Newsletter July-September 2008

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Chairman's Report

A few months ago we had what can only be described as a disaster at the IOMAS when the telescope controller packed up. Whilst we could still steer the telescope with a PC or manually it was inconvenient to say the least. Well we set about trying to purchase a new one, but soon found out that the supplies in the UK had to be ordered from the United States, and it would be at least 6 to 8 weeks to be delivered and then dispatched to us! This was in the middle of the main observing season! Well our esteemed secretary, James discovered that we could buy one in the States straight away but it could only be delivered to a US address. So as a long shot I emailed our US members Chris & Nicole Stott and asked if they would mind if we had one delivered to their home in Houston, Texas. Chris got back very quickly and not only agreed to this but insisted on paying for it also! So the details were sent the controller dispatched. A few days later I met up with Ian Jarrit of ManSat and I was handed the controller! Ian had met Chris in New York and brought it back for us. It was quickly installed and we once again are up and running. It really was a case of "Houston we have a problem" and Houston once again came through at the hour of need. On behalf of us all I want to say a big public thank you to Chris & Nicole and also to Ian for bringing it over.

This time of the year tends to be a bit quiet on the observing front as the sky just doesn't go dark enough for us, mind you we have had some great skies just recently and most people will have noticed the bright star rising in the East, late on each night. This is of course Jupiter and it will be with us for quite a few months as we go through the summer. Also clearly spotted low in the South has been the distinctively reddish coloured star Antares in Scorpio. I for one will be looking forward to the Perseids this year as I will be viewing from a dark location whilst on holiday. The problem is there will be a full moon a few days later, mind you a few glasses of wine and dark skies will be most enjoyable anyway, any meteors will be a bonus !

Over the years we have been quite successful in attracting and keeping new members in the Society, but we have often commented that we don't have that many members who look regularly at the night sky, for quite some time Dave was our sole observer at the observatory. However just recently we seem to have attracted a number of other like minded observers and we are absolutely delighted to know that our fantastic facilities are starting to be used in earnest. One of those is Glynn Marsh, who has been an overseas member for many years, has now moved "lock, stock and telescope" to the North of the Island .We have already co-opted Glynn onto the committee and we look forward to seeing and hearing about his observations over the coming months and years.

One thing that we are keen to do over coming months is to get the 28 inch telescope moving and the sub-committee looking into this are meeting regularly and we are hopeful that work can commence soon on this next exciting project for us all at the IOMAS. I must at this point express our grateful thanks to Helmut Kessler of CVI Technical optics, who has very kindly agreed to help us with the secondary optics, this is a very generous and much appreciated gesture.

Finally I would point out to all members that our AGM is coming up again in September and as always we are looking to the members for ideas, suggestions and proposals that the Committee can consider to keep us moving forward. We are also looking for speakers and suggestions of activities for the IOMAS. Next year will be a very exciting year for the IOMAS, it is our 20th anniversary, 10 years since we established the observatory, the International year of astronomy, and to cap it all the year when hopefully one of our members, Nicole Stott will reach orbit during her ISS mission next March.

Keep looking at the stars and (apart from Nicole!) keep your feet on the ground. Howard.

2007 Astro Highlights and Disappointments by Melvyn Taylor.

Without any doubt the strangest comet seen has to be 17/P Holmes which came to attention by its truly astronomical brightening during October. High in the sky it was first spotted Oct 28/29 and followed in its slow passage over Perseus as it grew in size and then faded only to be visible in 10x25 and larger bins.

Seen as a naked-eye object any new phenomena is a tremendous thrill be it aurorae, sunspots, novae or any eclipse/occultation. However, the weather and circumstances sometimes beat best intentions. One of the greatest comets for decades 2006 P1 (McNaught) unfortunately came into this category and despite several trips to overcome visibility problems from home (high trees in the s-s-west) it was never to be seen in-situ. In a similar way the summer sights of noctilucent clouds on June 20/21 and the big display June 27/28 came to enliven the scene a bit (in my opinion) like a Turner painting seen for the first time.

