

JOURNAL

of

THE NOTTINGHAM ASTRONOMICAL SOCIETY

September 1997

EDITORIAL

Welcome to the September 1997 meeting of the Nottingham Astronomical Society. Tonight's speaker is Mr. Simon Hoggkin of the Astronomy Group of the University of Leicester who will be talking about Brown Dwarfs and Extra-Solar Planets.

Thanks go to Brian and Robin for contributions to this month's journal.

Chris Riley (Journal Editor)

NEWS

The favourite theory as to how the moon formed is in trouble if a model devised by scientists at the University of Boulder, is accurate. The current leading theory is that a Mars sized planet collided with the Earth about 4.5 billion years ago. This would have sent a lunar mass of debris into orbit which would then have clumped together to form the Moon. The new model shows that if this had happened only 20% to 50% of the matter would have formed into a moon, the rest falling back to Earth. To create a moon as we know it today a planet of 2.5 to 3 times the mass of Mars would have had to collide with the young Earth. The problem is that this collision would have resulted in the Earth - Moon system of today having twice the angular momentum.

Astronomers in Germany think that they have detected a tiny moon in orbit around the asteroid Dionysus. The asteroid itself is estimated to be only 1 Kilometre in diameter. The astronomers observed Dionysus in July from Mauna Kea, when it passed within 17 million kilometres of Earth and noticed that the brightness varied periodically indicating that a darker object was in orbit.

Another extra solar planet may have been discovered orbiting around the Sun-like star ρ Coronae Borealis. The planet was detected by observing the slight shift in the spectral lines of the star caused by the gravitational pull of the planet, which is estimated to be slightly greater than Jupiter and orbiting its star closer than Mercury does to the Sun.

SKYNOTES

For September 1997

by B. Griffin, Director of Observing

SOLAR & PLANETARY DATA

OBJECT	DATE	RA	DEC	MAG	DIA.	ELONGATION	CONSTN.	VISIBILITY
		h m	° ' "					
Sun	Sept 4	10 52	+7 15					
	14	11 28	+3 29					
	24	12 04	-0 24					
Mercury	Sept 16					Greatest Western Elongation		
	19	10 42	+9 20	-0 6	6.7	18°, morning twilight, SE		
	24	11 10	+7 12	-1 0	5.9	15°, morning twilight, SE		
	29	11 42	+4 02	-1 2	5.4	12°, morning twilight, SE		
Venus	Sept 9	13 37	-10 39	-3.9	15.2	Evening Sky, SW		
	29	15 06	-19 20	-4.0	17.5	Evening Sky, SW		
Mars	Sept					Entering Evening Twilight in SW		
Jupiter	Sept 19	21 02	-17 57	-2.7	46x43	All night, Capricornus, S		
Saturn	Sept 19	1 13	+4 43	+0.3	17.9	All night, Pisces		
Uranus	Sept 15	20 31	-19 40	+5.7	3.9	Evening Sky, Capricornus, SW		
Neptune	Sept 15	19 57	-20 15	+7.8	2.5	Evening Sky, Sagittarius, SW		

LUNAR DATA

<u>Phases</u>	New -	2 ^d 00 ^h	First Quarter -	10 ^d 02 ^h
	Full -	16 ^d 19 ^h	Last Quarter -	23 ^d 14 ^h
<u>Apsides</u> -	Apogee	2 ^d & 30 ^d	Perigee	16 ^d

TOTAL LUNAR ECLIPSE

On the evening of 16th Sept the moon will rise in total eclipse and should therefore be invisible. The latter parts of the eclipse will be seen in progressively darker skies.

Totality begins	10 ^d 02 ^h	
Totality ends	19 ^d 18 ^h	
Eclipse ends	20 ^d 25 ^h	
	Sunset 18 ^d 15 ^h	Moonrise 18 ^d 15 ^h

RISING & SETTING TIMES

Aug31/Sept1

Sun set	19h 00m
Venus sets	20h 00m
Saturn rises	20h 20m
Mars sets	20h 40m
Neptune sets	01h 45m
Uranus sets	02h 20m
Jupiter sets	03h 15m
Sun rises	05h 10m

Sept30/Oct1

Sun set	17h 55m
Saturn rises	18h 00m
Venus sets	18h 45m
Mars sets	19h 20m
Neptune sets	23h 25m
Uranus sets	00h 00m
Jupiter sets	00h 40m
Mercury rises	05h 10m
Sun rises	06h 35m

HOUSE OF CAVES ?

by Robin Haynes

Hopefully there weren't many members turning up at the normal monthly venue the first Thursday in August just gone. Rumour has it that at least one forgets every year that we only meet there eleven months of the year saving August for something and somewhere a little different. This year it was the Bridlesmith Gate system. I'm not sure an astronomical connection occurs to me at the moment but I'm sure I'll think of one. Even a troglodyte was an astronomer sometimes (Moonwatcher in 2001 ?)

