



Professor Mike Edmunds as "Mr Newton" at the Cardiff Astronomy Festival.

Photos: Ian Davies.

<u>Contents</u>	<u>Page</u>	<u>Contents</u>	<u>Page</u>
Editorial	2	Up-coming CAS Public Events	18
Nipon Optics 10x50 Binoculars	3	CAS Lectures Dec - March	18
Annual General Meeting Minutes	3 - 14	Almanac	19 - 22
Behind the Scenes	15 - 16	Junior Page	23 - 24
Cardiff Astronomy Festival	16 - 18		

Editor Ian Davies, 52 Heol Nant Castan, Rhiwbina, Cardiff, CF14 6RQ.
Tel. (029) 2062 0501 email Publications.Officer@cardiff-astronomical-society.co.uk

Junior Editor Amanda Peters, 2 Sanquhar Street, Splott, Cardiff. CF24 2EB
Tel. (07758) 399 193 email Junior.Representative@cardiff-astronomical-society.co.uk

Editorial

Ian Davies

As usual the Society has been busy over the last few months with several public events, the highlight of these was our 3rd Cardiff Astronomy Festival held at the National Museum of Wales, Cardiff. This once again proved popular with many people in attendance. The traders and exhibitors who brought their wares along for the day were all very happy with the way their day went. The three speakers were very complimentary about the event. So all in all a good day for everyone. Roger has written an article about the day, it starts on page 16.

We have also recently been out and about at Dyffryn Gardens, the Brecon Beacons Visitor Centre and St. David's Centre.

Always on the lookout for new venues, we have been approached by the management at Flat Holm Island to possibly put on an event on the Island, it is early days yet, and there are all sorts of logistical issues, but we are currently in talks to see if we can make the event happen. If we go ahead the event will probably be on a Saturday/Sunday this autumn. Another venue asking us to do a stargazing evening is the Blaenavon World Heritage Centre, and once again we are talking to them about this possibility. All this activity has led to an increase in our membership, which as I write this stands at 363 and I believe there are a few more in the pipeline. As always we are on the lookout for volunteers from the membership to help out at these events, maybe manning a telescope, giving a talk, engaging the public with your enthusiasm for the subject and helping with transport of equipment events and setting it up. It all helps, you don't have to be an astronomy professor in order to help out!

And finally to all you Rary fans out there; Rary is taking a break this issue due to space constraints, he will be back in September.

Wishing you dark skies - Ian.

Publication Dates

The CAS newsletter is published at the first society meeting of September, December, March and June. The deadline for submissions is 4 weeks before the publication date (deadline for Issue 156 is 4th August).

Visit CAS on the web @



<http://www.cardiff-astronomical-society.co.uk>

General enquiries email info@cardiff-astronomical-society.co.uk

Remember as a CAS member you can use the Members' Area of the web site. You will need your password to access this area. If you don't know your password it is your surname followed by your membership number.



CAS is now on twitter, to follow us, follow **CardiffAS**

A review of Nipon Optics 10X50 Binoculars. David Powell

They say every observer of the night sky should have one pair of binoculars for general viewing.

Binoculars are useful for low power, sweeping of the Milky Way, seeing different colours of stars, optical doubles, open clusters, and so much more.

This pair has all the requirements needed to get the best out of our hobby.

10X50 are a good choice; they are lightweight, have a 5-degree field of view and offer long eye relief, and are comfortable to use with or without glasses, due to the rubber fold down eyecups. The centre focus wheel is "chunky" best appreciated on very cold nights when you wear thick gloves. The optics are coated, and feature BAK 4 prisms.

The views of the crescent Moon were stunning, the same was true of the famous double star in The Plough, Mizar and Alcor. I could not detect any flaring and the individual stars remained points of light right to the field's edge. All this and they come in a very handy, soft case.

For those who like some technical information, the lenses are fully multi-coated with broadband coating technology which gives additional image clarity over a wider spectral range.

These are high quality binoculars and very good value, should last a lifetime and offer celestial delights every time you look up.

I would recommend them to anyone. Price £45.00.

Check out the website www.nipon-scope.com; they are not too far from Cardiff.

Cardiff Astronomical Society Annual General Meeting April 14th 2011.

Meeting opened 7.35pm

Attendance 31.

The Chairman opened the meeting, outlined the agenda, thanking all those who took the trouble to attend, and invited the Secretary to give his report.

Secretary's report

Last years AGM took place April 1st 2010. Since then we have held 22 ordinary meetings. Last year 20. 1564 members attended. Last year 1324. This years average attendance 71. Last year 66. This year's programme suffered with several speakers cancelling at short notice, but we always manage to find replacements. Speakers are offered a meal, overnight accommodation, and travel expenses.

Membership is 351. Made up of 294 adults, 55 juniors, and 2 honorary. Last year the figure was 301. We do lose members, this year 87. All are sent a letter asking if they could supply reasons. Not all do. Of the 12 that did 10 renewed, and 2 could

not although we did not get any adverse comments about how the Society is run. We do intend to monitor subscription levels and seek to address any issues that arise. It's vital we replace lapsed members and seek new ones. It's simple really, the higher the membership the lower the subscription. It is also easier to attract speakers when they know they will get a large audience.

Our publicity machine is working overtime and we are always open to new suggestions and ideas.

We issued 4 CAS Newsletters, 2 FAS Newsletters, and the Handbook. The Federation of Astronomical Societies (FAS) provides public liability insurance (PLI). Vital to abide with our constitution" The society shall be an organisation to stimulate public interest in the science of astronomy". This time next year, my personal view is that the FAS will discontinue this facility and we will need to look elsewhere.

Committee met 6 times. Meetings involve reports by various officers, and suggestions to improve all aspects of the Society, as well as organising the main events. New committee members are always needed. This year we introduced a welcome pack for junior members.

The container at Castle Heights is a cause for concern. The company that own the site has gone into liquidation. We have been advised; bailiffs may take everything away even though CAS owns the container. We have therefore taken as much stuff out as possible.

The website continues to expand; I Davies does a fantastic job. Do log on to see for yourself.

The Physics & Astronomy Department here at Cardiff University support CAS 100%. Our President/Vice President and others help out as much as they can. We are allowed to meet free of charge.

The Society is grateful for those who provide overnight accommodation. Volunteers welcome.

I continue to conduct the day to day running of the Society, along with my assistant T Cooper.

D Powell Hon secretary.

