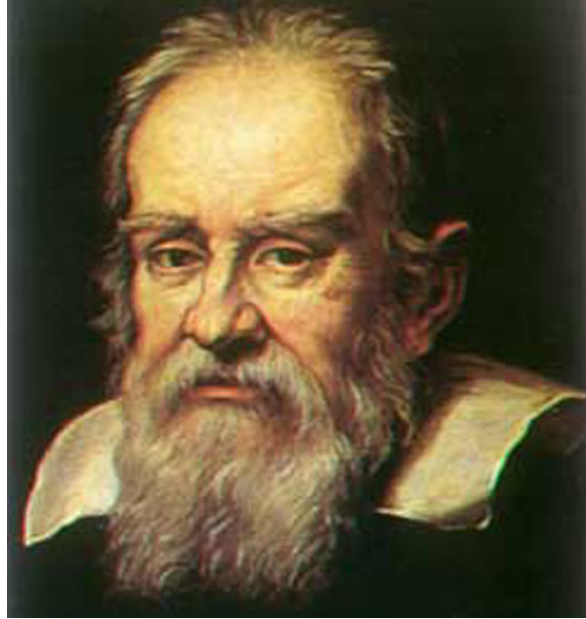


FOXTON BEACH
ASTRONOMICAL
SOCIETY Inc



Galileo Galilei (1564-1642)
"I've loved the stars too fondly to be fearful of the night"

NEWSLETTER
OCTOBER 2009

**FOXTON BEACH ASTRONOMICAL SOCIETY
LIST OF OFFICERS 2009 – 2010**

President:	Ron Fisher	Ph 368-6251
Vice President:	Bren Chainey	Ph 368-4987
Secretary:	Richard Leach	Ph 368-4608
Treasurer:	Tina Hills	Ph 368-6926
Observatory:	Gordon Dustin	Ph 363-7707
Viewing hotline:		Ph 0211270604

We welcome contributions from any members - observing reports, photos, news, links to interesting websites, just about anything astronomical will be considered. Please have your contributions in by the 21st of the month. Address any newsletter contributions to Steve Chadwick at stevechads@hotmail.com or post to 628 Himatangi Beach Road, RD11 Foxton We cannot guarantee everything will be included, but we will do our best.

NEXT MEETING
THURSDAY OCTOBER 1ST 2009 at 7.30 pm

Visitors are most welcome with no obligation to join. If you would like to join then simply contact a member of the committee for more information. The society meets on the 1st Thursday of the month at 7.30 pm at The Foxton Beach School staff rooms, Carthew Terrace, Foxton Beach.

President's report October

Last months meeting saw Doug Jackson give a practical guide to using a goto telescope. It was informative and highly interesting. I know a number of our members will now feel that it is attainable for them to learn how to operate a goto telescope and may even aspire to being trained on the club's Meade. We had a clear sky and i was overwhelmed by the number of members that got outside to observe even in the freezing cold.

Of course before the general meeting we had our special meeting to decide whether or not we would change our name to Horowhenua Astronomical Society. The majority went in favour of the change but our constitution states that we need a 75% majority to make the change. It was a great turnout for the vote and only one person sustained from voting. This shows a real committment to our society moving forward. We have always been the Foxton Beach Astronomy Society and that is what we will remain. We are proud of our history and will continue to promote ourselves to the wider public with such pride.

Next months meeting will see one of our newest members Mike White do a short presentation on observing Jupiter which will put us in good stead for the upcoming Galilean Nights event at Manawatu College.

Our committee meeting this month was a good one as usual. It was announced that our Space Radio concert event has received a grant from the Horowhenua Community Trust so we can now move forward in confidence with plans for a great night. Plans are also ticking along for our Galilean Nights event on October 24th at Manawatu College and we also continue to investigate the best way to approach local schools in support of their astronomy activities. We stand at 28 members paid up for the coming year and we have printed name badges for all so we can be identified at our events. It was proposed that we look at our strategic planning for the coming years and we agreed this is critical for us to have a vision of where we are going. We will look at starting this in the new year. We also talked briefly about how we would implement an education programme for members. To begin with we are hoping for more clear nights and to have the knowledgable members continue to share with the others so we can all learn how to operate the equipment we have.

I hope everyone enjoyed the Spring Fling and the Society dinner last month, i hear they both went well and now its almost time to start thinking about the xmas dinner already! Dont forget we have visitors from the Hawera Astronomy Society coming to our meeting in October so feel free to come anytime from 7pm to say hello before the meeting.

