

# Thanet Astronomy Group

Astronomy for Everyone in Plain English

## NEWSLETTER

October 2016



*The Traveller capsule*

PLANS PREPARED FOR PLANNING AND  
BUILDING REGULATION APPROVALS

**MARTIN FOAD**

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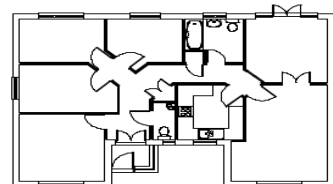
EXTENSIONS

NEW BUILD



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This space is available for promoting members' businesses. You can place an advert here for a donation to the group.

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## Executive Committee Messages

October 2016

The month of October will start with :-

*October 1<sup>st</sup>* Will start the Saturday meetings.

*October 5<sup>th</sup>* Will be the Wednesday members' meeting

Please Note : The Summer season at the cafe is now over and meetings return to a 7:30pm Start.

**5<sup>th</sup> October 2016 at 7:30pm**

2<sup>nd</sup> November 2016 at 7:30pm

7<sup>th</sup> December 2016 at 7:30pm

4<sup>th</sup> January 2016 at 7:30pm

### Beginners' Guide to Stargazing Course

We are getting much closer to the 2017 run of the stargazing course in Jan – Feb and need to start taking bookings if this course is going to be a success :-

All those that would like to attend this course (details on the web site) please email [ThanetAstronomyGroup@gmail.com](mailto:ThanetAstronomyGroup@gmail.com) to register your interest.

Danny, George, Gill.

Advertisement

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## About the Cover Picture



*The Traveller capsule*

*I thought that members may be interested in what future theme parks will offer.*

Would you go on this ride ???

A Chinese company Kuang-Chi <http://www.kuang-chi.com/en/> is a global innovation company based in Shenzhen, China. Kuang-Chi started in 2010 with only 5 people and is now an international business with over 1,400 employees.

Among many other innovative projects Kuang-Chi has several space related projects including the Traveller project. The Chinese business are planning to beat Virgin Galactic to launch trips to the edge of space.

Kuang-Chi science plans to invest 10 million yen (£1.12m) to develop a park in Hangzhou province called "Future Valley". This theme park will have a series of rides aiming to let people experience what it would feel like to be an astronaut in space.

The most exciting of these rides is what the company calls "Traveller". This ride will use weather balloon technology to lift a passenger carrying capsule up to 21km above the Earth. This is near space - at the limits of the Earth's atmosphere.

The Traveller project started on 21<sup>st</sup> November 2014 when KuangChi Science and Airways New Zealand signed a joint memorandum which laid the foundation for the launch of the Traveller in New Zealand.

In February 2015 Kuang-Chi started development of the manned version of the Traveller capsule leading the way to safe near-space travel for everyone.

On 6<sup>th</sup> June 2015 the Traveller commercial platform was launched from Ashburton, New Zealand and completed several of its tests.

## **Thanet Astronomy Group Contact Details**

### **Executive Committee**

|           |             |               |
|-----------|-------------|---------------|
| Chairman  | Daniel Day  | 01843 228 904 |
| Treasurer | George Ward | 01843 292 640 |
| Secretary | Gill Palmer | 07543 942 245 |

### **Committee**

|            |                |               |
|------------|----------------|---------------|
| Volunteers | George Cozens  | 07970 181 395 |
| Members    | Sheila Tomkins | 07791 892 057 |
| Newsletter | Janet McBride  | 01227 364 092 |
| Newsletter | Tracy Howes    | 07917 710 638 |
| Library    | Janet McBride  | 01227 364 092 |
| Web Site   | Danny Day      | 01843 228 904 |
| JAC & Gill | Gill Palmer    | 01843 848 064 |

### **Co-opted Members**

|                |                |               |
|----------------|----------------|---------------|
| Vice Chair     | Sheila Tomkins | 07791 892 057 |
| Vice Treasurer | Tracy Howes    | 07917 710 638 |
| Vice Secretary | Janet Mc Bride | 01227 364 092 |

## Members' Meeting Dates and Times

Thanet Astronomy Group

Members' Meetings

### Dates and Times

6<sup>th</sup> January 2016 at 7:30pm

3<sup>rd</sup> February 2016 at 7:30pm

2<sup>nd</sup> March 2016 at 7:30pm

6<sup>th</sup> April 2016 at 7:30pm

4<sup>th</sup> May 2016 at 7:30pm

1<sup>st</sup> June 2016 at 8pm

6<sup>th</sup> July 2016 at 8pm

3<sup>rd</sup> August 2016 at 8pm

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**\*\*\* 7<sup>th</sup> September 2016 at 8pm \*\*\***