Comments

Should we consider changing the restaurant o.k. to take speakers for a pre meeting meal? It's a long walk from the station, even if they use Queens Street instead of Cardiff Central. Or perhaps use the University Restaurant. We will discuss with T Cooper and J Thomas, as they are the designated members of committee who take the speakers out.

The speakers that let us down this year, have they been rebooked? Yes they will be on the next programme.

Report was proposed by S Bowerman, and seconded by P Bennett.

TREASURER'S REPORT 2010-2011

The end of year accounts closed at the end of March 2011. This year saw further work on the observatory at Dyffryn Gardens, and a breakdown of the expenses incurred to date from the beginning of the project is included at the end of this report.

Summary (to End of March 2011)

COMPARISON WITH 2009-2010			
2009-2010 (End February)[#]		2010-2011 (End March)	
Total cash assets	£9016.89	Total cash assets	£7529.33
Equipment fund	£1467.85	Equipment fund	£-1777.07
Subscription income	£3275.00	Subscription income	£4066.00

[#]: Society accounts for 2009-2010 are quoted to end of February instead of March as this more accurately reflects Society funds prior to the start of construction on the observatory.

The bank reconciliation at the end of March showed one un-cleared cheque of £40.00. Including this un-cleared expenditure our current account held £4168.36, with the reserve account totalling £2929.23. The treasurer held £431.74 in the form of petty cash and un-deposited cheques. No other petty cash funds are held by any other member of the committee. Total CAS funds at the end of March thus totalled £7529.33.

The loss of £1777.07 reported for the equipment fund reflects expenses incurred from the construction of the observatory. The equipment fund is expected to reflect a loss for the foreseeable future, as the principal income for the fund is derived from the raffle and targeted donations. The raffle showed a profit this year of £688.68, compared with £448.68 for the previous financial year. Raffle expenses increased by £17.75 over the previous year. The principal social function this year was the Christmas meal which saw a slight loss of £25.90. The sale of merchandise has netted the Society £142.00, principally comprising the sale of fleeces (including the offer of a fleece as a raffle prize at outreach events such as those hosted by the Brecon Beacons National Park) as well as the sale of glossaries.

Income from membership totalled £4066.00, an increase of £791.00 compared to the previous year.

Total income for the year was £8334.11 with total expenditure of £7252.54, resulting in a surplus of £1081.57.

Cardiff Astronomical Society

ACCOUNTS 2010-2011

BALANCE SHEET			
Sources of Funds (End March 2010)		End March 2011	
Current Account Opening	828.60	Current Account Closing	4168.36
Reserve Bank Opening	4927.61	Reserve Bank Closing	2929.23
Petty Cash Opening	691.55	Petty Cash Closing	431.74
Surplus of Income over Expenditure		1081.57	
TOTAL	6447.76	TOTAL	7529.33

BANK RECONCILIATION			
Current Account		Reserve Account	
Current Account Closing	4168.36	Reserve Account Closing	2929.23
Uncleared cheques and deposits	40.00	Uncleared cheques and deposits	0.00
Statement Closing	4208.36	Statement Closing	2929.23

CASH HOLDINGS		
Treasurer	431.74	This is money held as cash or temporarily as undeposited cheques
Secretary	0.00	
TOTAL	431.74	

EQUIPMENT FUND		
Opening (April 2010)	-480.57	This is money reserved in the bank accounts detailed in the balance sheet
Income nett of expenditure (Raffle profits + donations)	-1296.50	
Closing	-1777.07	

Cardiff Astronomical Society

ACCOUNTS 2010-2011

INCOME AND EXPENDITURE				
Category	Income	Expenditure	Surplus	
Subscriptions	4066.00	0.00	4066.00	
Raffle	845.55	156.87	688.68	
Merchandise	143.00	1.00	142.00	
Social Functions	388.45	414.35	-25.90	
Special Events	200.00	29.73	170.27	
Donations	2561.43	0.00	2561.43	
Interest	1.51	0.00	1.51	
Other Income	128.17	00.00	128.17	
Stationery		1.69		
Newsletter/Junior packs/Handbooks distribution		678.67		
Postage		13.68		
Printing/Copying		121.27		
Telephone		30.00		
Fuel		0.00		
Hospitality		231.84		
Speaker		482.00		
Insurance + FAS membership		56.00		
Travel		200.00		
Observatory		4240.48		
Equipment/Maintenance		339.21		
Library		23.40		
Other		217.35		
Losses		15.00		
TOTAL	8334.11	7252.54	1081.57	

Observatory

Total costs for the continued construction and development of the observatory totalled £4240.48 for the year. To date, this brings the cost of the observatory to £7140.13. The Society has gratefully received a total of £2825.43 in donations towards the project; £1714.00 coming from Society members. The next major expense to be incurred is the completion of the electricity supply, which is proceeding on schedule. Following this, the observatory can be insured and the Chairman is looking into the details of this requirement. Insurance for the observatory is subsequently expected to constitute a yearly expense.

CARDIFF ASTRONOMICAL SOCIETY

OBERVATORY FINANCES

DYFFFRIN GARDENS

EXPENDITURE

DATE	DESCRIPTION	SUM (£)	METHOD OF PAYMENT
10/03/2009	Map required for planning permission	19.65	Debit card
23/05/2009	Planning permission application	166.00	Cheque
04/03/2010	Initial payment to Alexander Observatories	1000.00	Cheque
25/03/2010	Observatory base	1550.00	Cash
27/04/2010	Pier (cash payment by G Carter – reimbursed)	155.00	Cheque
28/04/2010	B&Q supplies for observatory building	34.88	Cash
29/04/2010	Decking (inc £50.00 payment to R Adams)	214.00	see comments
03/05/2010	Final payment to Alexander Observatories	2170.00	Cheque
02/05/2010	Fixtures (cash payment by G Carter – reimbursed)	63.70	Cheque
03/05/2010	Fixtures (cash payment by G Carter – reimbursed)	37.24	Cheque
22/05/2010	B&Q parts for observatory decking	86.40	Debit card
29/05/2010	B&Q parts for observatory decking	59.29	Debit card
31/05/2010	B&Q parts for decking & interior walls	65.91	Debit card
17/06/2010	Electrical infrastructure	159.46	Debit card
19/06/2010	Timber and electrical items	104.12	Debit card
25/06/2010	Door furniture (cash payment by G Carter – reimbursed)	52.78	Cheque
25/06/2010	Electrical items (Newey & Eyre)	49.54	Debit card