Ron

The Foxton Spring Fling – a success!

Apart from unfortunate sun damage to a member's scope the day in Foxton's Main Street must be considered a real success. The opportunity was taken to meet and greet people as they perused our exhibit. Many questions were asked about Astronomy and features of the sky with some people indicating they did not know we had an Observatory in the town. We gathered names and contact details from people, which will enable us to follow up and alert guests to activities of FBAS. It was a pleasant surprise to find various people who have access to Telescopes of various sizes and conditions. The day was well worth the time investment and even saw one of our esteemed members riding a Unicycle along the road.

Allen Little



Photos from the spring fling by Paul Matthews

Letter to the editor...

Spring fling a great success with colourful floats, music, dancing – little intimidated by the military presence: Russian tanks – guns – all new to “spring flings”. Our “astronomical stalwarts” maintained a busy table of enquiries and peeps through telescopes.

The hero of the day was of course our own Gordon Dustin as he whirled madly round the course on his “magic machine” bringing cheers and applause from onlookers – hazardous getting on the “thing” and a bloody miracle getting off!

Best wishes
Joan Bassett

P.S. The social dinner at Levin on Sunday – very successful – Roast pork and veges – delicious but oh dear – no tea or coffee – “sorry love, it’s off”.



Viewing the sun at the spring fling (before meltdown) Photo: John Honore

Galilean Nights

"The Sun, with all the planets revolving around it, and depending on it, can still ripen a bunch of grapes as though it had nothing else in the Universe to do." (Galileo)

On 22-24 October 2009, the International Year of Astronomy 2009 Cornerstone Project, Galilean Nights, will see amateur and professional astronomers, enthusiasts and the public taking to the streets all around the globe, pointing their telescopes to the wonders that Italian astronomer Galileo observed 400 years ago.

Spread over three nights, astronomers will share their knowledge and enthusiasm for space by encouraging as many people as possible to look through a telescope at our planetary neighbours. The focus for Galilean Nights is the objects that Galileo observed, including Jupiter and the Moon, which will be well-positioned in the night sky for observing.

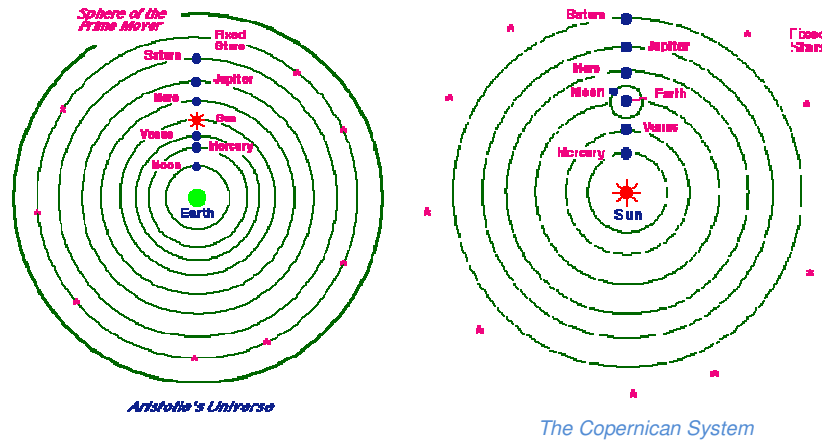
FBAS Manawatu College Star Party

Our society is celebrating the event by holding a star party on **Saturday 24th October**. The event will incorporate a Galileo presentation to be held from 7 PM at the College, www.manawatucollege.school.nz. We hope this event will draw interested people from throughout the district. It's a first time "Star Party" in Foxton. Members can help by spreading the word about this fantastic opportunity to celebrate Astronomy and commemorate Galileo who is still a major influence in Science generally and Astronomy particularly. Don't forget Saturday 24th October (Labour Weekend)

The Life of Galileo

Galileo was born in Pisa, Italy on February 15, 1564. His family belonged to the nobility but was not rich. In the early 1570's, he and his family moved to Florence.

Galileo invented many mechanical devices, but his most famous invention was the telescope. Galileo made his first telescope in 1609, modelled after telescopes produced in other parts of Europe that could magnify objects three times. He created a telescope later that same year that could magnify objects twenty times. With this telescope, he was able to look at the moon, discover the four satellites of Jupiter, observe a supernova, verify the phases of Venus, and discover sunspots. His discoveries proved the Copernican system which states that the earth and other planets revolve around the sun. Prior to the Copernican system, it was held that the universe was geocentric, meaning the sun revolved around the earth.