**\*\*\* Anniversary Three Years at West Bay Cafe Party \*\*\***

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5<sup>th</sup> October 2016 at 7:30pm

---

### **Next Meeting**

**2<sup>nd</sup> November 2016 at 7:30pm**

---

**\*\*\* 7<sup>th</sup> December 2016 at 7:30 for 8:00pm \*\*\***

**\*\*\* Christmas Evening Meal and Entertainment \*\*\***

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All members' meetings will be held at the :-

West Bay Cafe, Sea Road,

Westgate-on-Sea,

Kent.

CT8 8QA

Advertisement

# WEST BAY CAFE

Sea Road, Westgate-on-Sea  
CT8 8QA

**Location :-**

This Family Friendly Cafe is situated on the promenade just beside the sandy beach opposite the junction of Sea Road and Rowena Road, Westgate-on-Sea, CT8 8QA.

**Access :-**

via a flight of steps behind the cafe.

**Disabled Access :-**

via the main entrance to the bay and a slope at the cafe door.

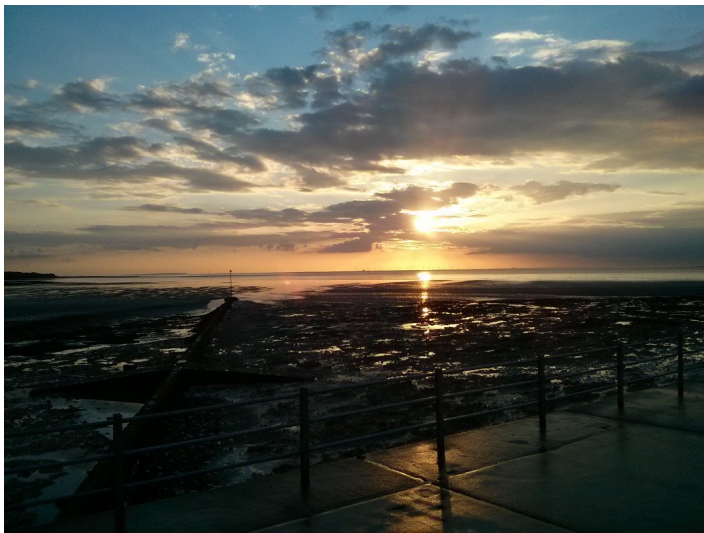
West Bay Cafe run by Alan and Kate has a very friendly atmosphere.



*Alan outside the new style West Bay Cafe*

There is a wide variety of good food and drinks at very reasonable prices and there are always special offers.

There is seating both inside and outside for those extra hot days.



*A Typical Sunset at the West Bay Cafe*

**The Sunsets at the West Bay Cafe are Spectacular.**

**With a meal, some friends, and a pint or two.**

**What more could you ask for!**

West Bay Cafe have hosted Thanet Astronomy Group since September 2013.

We would like to say a  
**HUGE THANK YOU to Alan and Kate**  
for all the help and support they have shown us over the last year.

**Please use this Brilliant Seaside Cafe and Tell Your Friends.**



## What we did last month

### September 2016

#### Saturday 3<sup>rd</sup> September Public Outreach Meeting

Today was the unveiling of our new banner, and it was received with great interest by all. We would like to thank the anonymous benefactor for offering to fund this banner.

Many passers by were encouraged to “Come and Chat” as it states on the banner. They had loads of questions and all got to use and look through the telescopes at the sun spots and all the sights in the distance.



#### Sunday 4<sup>th</sup> September Ramsgate Vikings 30<sup>th</sup> Model Ships Rally

We were very happy to be invited back for the third year to the Ramsgate Vikings 30<sup>th</sup> Model Ships Rally. Although it was a little windy we set up the telescopes on the cliff top and Gill set up in a more sheltered spot. We had a lot of interest with some people staying for quite a while.

We were even visited by the Mayor and Mayoress of Ramsgate who were very interested in astronomy and what we were doing.



#### Wednesday 7<sup>th</sup> September Members' Meeting

Today was our celebration of our 3<sup>rd</sup> year at West Bay Cafe. We had planned an informal social evening with tea, coffee and CAKES from Gill !

