SPÉIR

Astronomy with a Kerry Twist

No.3 Summer 06

TRIANGLE of DELIGHT

GEMS OF THE SUMMER TRIANGLE AND HOW TO FIND THEM

IRELAND'S THIRD OBSERVATORY CELBRIDGE - J65

ASTRONOMY ON A BUDGET

WHATS AN....ECLIPSE

www.kerryastronomyclub.com

Welcome

We are short of space this issue so I will keep the editorial brief. This is the third issue of Spéir and we are still plodding along. What would be great at this stage is some feedback so that we can tailor the publication more to your needs. With this in mind we have put a feedback form on our website where you can leave feedback.
Please take the time to have a look at this and leave a few suggestions.
Thanks *Trevor O'Donoghue*

Club News

The last few months have seen Michael Scully and Tony Curran spreading astronomy far and wide with a night course delivered through FÁS with great success. We held an open night in February and expected a modest turnout...We were a little overwhelmed when over fifty turned up, and we were hard pushed to help everybody, I hope we got to see most. We followed this with a public observing session on 28th April,which was quite successful despite the attendant clouds. The last few months have also seen a growth in our numbers and we now have over sixty paid up members.
Our outreach program is going full steam ahead with recent school and scout visits by David Tough, Michael Scully and Kevin Lawlor. At the time of writing Michael Scully is updating the website. We hope to give it a new feel and make it a little easier to get to the information you want. This should be completed and live sometime during the summer. We also have our **annual summer outing** approaching. This year we will be visiting Birr Castle and grounds with its massive 72" telescope. Truly a wonder of its day. For further info check the website and let Kevin Lawlor on 0868172994 know ASAP if going. The cost for the day should be around €20 - €25

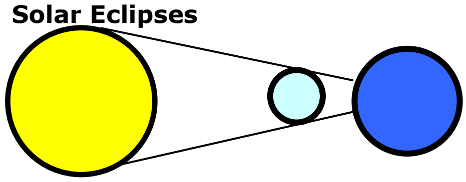
Astronomy on a Budget

A 12" SCT telescope on an Advanced GOTO Mount - €4000, An 80mm apochromatic refractor on a sturdy motorised mount for astrophotography another €2000 or €3000, a pair of image stabilised binoculars €1000. Your face when the Visa bill drops through the door...Priceless.
Thankfully not all astronomical equipment is as expensive as the above prices. I have managed to acquire a 70mm F10 refractor, an 8" f5 Dobsonian, a pair of 10X50 binoculars, A pair of 20X80 Binoculars and a tripod for same, all for somewhere in the region of €600. Go back 5 years and the equipment mentioned above would have easily set you back a couple of thousand Euro.
The key in sourcing reasonable prices for your astronomy stuff is the Internet, fellow amateur astronomers and of course Lidl also plays a big part in it. I picked up my 70mm refractor telescope for €45 second hand. You can get them new at Lidl most November's for €59.
Throughout the year Lidl have Binoculars, which are perfect for starting out in astronomy for €20. Just make sure you check out our website before purchasing for an unbiased opinion. An invasion of Chinese optics over the past few years has seen prices plummet for observing equipment, you can pick up a brand new pair of 15X70 binoculars for less than $50 on line, with postage Ireland around for $30 or $40. Expect to pay over €100 easily in Ireland or the UK, although prices are still falling. Check out Celestron Skymaster 15X70 and Barska X-Trail 15X70's. Expect to pay a little more for the Celestrons.
8" dobsonian telescopes, the staple of the astronomical community can now be picked up for somewhere in the region of £200 - £230 in the UK, add in a little shipping and you should have a nice new scope for somewhere in the region of €350-€400. This scope should serve you well for years. Thousands of galaxies and deep sky objects are within its grasp, as are surface features on Mars. Jupiter, and Saturn will be stunning. The price of dobsonians has now reached a point, where building one yourself will be more expensive than purchasing one. A recent offer has seen a large retailer in the UK offer a 6" Bushnell dobsonian for £99.
A word of warning though: be aware of telescopes on sale on Ebay. A lot of these, while seeming like excellent purchases, are a complete waste of time. On the other hand some are genuine bargains. To get an idea of prices, buy "Astronomy now" or "The Sky at Night" both UK publications with lots of ads. Then check out some American prices on the Internet. The following should give you some idea of what you should be expecting to pay. Binoculars 10X50's at Lidl €20, but pay no more than €40 or €60 elsewhere. A 70mm refractor on equatorial mounting, no more than €150 - €180. These are €60 in Lidl at Xmas. An 8" Dobsonian...€400-€450 but you may get it for less..
If any of you are thinking of buying a scope, ***please, please, please*** talk to someone who knows about them, do not take the word of your local camera shop salesman. Avoid anything that promises up to 450 times magnification. So if you are ready to take the plunge check out www.opticsplanet.net us based but has some cheap binoculars, www.telescopehouse.co.uk or www.telescope-servce.com , for good prices on large equipment. Closer to home try www.andromedaoptics.com , or North Down Telescopes at www.mccreaa.freeserve.co.uk
Trevor O'Donoghue