Also it was a pleasure to have several meteor watches of the Perseids, Orionids and Geminids with superb conditions in August allowing long stints until day-break. A great Geminid was recorded on Dec 13/14 at 23h08.2m UT when a slow, trained, white object appeared very near the radiant and moved just over Mars, it brightened slowly to a peak estimated about magnitude -2 to -3. The hour's watch which showed stars to mag. 4.7 had 9 shower and 3 sporadic meteors.

But what about the Mar 3/4 total lunar eclipse - who was not totally impressed (?). Forget Saturday evening at the pub or anywhere else this was a massively fine evening for a lot of the U.K. and I was suitably impressed and managed to take several digital images. The Moon, of course, was also involved in ‘taking-out’ the Pleiades last year and on more than one occasion (Feb 23/24 and Dec 21/22 yet these were clouded) but the August 06/07 night was nicely clear with a Perseid watch thrown in. Other occultation circumstances saw negative attempts, with more disappointment not to see the asteroids Baldwin and Meliboea block out stars in January and July.

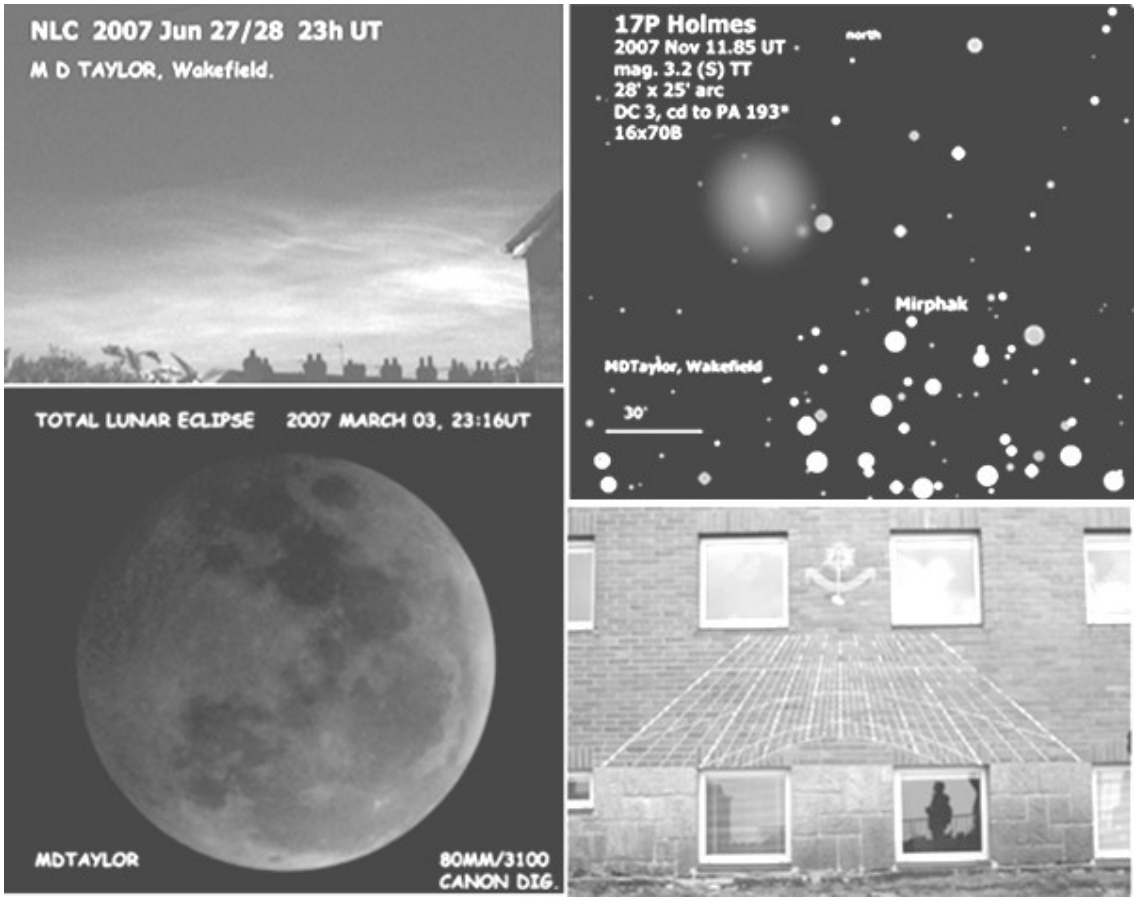
One great pleasure is to observe from an observatory proper. My back-garden and a small area of it is the place for spotting the stars, so any 'excuse' to make a few variable star estimates from the comfort of a wind/light excluded place is useful. I normally take small binoculars on any trips in the eternal hope that the sky is clear for any variables that are on view. It was a delight to view Saturn and other things from WYAS Rosse Observatory March 6/7 and the chance was taken on the Isle of Man Observatory at the August barbecue and at Calton Hill Edinburgh (AS of Edinburgh) early October. Cooke's telescopes travelled, with Calton Hill having an 8-inch and there is a 4-inch f/16 (made 1850) at the York Museum Observatory (1831 built) with a mechanically (gravity) driven eq. refractor through which Mars was seen in early December. But several other observatories in Slovakia were visited in August from which observations were not made. These were at the principal centre of Stara Lesna where there are two domes and a solar facility, also at Skalnate Pleso (1783m) and higher to Lomnica Stitt (2800m) another solar observatory with twin refractors. Keen and experienced rock scramblers could access Lomnica Stitt but it was 'hairy' enough in the 16 person cable-slung tin box otherwise known as a cable car! The 'place of the rocky lake' was built in the 1940s, the sundial is the largest (man-made) I have seen. Any folk terrified by thunder and lightening may reconsider a trip into the High Tatra mountain region - it was an experience not to be forgot, and soon after the sky went highly clear for observing.

