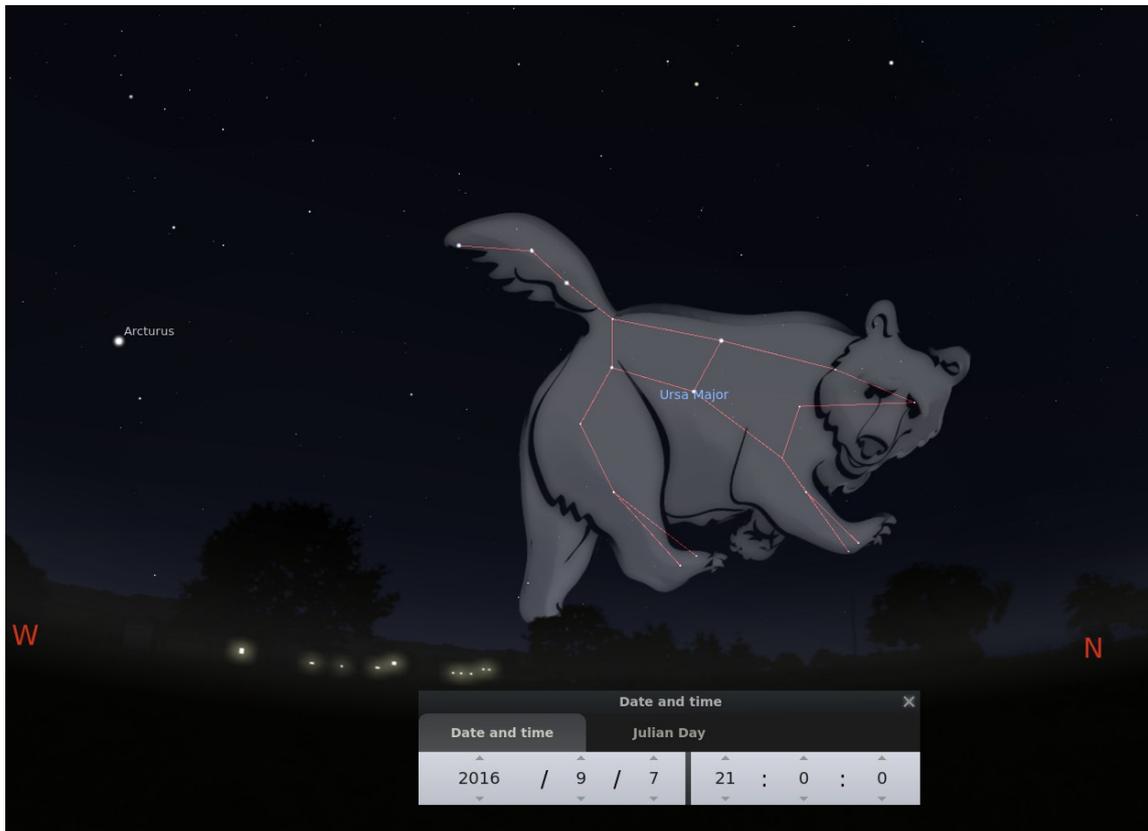


# Thanet Astronomy Group

## Astronomy for Everyone in Plain English

# NEWSLETTER

September 2016



*Ursa Major (The Great Bear) containing the Asterism "The Plough"*

PLANS PREPARED FOR PLANNING AND BUILDING REGULATION APPROVALS

**MARTIN FOAD**  
 Architectural Technologist  
 16, The Paddocks, Herne Bay, Kent, CT6 6QX.  
 (01227) 37 35 37  
 Email: martin.mpfoad@hotmail.com

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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

September 2016

The month of September will start with :-

**September 3<sup>rd</sup>** Will start the Saturday meetings.

**September 7<sup>th</sup>** Will be the Wednesday members' meeting

**Please Note :** This is the SUMMER season at the cafe and September is the last of the summer meetings.

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

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

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

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

### **Beginners' Guide to Stargazing Course**

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.

### **Telescope Making Group**

This year 2016 we will be starting work on the first of 3 telescopes we hope to make this year.

