

# Newsletter July – September 2009

Volume 5 Issue 3



Noctilucent Clouds from the Isle of Man Observatory

#### **Chairman's Notes**

Summer is usually a quiet time for astronomy, and I have this mental image of us all dusting and cleaning our telescopes. However this year seems to be as exciting as the winter, which is great given that it is our 20th anniversary

There is a much greater awareness in astronomy worldwide at the moment and this is, I believe due to a variety of reason, not just the fact that 2009 is the International year of astronomy. Over the years I have been talking about and teaching astronomy I have noticed that people are far more aware and more importantly appreciative of the wonders of our night sky and in the Isle of Man we do have I believe some of the clearest skies in Europe, (when its not cloudy!) Last winter, I think it was the October we had our monthly meeting and sky was breathtakingly clear, and I sometimes think we underestimate just how lucky we are to have such a great facility in the Isle of Man.

I was particularly please a few weeks ago when I arrived for the August meeting to find over 50 people present, usually our busiest months are understandably in the dark winters evenings, but we seem to be getting more in the summer as well, thank you all very much indeed for your support.

Turning to recent events, we had a great night in May to celebrate our 20th anniversary and this was followed by an excellent talk by Nick James of the BAA. I must thank in particular Angela Bridson for coordinating the dinner and to all who attended. We had two successful Star parties at the Cat with no tail and these were well supported and we will be having a number of other events later in the year once the dark nights return, so watch this space.

At this time of the year I make my usual appeal for ideas and for speakers at our meetings, we do try and vary the subjects and I think we do succeed, but we are always looking for new speakers, topics or even ideas for the format of our meetings so if you have any suggestions please let any of the committee know.

Finally by the time this address is read we hope to have our first IoMAS member in orbit. Nicole Stott, is due for launch on the Shuttle Discovery which is scheduled for launch in late August. Nicole will be staying in the ISS for a few months and we hope that when she returns to Earth she will eventually be able to come and talk to us about her experiences at a future meeting (I think we will have a full house that night !) Our thoughts and prayers are with Nicole, and we all look forward to learning about it in due course.

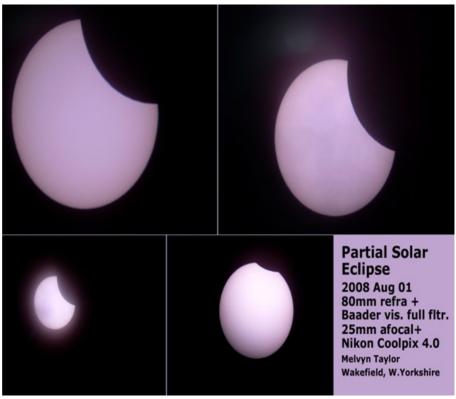
In the meantime enjoy the rest of the Summer and I hope to see you all again soon

Howard

#### Members Observation.

## OBSERVATIONAL HIGHLIGHTS 2008 By Melvyn Taylor

An incredibly beautiful view of Venus, Jupiter next the crescent Moon on a cold, damp evening Dec 1/2 at 15h44m in strong twilight was a lasting view of 2008. Cloud at first hindered the instant when the Moon blotted out Venus but some 50m later things cleared with Jupiter shining brightly but no Venus. The planet eventually emerged from behind the Moon and by 17h35m a low power binocular view was used on the scene low in the s-west. Soon afterwards the ISS was followed for about 3 minutes with an 80mm equatorially mounted refractor looking possibly magnitude

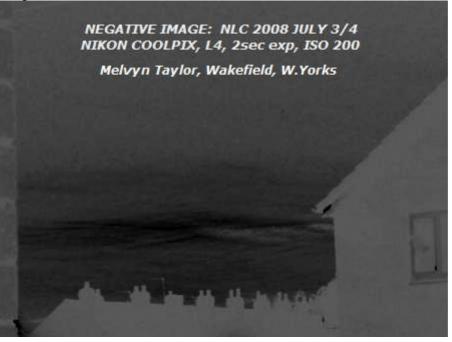


-4 or so, and similar to the size of Jupiter's disc in the same telescope.