Galileo's belief in the Copernican System eventually got him into trouble with the Catholic Church. The Inquisition was a permanent institution in the Catholic Church charged with the eradication of heresies. A committee of consultants declared to the Inquisition that the Copernican proposition that the Sun is the centre of the universe was a heresy. Because Galileo supported the Copernican system, he was warned by Cardinal Bellarmine, under order of Pope Paul V, that he should not discuss or defend Copernican theories. In 1624, Galileo was assured by Pope Urban VIII that he could write about Copernican theory as long as he treated it as a mathematical proposition. However, with the printing of Galileo's book, *Dialogue Concerning the Two Chief World Systems*, Galileo was called to Rome in 1633 to face the Inquisition again. Galileo was found guilty of heresy for his Dialogue, and was sent to his home near Florence where he was to be under house arrest for the remainder of his life. In 1638, the Inquisition allowed Galileo to move to his home in Florence, so that he could be closer to his doctors. By that time he was totally blind. In 1642, Galileo died at his home outside Florence.

"Alas! Your dear friend and servant Galileo has been for the last month hopelessly blind; so that this heaven, this earth, this universe, which I by my marvellous discoveries and clear demonstrations had enlarged a hundred thousand times beyond the belief of the wise men of bygone ages, henceforward for me is shrunk into such a small space as is filled by my own bodily sensations." (Galileo, 1641)

[A warning from history – NEVER LOOK AT THE SUN DIRECTLY THROUGH A TELESCOPE WITHOUT USING A SPECIFICALLY DESIGNED SUN-FILTER]

Space Radio

The 'Space Radio' event is going ahead and will be held at the Foxton MAVtech Audio Visual Museum on Saturday November 21st 2009. The evening concert will be held from 8:30pm to 10:30pm. There will also be an afternoon showing. We will be showing some classic footage from spaceflight history alongside other short films with astronomical themes. This will be introduced by astronomer Frank Andrews who will give a short talk on the Planets according to Holst. Gustav Holst composed 'The Planets' back in 1916, giving life to each planet by personifying them in some way and then conveying that musically. This will be the premise for an introduction to the Planets presentation. The talk will be from 4-6pm with tickets sold on the door.

MUCH HELP IS NEEDED FROM MEMBERS. We require people to promote and sell tickets; be ushers for both the afternoon and evening performances; undertake mailbox drops; and of course some poor sods to clean up afterwards. Please contact one of the committee members if you can help out in any way.

Some of Galileo's Discoveries

The Galilean Moons of Jupiter

With his two telescopes, one 3x and the other 30x magnification, Galileo was able to observe the skies in ways previously not achieved. In 1610 he made observations of 4 objects surrounding Jupiter that behaved unlike stars, these turned out to be Jupiter's four largest satellite moons: Io, Callisto, Europa and Ganymede. They were later renamed the Galilean satellites in honour of Galileo himself.



"I should disclose and publish to the world the occasion of discovering and observing four Planets, never seen from the beginning of the world up to our own times, their positions, and the observations made during the last two months about their movements and their changes of magnitude; and I summon all astronomers to apply themselves to examine and determine their periodic times, which it has not been permitted me to achieve up to this day. On the 7th day of January in the present year, 1610, in the first hour of the following night, when I was viewing the constellations of the heavens through a telescope, the planet Jupiter presented itself to my view, and as I had prepared for myself a very excellent instrument, I noticed a circumstance which I had never been able to notice before, namely that three little stars, small but very bright, were near the planet; and although I believed them to belong to a number of the fixed stars, yet they made me somewhat wonder, because they seemed to be arranged exactly in a straight line, parallel to the ecliptic, and to be brighter than the rest of the stars, equal to them in magnitude . . . When on January 8th, led by some fatality, I turned again to look at the same part of the heavens, I found a very different state of things, for there were three little stars all west of Jupiter, and nearer together than on the previous night."

"I therefore concluded, and decided unhesitatingly, that there are three stars in the heavens moving about Jupiter, as Venus and Mercury around the Sun; which was at length established as clear as daylight by numerous other subsequent observations. These observations also established that there are not only three, but four, erratic sidereal bodies performing their revolutions around Jupiter." (Galileo published these observations in Sidereus Nuncius in March 1610).

