

Mercury

The Newsletter of the Cotswold Astronomical Society

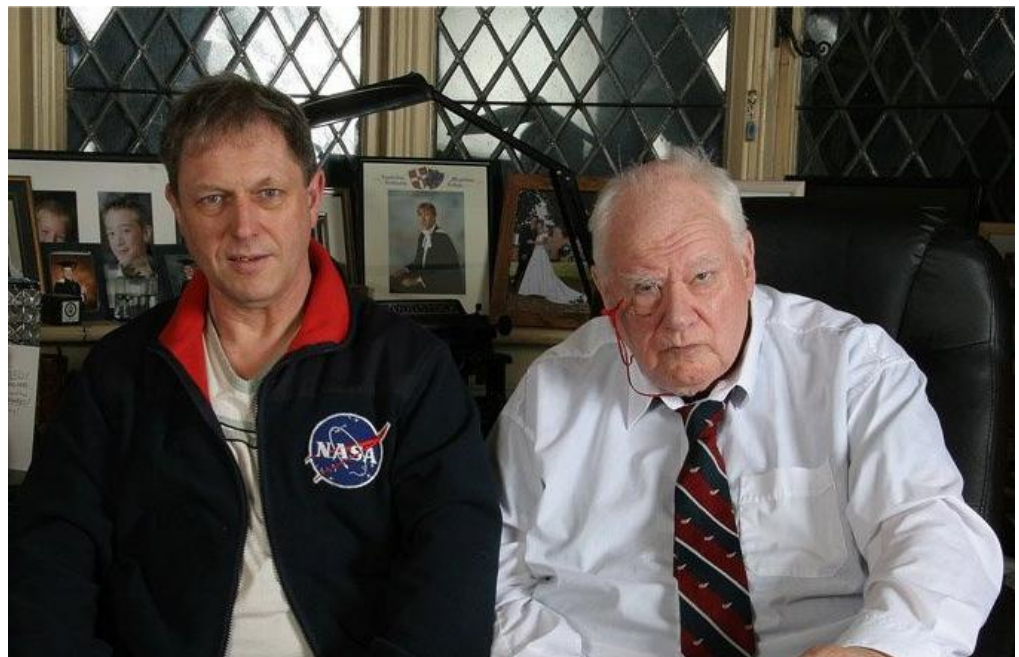
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January / February 2013

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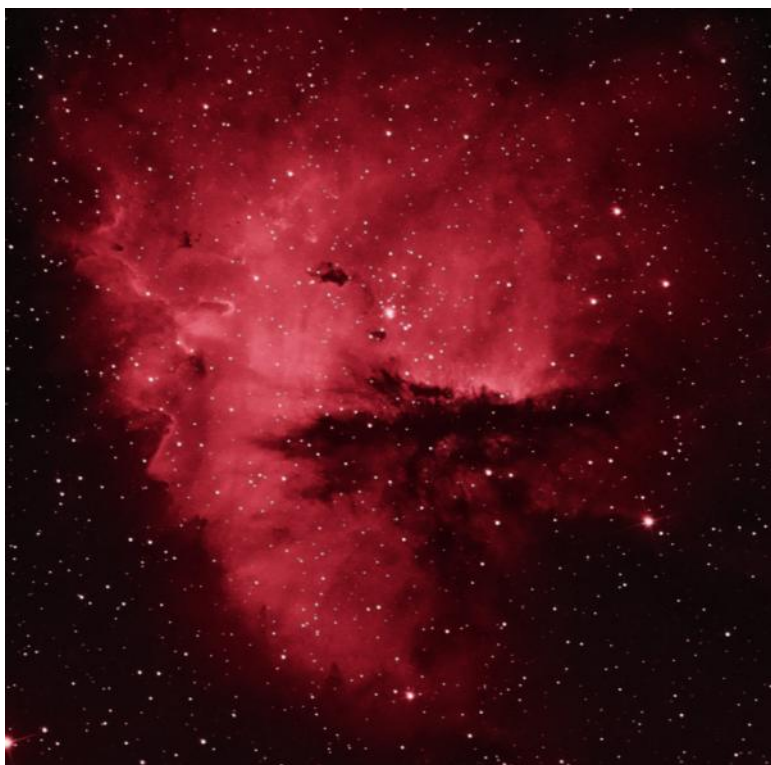
End of an era



Sir Patrick Moore Remembered.

By John Fletcher

(see page 4)



NGC281

The Pacman Nebula
Ha image mapped to
red.

3.5 hours total expo-
sure in 10 min subs.

**“January is
going to a
busy month
for the
society...”**

Co-ordinator’s Report

By Peter Cadogan

Looking back on 2012, it has certainly been an interesting year for astronomy and space science. In a poll of members at the last meeting, the most significant event of the year was deemed to have been the landing of Curiosity on Mars, closely followed by the discovery of the Higgs Boson at the LHC. But there have been some other equally profound discoveries, notably galaxies that were formed just 400 million years after the Big Bang (imaged by Hubble’s Extra Deep Field) and earth-sized planets found around distant stars, discovered by Kepler. Perhaps the most extraordinary find was the discovery of water ice at the poles of the planet Mercury. How could it possibly survive so close to the Sun? I am personally most interested in the results recently returned by the lunar gravity mission, Grail, whose probes, imaginatively called “Ebb” and “Flow”, have now crashed into the moon. We now have a much better understanding of the structure of the moon’s interiors and it would appear that the lunar crust is a lot thinner than we previously thought it was.

Editor’s Desk

Well it’s that time again. Here is the first issue of Mercury for 2013.

Over the past couple of years Mercury has run to 20 or 24 pages. The more observant of you may have noticed that both the November issue and this current publication only contain 16 pages.

‘Why?’ you might ask. I might answer ‘Mercury is prepared from contributions from the membership, it is quite a task to produce to a newsletter if there is no news!’

So let’s have it folks. Observations, stories, sketches, images..whatever you feel like sharing. This is your chance to show off. Make the most of it.

Rik

Also at the December meeting, Peter Burgess gave us a fascinating account of the Hoba meteorite fall in South Africa, which he visited out in the Namibian wilderness a few years ago. It was certainly fascinating to hear that it must have lost most of its cosmic velocity to have survived the impact without being vapourised. Perhaps it “skipped” over the atmosphere at a shallow angle a few times. As we visit more and more asteroids we will start to understand better where these enigmatic bodies came from. Perhaps we will even land astronauts on one and use it as a base for exploring the rest of the solar system.