**Note :** There is no knowledge or experience needed to join this workshop.

All those that would like to attend the Telescope Making Group please email [ThanetAstronomyGroup@gmail.com](mailto:ThanetAstronomyGroup@gmail.com) to register your interest.

**When we have a list of interested people we can discuss times and dates.**

Danny, George, Gill.

## About the Cover Picture



*Ursa Major (The Great Bear) containing the Asterism “The Plough”*

## Asterisms

### What is an Asterism?

An Asterism is an easily recognisable group of stars. Probably the one known by most people is The Plough. Usually an asterism forms part of a constellation but some, like Bootes, take up the whole constellation. Some asterisms can even be parts of several constellations! The Summer Triangle is formed by the “alpha” stars from the constellations Lyra (Vega), Aquila (Altair) and Cygnus (Deneb).



*The Plough marked in yellow*



*The Summer Triangle marked in yellow*

### The Plough

I’ll start with the Plough, or Big Dipper. This forms the tail and rear end of Ursa Major or the Great Bear and has eight stars (by eye you will only see seven stars), starting from the end of its tail with Alkaid, then the double star of Alcor and Mizar, Alioth, Megrez, Phad, Merak and Dubhe. The Plough is a circumpolar constellation, which means it is viewable all year round from the northern hemisphere.

## About the Cover Picture

### The Keystone

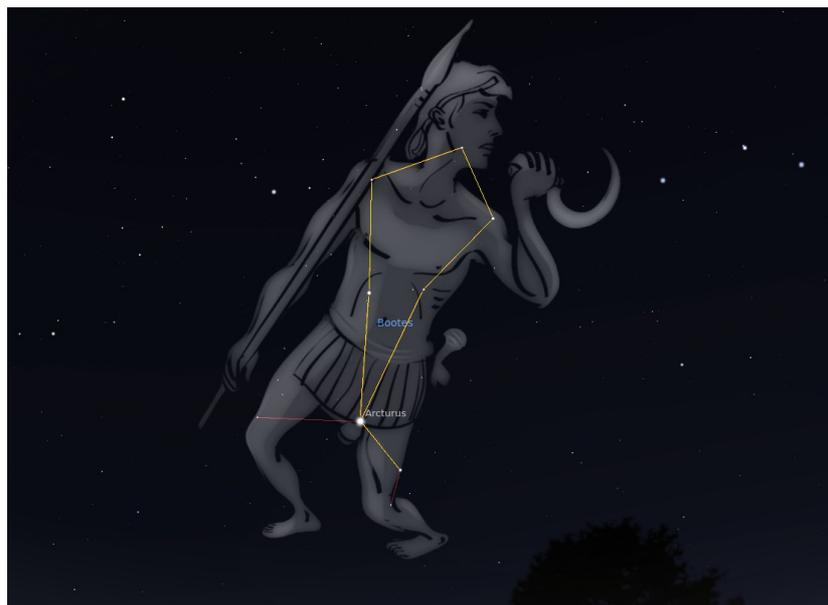
The Keystone, a formation of four stars in the constellation of Hercules, as the name suggests it forms a keystone. None of these stars are named but are all numbered. This asterism is home to M13, a most beautiful globular cluster.



*The Keystone asterism in the constellation Hercules marked in yellow*

### The Kite

The Kite, or Ice Cream Cone, is better known as Bootes (The Herdsman). This is a whole constellation. It's main, or alpha star, at the bottom of the kite is Arcturus, with Muphrid below and to the right. On the left hand side is Izar and at the very top is Nekker. The first star going down the right hand side is Seginus. The other three stars only have numbers.