WHAT'S AN...ECLIPSE

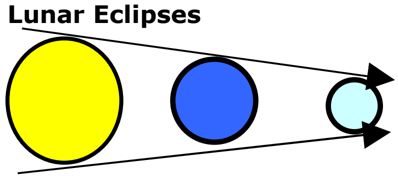
The third in a series of articles by Marian Gunning bringing the universe to you in simple easy to understand terms.

Solar Eclipses



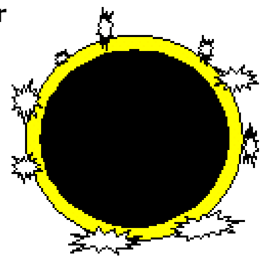
A solar eclipse occurs when the moon is in CONJUNCTION or passes between the sun and the earth.
We observe our small moon covering the face of a much larger sun because the moon is much closer to earth. Solar eclipses can only be observed from a limited area of the earth and last up to SEVEN MINUTES. Total Solar Eclipses are important to astronomers as they allow the suns outer regions to be studied.
There are on average about two total or partial solar eclipses visible from somewhere on earth each year.

Lunar Eclipses



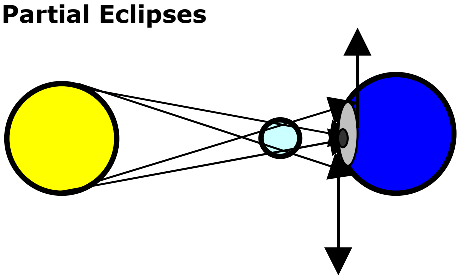
A lunar eclipse occurs when the moon enters the shadow of the earth or in other words when the earth is between the sun and the moon. A lunar eclipse can be observed from any place on earth where the moon is above the horizon. Usually the moon will appear a dull coppery colour because some light is refracted through the earth's atmosphere on to the moon. A lunar eclipse is visible for several hours.

Annular Solar Eclipses



An annular solar eclipse occurs when the moon is at the farthest part of its elliptical orbit from the earth. The moon appears too small to cover the suns photosphere. This results in a ring of sunlight still visible. This is called an ANNULAR ECLIPSE (from the Latin annulus meaning a ring) It does not mean the eclipse occurs annually!

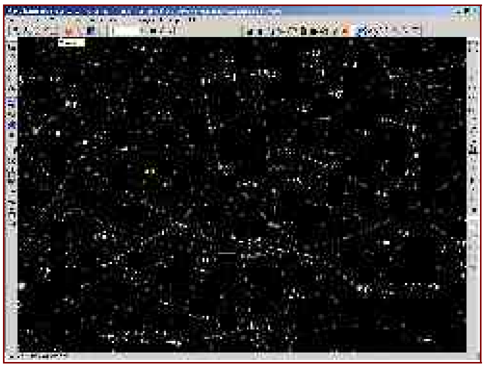
Partial Eclipses



During a total eclipse the moon throws its shadow on to a small area of the earth. This area is called the UMBRA. This shadow moves from west to east (the track of totality). The shadow cast outside the UMBRA is called the PENUMBRA and people within this PENUMBRA can see only a partial eclipse.

Marian Gunning

SPÉIR REVIEW



Cartes Du Ciel (Sky Charts)

is a **free** planetarium package that can be downloaded from http://www.stargazing.net/astropc/.

Like any planetarium software, it allows you to enter your location, date and time and provide you with a view of the night sky as seen from your location. Where Cartes du Ciel comes into its own is in the amount of stars / Nebula and NGC objects it can display. The basic package comes preloaded with enough information for most of our needs, but if that does not suit, you can download star catalogs that will give you the ability to display up to 16 million stars.

You can customise the display to meet your requirements and display as much or as little of the stars/nebula as you like.