26/06/2010	Paints & painting equipment	41.90	Debit card
29/06/2010	Earth cable	18.93	Debit card
01/07/2010	Data cables	48.36	Debit card
18/07/2010	Timber and paint (B&Q)	96.62	Debit card
21/07/2010	Paint and electrical equipment (B&Q)	38.42	Debit card
21/07/2010	Video Sender (Maplin Electronics)	66.99	Debit card
26/07/2010	85 metres 16mm armoured mains cable	390.00	Debit card
04/08/2010	Computer equipment	212.09	Debit card
02/09/2010	Ribbon for opening ceremony	6.00	Cash
16/09/2010	Chairs and stationery	38.47	Cheque
23/09/2010	Plaque (payment by T Cooper – reimbursed)	66.00	Cheque
28/10/2010	SCS Astro – Focus mask for Meade 12		

COMMENTS

- The donation of £164.00 from R Adams is linked to decking bought by her for £214.00 with personal funds. Only £50.00 was claimed from the Society, resulting in an effective donation of £164 towards the observatory. The only item from this transaction recorded in the general society accounts is the claim of £50.00, as this was settled via a CAS cheque. As no other aspects of this transaction were handled through the society accounts, it was decided not to include the remainder of the transaction in the general accounts as it would result in a permanent discrepancy in the figures. It is included in this report to record it as an observatory expense and to acknowledge Rosa's donation towards the project.
- Members will be able to pay subscriptions via Paypal. These accounts will be audited by a qualified person, who is not a member of CAS.
- C Saunders Hon Treasurer.
- Report proposed by M Delaney, seconded by C Vallee.

Observatory progress report

April 2011

The project has now moved into the final stages

- Trench has been prepared by the gardens staff.
- Cable has been run to the observatory.
- Connection of the ends to the power supply is immanent.
- Chippings can be purchased and laid.

- Electric works need certification.
- Training of members has begun
- Work needs to be done on the roof to enable weatherproofing at the end.
- Roof needs automating.
- Report proposed by R Adams, seconded by C Fluck.

G Carter Observatory Project Manager.

Observing report.

Until the AGM of 2010 I had been keeping detailed records for planned and ad hoc observing sessions, noting the items shown below, and a breakdown of successful and cancelled sessions was then presented at the AGMs.

- (1) Date and venue of the session.
- (2) Session status-did the session go ahead or was it cancelled (if cancelled then the reason).
- (3) Time over which observing took place.
- (4) Sky conditions.
- (5) Number of persons that attended the session.

For the period 2010-2011 we managed only five successful planned sessions. We did not call any ad hoc sessions because past experience shows that, with the exception of two or three keen committee members, most people are reluctant to make a session at short notice and phone calls to inform of the ad hoc session on the evening are a waste of time and expense. Therefore, with just five sessions to speak of for this period, I am not presenting the usual detailed breakdown but retaining in my records, and I shall continue to keep the records for future AGMs.

Comments. have we noticed an increase in numbers at the sessions? Yes a few more now attend. Are they members or potential members? Both types are represented.

Lets start the ad hoc sessions again.

Can we leave the mobile phone on with up to date information to save members having a wasted journey. **Action B Biss.** We should also list other phone numbers that can be used to check conditions.

Is it possible to use Twitter? Yes M Chick explained how this could be achieved.

Report proposed by K Hill, seconded by T Cooper.

M Delaney Assistant Director of Observations.

Public Events Officer's Report AGM 2011

Main points:

9 public events organized. These took place at:

- The Brecon Beacons Visitor Centre
- The RSPB Usk Wetlands Reserve
- Dyffryn Gardens
- The National Museum of Wales.

They have been a mixture of stargazing evenings and less formal solar viewing when there are no bookings but occur to support other activities.

We've had two large events this year. Firstly a tie-in with the BBC Stargazing Live programmes (very successful) and our Astronomy Festival at the National Museum of Wales (also very successful judging by the numbers and the feedback we've received.)

I've arranged/coordinated these events but my thanks must go to those who have come along with telescopes, given talks etc. and lent me their support.

Theresa Cooper Public Events Organiser.

Comments. we have now been asked to run an event at Blaenavon Big Pit later this year.

Report proposed by K Hill, seconded by C Saunders.

Publicity report.

The past year has been a fantastic year for the Society in terms of publicity. We held a number of high profile events and were able to generate a significant amount of press interest in our activities.

The first high profile event was the official opening of our observatory which attracted the attentions of national & local TV, radio and printed press and a nice article in both Astronomy Now and Sky at Night.

All our events were publicised in some way in the local press, however our Stargazing Live event attracted the highest profile and as a direct result we hosted one of the most successful events in the country.

I hope to build on the successes of last year over the next 12 months by utilising social media along side traditional media outlets.

We are already getting requests to host public events across south Wales and committee members are being called upon to speak to the press on astronomical events. I believe that enhancing our media profile will ensure that our Society goes from strength to strength and will be the first point of call for media enquiries on astronomy related stories.

Report proposed by H Lang, seconded by C Brown.

Mark Major Publicity Officer.

Librarians report.

In view of other expenses the Society has had to meet this year, I have restrained myself. One factor is that the bookcase is near the limits of what it can hold. Books added to our collection are listed. Binocular Astronomy, The Book Nobody Read-In Pursuit of the Revolutions of Nicolaus Copernicus. Searching the Stars-The story of Caroline Herschel, Sunquakes-probing the interior of the Sun.

To make more room in the library, there was a small cull this year. All the unwanted books went for a discretionary contribution to CAS funds. During the next stock take, I may need to sell a few more to ease congestion.

J Thomas Librarian.

Report proposed by P Bennett, seconded by T Cooper.

Chairman's report.

At the AGM last year, I claimed that 2009-10 was an exceptional year. We had pulled out all the stops for the International Year of Astronomy and were quite surprised at what we had achieved.

How could we possibly eclipse that?

Well now I am happy to claim that 2010-11 was an even more monumental year for Cardiff Astronomical Society.

As you all know, this was the year that realised the dream of building our own observatory, a goal which goes back so far that only Dave Powell can partially remember it.

This has only been achieved by the hard work and commitment of a group of members, beavering away down at Dyffryn most weekends. As the final connection of mains electricity is now only days away we look forward to years of service and clear skies.

Following the high profile opening, appropriately on the 35th birthday of the Society, it has already been in use for observing sessions, members' training and public occasions.

Several events this year have enhanced the reputation of the society: solar viewing at Dyffryn weekends, the hugely successful Stargazing Live - initiated by the BBC and attended by over 500 at Dyffryn, and our biennial Astronomical Festival at the National Museum, which took place only a couple of weeks ago. Once again we created a considerable impact, attracted nearly 2000 attendees, invited 3 eminent speakers who were each on top form. At the end of the day the traders were well pleased and we had made new friends and enrolled new members.