The very latest astronomy news, of course, has been that Sir Patrick Moore is no longer with us. He was responsible throughout his long life for inspiring many generations to take up practical astronomy and interest us in what is “up there”. My family didn’t even have a television set at home when he began broadcasting “The Sky at Night”, but his interest in mapping the moon was very useful at the start of the space program and I am very happy to have a 1953 copy of his “Guide to the Moon” on my bookshelf. I only met him

personally once, at an astronomy convention in Bristol many years ago, but the sight of him speaking to a large audience about whatever came into his head at the time was an experience not to be missed. One thing that Patrick never needed was a microphone.

As we look forward to 2013 as a society, one of our most pressing requirements is to elect a new Membership Secretary at the AGM. Rod Salisbury has combined this role with that of Treasurer for 13 years and the rapid recent growth in membership means that the workload has grown too much to be managed by one person. So please give this some serious thought in good time before the AGM in April. If you want to know more about what is involved, please contact Rod or myself. As you would be manning the desk at meetings, it would be a great way to get to know members, so it might well suit a couple.

January is going to be a busy month for the society, with three Stargazing Live open meetings planned. At 6pm on Friday 18th we will be joining forces with the National Trust on Minchinhampton Common, by the reservoir, and the following day we will try to repeat our previous successful events at Century Hall from 6.30pm. Then on Sunday 20th we will be at Nature in Art, near Gloucester, from 6.30pm. Fuller details can be found on the BBC Things to Do web site at: <http://www.bbc.co.uk/thingstodo/project/stargazing-live>

We hope that many of you will be able to participate in one or more of these events. Just bring a telescope along and wrap up warm. There will be lots of opportunities for sharing your knowledge, however limited, with some absolute beginners and their children. Let us hope that we have some luck with the weather.

Through the clouds
by Bryan Coxall

Those of you who came to the December meeting will have heard about our eventful holiday in Australia, which culminated in just managing to view the total solar eclipse from near Cairns through a small hole in the clouds. I was unfortunately unable to photograph it myself, because my camera got damaged in the rain on top of a granite monolith, but our neighbours in our B&B, Brain and Jill, were sitting next to us on the beach and were able to catch the event for us. I am pleased to report that the camera has now been mended, it was a truly awesome experience to see the sun disappear to reveal the pink prominences around the "black hole" and the delicate structure of the corona through binoculars. We now look forward to going to the USA in 2017 - I am already starting to plan our itinerary (Grand Canyon, Arizona Crater, Monument Valley, Yellowstone, etc). And good luck to Rod and Rosemary in the mid-Atlantic next year.

Clear Skies

"one of our most pressing requirements is to elect a new Membership Secretary at the AGM"



Sir Patrick Moore 1923 - 2012

By John R. Fletcher F.R.A.S.

With deep regret, sadly one of the most famous astronomers, a great friend of mine, Sir Patrick Alfred Caldwell-Moore, died today aged 89.

Patrick was a dedicated amateur astronomer who became known worldwide as an author of many hundreds of books, a writer, radio commentator and television presenter. Since 1957 he was the presenter of his television programme on the BBC called 'The Sky at Night' making this a world record for the longest running television programme retaining the same presenter.

He was an inspiration to myself and everyone that he met and all who spoke to him. He encouraged everyone, and in particular young children to learn all about astronomy and the stars above.

My regular astronomy lectures called "The Solar System and Beyond" and to teach astronomy to young children I try to put in a way that the average person could understand. This was endorsed by Sir Patrick many decades ago.

On my many stays at his lovely home in Selsey I had the privilege to meet many famous people and hundreds of his friends and visitors. Often I was given the job in recent years to show them around his three fine observatories, one housing a fine 15inch telescope.

He received lots of letters and phone calls daily. Every enquiry was answered. Some days it could be dozens of letters. I have watched him sit hour after hour using his 1908 old Woodstock type writer typing way at over 80 words per minute. On my first visits and stay over's he would bring me coffee and once a full English breakfast before I could finish he was working away on his books. Many an evening would be spent on cloudy nights having a nightcap together.

Patrick would often throw big parties for all his friends and often big marquees were put up and hundreds were invited to come along. His many "Sky at Night" anniversary parties such as the 45 year and 55 year celebrations were wonderful. He recently supported Cystic Fibrosis and held a garden party at his home earlier this year which was a great success. In fact he has supported and helped many throughout his life and at great expense. That was Patrick. He strongly supports the Cat protection society and recently wrote and had published a book called "Miaow! Cats really are nicer than people" He loves cats and his little black cat Ptolemy was a number one in his life. There were always groups visiting him and everyone went away with wonderful memories of this great man.

He was a former president of The British Astronomical Association, and was elected into The Royal Society and later received him knighthood and personal coat of arms that he was so proud of.

His main observing passion was the Moon. I have seen the many thousands of his original drawings of the Moons crater formations.

As with many famous astronomers of the past he also had a strong link with music as a composer and also enjoyed playing the xylophone and piano. He wrote marches and waltzes. The very first music he played to me on his own CD called "Moore's Music" The Royal Scottish National Orchestra. was "Orion's March. Op.51 and Vienna Dawn Op.32. My own personal favourite was that with him playing his large xylophone called "Penguin Parade. Op.37.

Many thousands of people had met and chatted with Patrick over the years. We will all miss him so much.

He was one of the kindest and most inspiring of all my friends.

I will miss him greatly. My condolences to all his friends.

John.

Observing Director's Notes

By Ian Davies

First of all, can I wish you all a very Happy New Year - these are exciting times for the Society, with membership at record levels and a growing public interest in astronomy. I'm sure this will translate into an ever more active programme of observing events and activities for us, and I hope as many of you as possible will want to get involved to some extent. Of course, one of the main benefits of being in an astronomy society is getting easy access to people with a lot of experience in the field, so if you're a beginner, a new member, or anyone with any questions about anything, don't hesitate to get in touch with me or others to get a bit of friendly help and advice!