The Mountains on the Moon

Galileo also made great discoveries about the moon. Prior to Galileo it was believed that, like all 'heavenly bodies', the moon was a perfectly smooth sphere. By the use of his telescope Galileo showed that it was anything but smooth! Here is how Galileo described his observations of 1610:

I distinguish two parts of it, which I call respectively the brighter and the darker. The brighter seems to surround and pervade the whole hemisphere; but the darker part, like a sort of cloud, discolours the Moon's surface and makes it appear covered with spots. Now these spots, as they are somewhat dark and of considerable size, are plain to everyone and every age has seen them, wherefore I will call them great or ancient spots, to distinguish them from other spots, smaller in size, but so thickly scattered that they sprinkle the whole surface of the Moon, but especially

the brighter portion of it. These spots have never been observed by anyone before me; and from my observations of them, often repeated, I have been led to the opinion which I have expressed, namely, that I feel sure that the surface of the Moon is not perfectly smooth, free from inequalities and exactly spherical... but that, on the contrary, it is full of inequalities, uneven, full of hollows and protuberances, just like the surface of the Earth itself, which is varied everywhere by lofty mountains and deep valleys.

Galileo even had a go at estimating the height of some of the mountains he observed. The picture taken by Mike White (below) shows the Apeninnes Mountains. By studying the lengths of the shadows they cast at different phases of the moon he made estimations of their height.



This is an image of the Apennines Mountains (Montes Apenninus), which is located on the South-Eastern border of Mare Imbrium. It has a diameter of 401km (officially, but some dispute this and put it closer to 600km) and some peaks rise to a height of over 5km. It is undoubtedly the most magnificent mountain range on the visible surface. Eratosthenes is the large crater (58km) at the top of the image, with the smaller Timocharis (33km) at the right and Archimedes (82km) at the bottom. Not far below the bottom of the image is the Apollo 15 landing site, which I didn't realise at the time I was imaging this, or I would have included it!

(Image and text by Mike White)

The View from Himatangi Beach



M16 The Eagle Nebula

As we enter spring the central bulge of the Milky Way begins to set earlier and earlier so we should make the most of the endless wonderful nebulae that it contains

This image shows the open star cluster of M16 in Serpens. It's surrounded by a huge diffuse area of nebulosity known as the Eagle Nebula. Unfortunately the wings of the eagle are out of the picture.

In the centre of the image you can see the star-forming region dubbed the 'pillars of creation' since the famous Hubble image from 1995.

(Image and text by Stephen Chadwick)

The Sky in October

JUPITER is the only naked eye planet visible in the evening sky during October. The planet will be slow moving in Capricornus. It is stationary on October 13, when its retrograde westerly motion through the stars will cease. It will be close to the 4th magnitude star Iota Cap, with the two mostly less than half a degree apart. At the beginning of October, Jupiter will transit about 10 pm for many places in New Zealand, but about half an hour later in the south west. The time of transit advances by about 2 hours during the month, but it does mean that Jupiter will be well placed for viewing throughout the month. The 63% lit Moon will be 3.5 degrees below Jupiter on the 27th, the two being closest. For NZ viewers immediately following sunset. Neptune, which has been a partner of Jupiter for much of the year, will be between 6 and 6.5 degrees from Jupiter during October.

MARS is the only other planet readily visible in October, and it remains a morning object. At the beginning of October it rises between about 3.30 am, in the north, and 4.30 am in the south of NZ. By the end of the month it will rise about an hour earlier. Thus the best time for viewing Mars is about an hour before sunrise, when it will be between north and northeast. The planet starts the month in Gemini being about 6 degrees from the similarly coloured star Pollux for the first week. The planet crosses into Cancer on the morning of the 13th and moves up to be on the edge of M44, Praesepe by the end of the month.

THE DAWN SKY - Mercury, Venus and Saturn

The three planets will be quite close to one another in the dawn sky during October. But they will be all but unobservable, since they rise only shortly before the Sun.

MERCURY will rise only some 35 minutes before the Sun on October 1, by the end of the month less than 5 minutes beforehand.

VENUS rises a few minutes earlier, and due to its brilliance may be visible just before sunrise very low between east and northeast.

SATURN starts the month closest to the Sun of the three, but will be rise more than an hour before the Sun by the end of October. Even so it is likely to be too low in the dawn sky for observation. The best chance for locating the planet in binoculars may be on the mornings of October 14 and 15 when it will be very close to Venus. On the 14th, Saturn will be half a degree to the lower left of Venus, the following morning the two will be slightly further apart but virtually level.