The partial eclipse of the Sun on Yorkshire Day (Aug 01) was well seen and a few decent images taken using the 80mm refractor. Feb8/9 and an iridium flare about the brightness of Mars moves down from the upper body of Orion and occults Alnitak, the eastern most of the belt stars, as seen from Wakefield; the time 17h 17m 55s UT. Other planets searched out were Uranus and Neptune on an evening (Oct 27/28) escape to Heath Common near outskirts of Wakefield. The planets were better to find due to the location allowing fainter naked-eye stars to be got in binoculars (16x70B). The opportunity was taken to view M30 in Capricornus a mag. 7 globular cluster at declination -23° and 26,100 light years distant. On Sep 3/4 and a very cold transparent evening the Trifid Nebula (M20) was spotted in 16x70B also M22 a magnitude 5.0 globular cluster that is one of the closest at 10,400 light years. In July under a decent sky the Milky Way through Cygnus is seen from Cross Lane Garden Observatory; there is no physical observatory building, just the grassed lawn!

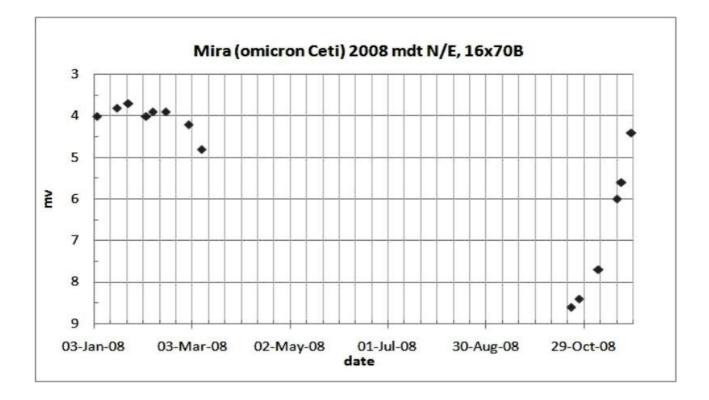
recorded in July 15/16. described as bands and features seen 030° with a just above The long (omicron notable for maxima naked-eye. early of its year it magnitude a days. Chi rise of two from

Noctilucent



cloud displays were 2008 as: Jun 29/30/July1/2/3/4/ and The latter display was from 22h12m to 22h18m whirls with very bright through azimuth 300° to maximum altitude of 15° Capella. period variables Mira Ceti) and chi Cyg were having well followed using binoculars and the Mira was magnitude 3.8 February and coming out minimum later in the brightened at a rate of 1 factor of 2.5 every 7 Cygni had a very rapid magnitudes in 30 days September reaching its

maximum early November at magnitude 4.1. One eclipsing binary, RZ Cas, that I keep an eye on had a predicted minima for Nov 10/11 and making



light estimates every 20m to 30m the record had it as follows: Nov 10.729, mag. 6.2; 10.737,6.3; 10.756,6.3; 10.777,6.3; 10.798,6.5; 10.813,6.2; 10.847,6.2. The prediction was wrong, there was no eclipse occurring that evening, and Taylor had done observations that show how bias affects visual observation. Still very faint and out of range of my telescopic range is R CrB that others are seeing it about magnitude 14 to 15. It went into one of its carbon induced declines in the summer of 2007.

Visual checks using a Baader filter on a 80 mm f/5 refractor were made of the solar disc during the year – a set of very negative observations – very, very few sunspots!

Melvyn Taylor 2009 August.

### Compilation of the Suns Activities in 2008 by Alan Buck

In 2008 there were 29 Active Regions, commencing with 10980 on the 4<sup>th</sup> January and finishing on the 18<sup>th</sup> December with Active Region 11009.

As can be seen below, the southern hemisphere was by far, more active.

	Jan	Feb	Mar	Apl	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
North	3	0	0	5	7	0	0	0	3	8	14	0
South	9	8	30	7	7	11	3	0	0	4	0	3

Total number of daily sunspot groups for 2008 = 122

Down by 180 groups compared to 2007.

There were 15 out of a total of 60 possible sunspot group classifications over the course of 2008. Of the 15 groups only 5 reached double figures. They were;

Bxo 30 Axx 24 Hsx 13 Dso 13 Cso 12

The remaining 10 groups were;

Bxi, Hrx, Cro, Hax, Cao, Dao, Dai, Eai, Dsi, Dac.

Being the last year of cycle 23, flare activity was hardly going to be something to remember. Below is a breakdown of flare numbers. There were no Class X flares recorded and only one Class M from AR10987 in March.

Flare	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Х	0	0	0	0	0	0	0	0	0	0	0	0
М	0	0	1	0	0	0	0	0	0	0	0	0
С	2	0	0	0	0	0	0	0	0	0	0	0
В	10	0	25	16	1	0	0	0	0	8	0	2

Totals for 2008 were	X class=0	M class=1	C class=3	B class=62	
Compared to 2007		0	9	72	541

Down by a total of 556 flares, of which 479 were B class.