Let us not forget that throughout the year we have still honoured our commitments to outreach and public sessions have taken place in many places

– including Brecon Beacons and Newport Wetlands.

The net effect has been that the membership numbers have weathered the recession storm. Those not renewing had no adverse criticism and left for personal reasons. Despite everyone having to reconsider the cost of non-essential activities and the horrendous price of petrol these days, fortunately a large number still feel that their membership of Cardiff Astronomical Society represents excellent value for money and attendances at lectures and other events have not fallen. Indeed the trend for membership is still heading upwards, now growing toward 400.

This year there were a few significant changes within the Society which were not anticipated.

Recent changes in external requirements and procedures mean that the society had to adopt new policies for Child Protection, Volunteers and Equal Opportunities. Had the Society been recently founded we would have had these in place already, but these matters were not on the agenda 35 years ago. However we now conform with normal practice. In effect, these policies are only confirmation of how we already and instinctively operate and will not adversely affect our activities. Importantly, these days, we have to be able to be able to demonstrate that we have considered these matters and abide by a code of conduct.

Secondly we made a bid for external funding from the Vale of Glamorgan Kick-start programme, primarily to finish the observatory project. Unfortunately, despite all indications to the contrary, the bid was unsuccessful. The reason given was that the panel found it difficult to quantify the benefit to the Vale of Glamorgan community. This was a blow but at least we now have all the correct documentation necessary for other funding bids elsewhere. And our financial position, which was never dependant on receiving this extra funding, remains healthy. I would also like to thank all those people who so generously gave donations towards the observatory.

Thirdly, I suddenly found myself in the bizarre situation of spending much of the year living in Abu Dhabi ! Eventually my commitments in Cardiff and those in the Gulf adopted a rhythm of commuting about every month. Whether this was controlled by the Moon is open to speculation, but obviously Islamic practice would see this as quite normal. In the event I found it just as easy to conduct my CAS duties over the Internet wherever I might be living. Not only was it easy to keep up with events in Cardiff, often I was actually 4 hours ahead, waiting for them to happen!

Fourthly, this year CAS has been beset by a strange phenomenon. Never before have we been concerned about speaker reliability. In all the years, the number of changes to the schedule of fortnightly talks, published way in advance could be counted on the fingers of one mitten. But unaccountably this year's schedule has been frequently disrupted with lots of changes, no shows,

and all manner of excuses – all genuine and some unfortunately tragic. I am sure Dave Powell has had lots of sleepless nights and all thanks to him for ensuring a talk was rearranged at very short notice on each occasion. This is one we really can't lay at the door of Climate Change but perhaps some special planetary alignment combined with increased activity on the sun is to blame. I understand Professor Brian Cox is investigating!

Finally, we learned recently that our first venture into political lobbying of the AMs in the National Assembly has borne fruit. They have decided that Wales is to have a national lighting policy. Of course we do not yet know what the policy will state but in the meantime many thanks to Joan, Mark, Theresa, Rosa and all those who were active in securing this achievement.

Indeed my sincere thanks go to all members of the committee for their sterling work over the last year. Without their individual commitment to their committee roles, lively discussion and initiative, Cardiff Astronomical Society could not continue to be the success it undoubtedly is today.

Election of Committee.

This year we say a big thank you to H Lang as he wishes to spend time away from committee duty. Hugh has been serving CAS for many years.

We welcome Rosa Adams, Graham Hall, and Cheryl Brown.

Bill Sutherland Award.

This year's recipient is Claude Vallee. He has worked tirelessly on our observatory.

Any Other Business.

Can we offer as raffle prizes something different than wine.

Action D Powell.

We need to check how much stock of fleeces and sweatshirts are left and any new stock purchased will be in the colour black.

Titles of some talks given by some speakers can be ambiguous, can we obtain a short synopsis. *Action D Powell.*

Can we also say if some talks are suitable for children? This is much more difficult to arrange.

The chairman said members should still make use of the suggestion box. Committee members do discuss items raised.

Meeting closed 9pm.

D Powell Hon secretary.

Behind the Scenes

Good News!

Saturday April 2nd. What a day. We held our one-day festival at the National Museum of Wales, and were delighted with the turnout. My thanks to every society member who came, and a special thank you to everyone who helped out. Our chairman Roger Butler has written a full account starting on page 16.

Some of you I know, belong to other clubs and keep fingers crossed dates don't clash. If it's any help, we start the new programme September 1st, finish December 8th. 2012 starts January 5th and ends July 5th.

Our stargazing event at Brecon on March 5th followed the well-worn path of its predecessors i.e. it was cloudy. But the event was sold out and we managed to keep the punters entertained for two hours.

We discussed a suggestion from a member about recording the talks on DVD. We have tried this before. It just will not work. Speakers move around and don't stay near the mike. Some speakers don't like seeing the red eye dot of a camera looking at them. Speakers turn around to look at the screen and present their backs to the audience, Power Point presentations are sometimes lifted from public web sites i.e. NASA and can only be used for non profit reasons and they don't like images being reproduced. So nice idea but not practical.

I have been asked by two members if I can obtain synopsis of some talks. I will try, but several speakers already contacted have said no. It seems some like to retain a little mystery.

This issue contains a report on the recent AGM. For several years now the minutes have become bigger and take up so much space in the Newsletter it almost pushes everything else out. So this report is shorter to save valuable space. The full version kept on file can be read online or you can obtain a copy from me. If I get lots of complaints, I will go back to publishing the full version in 2012. If I don't then we will carry on with a short version in the Newsletter and the full version available to whoever wants it.

What an achievement! 1

I am delighted to say that because of a very high profile campaign the Welsh Assembly Government will adopt an All Wales light pollution policy.

What an achievement! 2.

Nick Hart, has been asked by Sir Patrick Moore if he can use some of his excellent pictures on a future edition of Sky at Night.

Hugh Lang has decided he needs a break from committee. Hugh has been

active in CAS since its formation and he wore short trousers. That's a long time ago, so can't really blame him. Thanks Hugh you have put in your fair share of work over the years.

Castle Heights golf club is being sold. This means we have to remove our storage container. But all is not lost; we have been given permission to re site it about 100 yards down the road, in the beer garden of the "Black Cock" public house. I will drink to that.

Observatory, Delighted to say the electrics are connected at last.