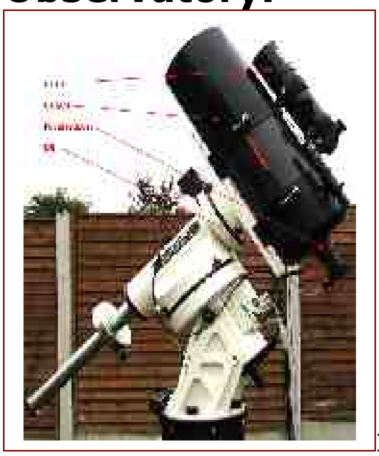
Cartes du Ciel can also provide you with up to the minute information on comets, planets and asteroids. Simply connect to the Internet, download the latest files with positions of these bodies and then plot them on your screen. The ability of Cartes du Ciel to zoom in on any region and produce excellent star charts makes it a perfect observing companion. As I am writing I have been using Cartes du Ciel to follow and plot the course of comet 73P Schwassmann/Wachmann 3. As if that was not enough, you can also use it to follow the moons of Jupiter and Saturn in real time. Zoom right in and identify the moons and their positions in the sky about the planet. Depending on what setup you are using you can flip the charts both vertically and horizontally to match the view through your eyepiece. It also has a neat calender function which will give you times of rise and set of all the planets, the moon and sun for a particular time period. This is handy to find out when the moon is out of the way for deep sky observing.

If you are zoomed in on a small enough piece of sky, you can download a picture from a number of sources to show you what the area looks like when photographed.

I found the software excellent, but it is not as intuitive as other programs I have used which may be a slight drawback. I have only began to scratch the surface of this program and I am sure it will fulfill my needs for years to come and all for free. There is a dedicated website where you can go for support and download a manual, but there is nothing like learning by doing, so download it, and mess around with it, and be surprised at its versatility and adaptability.

Trevor O'Donoghue

Celbridge J65, Ireland's third Observatory.



In an exclusive article penned for Spéir, Dave McDonald tells us about his latest achievement, becoming Ireland's third internationally recognised observatory....

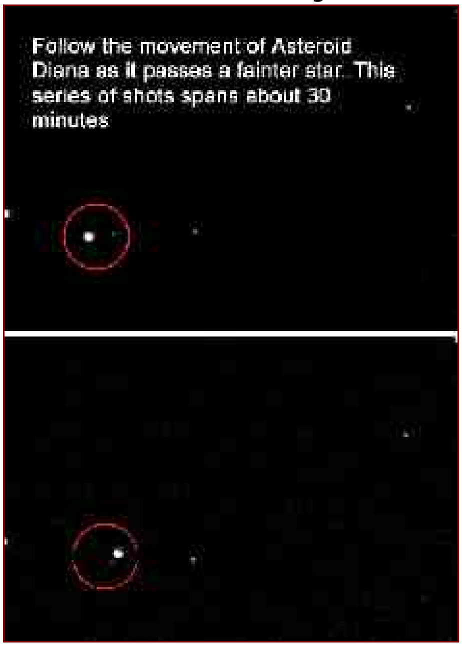
"I've been an amateur astronomer since I was old enough to look up to the skies. All my years of stargazing were rewarded recently when I received an observatory code from the International Astronomical Union Minor Planet Center (IAU MPC). Luckily enough the observatory code was much shorter – J65.

As of spring 2006, there are just over 1200 recognised observatories worldwide. Prior to 2006, there were two coded observatories in Ireland – Armagh (981) and Dunsink (982). I'm especially delighted as J65 is the first amateur observatory in Ireland. Having recently acquired the financial ability to invest in my lifelong hobby, I made a key decision that my primary goal was to try and provide 'real' science data that would make a difference. I set about doing the research and quickly discovered that astrometry was well within my reach and was an important source of data for professionals.

Astrometry is the precise measurement of the position and motion of astronomical objects. Recent astrometric measurements of the moons of Pluto have helped the New Horizons mission plan the correct movement of the probe. Of wider public concern have been measurements predicting the close approach of asteroids with Earth. Luckily, refined data shows the risk of known object impacts with Earth is pretty much zero. But then there are lots of unknown objects out there…I decided that if I was going to carry out astrometric measurements, I would need a high standard of equipment to give good science data. It was clear that the major initial investment was going to be the mount. It had to be capable of carrying a heavy payload, slew this equipment around the sky easily and track objects accurately. I eventually decided on the Astro-Physics 1200 GTO mount. It fulfilled all my criteria and luckily there was a two-year waiting list that gave me plenty of time to save up. I invested in a cheap CCD camera when the mount arrived in 2005. I started to learn how to image celestial objects which, like anything else in this hobby, is not as easy as it seems. For example, my idea of 'accurate polar alignment' was way short of that required for unguided imaging and I had to learn how to drift align. That in turn involved learning how to use a suite of fairly complex software programmes… Needless to say, it took me about a year to get my skills to a level where I could confidently image faint stars and galaxies such that looked like, well, faint stars and galaxies.

