are readily visible even in a telescope with an aperture of 50mm. Last year I easily observed distinct cloud bands on Jupiter with a 70mm skylux telescope. Push up the size of the telescope a little further and even more detail awaits. More cloud belts and on nights when the atmosphere is steady, you will be able to make out detail in these cloud belts such as the great red spot and other swirls and formations. There are still more phenomenon available to observe with your telescope. Regular transits of the Galilean moons across the planet are also visible, with the moon casting a dark shadow on the planet as it moves across the disc. You will also be able to see moons as they



The four Galilean moons

disappear behind Jupiter as seen from Earth, only to pop out on the other side a while later. This is known as an occultation. Most astronomy magazines carry information on a monthly basis about the position of Jupiter's' Satellites and their phenomenon. It was Galileo's observations of these satellites, in 1609, that led him to realise that they were orbiting Jupiter. This was radical at the time because it was widely believed that the earth was the centre of the Universe, and that everything orbited around it. Galileo realised that this must be wrong, his observations of the moons orbiting Jupiter and his study of the phases of Venus led him to reinforce and provide proof of the Copernican view of the universe, which was that the Sun was the centre of the universe. This landed him in serious hot water with the church and his views were considered blasphemous and he was forced to retract, but it spelt the end for the earth centered view of the universe.

Trevor O'Donoghue

SKY HIGHLIGHTS

The Planets for the next few months

Mercury – Past its best and not really visible with ease during this period although in mid April it is visible just before sunrise in the eastern sky.

Venus – During March, Venus is a dawn sight, rising before the sun. Mar 25th sees it at its furthest from the sun. Venus stays in the dawn sky for April and May.

Mars – Mars is still in Taurus, but fades a little as the month progresses. Track its movement as it moves into Gemini and skirts past the Open Cluster M35 in mid April. Watch Mars as it climbs higher through Gemini on its way towards Saturn in Cancer.

Jupiter – See the Article on Jupiter for details.

Saturn – Still on show as we enter Spring. It does not stray far from the beehive cluster in Cancer over the course of the next few months.

SPRING CONSTELLATIONS

March

This month's skies are alive with creatures. As well as Leo, the Lion, riding high, the giant water snake Hydra sprawls across the heavens. Close to its head lies Cancer, the Crab. In Greek mythology, the Crab was plucky enough to attack the hero Hercules while he was fighting Hydra. Nearby is the small constellation of Canis Minor, the Little Dog. Along with Canis Major, it is one of the two dogs said to belong to the hunter Orion.

April

In Greek Legends, Virgo, the Virgin, represented the corn goddess Demeter. Its brightest star Spica, Latin for "ear of wheat", refers to the grain held by the figure. Visible from both hemispheres, the constellation is the second largest in the night sky and is well-known for its galaxies. Virgo is far from the dust clouds of the Milky Way, so we have a clear view of the more distant Virgo cluster of galaxies. In all, there are about 2,000, including spirals, ellipticals, and irregular galaxies. However, only the brightest are visible with small telescopes – at about 50 million light years from Earth, the galaxies appear quite small and faint.

May

Ursa Major, the Great Bear, contains one of the most well-known star patterns. Called The Plough, or The Big Dipper, it consists of the seven

brightest stars in the constellation and is easy to spot from many places in the northern hemisphere. The whole of the Great Bear covers a much larger area. A Greek myth says that it is a princess named Callisto, who was wooed by the God Zeus and turned into a bear by his jealous wife Hera.

Ruairi Connaughton

NOT TO BE MISSED THIS SPRING

JUPITER This spring sees Jupiter becoming an observing object yet again. See the article for further details, but try not to miss Jupiter.

SPRING GALAXIES



For those of you with medium to large instruments, try and track down and identify some of the Galaxies in the Spring Skies...Details on the Website

SOLAR ECLIPSE



On the morning of 29th March a partial Solar Eclipse will be visible from Ireland. On this occasion less than a quarter of the Sun will be covered by the Moon. At 09.47am the moon will begin to move between the Earth and the Sun, blocking out part of the Sun's disc. As the eclipse progresses, the Moon will move across the sun's disc, and from Kerry, the Moon will obscure just over 16% of the Sun at mid eclipse which occurs at 10.24am. The eclipse finishes at 11.02am.

On no account should anybody attempt to look at the Sun without proper filters...not even with your eyes, or you risk blindness. There

are a number of ways to safely observe the sun including the correct use of filters and by solar projection. You can project the sun using binoculars or a telescope. Instructions for correct solar projection can be found on www.kerryastronomyclub.com A cheap alternative and still a safe way to observe the sun by eye is to use welders glass as a filter for the naked eye. The glass has to be **at least** grade 14 for safe viewing. ON NO ACCOUNT SHOULD YOU OBSERVE THE SUN WITHOUT PROPER PROTECTION FOR YOUR EYES.