I've been having a go at the BBC Sky at Night's Moore Winter Marathon over the past few months - a selection of around 100 objects which the S@N team have chosen for viewers to try and observe before the end of January. Of course, the weather has hardly been playing its part - I think I've had about 3 clear nights since November where I live! - but nonetheless I've got over halfway at time of writing. There are a lot of very familiar favourites in the list - The Pleiades, M42, Jupiter, and so on. But I've also seen a few things I'd not seen before - most notably Kemble's Cascade, a fantastic asterism in the constellation Camelopardalis which is best viewed in binoculars. It's easy to find too - locate the "W" shape of Cassiopeia, imagine a line extending between the two end points of the "W", and continue that line for

the same distance northwards. You should see a lovely string of stars, with a faint fuzz at the end (the open cluster NGC 1502). This was an object I'd always heard about, but just never tried to see - proof that there's always something new to discover up there!

I don't know if I'll complete the Marathon by the deadline, especially if it stays as wet as it has been over Christmas. But it's a good fun challenge nonetheless, and has got me thinking about other challenges I might set myself this year: How many Messier objects can I see from my (light polluted) back garden? How about choosing a particularly interesting constellation and trying to see all the notable objects in it (down to a sensible magnitude) during one season? I've also always had an interest in variable stars, but haven't really tried it seriously. Maybe I'll choose a small number of variables and try to make magnitude estimates of them whenever I'm observing and they're visible.

I'm sure we'd all enjoy hearing about each others' observing activities more often, either at meetings or in the pages of Mercury. I'll certainly try to do better this year in sharing what I'm up to! I'm looking forward to hearing others' experiences during 2013, and with a bit of luck we'll be able to get some group observing sessions in as well.

Whatever happens, have a great 2013 - and let's hope for some clear skies!

Ian

Totality

by Gillian Black



Dates For Your Diary: 12th January to 6th March

By Tony Ireland

We start the year with just one planet easily visible - Jupiter but another soon to show its face in an interesting way, Saturn. In February you will have a good chance of seeing Mercury in the evening sky. You can also try and photograph the Minor planet Ceres which will be within the horns of the Bull. Take a time exposure of up to one second at maximum aperture at say 400 ASA of the area on January 12th and another on January 21st and see if you can spot a 'star' that has moved towards the upper 'horn' star Elneth (B Tauri). That will be Ceres, discovered back in 1801. And most amazing of all (!) within the span of this DFYD we might see a bright comet low in the West..... !

Monday 14th January T

Jupiter will be easily visible high in the SSW and tonight at around 22.33 you should be able to watch Europa creep in front of the disc from the East. Io will be to the West and Ganymede and Callisto to the East

Wednesday 16th January T

Jupiter again. This evening early observers can watch Europa emerge from behind Jupiter at around 19.20. Callisto will be to the SW with Io way out to the West and Ganymede far away to the East. This week the Moon will be a fine sight in the SW after sunset.

Thursday 17th January T

Jupiter's Moons will be worth searching for tonight as first Io and then Ganymede cross the disc between 21.18 and 22.27 respectively. Watch out for the shadow of Io about the time Ganymede disappears as it impinges on the East rim of the planet. Europa will be to the East and Callisto out to the West.

Friday 18th January B T P

The Moon is at First Quarter tonight at 23.45. Worth a photo? What is more there is a decent occultation to admire.. The Moon occults Star P Piscium at 20.30 and it reappears at 21.39. Pi Piscium is a Mag 5.5 Star 110 LY away with a Luminosity ten times our Sun and twice the radius of our Sun. Temperature 7100 Kelvin.

Meanwhile Jupiter's Io plays hide and seek with the disc, disappearing at around 18.30 from the West and reappearing at 21.51 well to the East illustrating once again the shadow of Jupiter projecting out into space. Europa, Ganymede and Callisto are in their correct order to the West

Saturday 19th January

The Cotswold AS hosts a Stargazing evening at Shurdington starting at 6.30 pm. Please come along with telescopes and binoculars to help.

Note this evening obligingly Jupiter's moons are accurately arranged in their correct order West of the planet : Io, Europa, Ganymede and Callisto.

Monday/Tuesday January 21/22 BTP

This evening it will be worth staying up late to watch the Moon get closer and closer to Jupiter with the Pleiades and the Hyades to act as escorts !! The closest approach will be (of course) just after Moonset but if you have a low WNW horizon you will get a great view around 02.00 on 22nd. Good luck

The Moons of Jupiter will be well spread out with Europa crossing the disc from midnight, Io and Callisto to the West, Ganymede to the East.

Meanwhile the Moon occults 43 Taurii Mag 5.5 at 23.05. This is a huge star 26 times as large as our Sun and 263 times brighter than our Sun, slightly pink and 291 LY away.. It reemerges from the bright side of the Moon at 00.16 on the 22nd January.

Wednesday 23rd January T

Europa disappears behind Jupiter at 19.31. Io and Callisto look on from the West, Ganymede is to the East. Europa will not emerge into sunlight again until the early hours.

Thursday 24th January T

Watch Io and Ganymede race each other towards Jupiter from the East tonight while Callisto draws in from the West. Europa is far to the East.

Friday 25th January T

Jupiter continues to entertain ! Tonight Io disappears behind the planet at 20.2220 with Europa and Ganymede out to the West, Callisto to the East. Io does not reappear until just after midnight well to the East of Jupiter.

Saturday January 26th T

Early viewing of Jupiter tonight will show just three Moons ! Callisto still out East and Europa and Ganymede

to the West. However, keep observing and you will see Io emerge to the East from the disc at 19.46. And if you have a big enough scope you might be able to pick out Io's shadow on the SEB about half way across....

Monday January 28th T

An eclipse of the Moon tonight !! No not our Moon but one of Jupiter's Moons ! At around 20.25 look at Ganymede to the East of Jupiter. Over a period of about 9 minutes it will begin to fade as it enters Jupiter's shadow. Try as high a magnification as you can to observe this unique phenomena. It will start to re emerge at around 22.56 and be back to normal by 23.07.

Wednesday 30th January T P

Ever since Jupiter came into view at a reasonable hour (!) last year you will have noticed it as it moved WEST against the background of the stars of Taurus near the Hyades. This evening at 16.00, however, that movement ceases as we have to all intents and purposes passed Jupiter in our orbit allowing it to resume its Eastern movement around the Sun. Tonight it will be at its closest to the Pleiades.