We were hoping (and the forecast was looking good) to have a stargazing party. On the night it all fell into place and we had several telescopes set up, including members' telescopes.

To start with all were treated to amazing views of Mars, Saturn and the Moon. Then, the attention was turned to the constellations of Cassiopeia, Andromeda and Pegasus. To finish off we looked at the deep sky object, the Andromeda Galaxy.



See pictures below :-

## What we did last month

September 2016



Constellations Cassiopeia, Andromeda and Pegasus



The Andromeda Galaxy

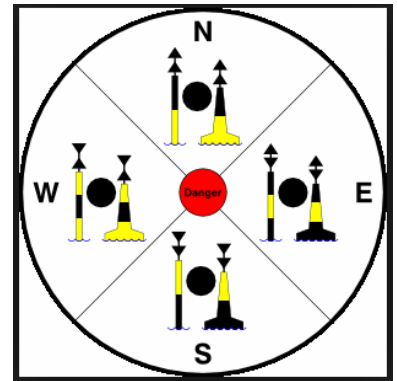
### Saturday 10<sup>th</sup> September Public Outreach Meeting

Today was a bit cloudy but warm and there was a good turnout of members to help with the public's questions. We had the new banner up again and we received a good response to it. Like last week we had a few requests about membership.



We only got a brief look at the sun.

We spent most of the afternoon looking at the cormorants on the Margate Hook sand bank 'Cardinal Mark'



*(A cardinal mark is a sea mark (a buoy or other floating or fixed structure) used in maritime pilotage to indicate the position of a hazard and the direction of safe water. Cardinal marks indicate the direction of safety as a cardinal (compass) direction (north, east, south or west) relative to the mark.*

These cormorants can be seen flying from their fishing trips to the cardinal mark and perching there while drying their feathers. Gill was showing her Jupiter and the Juno mission presentation to Dacey and Dacey was showing Gill her new book about planets. Both of them learnt lots of new facts about Jupiter and Juno.

### Saturday 17<sup>th</sup> September Public Outreach Meeting

Today was a really wind day and, as the tide was all the way in, the waves were breaking over the promenade and everywhere was soaking wet with salt water. We could not set up the telescopes today. We held the meeting in the warmth of the cafe where one member was showing us the plans and progress on his new home observatory and everyone was having a good time discussing astronomy and how to set the world to rights.

### Saturday 24<sup>th</sup> September Public Outreach Meeting

Not a bad day, dry and sunny, we were looking at the sun spots although they were few and very small today. Many people were interested in what we were doing and looking through the telescopes. Today was the first day I can remember that Gill was not with us to look after the children. Fortunately there were not too many children, but those that did come with there parents did get a good look through the telescopes and got answers to all their questions.

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## Book review

### Mars

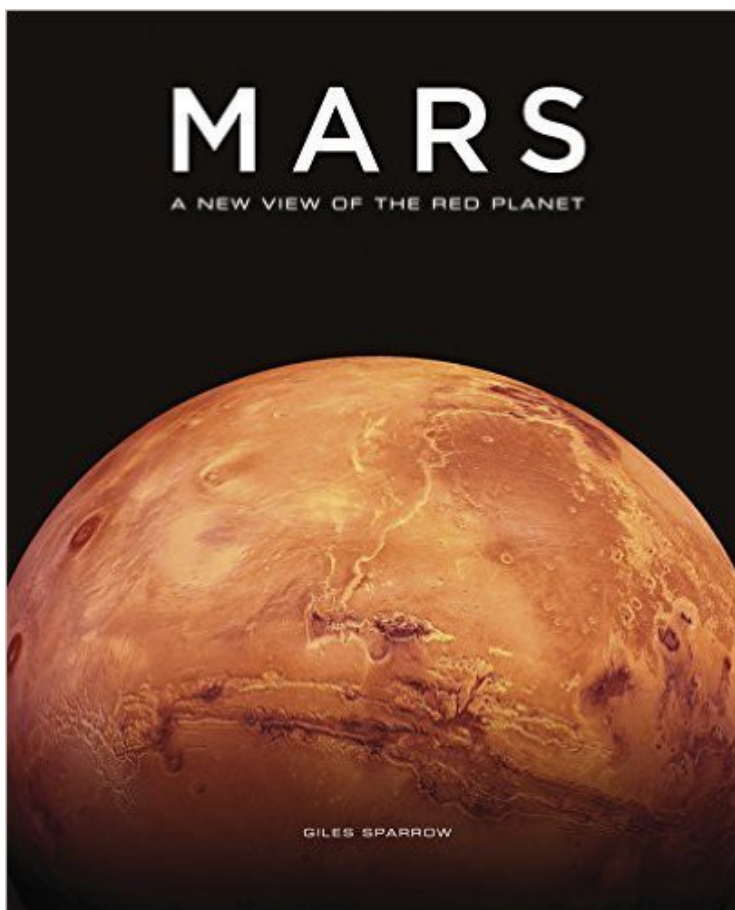
A new view of the Red Planet  
by Giles Sparrow