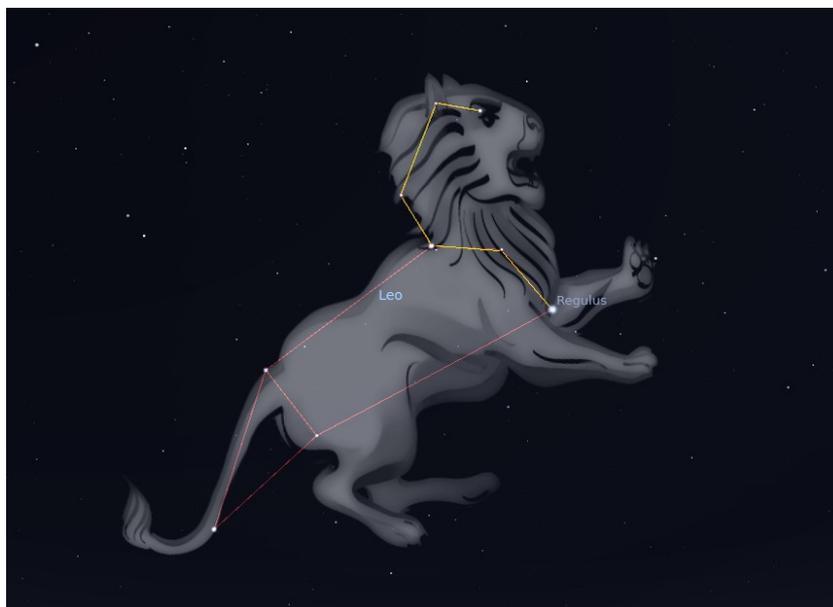


*The Kite asterism in the constellation Bootes marked in yellow*

## About the Cover Picture

### The Sickle

The Sickle is found in Leo, sometimes referred to as a question mark (inverted) or coat hanger. The sickle forms the head and front legs of the lion and is home to the alpha star, Regulus, at the bottom of the sickle. Working up the sickle next star has no name, then comes Algieba, then Adhafera and Rasalas which is at the top. The other stars are not named, they just have numbers.



*The Sickle asterism in the constellation Leo marked in yellow*

### The Great Square of Pegasus

In The Great Square of Pegasus, the four main stars are Alpheratz to the left, which incidentally is shared with the constellation Andromeda, at the top is Scheat and to the right Markab and to complete the square at the bottom, Algenib.



*The Great Square of Pegasus asterism in the constellation Pegasus marked in yellow*

## About the Cover Picture

### The House

The House, (Cepheus The King) is another asterism which includes the whole constellation. The constellation, Cepheus, is also circumpolar. Its alpha star is Alderamin (top left in the picture). Travel toward the roof, and the next star is Alfirk and, at the apex is the star Errai. At the base of the house is Herschel's Red Garnet Star, a little under 6000 light years distant.



*The House asterism in the constellation Cepheus marked in yellow*

### The Northern Cross

The Northern Cross is part of the constellation Cygnus the Swan. The alpha star is Deneb, the top of the cross or tail of the swan. At the centre of the cross is the star, Sadr. At the bottom of the cross is Alberio. Alberio is a beautiful blue and orange double star that can be seen with even a small telescope. Completing the cross on the left is Gienah and on the right is 18 cyg, a numbered star.



*The Northern Cross asterism in the constellation Cygnus marked in yellow*

## About the Cover Picture

### The Summer Triangle

The Summer Triangle spans three constellations, Cygnus (the Swan), Lyra (the harp) and Aquila (the Eagle). The alpha stars are Deneb in Cygnus, Vega in Lyra and Altair in Aquila.

**The Winter Triangle** is a not so well known an asterism. It takes in three constellations and consists of Betelgeuse in Orion (the hunter), Procyon in Canis Minor (small dog) and Sirius in Canis Major (big dog).



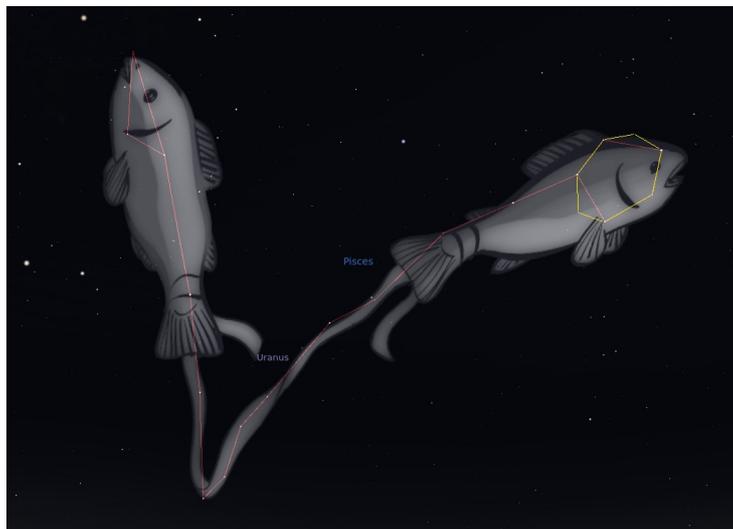
*The Summer Triangle asterism (left) between the constellations Cygnus, Lyra and Aquila*