Variable star-wise the highlights were a very bright maximum (2.8) of Mira's maximum in mid February and the fading of R CrB that began in July, it is now faint around mag. 13.5 having been around 6.0 at ‘usual’ brightness. And at the year end it was possible to spot yet another Japanese credited nova in Vulpecula around magnitude 7.7 in 16x70 binocs. Early February had both Mercury and Venus in the evening skies and a series of digital photographs taken from platform 11 at York Rail Station captured one of the better landscape shots of both inner planets.

A trip away from the heavy pollution of West Yorkshire was taken in April to the wilds of Horton-in-Ribblesdale where over 14/15/16 we had clear skies and it was a delight to search out deep-sky objects like clusters and galaxies in a 80mm f/5 eq.

mounted refractor. One aim at Horton was to try for comet 2P/Encke from a dark sight but it was not a confident observation due to low altitude over Simon Fell, and inevitable sky extinction. Reported observations had it around total magnitude 6.5 for this time. Comet 2006 VZ13 an unusual object with a 40 year period and retrograde orbit, originally classed as an Amor asteroid which was due to be at perihelion in September became visual in June. Using the very handy 80mm scope I had it around mag. 7.5 and about 4 arc minutes in size and rather diffuse. During June at home using 16x70 bins I decided to learn a bit more of Ophiuchus and Serpens picking up M3, M10 and M14. Solar viewing was not too challenging in 2007 with solar minimum providing few sunspots but to one's relief June 4/5 had a large group and three active areas visible.

Melvyn Taylor, 2008 May



Comet 17P/Holmes is a planetarium based and amended drawing of the field / Wall sundial at Skalnate Pleso, Slovakia, Observatory

Meetings

Listed below are the planned meetings at the observatory. The meetings in *italics* are for groups outside of the IoMAS, but any member is allowed to attend these meetings where you may help with the visit, or just use the telescopes. Note these meetings may change at short notice. Contact the host of the meeting to confirm. Also, see the IoMAS website as this has a page that is continuously updated.