FEBRUARY

This month sees the only opportunity of catching Mercury in the evening sky this year. As it will be at its closest to the Sun on 17th February the angular separation will be reduced but at the same time you can take on board the fact that it will be at its brightest as a result - up to Mag - 0.6. half lit. Indeed it will be even brighter between Feb 6 and 10th - -1.0. To add to the fun it will be close to Mars, a planet with which we will have lost interest for months as it neared the Sun, but during mid February you can reassure yourself that it still exists using binoculars after sunset providing you have a low WSW horizon as it will be close to Mercury which passes that planet between February 7th and 8th. But you will need good binoculars to spot this. The night before, if your telescope can get down that far, you may even see Neptune (Mag 8) to the right of Mercury.

Jupiter remains the best show, though fading down to Mag -2.3 by the end of February and the disc down to 39" wide.

And Saturn is slowly coming up at a respectable hour with its rings tilted to a maximum of 19.3 from edge

on. More about her in the next DFYD.

Friday February 1st T

Tonight start observing Jupiter at around 19.00 and in a few minutes you will see Europa creep off the disc to the West. If your scope is big enough you will see the shadow of Europa creep ON to the disc from the East ! Much later at 22.23 Io will disappear behind Jupiter.

Saturday February 2nd T

Tonight watch the same phenomena as Io passes out from in front of Jupiter at 21.35 but its shadow then is already half way across Jupiter as, of course, it is closer to the planet. The other three Moons are to the West - Callisto, Europa and Ganymede.

Sunday February 3rd T

Io again takes centre stage. At 20.05 you will not be able to see it to the East of the disc of Jupiter. Two minutes later you will as it emerges from eclipse ! Ganymede and Callisto will still be to the West, Europa to the East.

Monday February 4th T

Jupiter again... but you are not bored with all this are you ?! OK, you are but it is all I have to offer as things happening as against nothing happening...which is what DFYD is all about ! At 19.28 Ganymede disappears behind Jupiter with Io and Callisto to the West and Europa to the East. Keep an eye on the low Western horizon after sunset to see if you can spot Mercury..

Wednesday February 6th B

This evening, half an hour after sunset, get your binoculars scanning the Western horizon to see if you can pick up Mercury and Mars (and Neptune !) within a circle of less than 2 degrees. Their magnitudes will give them away. Friday February 8th T B At 18.00 Mercury is just .27 of a degree NNW of Mars. That's real close !! Half a Moon width. Magnitudes - 1.0 and +1.2. Mercury will continue to get slightly higher in the sky for another week yet and will be near Mars again on February 24th as it comes between us and the Sun once more. Meanwhile, just before 19.00 Europa will pass onto Jupiter's disc from the East. Io and Ganymede will cosy up to each other, with Callisto much further out to the West. Europa will re emerge from the disc at around 21.38, just as its shadow impinges on the eastern side of Jupiter ! Io comes charging in from the West to pass Europa in line of sight just after 23.00.

Saturday February 9th T

If it is clear and if anyone brings a telescope along to the February CAS Meeting then we must make sure the talk is over by 21.20 to dash outside and watch Io come across Jupiter from the East at 21.25 ! Callisto Europa and Ganymede will be out to the West.

Sunday February 10th T

Tonight you can amuse your neighbour ! Invite him round to look at Jupiter at around 21.55. It will show three Moons, Callisto and Europa to the East and Ganymede way out to the West. Tell him to keep looking... Suddenly at around 22.04 he will let out a yell - 'Hey, I can see Four Moons now' Ridicule him !! Then with a grin you can explain that Io has just popped out from eclipse behind Jupiter...

Monday February 11th T B

Today watch the New Moon pass Mercury low in the West . Tonight it will be at its closest to Mercury (and Mars) about 10 degrees above the horizon 45 minutes after sunset. Meanwhile it's a late night for Jupiter fans. With Callisto and Europa to the East you will need to wait up till 23.23 to see Ganymede disappear behind Jupiter from the West with Io further out.

Wednesday February 13th T

Something different ! Watch Io and Europa to the West Of Jupiter this evening as they come close together, in line of sight. Europa is to the North. Best time is around 19.35. Ganymede and Callisto are out East and a faint Star TYC1276-222-1 further West.

Thursday February 14th T

After a splendid Valentine's day meal take your beloved outside to show her Jupiter where Europa and Ganymede perform the same dance as Europa and Io did last night except this is to the East of Jupiter. Best time just after 21.00. Io is further in and Callisto further out also to the East.. Aaaah !

Friday February 15th T

All sorts of fun tonight !! Early evening Callisto and Europa are to the East, Ganymede and Io are to the West. Over a period of 3 hours Io and Ganymede draw closer together and Europa slides onto Jupiter's disc. If you are REALLY keen you can watch Europa emerge and Io disappear behind Jupiter by 01.56 on 16th...

Saturday February 16th T B

Seek out Mercury this evening after sunset. It is at its greatest elongation East (18.1 degrees) and will now rush past us... Jupiter fans will have to wait until 23.12 to watch Io impinge on Jupiter's disc from the East with Europa and Ganymede to the West, Callisto to the East.

Sunday February 17th T P

The Moon is exactly Half at 20.30. around 5 degrees SE of the Pleiades. ?Photo. Another interesting phenomena tonight with Jupiter, Europa will have passed behind the planet early evening, It emerges very close to the eastern limb at 18.52 - but within 180 seconds ! has disappeared into the shadow of Jupiter - a case of first you see it then you don't ! Io disappears behind Jupiter just after 20.30. and an hour later Europa reappears to the East from Jupiter's shadow. And it will be just before midnight before Io reappears again out of the shadow of Jupiter.

Monday February 18th T

Another night when to start with you see just three Moons around Jupiter. Then just after 19.46 Io pops out to the West from Jupiter's disc. Callisto is close in to the east with Europa further out and Ganymede approaching from the West. You can now have a few nights off until..

Friday February 22 nd T

The winter solstice begins on Mars tonight !!!!

Meanwhile Jupiter's Moon Ganymede emerges from the west side of the disc just after 19.45. Io out to the West with Callisto, Europa to the East.

Saturday February 23rd T B

The Moon occults Star 60 Cancri at its dark side at 22.53. This star is massive compared with our Sun, 80 times across and 944 times as bright some 582 LY away.