*The Winter Triangle asterism (right) between the constellations Orion, Canis Minor and Canis Major*

*Asterisms marked in yellow*

### The Circlet

The Circlet is in the constellation Pisces. This is a circle of seven stars on the end of the right hand fish and directly under Markeb in Pegasus. None of the stars have names but all have Greek letters or numbers (gamma Psc, 7 Psc, theta Psc, iota Psc, 19 Psc, lambda Psc and kappa Psc).



*The Circlet asterism in the constellation Pisces marked in yellow*

## About the Cover Picture

### The Teapot

The Teapot is in the constellation of Sagittarius, the archer. This is mostly a southern hemisphere constellation but it does peep over our horizon in July and August.

The teapot consists of eight stars. Kaus Australis, Alnasl and Kaus Media make the spout, Kaus Borealis, Kaus Media and 27 sgr make the lid. Nunki, 40 sgr, Ascella and 27 sgr make the handle. It really does look like a teapot, but you need a good clear view to the south/south west to see it.



*The Tea Pot asterism in the constellation Sagittarius marked in yellow*

### Cassiopeia

Cassiopeia is known as the Ethiopian Queen. Yes it's an asterism because its easily identifiable five stars form a **W**. The five stars are Caph, Shedir, Cas 27, Ruchbah and Cas 45.



*The "W" asterism in the constellation Cassiopeia marked in red (just for a change :-)*

## About the Cover Picture

With a little guidance these asterisms are all reasonably easy to locate, so have a go see how many you can find.

When you find one of these asterisms try having a book handy with an illustration of the full constellation(s) that they are part of and then look at them again with a pair of binoculars and see if you can spot the other stars the form the constellation(s).

In most cases the other stars of the constellations are not bright enough to easily see by eye but when you can find the brighter and easy to see asterism then, with the aid of a pair of binoculars, you will find that you can pick out many more of the constellation's stars!!!

Good luck with this and if you want help then just ask...



*The Plough part of the constellation Ursa Major*

Make a start with the Plough.....

George W.

## **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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### **Next Meeting**

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

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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.

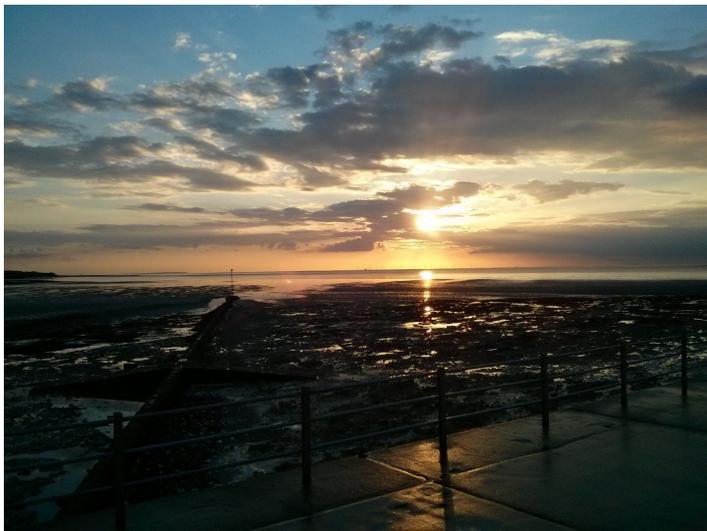
West Bay Cafe run by Alan and Kate has a very friendly atmosphere.



*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

### August 2016

#### Wednesday 3<sup>rd</sup> August Members' Meeting

This month the meeting was run by George, Gill and Sheila. George did an amazing talk on Asterisms (for those that missed it... see the cover story in this issue) and Gill did a presentation on the Juno project.