The next step was more an accident than a goal. I had started to research asteroids and came across the Minor Planet Center web site. Here I learned how to generate ephemerides for asteroids I was interested in. One of the fields you complete is your location – you can type in your co-ordinates or simply your observatory code. Typing in latitude and longitude values every time I wanted to generate an ephemeris was becoming tedious. So I had a look around the MPC website and came across the method for obtaining an observatory code. Essentially, you observe a minimum of two (preferably three) asteroids over a number of nights. You then analyse the images and determine the location of your chosen object. The data is collated into the form required by the MPC and sent to them by email along with the geographical location of your setup. The MPC reviews the observations and provided they meet their criteria, you are issued an observatory code for that specific location.

So, now I had method sorted, it was time to get a plan in place. It wasn't too difficult to find six targets of



varying magnitudes within my imaging capability. Also, they were reasonably far apart and were sufficiently high up in the sky. I chose six to make sure that if I had to cut the run short because of weather, I would hopefully still have three targets imaged. The next available clear night, I put the plan into operation. I set up the scope and found the first target. I took a few images that I quickly analysed to make sure the target was present, and when satisfied, I moved onto the next target. At the end of the evening I managed to image all six targets. I then 'plate solved' the images. This is matching your image to the known star field and then determining exactly where the target is located - this is done with software. The next clear evening was some days away but the MPC do not required your observing nights to be consecutive – lucky for us in Ireland. When the skies eventually cleared, I repeated the previous exercise but the weather wasn't being very cooperative. The process took a lot longer this time because of sporadic cloud. Eventually, I had sufficient images of reasonable quality. Once solved, I found that only four targets out of the six were of sufficient quality. I set about formatting the data and checking it against MPC ephemirides (just to make sure). Eventually I had the data ready to go, but now I had to follow the MPC format. This was trickier than I thought. I sought the advice of the Minor Planet bulletin board members and with a lot of help, eventually had the data in the correct format – well, pretty much. Before hitting the send button though, I checked the data one more time and then, closing my eyes and crossing my fingers, sent the mail to the MPC. I was told that I might have to wait more than a week to hear anything back. To say I was surprised when I got a reply an hour later was an understatement. Even more of a surprise was that the MPC had issued me with an observatory code.

Well, I was absolutely delighted as you can imagine. J65 Celbridge Observatory was now officially recognised. As an added bonus, I was informed by the MPC a few hours later that this was the first Irish Amateur observatory to be recognised. Since receiving the observatory code, I have continued to carry out astrometric measurements as often as the weather permits. Obtaining clear images of sufficient quality to permit accurate astrometric data is not as easy as it might sound. However, by choosing targets carefully meaningful data can be obtained. Choosing objects of sufficient brightness and high enough in the sky are the key parameters.

I would hope that 2006 will bring me closer to my goal of photometry. As well as purchasing the imaging and filter equipment, I also need to choose a new OTA. But like anything else, there will need to be compromises since the equipment is quite expensive. Certainly the imager is probably the most important item at the moment so the OTA may have to wait until 2007. I would hope to eventually land a 14" or 16" aperture OTA to enable me to choose the dimmer objects and go deeper than my current setup allows. There are many amateurs in Ireland now who have a keen desire to image the night sky. Some are content to produce images they can share with the community and their friends. There are a smaller number of amateurs who are keen to do real science with their equipment. In order to take part, whilst an observatory code is not a requisite, it is certainly a benefit in allowing external authorities ratify the quality of your data.

Some amateurs might feel that they cannot achieve this objective. My advice would be that you don't know until you try – give it a go.

Dave McDonald
J65 – Celbridge Observatory
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The Planets for Summer

Mercury – Visible in the evening sky from mid June to early July. Back in morning skies early August.

Venus – Visible in the dawn sky all Summer.

Mars – Visible in the western June sky after sunset. Check it out mid month when it makes a trio with Saturn and the Beehive. Dim in July and lost in the sunset by months end.

Jupiter – Shining bright in the South and South west as Summer progresses. Don't forget to look at its moons even with binoculars.

Saturn – Last chance in evening sky til mid July when it gets lost in sunset. It reappears in morning sky during August

Trevor O'Donoghue

CONSTELATIONS

JUNE - At this time of year, the nights are at their shortest. At northerly latitudes the sky never gets properly dark at all. The tail of the Great Bear, Ursa Major, can be used as a signpost in the midsummer skies. Find it overhead, and follow its curve down towards the southern horizon. This will lead you to Bootes where you will find the bright star Arcturus. Nearby is the small constellation of Canes Venatici, whose stars were once part of Ursa Major.