Geomagnetic storms on the K Index 1 to 9, consisted of the following;

K5 Minor Storm = 23, K6 Moderate Storm = 3, K7 Strong Storm = 1

#### 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.

6<sup>th</sup> August Monthly Meeting "Apollo 11" by Howard Parkin 20<sup>th</sup> Committee Meeting 3<sup>rd</sup> September Monthly Meeting. "History of Asteroids" by Dave Storey 23<sup>rd</sup> September AGM. Onchan Parish Hall. Royal Avenue. Onchan. 8pm. 25<sup>th</sup> Public Open Night at the Observatory . IYA 2009 26<sup>th</sup> – 27<sup>th</sup> Public Open Weekend at the Observatory.

#### The Manx Night Sky. August - September 2009

#### Note: All times are Universal Time. Add 1 hour to get local time.

Moon			0					
New		1 <sup>st</sup> Qtr.	Full		3 <sup>rd</sup> Qtr.			
20 <sup>th</sup> Aug.	10.02hrs	27 <sup>th</sup> Aug. 11	.42hrs 6 <sup>th</sup> Au	ıg. 00.5	5hrs	13 <sup>th</sup> Aug. 18.55hrs		
18 <sup>th</sup> Sept.	18.44hrs	26 <sup>th</sup> Sept. 04.	50hrs 4 <sup>th</sup> Sej	pt. 16.03	3hrs	12 <sup>th</sup> Sept. 02.16hrs		
Lunar Occultation's: (Stars brighter than magnitude +6.0) Date Time (h.m:s) Star SAO# Magnitude PA Type of Event Notes								
5 Sept.	20.07:54	ZC3494	128336 4.5	240	RD	lambda Piscium.		
10 Sept.	22.49:45	ZC598	76425 5.5	227	RD	36 Tauri		
15 Sept.	04.23:58	ZC1259	97781 5.9	275	RD	20 Cancri		
29 Sept.	21.31:43	ZC3108	164263 5.3	123	RD	29 Capricorni		

Times are UT as seen from IoMAS Observatory. Start to observe these events about 15 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. RB = Reappearance on bright 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** is poorly placed for observation from the IoM at the moment. It is always close and low down to the evening or morning horizon at this time of year.

**Venus** is a morning star, shining at a very bright -4.0. It is currently moving away from the Earth and will be seen to shrink in size as seen in a telescope. On the 1<sup>st</sup> and 2<sup>nd</sup> of September, the planet passes close to the south of the open star cluster Messier 44, "The Beehive Cluster" and should look very nice though a pair of binoculars. On the 20<sup>th</sup> September, the planet passes just to the north of Regulus, the brightest star in Leo.

**Mars** is moving away from the Sun in the morning sky and its brightness will be around +1.0. Its distance makes the disc of the planet very small but by the end of September, good large telescopes used in good steady skies should start to see some surface details.

**Jupiter** reaches opposition on the 14<sup>th</sup> August and will be visible all night. The planet is low down in Capricornus and hence will be poorly imaged for most of the time as seen through a telescope. The moons of Jupiter though will be interesting to watch night after night as they change their relative positions as they orbit Jupiter. Try to observe the shadows of the moons as they cross the disc. The dates and times of these events can be found on the IoMAS website on the "Manx Skies" link. Or consult monthly magazines such as Astronomy Now, Sky & Telescope.

**Saturn** is poorly placed at the moment as it is close to the Sun. It emerges into the morning sky after solar conjunction on the 14<sup>th</sup> September.

#### Meteors:

#### **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; 8<sup>th</sup>, 15<sup>th</sup> and 26<sup>th</sup> July. These meteors have been recorded as yellow-blue in colour.

**Alpha-Capricornids** are active between July 15<sup>th</sup> until August 20<sup>th</sup>. Peak activity occurs on 2<sup>nd</sup> 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 6<sup>th</sup> 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 23<sup>rd</sup> to August 20<sup>th</sup>. This years maximum occurs on 12<sup>th</sup> during daylight hours, so observations on the nights of 11<sup>th</sup>, 12<sup>th</sup> and 13<sup>th</sup> should be good. The maximum of 80 meteors per hour can be expected in ideal conditions but the 21 day old Moon will interfere with its bright glare that will drown out some of the fainter meteors.

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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.