#### Saturday 6<sup>th</sup> August Public Outreach Meeting

This was a bad weather day, with less telescopes and very few people around. It was very quiet.

#### Thursday 11<sup>th</sup> / Friday 12<sup>th</sup> August Perseids Meteor Shower

Luckily, the weather was kind to us on the very night that the Perseids Meteor Shower reached its peak... on the night of Thursday 11<sup>th</sup> / Friday 12<sup>th</sup> August 2016! Unfortunately we didn't actually get to see the 100-200 meteors per hour that had been predicted. Collectively we did see an estimated 35-40 shooting stars (depending on whom you spoke to). As there were between 35-40 people, that means everyone got to see at least one meteor (Shooting Star) during the viewing evening.

For the full story see Gill's Junior Astronomers' Club page.

#### Saturday 13<sup>th</sup> August Public Outreach Meeting

Another very bad weather day, with very few people. Those that did come chatted about astronomy until the weather got the better of them and the afternoon closed early.

#### Saturday 20<sup>th</sup> August Public Outreach Meeting

At last the good weather returned! Danny back and more telescopes out on display. The warmer weather brought out many more people and a lot more interest in what we were doing.

#### Saturday 27<sup>th</sup> August Public Outreach Meeting

Again, good weather with many people asking about what we were looking for. The afternoon was spent showing people the sun spots and explaining about what our group does and how the telescopes work.

Danny.

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## Book review

### Quantum

This is another amazing book, but not for the faint at heart.

If you want to learn a little about the history of physics and the events that were involved in the discovery of the Quantum, then push on into the book and learn what this is all about.

This book is one of the very best I have ever read !

The style of writing is clear, amazingly entertaining (especially with such a subject), and works from the beginning in a clear and steady way.

This book has been short listed for the BBC Samuel Johnson prize for non-fiction.

It has been described as “Gob-Smacking” in the Guardian.

The book is divided into four parts :-

Part 1: The Quantum. Containing 6 chapters

The Reluctant Revolutionary, The Patent Slave, The Golden Dane, The Quantum Atom, When Einstein Met Bohr and The Prince of Duality.

Part 2: The Quantum. Containing 4 chapters

Spin Doctors, The Quantum Magician, 'A Late Erotic Outburst' and Uncertainty in Copenhagen.

Part 3: The Quantum. Containing 3 chapters

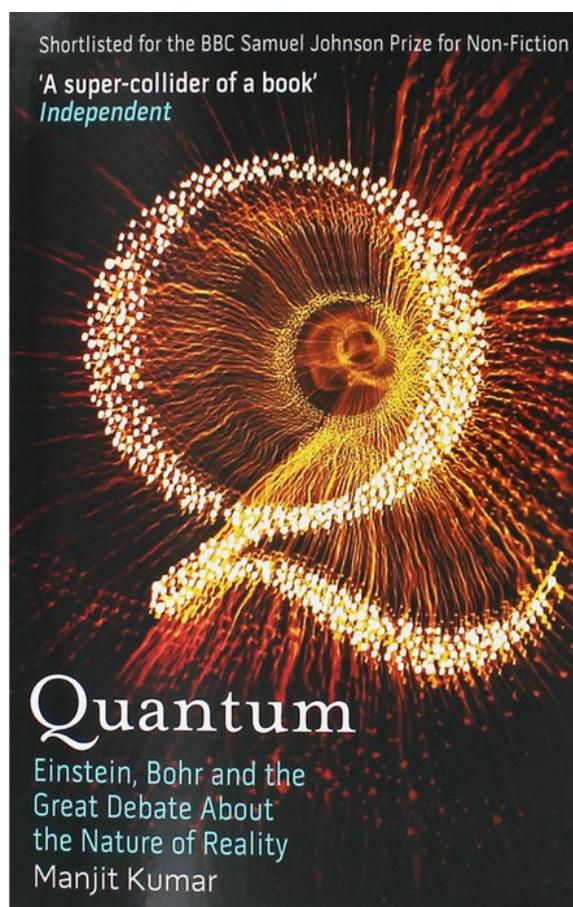
Solvay 1927, Einstein Forgets Relativity and Quantum Reality.