July - The Constellation of Scorpius the scorpion lies between Libra and Sagittarius in the Milky Way. It is not hard to imagine this pattern of stars resembling a scorpion, with its claws and stinging tail. An arc of stars marks the curve of its raised tail and the fiery red star Antares lies at its heart. In Greek mythology the hunter Orion was killed by the sting of the scorpion. Scorpius rises in the sky as Orion sets, which means the two enemies are now kept apart. At one time, the scorpion figure included the stars of Libra, making it the largest of all star groups. Scorpius contains a number of eye-catching clusters, some visible to the naked eye.

August - The Constellation of Sagittarius the Archer offers a richer display of star fields, clusters, and nebula's than any other constellation. The center of the Milky Way galaxy lies within the borders of Sagittarius, and as a result, this area is brilliantly illuminated. In Greek mythology, the entire constellation depicts Crotus the centaur – half-man, half-horse – firing his bow. The arrow is aiming at a scorpion, which is represented by neighbouring Scorpius. However, stargazers in the southern hemisphere usually recognize Sagittarius by a group of eight stars taking a shape known as The Teapot. Steam appears to rise from the spout, thanks to a star cloud.

Ruairi Connaughton

MORE CONTRIBUTORS WANTED

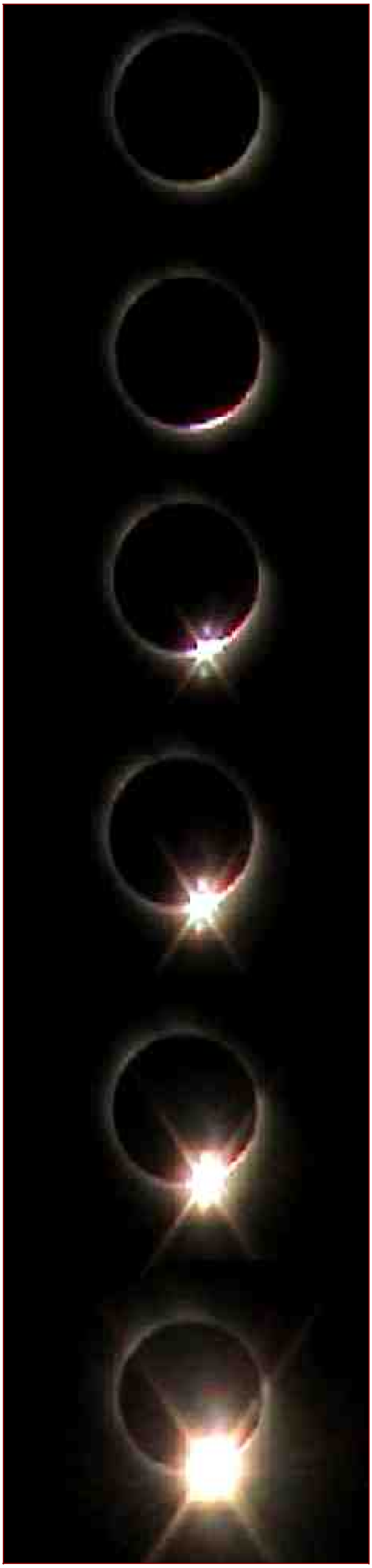
I am sure that by now , you the readers are sick of my ramblings in every issue. So now I am crying out for some some new authors. Send your contributions to trevor@framecommunications.com and I can include them in the next issue. There are no hard and fast rules on what to write about, it might be your 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.

TURKISH DELIGHT

Total eclipse From Turkey On the morning of 29th of March 2006 at 13.54 local time a total solar eclipse occurred over Turkey. I was lucky enough to be there with 140 other Astronomers from Astronomy Clubs all over Ireland to witness this stunning and unique event, which lasted for 3 minutes and 48 seconds.

"We arrived on our site a few hours before the eclipse to give people a chance to set up telescopes, binoculars and cameras and to allow for any



unforeseen catastrophes, but thankfully everything went to to plan. The site we had chosen was about 75 km outside the main city of Antalya in Turkey and located in a restaurant's back garden, which consisted of 100 metres of scrub land running down to a sandy beach fronting the Med. Sharing the site with the Irish astronomers was a group of about 40 Russian astronomers, some local school children, a horse and a dog. After everybody had set up the long wait began. The next hour or two was spent going over the sequence of events, planning for the eclipse and checking cameras and equipment. Filters have to be used for the partial eclipse, and it is only at totality that one can observe the eclipse without the aid of filters.

At 12.48 local time the partial eclipse began, with the moon edging its way over the suns disc blocking out some of the light. As more and more of the sun got blocked, the excitement began to grow, you could almost taste it. Light levels began to fall, not gradually, but in what can only describe as in stages, the sky and ground took on a weird colour, shadows became defined and the temperature plummeted. The breeze also seemed to pick up but maybe that was just my imagination or being slightly more aware of it as the light dropped. People became jittery, kept asking the time, how long until totality. This run of events lasted for over an hour, and grew in intensity until the last sequence of events occurred.