Easter Sunday saw the usual crowd turning up at Dyffryn Gardens for the Solar Viewing Day. Things started badly, the Sun staying behind some very thick and ominous looking cloud, but by mid morning the cloud melted away and we were able to treat everyone who passed by to some splendid views of filaments, sunspots, and prominences. No event would be complete without the usual battle of wits between Theresa and myself. This time she suggested (after filling the tables with all manner of giveaways) we should move both tables to a better location. I in my wisdom said this was not necessary; she aided and abetted by Rosa then moved the tables to a better location. Oh and the display boards fell down. Nothing to do with me, there were only two suspects Rosa and Bob, and my money was on Bob.

And now for the **Good News**.

Rosa Adams is back (hooray), this means I can hand this column back to Rosa, ok in a very poor state, but she likes a challenge. So from the next issue its over to Rosa. See told you I had some good news.

Cardiff Astronomy Festival Roger Butler

Well the dust has settled on yet another successful astrofest. And even though it does not have the eternal impression of Neil Armstrong's boot, I am sure we will remember it for a long time to come.

This was our third biennial Astronomy Festival at the National Museum in Cardiff. The first was a resounding success and the second even eclipsed the first as we redoubled our efforts. From my experience it is usually the third event in a concert tour that goes 'off the boil'. Too much confidence in previous successes can allow standards to slip. So we double-checked everything just to make sure.

And it paid off. We did it again - thanks to all the efforts, both physical and mental, of the usual suspects. We are now a well-oiled machine - although really we only get well-oiled after the event. No shortage of volunteers to set up, move equipment, (wo)man the stand, chat to the public, answer questions.

Theresa shouldered most of the stress and negotiated with the museum staff, who had not been in post at the previous events. Crucially she managed to arrange for herself, Ed and myself to get into the museum for an hour or so the night before. This allowed us to put out and cover all the tables ready for the traders to display their wares the following morning.

And a very great thanks to Dave who managed to persuade a significant number of traders to take up those stands. It had been far from easy to secure a range of traders to take up the offer in the current economic climate with horrendous transport costs and general sales of astronomical equipment down everywhere. So many thanks to all those traders who were there and who left well pleased with the day. It was good to meet and chat with them all and the people from Nipon Optics in Nailsea actually joined the society and will be coming to meetings.

It is always good to see Bob Mizon and support his tireless work for the Campaign for Dark Skies. Since the last astrofest, he has been deservedly honoured with an MBE – (Mandatory Blackouts Everywhere?)

It was particularly good that after a long day on their feet, talking to punters, the traders were not just abandoned to pack up and ship out themselves. We all helped carry their boxes of goods to the kerbside, to be loaded up and safely on their way. And nobody said a word - we just did it! I know that was very much appreciated.

It was also Dave who was responsible for the lineup of eminent speakers. With an overall theme of history of astronomy, all three speakers were really on top-form and did us proud - and each event was attended by about 80 people in the Reardon Smith Lecture Theatre.

First up was Clive Ruggles, the first Professor of Archeoastronomy ever appointed, anywhere. In his case anywhere turned out to be Leicester University. This is an absolutely fascinating area – archeoastronomy, not Leicester! How human beings have related to the skies with just the senses they were born with; before telescopes, space missions and space telescopes expanded our vision and how they reacted to what they saw I find enthralling. Prof. Ruggles seemed undaunted by the task of encapsulating countless thousands of years of astronomical endeavor into an hour's talk. I hope his introduction left many of the audience with a wish to explore this further. After all there are so many pieces of evidence all around us. And I couldn't resist purchasing his book 'Songs from the Sky' to keep me out of mischief.

Meanwhile there was a real buzz around the stands and the foyer was getting very full.

Next to bat was Professor Mike Edmunds, our Vice President. He has gained quite a reputation for his recollections of 'Mr. Newton'. Most literally, Sir Isaac Newton was brought to life to reflect on his career towards its end but before he was knighted. Newton kept copious notes in a very fine hand purely for his own use, with no thought of publication. And as he read from Newton's texts on a wide variety of topics, Prof. Edmunds, in appropriate costume, created an alter persona which was most vivid and had us believing that Newton was really there. After this tour de force, I could only reward the teacher in the most appropriate way and, with due gravity, presented Mike with an apple. On the base of the apple was a Union Jack sticker emblazoned with the word 'Cox'. Surely not relating to Professor Brian Cox? Again, I had been inspired to the bookshop and have subsequently read a biography of Sir Isaac Newton. It is an incredible story – you couldn't make it up. Check it out for yourself.

Well after two enthralling talks we had probably had enough food for thought and so we approached lunch. And then we discovered that like Houston "we have a problem!" The buffet lunch for our guest speakers had been 'humanely destroyed' after being left out for over 2 hours. Something had been lost in translation but this was the only hiccup in the entire day and was soon rectified as we adjourned to the café.

The final talk brought us up-to-date and beyond. Our President, Professor Mike Disney gave us an insightful account of the new images and data coming from Hubble, Herschel, Planck, and the like. And who better, since he has personally contributed to all these missions. More significantly these missions are causing astronomers to re-think much of what they previously considered to be correct and new theories are required to accommodate the new discoveries. So, in common with all our forebears before the telescope and the amazing Sir Isaac Newton, astronomers are even now still having to stretch their imaginations to the limit as they ask the everlasting question: "What does it all mean ? "

I never did get to go in the inflatable planetarium from Technquest but I know a great number of people did. Perhaps next time. But for me the time seemed to go relatively quickly and it was 4pm all too soon.

Ian's magnificent Saturn V model was packed away into its boxes until next time. I wonder if the even more intricate launch pad will be finished in time for the next astrofest in two years. And as the circus left town, all that was left was to say "Well done, everybody. You've all done very well." In the words of old Mr. Grace.

But finally, I recalled that at the conclusion of the second astrofest, we were unexpectedly infiltrated by a wedding party, complete with bride and bridesmaids in full regalia. This year's surreal moment came as we left and was a photoshoot of hunky guys dressed as Roman gladiators on the steps of the Museum. What was that about? But hey, it was getting cold, would soon be dark and did it matter?

Onward and upward!

Up-coming CAS Public Events

Safe Solar Viewing

30th July 2011, 10am to 4pm. Brecon Beacons Visitor Centre. Free To All, Parking charges apply.

Safe Solar Viewing

20th & 21st August 2011, 10am to 4pm. Dyffryn Gardens. Garden entry charges apply.