Part 4: The Quantum. Containing 2 chapters

For Whom Bell's Theorem Tolls and The Quantum Demon.

There are also many black and white (of course) photos of many of the scenes depicted in the texts. All in all, this is a very informative and interesting book. **The Works £3 !!!**

Danny.



## What's in the sky this month ?

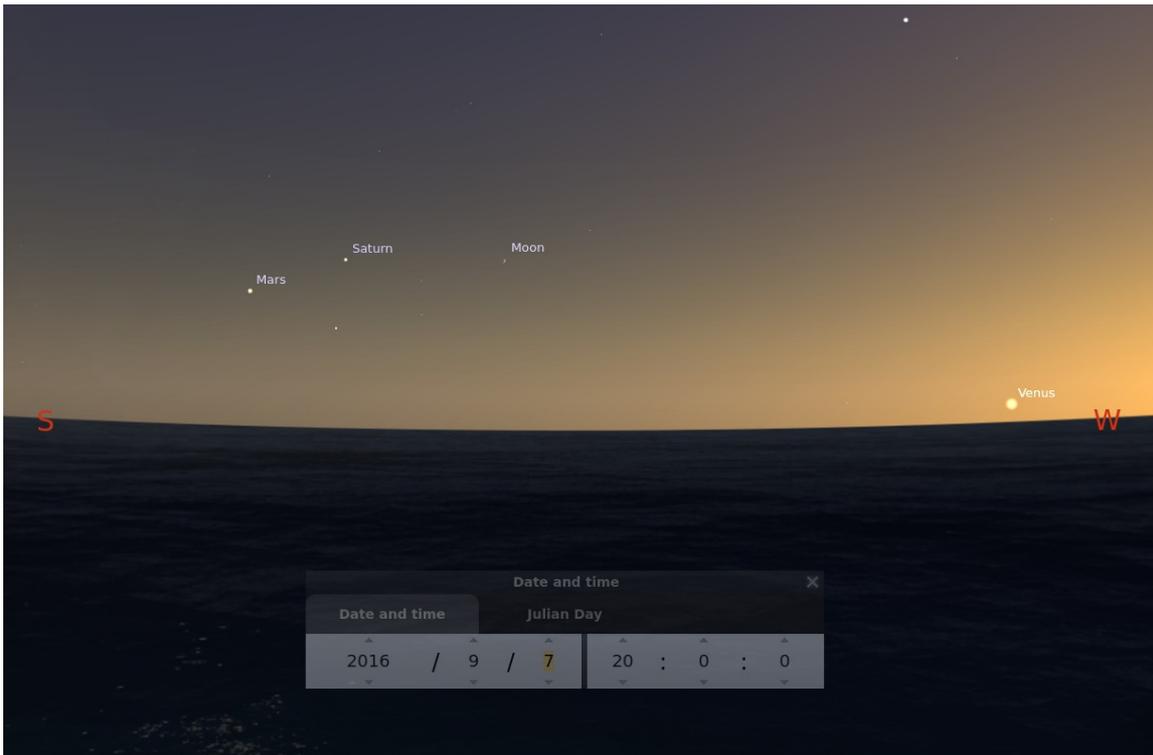
### What to see from Monday 5<sup>th</sup> September to Saturday 10<sup>th</sup> September