This year we have been learning more about Mars at Thanet Astronomy Group and I borrowed a book which was all about Mars!

The book is by Giles Sparrow, who has written quite a few of the astronomy books I have read. It has information on how Mars was formed, what it is made from, the craters and volcanoes, and the missions to Mars including all the different probes which have been sent and much more.

But more importantly, from my point of view, this amazing book has loads (and I mean loads!) of pictures of the red planet. The book shows images taken by the orbiters and rovers that NASA have sent and they are truly beautiful images and I just couldn't stop looking at them.

There are some amazing features on Mars and this book has information and pictures of them.



Olympus Mons is the tallest volcano in the Solar System. It is 16 miles (25 km) high and 374 miles (624 km) in diameter! Mount Everest is only 8,848 metres high and about 200 km in diameter.

Victoria Crater is an impact crater which is about 730 metres in diameter and its most distinctive feature is the scalloped edge of the crater rim.

Valles Marineris is the single most prominent surface feature on Mars and is an enormous canyon system that runs around almost an entire hemisphere, south of the Martian equator. It extends for about 4,000 km. At its broadest point it is up to 600 km wide and is 10 km deep in places.

I really enjoyed reading this book and learning more about Mars and looking at all the amazing pictures.

Tracy Howes.

## What's in the sky this month ?

### What to see from Friday 30<sup>th</sup> September 2016

#### Constellation (Auriga)

This month we are going to look at one of the lesser known constellations, Auriga, and from the 2<sup>nd</sup> October we will be looking out for the Orionid Meteors.

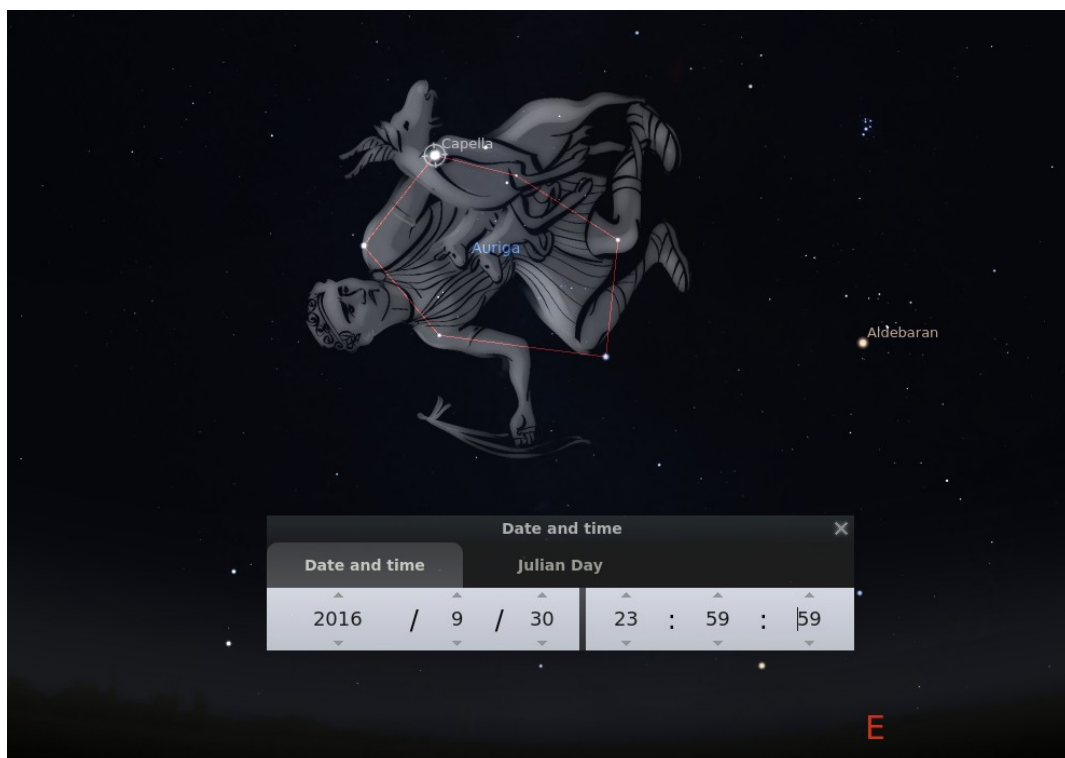
The name Auriga is Latin for The Charioteer. The constellation was first catalogued by the Greek/Egyptian Claudius Ptolemy c. 100 AD - 168 AD in the second century. Its shape was thought to resemble a charioteer's helmet.