THE MOON

Perhaps the greatest sight available in amateur instruments. Some people spend a lifetime studying the moon (just ask Patrick Moore). Detail changes from hour to hour and is best seen at the terminator (where night meets day on the moon). The moon is best observed when it is far from full, when the glare is not too much and a lot of detail is visible. Download a lunar observing map at www.kerryastronomyclub.com

MORE CONTRIBUTORS WANTED

If any of you would like to see your name in print or have any articles lying around that you would love to share then please email them to trevor@framecommunications.com and I can include them in the next issue. There are no hard and fast rules on what to write about, it might be your learning curve with astronomy, your favourite things to look at..anything as long as its astronomy related. As for guidelines, the only two are

1. All sizes are welcome but try and keep articles to under 1,000 words as this is roughly a page with a few pics.
2. Try to write the article in simple, easy to understand terms. We are not all rocket scientists.

Thats it, get writing and emailing. I look forward to hearing from you guys soon.



Using, his dobsonian telescope and a webcam on Feb 2nd 2006



with the course to demonstrate the topics covered and the constellations under such an excellent sky. The site is at least 4 miles from the nearest streetlights (about 6 of them) and there was no discernible light pollution in any direction! The South Kerry observing site is well christened now and we hope to be returning there soon.



Michael Scully

OBSERVING LOCATIONS

Banna Beach – To get to our Banna Beach observing location, take the road from Tralee to Ballyheigue, pass through Ardfert and take a left a mile or two outside the village, where the sign says Banna beach. Continue to the end of this road and when you reach the dunes, turn left to the boathouse. There is some flat land and lots of space to park your cars here.

Short Mountain – from Killarney side. When you reach Castlemaine, take the road for Tralee. About a mile or so outside the town on the left there is a sign which says "Scenic Route". Take this road to the top of the mountain where you will come across a car park on your right. If you reach the summit you have gone too far.

Short Mountain – from Tralee Drive past the entrance gate to the Aqua dome and after about 2 km (a mile and a half), you come to a Tee junction where you turn left. Then after just 50m turn right up the narrow winding road that will take you to the top of the hill. Proceed over the summit and 150m later there is a car park on your left. This is the observing site.

Dromid Pearse GAA grounds (near Waterville) – from Killorglin. After crossing the bridge in Killorglin coming from Tralee or Killarney turn left at the cross and proceed past Glencar and over Balach a Sheen pass towards Waterville. About 15 km before Waterville, Drumid Pearse's GAA grounds are on your right.

SOUTH KERRY OBSERVING SESSION

As part of a night class that Tony Curran gave before Christmas in Waterville we promised to hold an observing session in the area. Overcast and unpredictable weather lead to a couple of cancellations, but on February 20th everything lined up and four of us set off from Tralee for what would be one of the best sessions of the winter.

An hour and twenty minutes of a drive later and we were turning into the car park of Drumid Pearse GAA grounds deep in the dark valleys of the south-west Kerry mountains. A crystal clear inky black sky and about 30 people of all ages greeted us. We set up the telescopes and

following a quick tour of the constellations with the laser pointer we started to show those there the sights on view. Saturn, as always, was a big hit with some wondering if we had cheated and put a picture slide of it into the eyepiece! Soon after starting some of us saw a brilliant fireball. About three times as bright as Venus at its best and quite slow (for a meteor). It disappeared behind a piece of cloud and the whole cloud lit up. A rare and unusual sight.

As the night wore on the younger stargazers were carried away to their beds leaving the way free for the course members and others to sample the other delights of the night sky. We sampled galaxies, nebulae, globulars and the two planets on show. It was great to be able to combine an observing session

NEWS FROM OTHER IFAS CLUBS

Tullamore Astronomical Society are holding their 16th annual Cosmos Star party on the weekend 21st to 23rd April in Tullamore. Speakers include Dr. Neil Bone, Deputy Editor of *Astronomy Now*. Mr. Michael O'Connell, Tullamore Astronomical Society. Ms. Catherine Ansbro, Kingsland Observatory, Roscommon. Mr. Ash McFadden, Inishowen Planetarium & Maritime Museum. Dr. Massimo Teodorani, CNR Radioastronomy Institute, Bologna, Italy. Looks like it will be a good weekend. More details at www.tullamoreastronomy.com

Maynooths Colleges Astronomy Club **Astro2** continue with their weekly talks on Tuesdays

Irish Astronomer of the Year January saw the announcement of this years Irish Astronomer of the Year. The winner is Martin McKenna from the East Antrim Astronomical Society. Martin was awarded this honour by other amateur astronomers throughout Ireland for his exceptional dedication and tireless observing...Well Done

www.irishastronomy.org

Next time you are online, visit irishastronomy.org, a website run by the Irish Federation of Astronomical Societies. If you have a question, ask it on the bulletin boards and have it answered by any number of helpful Irish amateur astronomers.

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