**Planets** (Mars, Saturn)

**Moon** (The Moon)

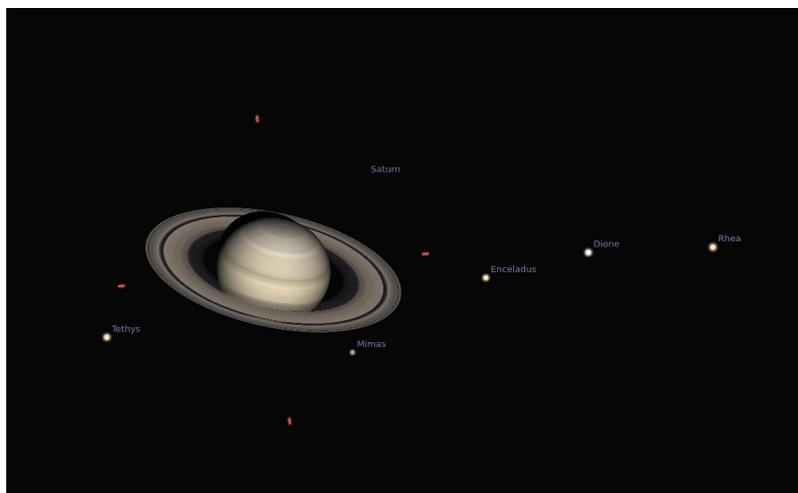
#### September 5<sup>th</sup> to 10<sup>th</sup> - after sunset: Mars, Saturn and the Moon

Between September the 5<sup>th</sup> and 10<sup>th</sup> look South South West at about 8:00pm and you will see (from left to right) Mars, Saturn and the Moon.



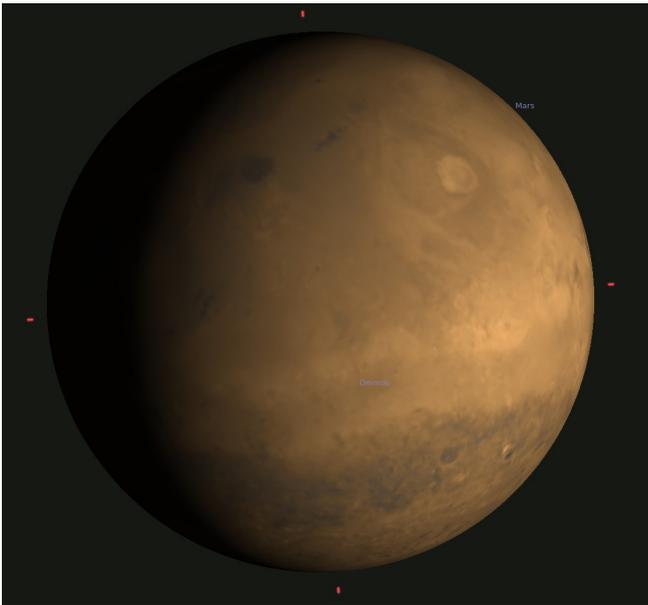
*Looking South South West Mars, Saturn and the Moon*

Mars is the left most planet and will look like a small star with a red tint. The next planet is Saturn. Located a little above a bright star, Antares, part of the constellation Scorpius. Next in the line is our Moon.



*Saturn*

## What's in the sky this month ?



*Mars*



*Moon*

If you look over to the west you may also be able to spot the planet Venus, just above the horizon.

**If you would like to see the objects in this article or help with astronomy in general we would be very happy to help you.**

### 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**

This page is for our members to contribute to our news letter.

If there are any members that would like to write a few words and maybe add a picture or two please let one of us know.

This is your page

Anything related to astronomy

You could write about a meeting or viewing evening

or any astronomy related site you have visited.

Your page can be as short or as long as you want...

## Did You Know ?

Why do I have so much trouble finding the Constellations ?

This is a very common problem indeed, we all suffer from it! There is one small and simple bit of information you need to help you on your way!

Did you know the reason you can't find the constellations is that many of the stars are too dim to see in our light polluted sky ?

To make things a little worse - if we live in an area where there was no light pollution you would be able to see so many stars that you would not know where to start. So we are probably better off at least starting out with less stars to sort out.

Once we have this information the task can be simplified. All we need is to know exactly which stars we can and can't see in any particular constellation. This task can be done with almost any star chart or whatever book you are looking up the form of the constellation in.

All the good charts and books will show the magnitude (brightness) of the stars, usually by the size of the dot drawn (Bigger Dot = Brighter Star).

If you want to get more detail then you can use Stellarium. Use the search facility to find the constellation of your choice. Stellarium will show you where it is in the sky, then click on the individual stars and read the information at the top left of the screen.

The Magnitude will be very near the top. The lower the number, the brighter the star.

In perfect conditions, with no light pollution, you will just be able to see a magnitude 6 star - but that is never going to be the case for most of us.