CAS Lectures March - June

Date	Title	Lecturer
9 th June	Herschel Space Telescope observations of the Virgo Galaxy Cluster.	Dr Jon Davies, Cardiff University
23 rd June	The Moon-Exploring our nearest Neighbour.	Dr Robert Massey, Royal Greenwich Observatory, London.
7 th July	Three Short Talks.	Members of Cardiff Astronomical Society.

Almanac Compiled by Ian Davies

Sun Rise/Set & Twilight

Date	Astronomical Twilight Begins	Sun Rise	Sun Set	Astronomical Twilight Ends
01 st June	--:--	04:01	20:19	--:--
08 th June	--:--	03:57	20:25	--:--
15 th June	--:--	03:55	20:30	--:--
22 nd June	--:--	03:55	20:33	--:--
29 th June	--:--	03:58	20:33	--:--
01 st July	--:--	03:59	20:33	--:--
08 th July	--:--	04:05	20:30	--:--
15 th July	--:--	04:12	20:24	--:--
22 nd July	00:38	04:21	20:16	23:59
29 th July	01:28	04:31	20:07	23:09
01 st August	01:42	04:35	20:02	22:55
08 th August	02:09	04:46	19:50	22:27
15 th August	02:32	04:57	19:37	22:01
22 nd August	02:53	05:08	19:23	21:38
29 th August	03:11	05:19	19:08	21:16

Meteor Showers

Date	Meteor Shower	RA	DEC	ZHR
6 th June	Ophiuchids	17h56m	-23°	5
21 st June	Ophiuchids	17h20m	-20°	5
9 th July	Capricornids			5
16 th July	Capricornids	20h44m	-15°	5
21 st July	alpha-Cygnids	21h00m	+48°	5
26 th July	Capricornids	21h00m	-15°	5
30 th July	delta-Aquarids	22h36m	-17°	20
1 st August	Piscis Australids	22h40m	-30°	5
3 rd August	alpha-Capricornids	20h36m	-10°	5
7 th August	iota-Aquarids	22h10m	-15°	8
13 th August	Perseids	03h04m	+58°	75
22 nd August	alpha-Cygnids	21h00m	+48°	5

Observers Club Meetings

Date	Day	Time	Venue
24 th June	Fri	20:00 - 22:00 GMT	Black Cock Inn
29 th July	Fri	20:00 - 22:00 BST	Black Cock Inn
26 th August	Fri	20:00 - 22:00 BST	Black Cock Inn

Observing Sessions

Date	Day	Time	Venue
2 nd July	Sat	21:30 - 24:00 BST	Dyffryn Gardens
2 nd or 3 rd September	Fri or Sat	20:30 - 24:00 BST	Dyffryn Gardens
23 rd or 24 th September	Fri or Sat	20:30 - 24:00 BST	Castle Heights Golf Course

NOTE Where two dates are given we will attempt to hold the session on the first date, weather permitting, otherwise we will try again on the subsequent date. All dates are subject to weather conditions. For confirmation of any session please check on the CAS Web site or the CAS Observing line 07817 723 883 for more information.

* Due to the current situation at Castle Height Golf Club the venue for the observing Session on the 23rd/24th of September is provisional and may be changed if circumstances require.

Almanac June

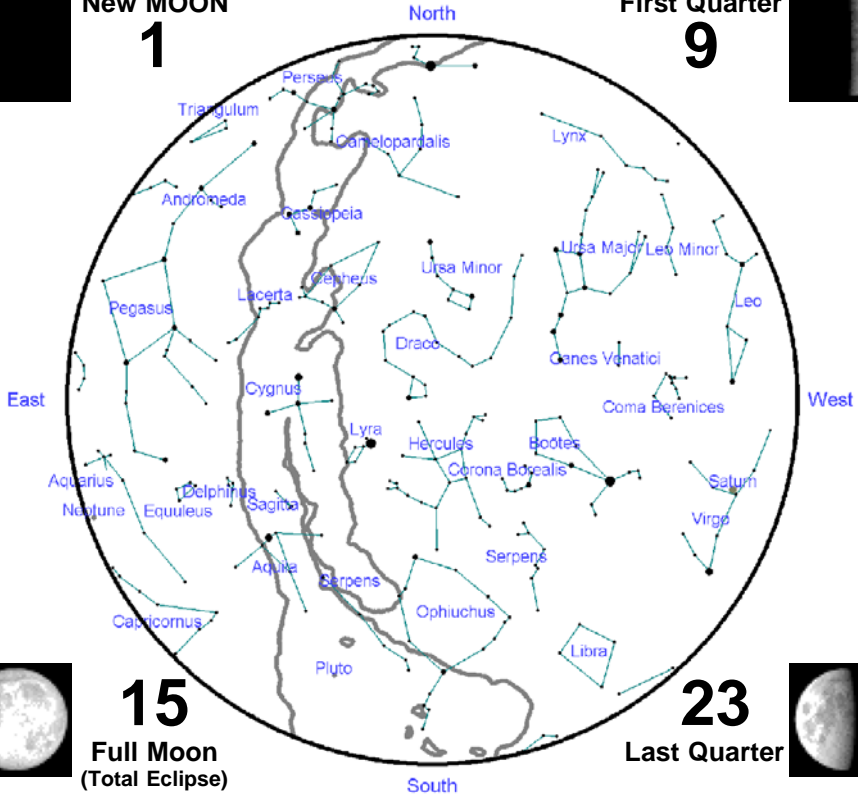


New MOON

1

First Quarter

9



15

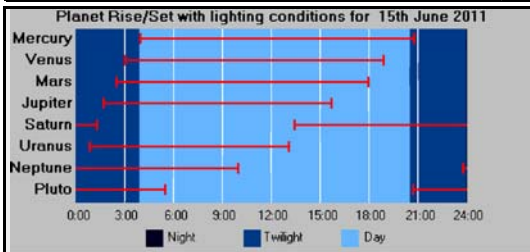
Full Moon
(Total Eclipse)

23

Last Quarter



	Constellation	R.A	Dec	Rises	Sets	Mag.
Mercury	Taurus	05h42m46s	+24°33'34"	03:57	20:44	-2.0
Venus	Taurus	04h19m31s	+20°33'55"	03:02	18:53	-3.9
Mars	Taurus	03h33m21s	+18°53'42"	02:27	17:56	+1.4
Jupiter	Aries	02h01m12s	+11°07'17"	01:40	15:39	-2.2
Saturn	Virgo	12h42m24s	-01°46'49"	13:25	01:17	+0.2
Uranus	Pisces	00h16m59s	+01°02'33"	00:48	13:04	+5.9
Neptune	Aquarius	22h13m48s	-11°33'24"	23:45	09:56	+8.0
Pluto (Dwarf)	Sagittarius	18h326m47s	-18°46'46"	20:44	05:30	+14.9



Planet Events

12th Mercury at Perihelion (0.31 A.U.).
 12th Mercury at Superior Conjunction.
 15th Total Lunar Eclipse. Moon rises eclipsed @ 20:26UT, total phase ends @ 21:03UT, eclipse ends 23:01UT.