3rd July Monthly Meeting. "Flora & Fauna at the Observatory Fields" by James Martin
17th August Committee Meeting
7th August Monthly Meeting. "Meteorites" by Gary Corlett
21st August Committee Meeting
4th September Monthly Meeting "Supernova" by Richard Shafto
18th September AGM: Date and Venue to be confirmed.

The Manx Night Sky. July - September 2008

All times are Universal Time (UT). IoM time is BST so don't forget to subtract 1 hour from the times quoted.

Moon

New	**1st Qtr.**	**Full**	**3rd Qtr.**
3rd Jul. 02.19hrs	10th Jul. 04.35hrs	18th Jul. 07.59hrs	25th Jul. 18.42hrs
1st Aug 10.13hrs	8th Aug. 20.20hrs	16th Aug. 21.16hrs	23rd Aug 23.50hrs
30th Aug. 19.58hrs	7th Sept. 14.04hrs	15th Sept. 09.13hrs	22nd Sept. 05.04hrs
29th Sept. 08.12hrs			

Lunar Occultation's: (Stars brighter than magnitude +6.0)

Date	Time (h.m:s)	Star	SAO#	Magnitude	PA	Type of Event	Notes
20 Sept	02.46:54	ZC536	76126	5.5	223	RD	Celaeno. Pleiades
20 Sept	03.09:59	ZC539	76140	4.3	253	RD	Taygeta. Pleiades
20 Sept	03.19:02	ZC541	76155	3.9	224	RD	Maia. Pleiades
20 Sept	03.32:52	ZC542	76159	5.8	260	RD	Asterope. Pleiades
23 Sept	02.43:16	ZC1055	78866	5.8	295	RD	37 Gemini

Times are UT as seen from IoMAS Observatory. Start to observe these events about 5 minutes before the above times to allow for differences in your latitude and longitude. This will give you time to locate the star that is about to be occulted.
ZC = Zodiacal Catalogue. Type of Event DD = disappearance at dark limb, RD = Reappearance at dark limb.
PA = Position Angle around limb of the Moon, where 0 degrees is north, 90 degrees is east, 180 degrees is south and 270 degrees is west.

Planetary Highlights

Mercury reaches greatest western elongation of 22 degrees on 1st July and superior conjunction on the 29th July. The planet is a morning object but is well south and will be poorly placed for observation. During August and September, Mercury is to the left of the sun. The planet is low down and in bright twilight and will be a difficult object to see from Manx shores. On the 20th August an opportunity to glimpse the planet through binoculars will occur using the bright planet Venus as a guide. On this date, Mercury passes just less than one degree south of Venus. Mercury reaches greatest eastern elongation of 27 degrees on the 11th September; however it will be low in the south western horizon and will be poorly placed for observation from the Isle of Man.

Venus moves into the evening sky this quarter and will be a difficult object to see from Manx shores. The planet will gradually move away from the sun's glare and will be better placed for viewing during late August and September. It will be unmistakable beacon shining at magnitude -3.9

Mars is in Leo and at the start of July, close to the north of Regulus. The planet is moving prograde (west to east) and will be seen to catch up to the planet Saturn, also in Leo. On the 10th July it passes about 2/3 degree below Saturn. Of the two, Saturn will be the brighter at mag. +0.8 compared to Mars' mag. of +1.7 This conjunction will be best seen in binoculars as it occurs in a bright sky low in the west after sun down. As the month progresses, the planet will eventually be lost in the evening twilight sky. During August, it lingers in the twilight sky after sunset but is not a viable planet to image through a telescope due to its distance and low position in the sky. On the 8th August, Mars move from Leo into Virgo.