At about 30 or 40 seconds before the total eclipse, the sky had darkened to such an extent that the planet Venus popped into view, this was greeted by a huge cheer, The sun had almost disappeared at this stage and the last tiny crescent was visibly shrinking...Then in an instant the last glimmers of sunlight coming through the valleys of the mountains on the edge of the moon glinted in what is known as Baileys Beads, then the last flicker of sunlight on the edge of the suns disc disappears in the diamond ring...and then totality.

The sun has disappeared, reason and sense go with it and everyone is whooping and hollering, Cries of "WOW", "Oh My God" and worse reverberate around the observing site as we see a black circle in the sky surrounded by the white light of the suns corona (its extended atmosphere). It is a totally unreal and surreal experience. It is not as dark as I thought it would be but it is pretty dark and eerie, I observed the eclipse through binoculars and with the naked eye and words or pictures cannot do justice to the magnificent visual spectacle that is a total eclipse. The first three minutes were spent lying back looking at the eclipse, before it occurred to me that I forgot to take the filter off the camcorder. Needless to say, I completed this task in record time and jumped back on the sun bed to watch the last half minute or so. I looked at the amazing colours on the horizon, weird blues and salmon pinks...and then the sunlight begins to creep through around the edge of the suns disc and a stunning diamond ring occurs again and before you know it, it is dull daylight again...

Without a doubt the almost four minutes of totality were the fastest of my life and appeared to last only about a minute or so. In the end, I captured about 40 seconds of footage on the camcorder, a couple of pics of the horizon, but the real memory of the eclipse is stored deep within me, hopefully to never be forgotten. The highlight for me was seeing the suns magnetic field lines bursting out from its poles and shaping the corona into streamers of hot plasma.
A truly remarkable experience which I hope was the first of many..Roll on 2008.
Trevor O'Donoghue

OUTREACH REPORTS

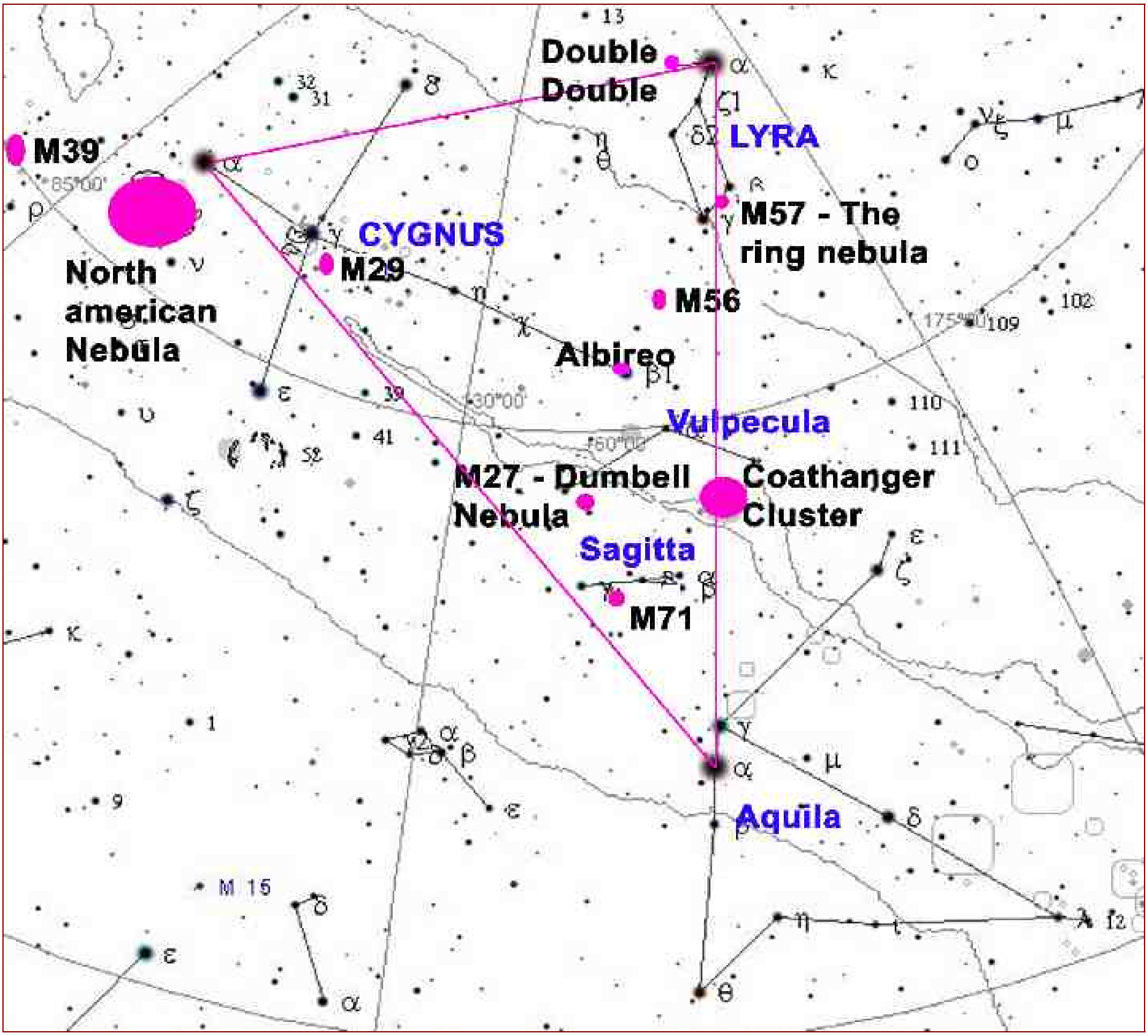
Kevin Lawlor visits Kilmoyley National School.
On the 29th.March, I was invited by Aine Lovett, Principal, Kilmoyley national school, to allow the teaching staff and all pupils to observe the Partial Solar eclipse visible in Ireland on this date. I set up my meade ETX 70 scope fitted with a solar filter to allow observation to take place. As the eclipse began at 10.45 am,I duly notified the teachers and pupils to start their observation. I pointed out to them what the sun looked like when viewed through my telescope, it had the appearance of a large snowball with the moon covering off the bottom end. Each teacher and pupil got about 15 seconds to look at the partial eclipse.
When everybody had seen this event, I removed the solar filter from the scope and fitted it in front of the lens of my digital camera, this allowed me to take photographs safely. As a follow on to this,I announced to the 4th, 5th, and 6th classes and their respective teachers that I would hold an observation session in the school grounds on Tuesday 4th April starting at 9pm. Some pupils had informed me that they had received small telescopes and binoculars as Xmas presents. I informed them to bring them along and that they would be shown how to operate these scopes. I phoned Paddy Stack, Michael Scully and James Savage and told them of what I had planned. I am grateful that they were only too delighted to join me for this observation session. In total some 60 pupils and their parents showed up for this event. There were 4 telescopes set up by the club members and judging by the reaction from everybody in attendance, a wonderful night was had by all.