Sunday February 24th T

Early viewers can see Europa disappear behind Jupiter at around 18.49 reappearing at 21.31 and disappearing again into eclipse at 21.33 ! It finally re-merges from eclipse just past midnight, by which time Io has done a disappearing act at 22.22. Ganymede and Callisto are further West. And to confuse matters Star HIP 20349 may appear in between them in larger scopes !

Monday February 25th T B P

Io's turn tonight. Watch it cross onto Jupiter at 19.40 reappearing to the West at 21.49. Europa is to the East, and Ganymede and Callisto to the West. Meanwhile the Moon is Full at exactly 20.28.

Earlier Mercury is again near Mars but you will need binos to pick them out and a clear West horizon about 30 minutes after sunset...

Thursday February 28th T B

This evening for the first time for ages all Jupiter's moons are arranged in their correct order to the East of the planet. (You should know their names by now !!)

MARCH

Jupiter still invites us to get that scope out but Saturn is becoming visible to late observers. More about her in the next edition of DFYD.

Mercury has vanished, between us and the Sun whilst Venus, Mars, Uranus and Neptune are behind the Sun.

There is the possibility that we may be able to see a bright comet low in the West after sunset. Comet C/2011 passes within the orbit of Mercury on March 10th going North. But will it be North enough for us.... watch the astro press...

Friday March 1st T

We open proceedings as we left off last month. Jupiter remains the centre of attention. At 21.10 Ganymede creeps onto Jupiter from the East. It will track well below the SEB and re emerge at 23.46.

Sunday March 3rd T

An interesting evening for Jupiter fans. At 21.28 Europa will pass behind Jupiter emerging just after midnight, only to disappear again straight away into Jupiter's shadow ! If you can keep watching you will see Io pass behind Jupiter at 00.19.

Monday March 4th T

Jupiter again ! Watch Io cross onto Jupiter at 21.34. Callisto and Europa out to the East and Ganymede to the West. It reemerges at 23.43. Io's shadow by then is half way across the disc.

At 13.00 Mercury passes 3 and a half degrees below the Sun on its way to the morning sky..

And that's it for this period..

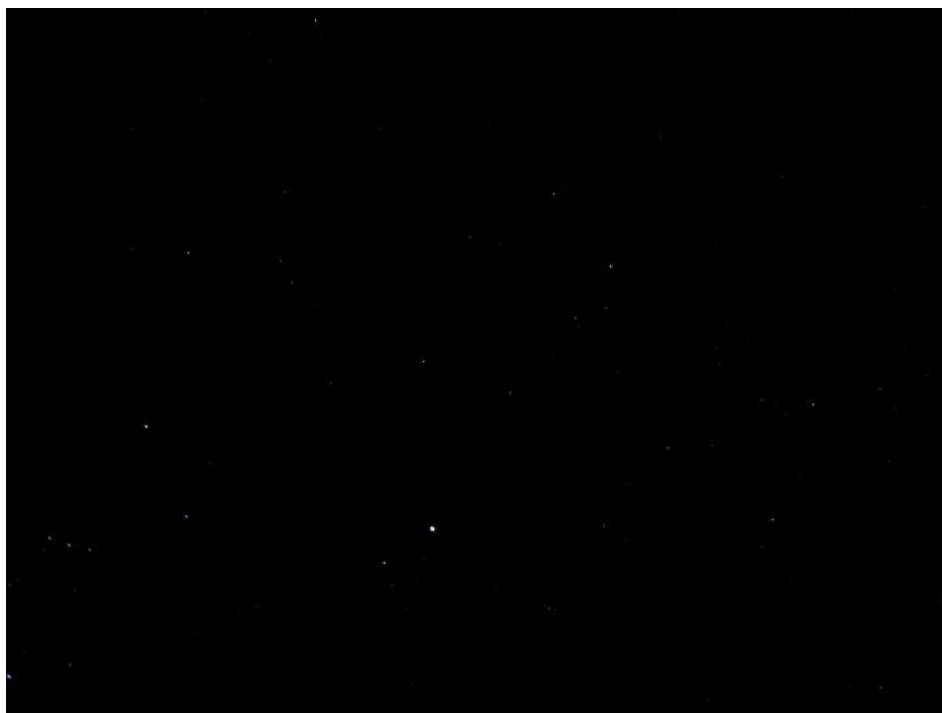
TONY IRELAND

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Jupiter in the Hyades!

by Tony Ireland

Took this on 9th December at 23.29. Used my TZ20 balanced on the runner of my shed roof. Exposure 30 seconds at F3.3 ASA 100



Looking back

By Tony Ireland

Another calendar year passes and we are still celebrating our 30th anniversary. But I have a feeling that these reminiscences will provide a few more entries before we catch up with ourselves, as it were !

In the last edition we had reached the start of 2003, a very exciting year for astronomy , especially if we include the events of December 2002 as recalled in the first MERCURY of 2003. For just as we shall hear, hopefully, of a successful trip to Oz by our current Co-ordinator to witness a Total Eclipse of the Sun last month, so too back then we were treated to a marvelously detailed piece by - who else ? - Rod Salisbury on HIS trip to Oz to see the Total Eclipse of the Sun in December 2002 from near Woomera whilst Derek Maskell waded in with an equally thrilling story of seeing the same eclipse from East Africa (34.04 E 24.93 S to be precise !). Rod's view was in the late evening: Derek's was in the morning. Rod and Rosemary had bad luck with the weather whilst touring places Hilary and I had seen the previous year in brilliant sunshine. As the rain poured from grey skies they were fed up with hearing from residents the comment 'You should have been here two or three days ago when the temperature was in the 40's' !

However, when it came to the eclipse itself Rod was lucky. Here is what he reported... I watched the diminishing crescent of the Sun through my eclipse viewers until almost the last moment, then removed them to be greeted by the most fantastic sight of a perfect diamond ring. Never have I seen a better example prior to totality'. Rod managed one photo during the 25 SECONDS of the totality which successfully captured the narrow shadow cone.. With Mercury nearby. He described the binocular view as breathtaking because the Moon was roughly the same size of the Sun such that the pink chromospheres and prominences were amazing.

Later, to watch the 'crescent' Sun set was itself a unique experience.