Jupiter Remains in the constellation Sagittarius through July to September, shining at a bright -2.7 It reaches opposition on the night of the 9th July and will rise in the east when the sun sets. As the planet is low down in the south during late evening, the view as seen through a telescope will be degraded by the turbulence within the earth's atmosphere. You will be able to watch the four Galilean satellites change positions either side of the planet night after night. You will also be able to see the eclipses of the moons as they pass behind and into the Jovian shadow. Also, with careful observation, you may see some of the moon shadow transits across Jupiter's disc.

Saturn. Is in Leo and found in the west after sunset. It is joined by Mars during July. See above. Through a telescope, the rings will be seen tilted at an angle of 8.5 to 7.0 degrees towards the earth. Note the southern face of the rings will be pointed in our direction. During August, the planet moves ever closer to the sun and will be lost to the sun's glare by September. It reaches solar conjunction on the September 4th.

The bright moon Titan can be seen west of Saturn on 3rd , 4th ,5th ,19th ,20th 21st and east of the planet on 11th,12th ,13th ,27th ,28th ,29th.

Meteors: **Alpha-Cygnids** are active during July through August with a maximum on 21 July and 21 August. It is a weak shower with best rates at only 5 per hour.

Capricornids are active throughout July and August and again has a low rate of 5 per hour. There are three nights when activity peaks; 8th, 15th and 26th July. These meteors have been recorded as yellow-blue in colour.

Alpha-Capricornids are active between July 15th until August 20th. Peak activity occurs on 2nd August when a maximum of 2-3 meteors per hour may be seen in ideal conditions. Long slow moving fireballs are sometimes seen.

Iota-Aquarids peak on the night of August 6th with 2-3 meteors per hour and may be seen during the months of July and August. They are usually faint meteors and radiate from two positions in the sky.

Persieds are seen between July 23rd to August 20th. This years maximum occurs on 12th during daylight hours, so observations on the nights of 11th, 12th and 13th should be good. The maximum of 80 meteors per hour can be expected in ideal conditions but the 11 day old Moon will interfere with its bright glare that will drown out some of the fainter meteors.

Contact:
Newsletter Editor: Dave Storey 38 Hailwood Avenue, Douglas, Isle of Man, IM2 7DG
dave.storey@iomastronomy.org Tel 617084 or 495283

IOMAS COMMITTEE

Chairman: Howard Parkin ☎625755 e-mail howard@iomastronomy.org
Vice Chairman: Gary Kewin **(KEY)** ☎622241 e-mail gary@iomastronomy.org
Secretary: James Martin ☎ 842954 e-mail james@iomastronomy.org
Treasurer: Gary Corlett **(KEY)** ☎ 611737 e-mail garyc@iomastronomy.org
Membership Secretary: Dave Storey **(KEY)** ☎ 617084 or 495283 e-mail dave.storey@iomstronomy.org
Committee Member: Angela Bridson e-mail angela@iomastronomy.org
Committee Member: Kevin Deakes kevin.deakes@iomastronomy.org
Committee Member: Graham Gordon. graham.gordon@iomastronomy.org
Committee Member: Mark Henthorne ☎ 491414 mark.henthorne@iomastronomy.org
Committee Member: John McDermott john.mcdermott@iomastronomy.org
Co-Opted Committee Member: Colin Hill e-mail colin@iomastronomy.org
Co-Opted Committee Member: Glyn Marsh

DOME PHONE
464926

www.iomastronomy.org

Please ring the Dome Phone on any clear night. There should be a committee member there if you're lucky. If you don't get an answer, please try any of the above committee members that have **(KEY)** next to their name to see if they plan to do some observing. They should be able to try to get the observatory open for you. If you know in advance what you plan to observe, again, ring the above committee members to arrange an observing session.

This newsletter has been very kindly sponsored by "The Office Equipment Centre" Douglas. Isle of Man.