URANUS having been at opposition in mid September will be in the evening sky. It starts October in Pisces, but moves into Aquarius on the 12th.

NEPTUNE, in Capricornus, is also an evening object and remains fairly close to Jupiter during October.

(Courtesy of the RANZ)

Gord's Corner

Just a note to advise my time and activities over the last few months has/have changed quite a lot and as a result I have not put a lot of time into astronomy and related activities apart from my attendance at the Spring Fling promo. But I did ride my unicycle in the parade after a break of about 10/12 years. Hurrah.

Good to see the turnout of members at our stand at the Spring Fling. Plenty of response from the public. Lots of people out there who are interested in the starry skies, planets and moon etc, but who do not want to join an astronomical society, but who want to take a look through a telescope. That is the start.

I notice that activities in our society are gaining momentum. This then is going to involve members a lot more. Question. Do you have time? Time gentlemen, please.

Well members, here we are just turned the page from winter to spring. The old saying 'time flies' is so very true. The days, weeks, and months have rolled by at a fast rate of knots that in another 3 months it will be Xmas then on in to the new year. Can you remember what you did 6 months ago, 7 months ago or even 3 months ago? And of course the fact that as each year rolls by we all become one year older.

Daylight saving is now with us and of course all the fun and frolics which come with it. Just think of all those extra jobs you will get done, but alack alas what it does do is become a pain in the butt for astronomers who delight in taking in the beauty of the night skies. Everything is that much later and serious observing times are reduced unless you are a real night owl.

The release re the "space radio" event programmed for Saturday 21st November should be a great show. Members, I urge each and every one to get behind this programme and assist in whatever way you can. We all have our own particular talents and if we pool all those talents – oh boy – what can we achieve. Let's get in behind the "space radio" event and associated "young stargazers" programme, and make it a big successful happening. Your show. Your involvement. Let's do it. Go-go-go.

The Spring equinox has been and gone. Now we look forward to the summer solstice. I am really looking forward to the next six months and all the things I have to do – want to do – look forward to actioning – or even put on my "to do" list. Things like cutting the grass, working, planting the garden, caravanning, more work, swimming, getting a sun tan, looking at the night skies and enjoying the wonders of such, housework, cycling, walking, dancing, being lazy, enjoying a dram or two, a few zedds, conversation, good food, great company, more night sky observing, fishing, boating, watching programmes on the square box (tv), (Coronation Street – sic), (Days of Our Lives – another sic) – but in all seriousness enjoying life to the max. (I know. I forgot tenting.)

The Special General Meeting of September 3rd was well attended. The major proposal at that SGM was to change the name of the society to that of the Horowhenua Astronomical Society. As chairman for that meeting I was quite impressed with the quality of the debate on the proposal, be it 'in favour of the motion' or 'against the motion'. The formality of the meeting, I felt, was necessary due to the nature of the proposal. My thanks to all persons present for the way they conducted themselves under my chairmanship. It was a rewarding experience and one we can all learn from. Voting was – 13 votes in favour of the motion, and 7 votes against the motion with one abstention. A 75%, three fourths, majority of persons present able to vote meant that 16 votes were required to carry the day. The proposal was lost.

Just a reminder, members – the name of our society is the Foxton Beach Astronomical Society Inc., not the Foxton Beach Astronomy Society as mentioned in a letter I received in the mail this week.

Gords

Calendar of events

Here is a provisional list of upcoming events:

October 1st Monthly meeting
Mike White on 'Observing Jupiter'

October 24th or 25th (Labour Weekend) Galilean Nights
Star party at Manawatu College, Foxton, with a talk on Galileo and Jupiter.

November 5th Monthly meeting
Stephen Chadwick on 'astrophotography'

November 21st Space Radio concert. 8.30pm – 10.30pm.
MAVTech Audio Visual Museam, Foxton

December TBC
Frank Andrews on 'The Xmas Star'

January No monthly meeting

February Monthly meeting
Ian Cooper on 'Comets'

If undelivered return to:
Foxton Beach Astronomical Society
C/- 15 Manchester Street, Levin



Nelson Bartlett Observatory

(Photo by W Marshall)

**THE FOXTON BEACH ASTRONOMICAL SOCIETY
NELSON BARTLETT OBSERVATORY
FOXTON BEACH SCHOOL STAFF ROOMS
CARTHEW TERRACE
FOXTON BEACH**