Even the local curate, Fr.Nicholas Flynn came along to see what was happening and I am certain that he had a word with the man above to give us a clear sky for the occasion. We left the school at about 10.45 pm. and I am certain that everybody learned something from the event.
Kevin Lawlor

Public Observing Session.
Kerry astronomy club held a public observing session at our Banna Beach location on April 28th. Instruments present were 2X10" dobs, an 8.75" dob, an 8" dob, a Skylux, an Etx 70, a pair of 25X100's, a pair of 20X80's and lots of smaller binoculars. As the skies darkened and a crowd of 30 or so arrived, cloud overhead prevented us from looking for the comets. A brief look at a young 26hr old moon started the night and Jupiter low on the horizon was the nights first telescopic target. Young and old got to see Jupiter and its moons, Unfortunately the seeing and atmosphere were muck so no cloud belts were easily visible. Fast moving cloud played a major part in observing, so as gaps appeared, Saturn, the comet, the Beehive, the Double Cluster, the Great Globular in Hercules, and M35 were swept up.
In cloudier moments the club members explained to the public about the movement of the stars and planets, pointed out some constellations, talked about satellites, meteors, comets and lots of other astronomical phenomenon. Most people who attended managed to see the Galilean moons of Jupiter, the rings of Saturn and some DSO, such as the Double Cluster or M13. Lots of OOOHS, AAAHS and WOWS testified to the success and enjoyment the evening provided. All in all a great evening. Of particular note was comet 73P fragments, B and C. Both were very easy binocular targets that night as fragment B was in flare up and to my mind seemed a tad brighter than C.
Trevor O'Donoghue

Editorial Part Two

Having found a little space, there are a few more things I would like to mention. The first is our website. As you will have probably noticed there is advertising on the website. This helps pay for our website but only if you click on them. Next time you are online, why not click on an ad, who knows you might find just what you are looking for. The second thing is our monthly meetings. While the ITT is a perfect venue for the presentation side of things, it may be a little formal. We do not seem to have time or the right space to get to know each other and just talk or chat. With this in mind, can you have a think about this and let us know if you are happy or would like a more informal approach. Again there will be a feedback form on the website.