You will need to concentrate on looking for the stars that are magnitude 3 and below. These will be bright enough to be easily seen by eye.



Megrez is a magnitude 3.30 star and one of the dimmer stars in The Plough asterism part of Ursa Major Constellation  
Danny.

## Junior Astronomers' Club (JAC & Gill)

August 2016

Hurray!!! At last, we have all managed to meet for a viewing night... and what a spectacular night it was!



*Shooting Star Party*

Luckily, the weather was kind to us on the very night that the Perseids Meteor Shower reached its peak... on the night of Thursday 11<sup>th</sup> / Friday 12<sup>th</sup> August 2016! Unfortunately we didn't actually get to see the 100-200 meteors per hour that had been predicted. Collectively we did see an estimated 35-40 shooting stars (depending on who you spoke to) and as there were between 35-40 people, that means everyone got to see at least one meteor (shooting stars) during the viewing evening.

We met in the car park behind The Minnis Pub at Minnis Bay, Birchington from 9pm. We were able to get spectacular views of the Moon, Saturn and Mars in the South through our telescopes before they went below the horizon.



*Shooting Star Party*

## Junior Astronomers' Club (JAC & Gill)

August 2016

We even inspired the interest of a few passers-by who were either dog walking or camping at Minnis and our Junior Members were keen to show off their knowledge of the Summer Triangle, which was spectacularly clear.

We hope we've inspired some more of the wider general public too as we were honoured to have been asked by Radio Kent to do a live radio broadcast on the night of the viewing. George W. and I spoke on behalf of Thanet Astronomy Group direct from Minnis Bay, in the absence of Danny who was on holiday, but we also managed to link up with him at the top of a hill in Wales to compare locations.

We were able to explain to everyone what the Perseids Meteor Shower is and where it comes from (if you are still not sure... then read last month's cover story in the newsletter!) However, we definitely had the best viewing as we had clear skies :) and Danny had cloud cover. (At present, you can still hear the whole 12 minute interview on the I player.)

After all the initial excitement, by 10.30pm the focus of attention was firmly on the meteor shower up above us. Although the meteors were emanating from the North East, they were spotted in every direction leading away from the constellation of Perseus.

At one point, we were treated to an amazing fireball across the sea to the west which many of the group saw at the same time. If you have never seen a fireball, you would be amazed as it shoots across the sky leaving a trail of smoke, a bit like watching a firework, as opposed to a normal meteor...blink and you've missed it! Apparently, there have been far more fireballs spotted this year due to the Earth being nudged into a particularly distinct bit of the Swift Tuttle's debris a day earlier than normal. Scientists say this was caused by Jupiter's gravitational pull which made the meteor shower more intense.

I have been lucky enough to see three shooting stars this month alone...one in my back garden on the trampoline, one at the Minnis shooting stargazing night and one on holiday in Devon at 2am in the courtyard of the rural cottage where we were staying!



*Shooting Stars on the Trampoline*

## Junior Astronomers' Club (JAC & Gill)

August 2016

Which leads me to our youngest JAC and Gill members' first shooting stargazing experience...as the photo proudly shows!



*First shooting star viewing*

Whilst on the subject of astro-photography, this amazing photo was taken by my eldest son on a balcony overlooking the sea near Walpole Bay on the night of the 12<sup>th</sup> as he took a time lapse shot focused on the Pole Star, Polaris. He took 230 photos over a 2 hour period and, hidden amongst the images, he was thrilled to realise that he had actually caught a few meteor trails too, although the longer ones were planes!



*Northern Circumpolar Spiral*

I hope your shooting stargazing season has been as successful as ours this Summer!

Reach for the stars!

Gill Palmer.

## Adult Word Search

ASTERISM      CROSS      FIREBALL      HOUSE  
KEYSTONE      KITE      PLOUGH      SICKLE  
STARGAZING      SUMMER      TEAPOT      TRIANGLE

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

Danny.

## Junior Word Search

**ASTERISM**

**FIREBALL**

**HOUSE**

**KITE**

**PLOUGH**

**STAR**

**SUMMER**

**TEAPOT**

**TRIANGLE**

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

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.