The data presented here is for the 15th June, positional data is at 00:00 GMT/UT

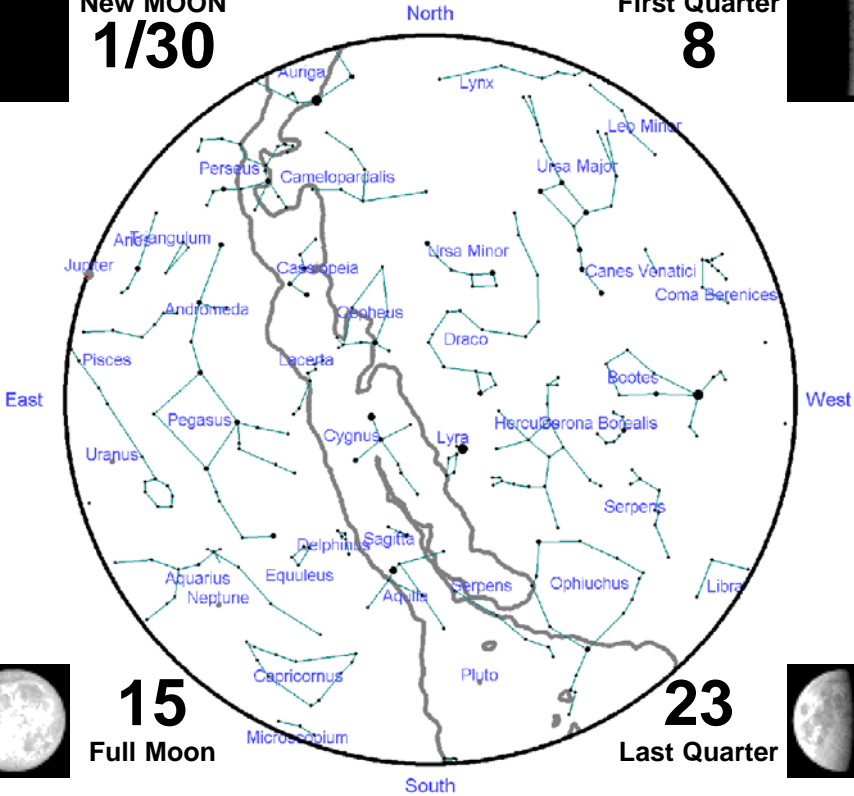
Almanac July

New MOON

1/30

First Quarter

8



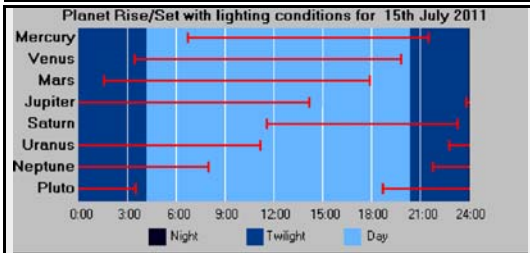
15

Full Moon

23

Last Quarter

	Constellation	R.A	Dec	Rises	Sets	Mag.
Mercury	Leo	09h23m30s	+15°28'18"	06:39	21:27	+0.3
Venus	Gemini	06h27m45s	+23°07'01"	03:24	19:50	-3.9
Mars	Taurus	05h02m36s	+22°51'46"	01:31	17:54	+1.4
Jupiter	Aries	02h20m23s	+12°42'28"	23:48	14:09	-2.3
Saturn	Virgo	12h45m16s	-02°12'59"	11:32	23:15	+0.3
Uranus	Pisces	00h17m54s	+01°07'22"	22:46	11:07	+5.8
Neptune	Aquarius	22h13m57s	-11°32'37"	21:48	07:58	+8.0
Pluto (Dwarf)	Sagittarius	18h23m37s	-18°51'59"	18:43	03:28	+14.9



Planet Events

26th Mercury at Aphelion (0.47 A.U.).