Meanwhile Derek had chosen a journey through South Africa, Swaziland, to Mozambique. And guess what - it was cloudy at the moment of totality after witnessing the encroaching Moon right up to that point. Nevertheless it was better than 1999, and a good excuse to pop the champagne whilst waiting 40 minutes for a gap in the clouds to see the Sun again.

In that first 2003 edition we also read of John Fletcher's appearance on the SKY AT NIGHT programme in the

autumn of 2002 plus his helping with the publicity for astronomy stamps issued then. He also had another fantastic weekend in Selsey with Patrick Moore meeting Martin Rees and being serenaded by Catherine Gallo-way, a well known soprano...

Meanwhile up in Yorkshire I had had the thrill of meeting two Russian cosmonauts at the Leeds AstroFest , Alexander Martinov and Yuri Usachev who gave the large audience a fascinating insight on what it is like to be aboard MIR and the ISS. Not for the fainthearted ! Yuri was envious of my having copies of PRAVDA and IZVESTIA published the day after Yuri Gagarin circled the Earth in 1961.

As for astronomical events visible from the UK in 2003 we were blessed with two Lunar Eclipses, an Annular Eclipse of the Sun visible from the North of Scotland and the closest approach of Mars for SIXTY THOUSAND YEARS !! In January the Society held a successful astro display in Regents Arcade whilst two members entertained a group of Cubs and Scouts in Hucclecote.

Following the AGM Peter Cadogan took over as Editor of MERCURY from Callum whilst Rod reported on the healthy financial state of the Society with assets approaching £800 despite a loss for the year of nearly £200. Fred Watkins was awarded a Life membership of the CAS to recognise his 20 years as a member. Fred, in fact, has the distinction of being the first ever member to pay a subscription to the CAS !



Fred receiving his Life Membership from Life Member No 2 !

7th May 2003 was rather special as Mercury (the real one !!) crossed the Sun's disc early morning. I was clouded out in Skipton - at least there is no report of mine in the next MERCURY (the other one !) but several

CAS members had better luck including Peter Cadogan, Derek Maskell, and (of course) John Fletcher.

But it was at the end of the month that the real drama took place early in the morning of May 31st. For Hilary and me up in Scarborough it was particularly exciting. We had booked a front room at the Crown Hotel, an Agatha Christie style establishment, to witness, we hoped, an eclipsed Sun rise out of the sea far to our left. For the three previous days it had been cloudy. But when we awoke at around 3.30 am it was clear and by 4.15 the Promenade below us was crammed with hundreds of people, whilst lower down the cliff the Scarborough AS, under the patronage of the great Jon Harper, had assembled telescopes adapted for solar viewing with loudspeakers to explain to gaping Yorkshire folk what was happening.

At 4.37 am a great cheer went up. A blood red crescent Sun 80% covered by the Moon, could be seen rising through the misty horizon. There was no need for filters to see this amazing sight. As it rose, spreading a pinky hue over the sea, cameras whirled and people chattered excitedly. My video camera couldn't cope with the contrast in colour and turned the Sun's image golden yellow but my slides and print photos dealt with the contrast more sympathetically. As I watched the beautiful image I phoned Alan Birkner in Chicago on my mobile. He was about to retire to bed (it was still the previous evening!) and of course could see nothing. His comments are best forgotten!

By 5.05 the Sun had risen sufficiently to make filters necessary. The Crescent of the annular eclipse had now thickened. I went out into the street and found Paul Hudson, an astrophysicist and principal weatherman of BBC Look North, chatting to Professor John Parkinson, an ardent eclipse chaser, who was recording his impressions for the local BBC TV and Radio stations. Paul wandered about in a semi-daze delighted that his previous evening's weather forecast was right(!), that his fear that high cirrus would spoil the view was in fact wrong - it had the opposite effect - and by the sheer magic of the occasion. He gave me an exclusive interview for my Skipton and Craven Astronomical Society. He finished by rushing off to open a bottle of champagne for the BBC crew, which I filmed, whilst down below the Scarborough AS were letting off fireworks!

Later I went down to meet Jon Harper and congratulated him on the success of his efforts to alert the public and show them the eclipse through so many Society telescopes. He was very happy indeed as to how it had all turned out.

I suggested to CAS members that they book their place for the next annular solar eclipse visible from the North Yorkshire coast - in 2093!

Meanwhile down in this part of the world Rod went to Iceland (!) where, despite cloud, he did see the annular phase, stating 'the entire ring sparkled with light ... for the whole 3 ½ minutes. ...it was breathtaking' Shortly afterwards clouds rolled in to block out the rest of the eclipse. Lucky Rod.

Not to be outdone Derek Maskell ended up with the BBC Sky at Night team off the West Coast of Scotland, complete with Patrick Moore, seated like King Canute, awaiting the eclipse. Sadly cloud spoiled the best bits but Derek and Patrick did see some of it.

Then it was August which provided the next big event - the closest approach of the Earth to Mars in over 59,000 years. On 27th Mars reached a disc of 25", roughly half of that of Jupiter when closest to us, shining at Mag - 2.9. I pointed out that we would be passing Mars at around 5 kms per second (30 compared with 25 kms). Apparently Mars' orbit is so eccentric that it can vary by up to 43 million kms. Thus 57,537 BC was linked to 2003 AD and the next close approach - even closer by 110,000 kms - in 2729.... In 2003 we were just 34,646,418 miles apart at 11.00 BST on August 27, a mere 138 times further away than the Moon.....

Up in Yorkshire I had a queue of neighbours at my door that week wanting to see Mars through my ETX 90. In Cheltenham you were celebrating a VERY successful National Astronomy Week, with exhibitions in the Regent Arcade, talks to children at Gloucester Library, and later many at an Astro Dome at that venue. But of course public viewing of Mars on 27th wasn't possible because of cloud....

Over in Western Canada Jack Newton and his wife Alice had something very different to get excited about - a raging forest fire almost engulfed their newly built B&B Observatory in Osyoos. What was worse Alice was out at the time of the greatest threat to their house as Jack fought the circling flames with a hose pipe. Fortunately excellent work by the authorities saved the day - just - but for several hours it was touch and go..... in those dramatic hours Anarchist Mountain earned its name...!