Summer Triangle – Step outside any evening during the Summer, face south and look up. The three bright stars that dominate the sky are the leading stars of the Summer Triangle. Top left is Deneb from the Constellation Cygnus, Top right is Vega from Lyra and at the bottom is Altair from Aquila. Inside this triangle we also find the constellations Sagitta and Vulpecula. The Milky Way runs through this region of the sky and this alone would ensure rich pickings, but throw in a few nebulae, a couple of globular and open clusters and this is a great area to explore. Lets start with Cygnus (the swan), and the two open clusters M39 and M29. Both of these are within reach of binoculars and make an interesting pair. M39 is easy, while M29 is harder, being in a rich area of the sky. Jump back up to the bright star Deneb and if you have dark skies pay particular attention to the part of the milky way near it. You will see a bright region, this is the north American nebula, named for it distinctive shape**.** Next up is a double star and you will need a telescope, or large binoculars for this one. Beta Cygni or Albireo is a stunning double star made up of a blue and orange component. It is striking and one of the prettiest pairings in the sky. Now we move to the constellation Lyra. Just to the left of Vega is a star which will be seen to be a double in binoculars. In a telescope, at very high magnification, both stars will be seen to be close doubles, giving it the title of "the Double-Double". Drop down from "the Double Double" and in the bottom line of the parallelogram of Lyra right in the middle, hides one of the skies most celebrated treasures, M57 or the Ring Nebula. Apparently this is visible in 10X50 binoculars, but looks almost stellar. I have to admit I have never seen it in my 10X50's. Turn a telescope towards it though, and a distinct ring of gas is visible. This gas was puffed off a dying star to form a planetary nebula. Moving down from M57 towards Altair but a little to the left is M56, a globular cluster, visible, but challenging in binoculars; a telescope is needed to show it for what it really is, a vast ball of stars. Back to our imaginary line between M57 and Altair and about halfway along there is a magnificent cluster called the Coathanger Cluster. This is best viewed with binoculars and the name really says it all, except that when viewed through binoculars it is upside down. It is simply stunning. Moving over to the left as you look up and in the constellation Vulpecula we come to another planetary nebula M27, the Dumbell Nebula. This nebula is visible in binoculars in a dark sky as a small hazy patch. Yet again a telescope will reveal more of its "apple core" shape. Before we finish, don't forget to drop down to Sagitta and check out M71 another globular Cluster.

Trevor O'Donoghue

MEMBER PROFILE

In the first of a new series, we profile a member each issue. First up is...

Name: John Keane.
Observing Location: Causeway.
Observing equipment:
8 x 40 binoculars.
Skylux refractor bought from Lidl.
A Six-inch Newtonian reflector bought through Ebay.
A green laser pointer also bought through Ebay.
I joined Kerry Astronomy Club in 2004 after my wife saw a small piece in the Kerryman notes section, she now regrets showing me the article and now calls herself a "Space Widow" any time I go out observing. Like most people in the club I had an interest in astronomy since I was a young boy but there was never an outlet to pursue such activities. The person who had the greatest influence on me was an American astronomer called Carl Sagan. It was from watching his program called Cosmos in the early 1980's that I stopped looking at the stars as just points of light in the night sky & began seeing them as whole new worlds that we can barely comprehend. I try and attend all the monthly meetings and observation sessions but when they're not on and the sky is clear I'd usually take my scopes up the field. Where I live I'm blessed with lack of neighbours and yard lights so the sky can be really dark.

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.

IFAS PODCAST

IFAS or the Irish Federation of Astronomical Societies are now producing podcasts, that you can download and listen on your MP3 player or computer..To get to them just log on to our website and follow the links. Don't forget to visit http://www.irishastronomy.org where Irish astronomers live when its cloudy. Join in the discussions, ask a question or just see what other amateurs are up to.

IMAGE GALLERY

Opposite Top: Saturn by Michael Scully with his 8.75" dobsonian telescope and a webcam: 455 frames out of a 775 frame video file.
Opposite Bottom: The Moon by Trevor O'Donoghue, digital camera held up to the eyepiece of his 8" dob. Showing Plato, the Alps and some isolated mountains at X173 .
Above Top: Michaels Scullys image of Jupiter and moon using same equipment as Saturn image but with 74 frames out of 152
Above Middle: Kevin Lawlor's image of the partial eclipse taken at Killmoyly National School with his Nikon D100 pointed at the eyepiece of his Meade ETX 70. It shows the surrounding clouds nicely.
Above Bottom: Michael Sculley's partial eclipse. It shows the silhouette of the Moon and the small group of sunspots on the lower left.

LAYOUT AND DESIGN BY TREVOR O'DONOGHUE
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