The main or alpha star, Capella, is about 42 light years away from us. Capella is the sixth brightest star in the sky and the 3<sup>rd</sup> brightest in the northern hemisphere.

The star we see as Capella is actually a stella system of 4 stars, arranged as two binary pairs of stars. Capella in Latin means a small female goat and it is sometimes referred to as the Goat Star. Sometimes Capella is referred to as Capella and the Kids (The Kids are a small asterism comprising of two stars close to Capella).

The constellation, Auriga, can be seen throughout most of the year but is at its best in the winter months. The remaining stars of the constellation, starting from the brightest star, Capella, and working clockwise are Haedus, Hassaleh, Alnath (shared with the constellation Taurus), an unnamed star 37Aur and Menkalinan.

To see the constellation Auriga look East North East at about midnight and up at an angle of 37°. Then you will be looking at the bright star Capella - the main star of the constellation.



*The constellation Auriga as seen at midnight 30<sup>th</sup> September 2016*

## What's in the sky this month ?

### What to see from Friday 2<sup>nd</sup> October - 7<sup>th</sup> November 2016

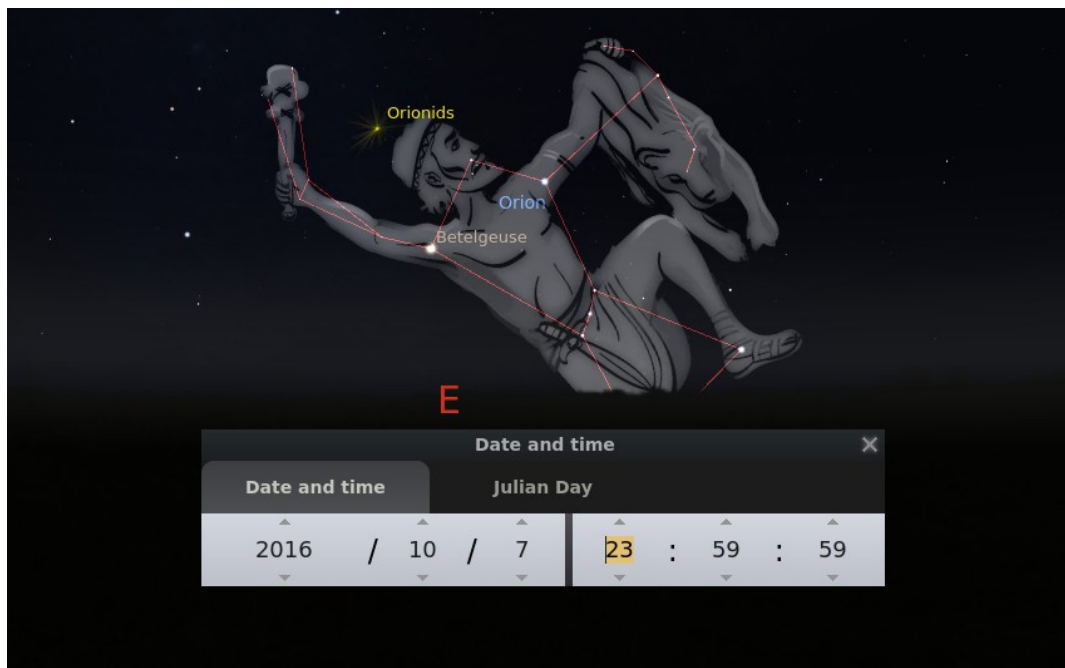
**Peak Date :- 20<sup>th</sup> October 2016**

#### Meteor Shower (The Orionids)

This year the Orionids' meteor shower will be around from 2<sup>nd</sup> October until 7<sup>th</sup> November. During this time the number of visible meteors per hour will increase up to the peak date of around 20<sup>th</sup> of October and then reduces to none by the 7<sup>th</sup> November.