Volume 21 Issue 4 was bursting with lengthy articles designed to help you master all sorts of astro talents. There was also a report of an Open Day at Mount Tuffley where John Fletcher showed 24 members of the CAS the 12" telescope that Sir Patrick Moore had given him after it had been cleaned and restored. This fa-

mous scope had been used by Patrick to advise the Apollo Team where to land the Apollo craft..

In November there was a Total Eclipse of the Moon but amazingly there are no reports at all of that event in MERCURY. I will have to search amongst my slides to see if I can trace a photo from Skipton...

I am now going to recall a tale of woe which happened to a very well known astronomer who visited Cheltenham for the Science Festival that year. It is a true story though you may well find it hard to believe.....

“We all know that amateur astronomers are rather strange animals liable to do crazy things at a moments notice, but when it comes to professional astronomers, they are in a class of their own. Not for them the prospect of being arrested for malingering in ancient churchyards in search of lunar occultations (Dick Warden and Dan Turton many years ago), nor encouraging the Boys in Blue to lie down in Ilkley Moor to observe passing meteorites. No professional astronomers are of much more daring vintage. They wander around Cheltenham naked in search of a bed , any bed in the wee small hours of the night.!! You think I am pulling your leg ? I am not. Read on and be prepared to blush - especially John Fletcher !

Imagine the scene . You are female. You are extremely busy. You are invited to the Cheltenham Literary Festival with your male friend to lecture on the upcoming approach of Mars. You arrive late and report to your designated hotel. And you are not satisfied with the room provided. You ring up the Organiser and complain bitterly. You are assigned another hotel with two rooms free. You report in and are happy with the sleeping arrangements. You receive a rapturous reception for your talk. Things are at last looking up..... You are invited to a posh dinner afterwards as Guest of Honour and you find yourself sitting next to the father of the Organiser who tears you off an almighty strip for the way you have criticised the Organiser of the Festival who was unaware (apparently) of what you really really want - to coin a phrase.... Even for you the extent of the ticking off leaves you feeling shattered and you retire to your hotel room feeling very unsettled and wanting kind words, if not coronets. You cannot sleep. You need tender loving care. So you get up from your bed and set off to find your soul mate. You cannot remember their room number. You cannot remember where your room is. Your bedroom door has slammed shut behind you. You have no key, and worst of all you have no clothes on !! Eat your heart out Manuel . Thus it was at 2am a strange sight was spotted in the corridors of this (unnamed) hotel. Miss HEATHER COUPER,

she of the jolly voice and disposition, she who has graced - and continues to do so - the airwaves and our TV screens for many years, she who arranged, many years ago, for the Cotswold AS to figure in a BBC Radio 4 programme on Halley's Comet (I have the tape still), she who in the previous year had explored Tiananmen Square, slept in a haunted house in Jersey, lectured at the Sydney Opera House, been thrown off an Easyjet plane for excessive explorations of Scottish whisky in the Orkneys, had mingled with the Mighty on the Millennium Commission and (perhaps worst of all) had lost a vital dominoes match at the Pink and Lily pub near her home in Henley, among many other sins. She, bless her, was found wandering, without intent, in all her natural glory, fast asleep, by the hotel manager, who, to this day, could not believe his luck.... which only goes to show that sometimes it pays to be 'On nights', for you never know you might see a ghost - which turns out to be real after all.

NEVER FORGET YOUR HOTEL ROOM KEY - EVEN WHEN YOU ARE ASLEEP.... “

One of our unsung members from way back is John Rock. We may not see him very often at meetings these days - its quite a long way from Swindon - but Jon has made many valuable contributions to the Society over the years. In March 2004 he provided a brilliant article on how to build an observatory and not just a roll of shed either. If anyone today wants to know exactly how to go about constructing one let me know and I will copy you Jon's article. To prove what a fine astrophotographer he is he sent in some wonderful photos of Mars taken with a CCD camera through a 10" Meade. Equally stunning Mars photos were sent in by Graham Calvert using a MX9 camera attached to a 9.25 Schmidt Cass scope.

In March 2004 we said Goodbye to Duncan Willoughby who had done a tremendous job in driving the CAS to new heights (over 80 members) and welcomed Callum Potter as our Co-ordinator.

Of course the big event of 2004 was the Transit of Venus between 06.19 BST and 12.23 BST on June 8th. MERCURY had reports from Cheltenham, Skipton, Selsey and Sharm el Sheik in Egypt. Everyone who sent in these did see something, with Egypt winning as far as the sky was concerned though JF down in Selsey with Patrick Moore and Bryan May - and Uncle Tom Cobbley and all (!) - also did well. Cheltenham's spot was in Imperial Gardens where Peter hosted a merry crowd of passers by including two policemen, plus Radio Gloucestershire. The famous Black Spot was seen by nearly everyone at the beginning and end, photos were taken, videos and

films made, with JF appearing on BBC TV with Patrick. I suppose the worst view was (of course) from Skipton (!) but even then to see anything from up there is a miracle ! There were thoughts of the next transit on June 6th 2012 with Rod forecasting the time the Sun/Venus would rise and the transit end from Cheltenham Later I speculated whether Venus and Mercury would ever be able to transit the Sun together ! I discovered that this might be possible after the year 11,900 AD. The Big One will be on March 27/28th 224508 when they both transit at the same time.....But let your imagination go further.. how about a transit AND a total eclipse of the Sun ? Yes that will occur August 20th 10663 at 0405 with Mercury in transit and again on August 25th 11268, whilst Venus will be in transit on April 5th 15232 at 15.38 with a Total eclipse of the Sun two hours later. And if by then we have dwellings on the Moon on November 13/14 2236 - that's only 224 years ahead - then Moon folk will witness the earth AND Mercury crossing in

front of the Sun. And finally - the Big One - (are you ready for this ?) - In 571741 AD Patrick Moore will be reporting from MARS as he watches a simultaneous transit of Venus, the Earth and the Moon, crossing the Sun with Rod Salisbury standing behind him.. What a thought ! Don't forget your Explorers Tours eclipse glasses Rod !

2004 ended with a Total eclipse of the Moon late October - which nobody saw as it was cloudy almost everywhere BUT we were able to see the latest Comet, Comet Macholz, which was clear around Xmas. And Duncan Willoughby added to his huge collection of autographs of space men and women (Valentina Tereshkova).... Lucky fellow. Gee only two years covered in this edition..must do better in the next issue.