The myth that Nottingham's cave systems are natural, pre historic and interlinked with fantastic secret corridors winding under the city doesn't stand up to scrutiny. Certainly there is a Celtic, pre Anglo-Saxon possibly even pre Roman name for Nottingham i.e. Tiggocabauc meaning house of caves. Think of the setting in pre historic times - an extensive forest to the north for hunting, fuel and materials and a high plateau providing a secure look out over the Trent valley. Why wouldn't some ancient tribe settle there long before the Romans came. The Romans didn't bother much with Nottingham though - maybe they couldn't be bothered to evict the stubborn Celts from their caves and their secure plateau. So before the Angles and Saxons came to Nottingham in the fifth and sixth centuries all we have to suggest an earlier Celtic settlement is an intriguing name with its tantalising reference to caves.

During those centuries the Celts were driven out westward and northward first by the Jutes and Saxons in the South of England and then by the Angles in the Midlands and the North. The new invaders had their quarrels between themselves, but these pagan invaders, formed at first an Anglo-Saxon heptarchy and eventually a unified Christian England under the kings of Wessex. Nottingham was now an Anglo-Saxon town with a new name - Snotengaham. Was there a Snot, an Angle or a Saxon who gave his name to the town ? Or is Snotenga an ham Saxon for caves and dwelling place and the whole thing a direct translation of the original Celtic name ? Some say the caves under Derby road lay outside the Anglo-Saxon town and therefore must be Celtic.

But soon the Vikings were raiding and pillaging England including in 868 the pagan Danes who captured Nottingham and this is documented along with both the Anglo-saxon and Celtic names mentioned. Snotengaham was now part of the Danelaw and had streets called gates. Further south Ethelred and Alfred the Great halted the Danish progress but had to pay them off with the Danegeld.

The Anglo-saxons eventually got Nottingham back in the next century but they never really subdued the Danelaw and with intermingling and intermarriage there were even some Danish rather than Anglo-Saxon kings on the throne. At any rate in 1066 with comet Halley high in the sky and the Normans coming across the channel the Danes now Christians seemed to regard themselves as English as the Anglo-Saxons and resisted the new invader together. Not so successfully for Nottingham (as it now was, the Normans not liking the initial S) became like a lot of towns post conquest, a two borough, French and English town. As the population grew lots of caves were formed beneath dwellings - they were cheap to construct, allowed evenness of temperature ideal for storage and for trades like malting and brewing and tanning.

The system the N.A.S. party were shown round (thanks to the NH&AS - £3 - worth it - very interesting !) was the Bridlesmith gate system. They were started prior to 1250 which makes them amongst the earliest dateable caves in the city. If there are provably older ones their antiquity and the fact that they belong to an earlier smaller settlement will make them harder to find and less likely to have survived. Almost unique to Nottingham these sort of caves were the mediaeval answer to extending the property above. Alas, Robin Hood didn't flee back to Sherwood undetected in a secret maze of interlinking passages but you never know. Among the caves used by tanners, maltsters and apothecaries was an impressive great domed cave whose mysterious use has been recently divined - it was an ice house, storing ice from the nearby Leen in winter and having the ideal thermal properties to keep the ice useable throughout the year.

Thanks to the Secretary for an interesting idea. We look forward to next August.

Note: Don't forget the September 18th informal meeting at the house of Len Fenwick,
"SHELTAM", Landmere Lane, Ruddington, NOTTINGHAMSHIRE, NG11 6ND.
Telephone 0115 921 7085.

Weekend Observing Sessions

To find out about weekend observing sessions contact either Brian or Robin.

Brian Griffin Tel. (0115) 9298364.

Robin Gray Tel. (0115) 9654782.

ABOUT the SOCIETY

Affiliated to the British Astronomical Association
Member of the Federation of Astronomical Societies

President:- Mrs. C. Wells

Vice President:- Mr. R. Haynes

Mr. A. Heath (former Dir. BAA Saturn Section)

Honorary Secretary:- Mr. C.J. Brennan
40 Swindon Close,
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Giltbrook,
NOTTINGHAM, NG16 2WD.

Telephone 0115 938 4521

Meetings:- Djanogly City Technology College,
Sherwood Rise,
Nottingham Road,
NOTTINGHAM, NG7 7AR

Doors open:- 7:30pm

Meeting starts:- 7:45pm

Meeting ends:- 10:00pm

There are formal monthly meetings with speakers. They are held in Room 003 on the ground floor in the C.T.C.. A small charge of £2.00 adults, £1.00 Juniors is made to non-members. Invited guests free.

Subscriptions:- £16.00 Full Adult
£8.00 Junior (16 or under, FTS, Senior citizens, Unemployed persons (UB40 holders)). Subscriptions become due at the AGM. A half price subscription rate is charged for persons joining after April 1st each year.

NOTTINGHAM ASTRONOMICAL SOCIETY

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