The data presented here is for the 15th July, positional data is at 00:00 GMT/UT

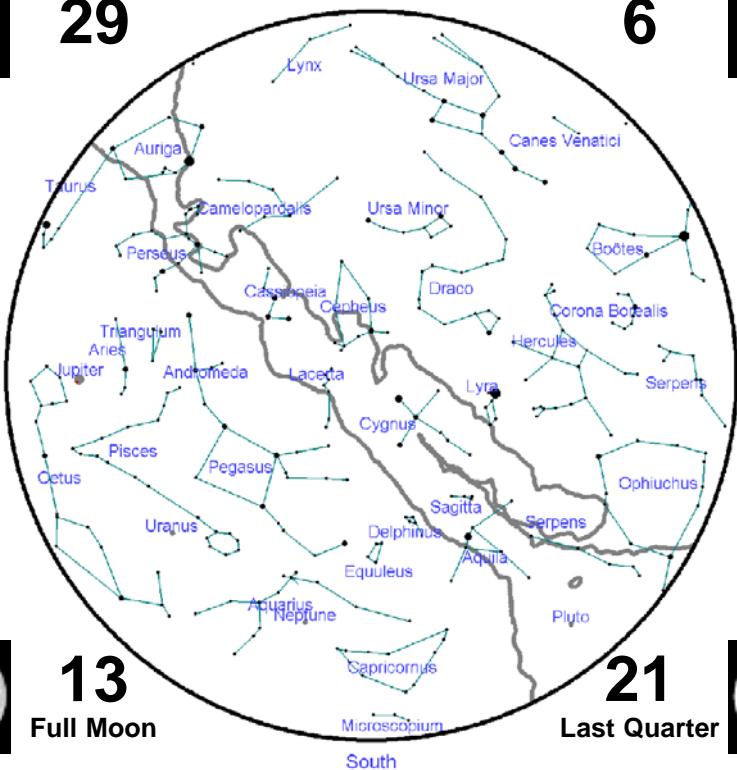
Almanac August

New MOON

29

First Quarter

6



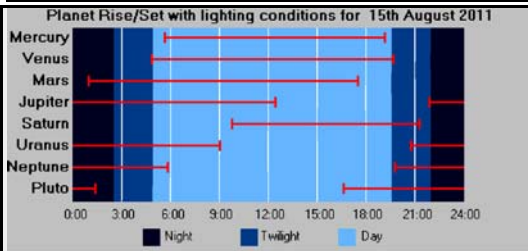
13

Full Moon

21

Last Quarter

	Constellation	R.A	Dec	Rises	Sets	Mag.
Mercury	Leo	09h44m41s	+08°29'58"	05:36	19:08	+4.4
Venus	Leo	09h36m57s	+15°33'23"	04:50	19:39	-3.9
Mars	Gemini	06h33m40s	+23°41'07"	00:54	17:29	+1.4
Jupiter	Aries	02h31m57s	+13°32'53"	21:53	12:24	-2.5
Saturn	Virgo	12h53m19s	-03°10'46"	09:43	21:17	+0.4
Uranus	Pisces	00h16m08s	+00°54'57"	20:44	19:02	+5.8
Neptune	Aquarius	22h14m05s	-11°31'51"	19:46	05:57	+8.0
Pluto (Dwarf)	Sagittarius	18h20m59s	-18°58'57"	16:39	01:23	+15.0



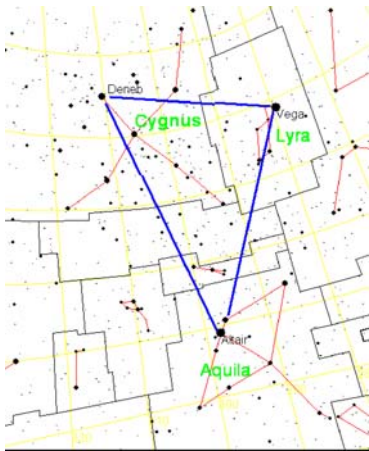
Planet Events

- 9th Venus at Perihelion (0.72 A.U.).
- 16th Venus at Superior Conjunction.
- 17th Mercury at Inferior Conjunction.
- 22nd Neptune at Opposition.

The data presented here is for the 15th August, positional data is at 00:00 GMT/UT

The Junior Page

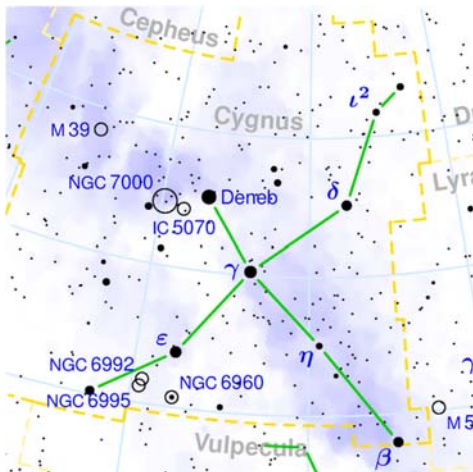
The Summer Triangle



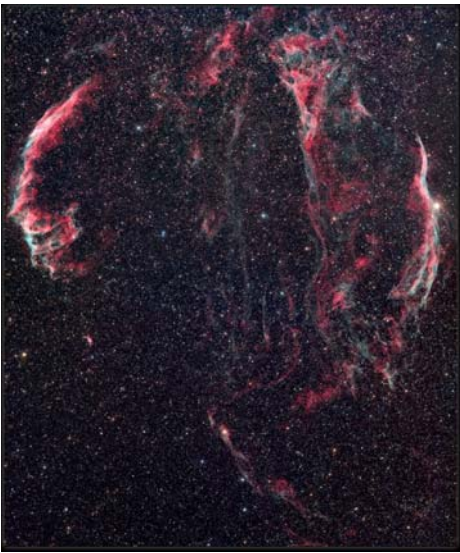
The summer triangle is made up of three bright stars each of which belong to a constellation. They are Altair in Aquila the Eagle, Deneb in Cygnus the Swan and Vega in Lyra the Harp.

Altair is the twelfth brightest star in the sky with a magnitude

of 0.77, is about 16 light years from Earth, has 1.8 times the mass of the Sun and 11 times its luminosity. It is a rapidly rotating star with a rotation period of nine hours. Altair means flying eagle. The constellation of Aquila the Eagle which it is part of has a few legends associated with it. In one the eagle is the Greek god Zeus in disguise whilst other legends claim Aquila is the eagle of Zeus who flies to Earth to collect the lightning bolts which Zeus has thrown.



The bright star Deneb in Cygnus is magnitude 1.25 and is a blue-white supergiant. Deneb means tail and is the nineteenth brightest star in

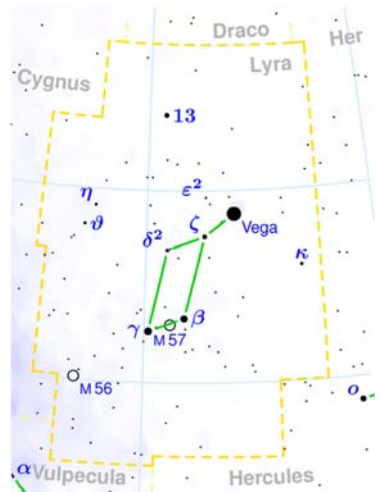


The Veil Nebula in Cygnus

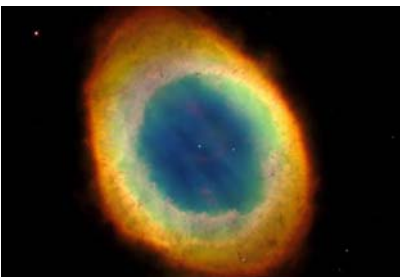
the sky, is estimated to be 1,500 light years from Earth and is the farthest first-magnitude star from Earth. It's luminosity is thought to be nearly 60,000 times that of our Sun and its mass is estimated to be 20 solar masses. It will go supernova sometime in the future. Cygnus in legend is said to be Zeus in disguise. The Veil nebula a supernova remnant lies in Cygnus and the Milky Way goes through the constellation

and is a fine sight away from light polluted skies.

Vega in Lyra the Harp means landing or falling. Although Lyra was thought of as a harp by the ancient Greeks Arabic astronomers saw the constellation as a swooping vulture. Vega is the fifth brightest star in the night sky with a magnitude of 0.03, is 25 light years from Earth, is a blue-tinged white main sequence star 37 times as luminous as the Sun and has more than twice its mass. The star has a fast rotation of about 12.5



hours



The Ring Nebula in Lyra

whilst our Sun takes about 25 days to rotate. Lyra has a disk of dust around and there is thought to be a planet as well. In some legends Lyra was the harp of Apollo or of Orpheus. The famous planetary nebula the Ring Nebula lies within it.