TONY IRELAND



Crab nebula by Rik McRae

LRGB image with narrowband Ha data added to red channel in blend mode lighten. (3.5 hrs total exposure time)

Society Loan Equipment

The following equipment is available on loan to society members. To save the current holders of these items from having to bring them along to every meeting, they will now only be made available by pre-booking:



Meade MySky (A)

This is a gadget that helps the beginner navigate around the night sky.



Meade ETX 90 (A)

This is a small telescope that comes with its own tripod and was kindly donated to the society by Tony Ireland.



10x50 binoculars (A)

A fine pair of binoculars and a sturdy tripod with adaptor. Both of these items were bequeathed to the society by the late Mary Hilsden.

For items marked A - please contact Andy Szewczuk via email (andrewandkarensz@tiscali.co.uk)



Manual equatorial mount on a sturdy tripod (B)

Kindly donated by Angela Cresswell, this heavy duty mount could be very useful if you currently have a telescope (eg an 8") without such a mount.

For items marked B - please contact Peter Burgess via email (p-w-burgess@tiscali.co.uk)



Meade 8" Dobsonian (C)

Kindly donated by Lynn Green from Winchcombe, this large aperture scope offers a great introduction to the wonders of the night sky.



Celestron NexStar 130GT (C)

Given to the society by Val Renn from Up Hatherley. The kit is particularly suitable for a beginner, especially one who is not very familiar with the night sky.



Celestron C8+ (C)

This fine telescope was very kindly given to the society by Andy Stephens and will always be available for viewing at monthly meetings, clear skies permitting. However it can be borrowed between meetings if required.

For items marked C - please contact Peter Cadogan via email (peter.cadogan@zen.co.uk)



Phenix 127 (D)

This 5" f/9.4 achromatic refractor offers excellent views of the moon and planets. It was kindly donated by Alan Parker. As for the C8+ above, this scope should always be available for viewing at monthly meetings but can be borrowed between meetings.

For items marked D - please contact Rik McRae via email (rikmcrae@yahoo.co.uk)

Monthly Meetings and Events

12th January 2013

Neptune and beyond

Mark Gibbons (Cotswolds AS)

Friday 18th January 2013 (6.00pm)

Stargazing on Minchinhampton Common with the National Trust (if clear!)

Saturday 19th January 2013 (6.30pm)

Stargazing at Shurdington

Sunday 20th January 2013 (6.30pm)

Stargazing in Twigworth at Nature in Art

9th February 2013

Deep Sky Observing

Callum Potter, (Cotswolds AS)

Saturday 2nd March 2013 (9.30am)

Cotswold AS is hosting the 2013 BAA Deep Sky Section Annual Meeting

9th March 2013

Variable Stars - How and why they vary

Gary Poyner

13th April 2013

Annual General Meeting

11th May 2013

Making astronomical observations

Roger Pickard (BAA)

Directions to Shurdington Century and Millennium Halls

From Cheltenham

Follow the A46 towards Bath/Stroud which passes through Shurdington. Turn right into Church Lane which is close to a Pelican Crossing, then 2nd left into Bishops Road. Century and Millennium Halls are immediately on the left.

From Gloucester

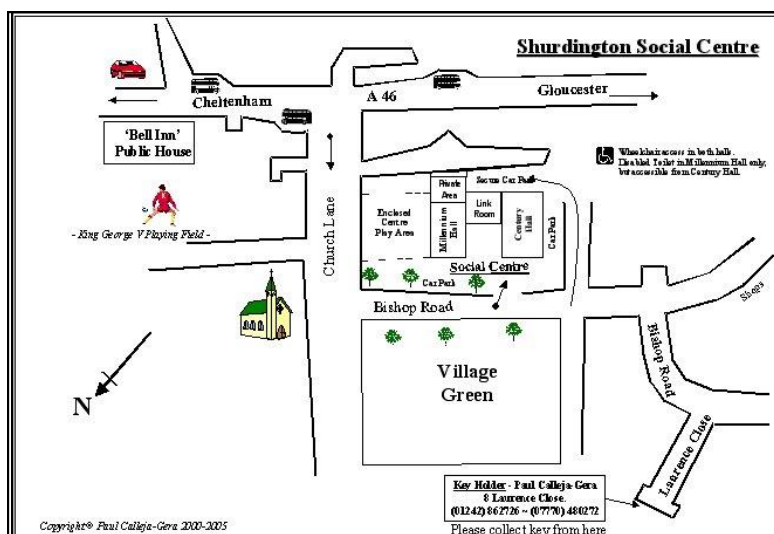
Follow the A417 towards Cirencester. At the roundabout with the A46 turn left towards Cheltenham. This road passes through Shurdington. Turn left into Church Lane near a Pelican Crossing, then 2nd left into Bishops Road. Century and Millennium Halls are immediately on the left.

From Cirencester

Follow the A417 towards Gloucester. At the roundabout with the A46 turn right towards Cheltenham. This road passes through Shurdington. Turn left into Church Lane near a Pelican Crossing, then 2nd left into Bishops Road. Century and Millennium Halls are immediately on the left.



“Meetings of the society are held monthly on the second Saturday of the Month, starting at 7.45 p.m.”



The Cotswold Astronomical Society serves amateur astronomers in the Cotswold area centered on Cheltenham and Gloucester. Local membership reaches to Swindon, Evesham and Worcester too.

We welcome anyone interested in astronomy. Our members come from all walks of life and range from beginners just starting out to experienced amateurs with a wealth of knowledge. Members have varied interests from cosmology to telescope making, from lunar and planetary observing, to supernova hunting.

Not all members are active observers, and the society caters equally well for the armchair or internet astronomer.

We're on the web!

www.cotswoldas.org.uk
info@cotswoldas.org.uk

The Cotswold Astronomical Society was established in 1982 and is a member of the Federation of Astronomical Societies.



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Links

Weather Check

http://www.jfmto.pwp.blueyonder.co.uk/CURRENT_Vantage_Pro.htm

Astronomy Picture of the Day

<http://antwrp.gsfc.nasa.gov/apod/astropix.html>

You may choose to receive your Mercury in PDF form, this will help to keep down costs. And it looks nicer in colour!

The next edition will be in March, Please ensure material for publication is submitted before the end of February.

Thank you, Rik