The peak rate will be about 20 meteors per hour and they will be at their best from midnight on the 7<sup>th</sup> October. The meteors are caused by the small bits of dust and grit left behind by Halley's comet when it last passed the Earth's orbit.

To see the meteors on the 7<sup>th</sup> October or any other night look in the general direction of the constellation of Orion and try to watch as much of the sky as you can. Let us know if you spot any meteors, see contact details below.



*The constellation of Orion showing the radiant point of the Orionid Meteor Shower in yellow*

#### Contact details

Email [ThanetAstronomyGroup@gmail.com](mailto:ThanetAstronomyGroup@gmail.com)

Website [www.ThanetAstronomyGroup.com](http://www.ThanetAstronomyGroup.com)

**Or come and meet us over a cup of tea at  
West Bay Cafe, Westgate-on-Sea, CT8 8QA.  
Saturday afternoons 1-4pm.**

**George Ward / Danny.**

## Members' Page



*"Pearl of Holmfirth"*

This is not one of my normal model boat builds but it only took 4\6 weeks to make (1 hour per night). Most of my models take 18\24 months to make (plus 3\4 months research) and are very true to the real boat I'm making.

This model started life as an action man tank (with no tracks or guns). I found it at a boot fair (for pennies) the rest of the bits are odds I had in my junk box. The telescope main body is a manual air pump for balloons.

The round deck is also from a boot fair. I got it for a future plan I had in mind for a tug with a helicopter deck. When I have finished my current boat build, the Radio London pirate radio ship. I'm only 3 months in. 12+?? to go!

The cups holding the tripod legs are drinks bottle caps. The outboard motor has come off a model RNLI inshore rescue boat I made 6 years ago and crashed (can't be repaired... too far gone!)

I try to re-use bits like shampoo tops etc. for parts needed for the build.

I hope you like it. It was a just-for-fun boat build to celebrate the group's 3rd year at West Bay Cafe and the Vikings Boat Club's 30th year.

*[I think this boat should be our mascot. It's an amazing little boat and it really does float! There are also some in-house jokes, like the name on the back of the boat, "Pearl of Holmfirth". If you don't get it, ask Juliette!]* Ed.

Cheers

Steve

## Did You Know ?

Ooh! It's upside down !

These are usually the first words spoken by many people when they first peer through an astronomical telescope at terrestrial objects.

I remind them that astronomical telescopes are designed for viewing the night sky and not land based objects. When observing the night sky there is no up or down.

So lets define "up". Up is the opposite direction to which gravity is pulling you. Up only exists where gravity exists. The actual direction of the pull (and therefore the direction of up) depends on where you are. As you know in Australia up is down :-)

"They can't hear you scream in space and there's no UP!"

Astronomical telescopes invert the image because the 'Objective' lens or mirror is curved, convex or concave respectively. If you have looked into the bowl of a spoon you would have seen that your face is upside down because the top of the spoon reflects your chin and the bottom your forehead. You may not have noticed that your left side is now the right and your right side is now on the left.

(Have a go, try this).

Should you wish, this problem can be overcome with the purchase of an 'erecting eyepiece' not recommended for astronomy. The more lenses you add, the more light will be lost. It's fine for terrestrial use, especially in the daytime, as there is plenty of light to waste.

Refractors have no mirrors. They are similar to our eyes. The light/image passes through the pupil and primary lens, and onto the retina, then the optic nerve, then to the brain which reverses the image up the right way.

However, Schmidt-Cassegrain telescopes also known as Catadioptric telescopes, confuse things even more. They have both lenses and mirrors and, when coupled with the use of a star diagonal, will not only invert the image but also present it back to front.

With Schmidt-Cassegrain telescopes light passes through the primary lens and onto the primary mirror. This is where the image is inverted. It's then reflected onto a secondary mirror, situated at the centre of the primary lens, then back down a tube to the star diagonal. Between here and the eyepiece is where the image becomes reversed.

Confusing ? Definitely!!!

George W.



## Junior Astronomers' Club (JAC & Gill)

### JAC and Gill News

The Summer holidays are over and the children are back to school, so it's been a fairly quiet month for JAC and Gill. However, the weather still feels like it's the Summer and the families have continued to come out for their ice creams, which means there has been lots of passing children interested in what we are doing... particularly at the Model Ships Rally in Ramsgate on Sunday 4<sup>th</sup> September.

We were inundated with youngsters keen to look through the telescopes and learn about the planets and star constellations. Some were thrilled to be able to hold a real meteorite from outer space and couldn't wait to tell their new teachers on their first day back at school!

Back at West Bay Cafe with our regular Juniors, the exciting topic of the month was the Juno Mission's arrival at Jupiter after five years travelling from Earth across our Solar System. Juno finished its first lap of Jupiter on 27<sup>th</sup> August 2016 and flew by the giant gas planet at a distance of just 2,600 miles above the dense cloud tops!

Juno's mission to Jupiter is intended to reveal the origin and evolution of the giant gas planet in order to improve our understanding of the beginnings of our Solar System. The Juno Mission is attempting to...

1. Identify how much water is in Jupiter's atmosphere.
2. Look deep into Jupiter's atmosphere to measure its internal structure, temperature, cloud motions and other properties.
3. Map Jupiter's magnetic and gravity fields.
4. Explore and study Jupiter's magnetosphere near the planet's poles to reveal how this enormous magnetic force field affects its atmosphere.

All this information will help to determine which planet formation theory is correct or if new theories need to be devised. The first high resolution photos were sent back to Earth this month, so check out the NASA Junocam website <http://www.nasa.gov/feature/jpl/to-jupiter-with-junocam> for updated information and unique images.

The bit that made us all chuckle was the fact that on board the spacecraft are three 1.5 inch Lego figures depicting the Roman god Jupiter, his wife Juno and Galileo Galilei, who is holding his own little telescope for the journey! Maybe he will discover more than just the four Galilean moons now he is so close to Jupiter!

Reach for the stars!

P.S.

Talking of reaching for the stars... our Rocket Seeds from the ISS are still going strong and are now 24cm tall... however our Earth Seeds have pretty much given up. Therefore, it looks like we could grow plants in space if they are all as healthy as these ones!!! Well done, little seeds! :)

Gill Palmer.

## Adult Word Search

ANDROMEDA      ASTRONOMY      AURIGA      CHARIOTEER  
CONSTELLATION      GALAXY      MARS      METEOR  
ORION      OUTREACH      PEGASUS      SATURN  
SPACE      STARGAZING      TRAVELLER

C C I A D E M O R D N A E N T  
R H T S S J D H O Z Y S O R S  
B S A T U R N A C X B I A G U  
G J Q R F S B L A A T V F M S  
O M N O I R O L M A E R H Y A  
O O S N Q O A X L L U R J W G  
S H U O D G T L L S L R T V E  
F B L M T S E E U P R C I U P  
M C C Y P T R S E A Z A V G O  
E U D A S Q W W U R I K M S A  
T Z C N W S G F X R I G E Y R  
E E O S T A R G A Z I N G I B  
O C B Z M N E O G Z Q V O V C  
R N S A T O C Q U U M I I P E  
K G U X K P W O C Z M L K M D

Danny.

## Junior Word Search

GALAXY    JUPITER    MARS  
METEOR    MOON    SPACE  
STAR    SUN    TRAVELLER

G S Y M N U R N R  
A B R U R E V O E  
L E S A T T G O L  
A R K I M F W M L  
X B P S W S J I E  
Y U M E T E O R V  
J E C A P S X R A  
B I R T Q T N Q R  
Z S C S O Z E N T

We hope that you find the Adult and Junior word searches interesting and that they inspire you to look up any of the words you don't know absolutely everything about :-)

If you like these please let us know and we will continue to produce them.

We are thinking of adding a crossword as well in future newsletters. If you like this idea please let us know.

Comments please : you all know the email address !

Danny.

## **Members' For Sale and Wanted**

This page is for members to place items for Sale and Wanted adverts.

Please let us know if you have anything you would like on this page.

Email us at : - [thanetastronomygroup@gmail.com](mailto:thanetastronomygroup@gmail.com)

Or call Danny 01843 228904 or George 01843 292640

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We will be adding to this list for 2015 and 2016 newsletters when time is available.

The list will be published at the end of the newsletter so you can easily identify where articles were published.

The Index will also be published on the newsletter page of the website.