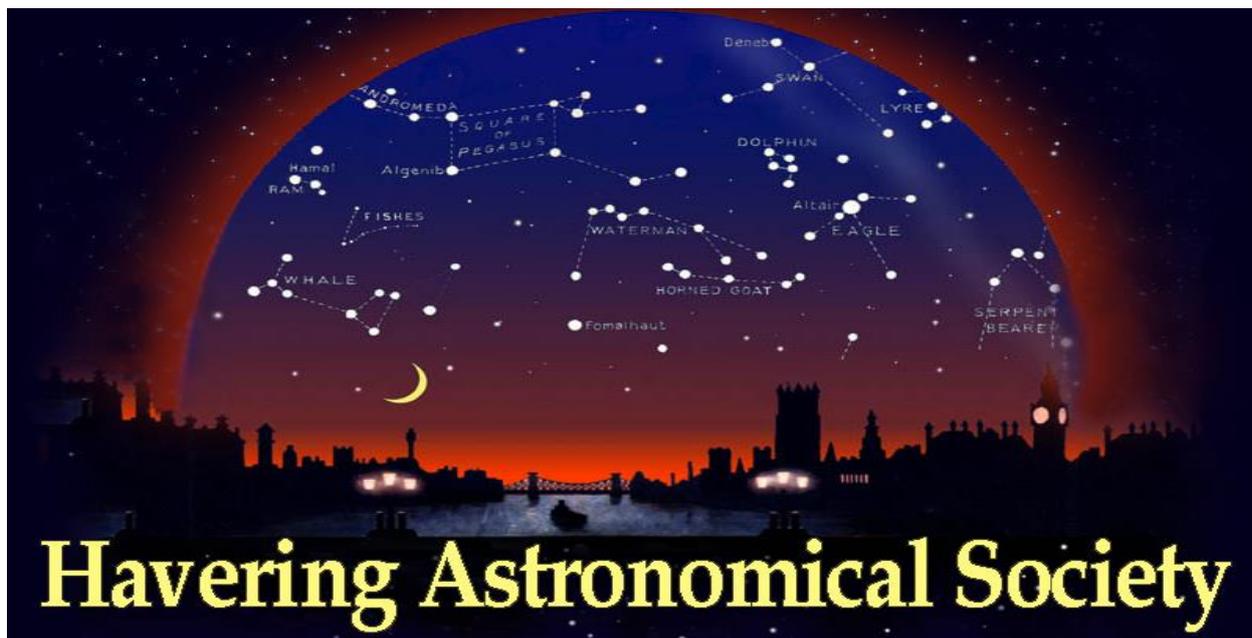


**WELCOME TO OUR MEMBERS AND GUESTS.  
PLEASE SIGN IN AND WE HOPE YOU ENJOY THE EVENING**

NOVEMBER 2017



www.havastro.co.uk

**This Month:**

We welcome back Society member **Nik Szymanek**, who will show us some more of his amazing images and explaining how he took them

**Last Month:**

We had a very interesting evening with **Dr Paul Whiting** who initially spoke of his experiences at the total eclipse in the USA earlier this year. At this point he was joined by **Liz** and **John** who also spoke and showed photos of their own trip to view this event. Afterwards **Paul** then gave a fascinating presentation on the **History of Astronomy**.

**Member's News:**

**Sid** wishes to be remembered to everyone. He is unable to walk very far but otherwise he is bright and keeping cheerful. However, he does miss coming to our meetings and to the Young Astronomers.

**Astronomers observe one of the oldest objects in the universe**

Astronomers using the Large Millimeter Telescope (**LMT**), in Mexico's central state of Puebla, report today that they have detected the second most distant galaxy ever found in the universe. Born in the first one billion years after the Big Bang and referred to as **G09 83808**, the new object was first detected by astronomers using the Herschel space telescope, but for such distant objects, that instrument can take only "very blurry pictures that yielded almost no information,". So Herschel astronomers passed their information on to **LMT** knowing that the new instrument in Mexico is the best in the world to confirm it.

**For Sale**

**Frances** has been contacted by a lady who lives in Brentwood who has an 8" Polaris Smith Cassegrain telescope for sale which she finds herself unable to use anymore. She states it cost £1200 when new but is looking for an offer between £600-£800. If you are interested, please contact **Sarah Bentley** on 01277 224584.

**Next Meeting ~ December 13<sup>th</sup>**

Next month it will be our Christmas Quiz, set as usual by **John Sweeney**, so please bring along your thinking caps! We will be holding a raffle and any contributions would be appreciated. You are invited to bring some nibbles or snacks for the occasion.

# NIGHT SKY

**The Leonid Meteor Shower:** peaks on November 17<sup>th</sup> at 16:30 GMT but can best be seen after 22:30 onwards when **Leo** rises in the East from where they will radiate. The predicted Zenith Hourly Rate is only 10 meteors per hour but as the Moon will be in its new phase, weather permitting, the conditions will be perfect to observe the shower.

**Jupiter:** can best be seen on November 30<sup>th</sup> at 06:20 GMT in **Libra** low in the Southeast. Although low in the sky at this time, a small telescope will be able to show the planet's main characteristics including its flattened spheroid shape caused by its rapid rotation. Larger details such as the Great Red Spot can still be seen using a 6" telescope or larger.

**Neptune:** can best be seen on December 1<sup>st</sup> at 18:20 GMT in **Aquarius** in the South. Neptune is well placed at this time as it reaches its highest point due South in true darkness.

**Uranus:** can best be seen also on December 1<sup>st</sup> at 21:00 GMT in **Pisces** in the South. Uranus is well positioned, reaching its highest point in the sky during darkness. Shining at mag.+5.7 its 3,6 -arcsecond disc doesn't reveal much detail but it is worth viewing just to see its wonderful greenish hue.



*Thank you to  
everyone who  
helps with  
refreshments.*

## Observing at South Weald

Please note; due to Health and Safety requirements, observing at South Weald is restricted to registered Society members only. The November dates for observing at South Weald are Saturday 25<sup>th</sup> or Sunday 26<sup>th</sup> if the weather is not favourable. Please see the Society website or Facebook page nearer the time for updates.

## Young Astronomers

We will next meet at the home of **Terry** and **Christine** on Thursday 7<sup>th</sup> December.

## Spaceflight News

### Dream Chaser completes successful glide test

Sierra Nevada Corporation's **Dream Chaser** spaceplane successfully performed a free flight test at NASA's Armstrong Flight Research Centre in California. The spacecraft is being developed to send cargo to the International Space Station. The automated test went as planned, according to an SNC statement. The flight occurred four years after the first glide test, which saw the otherwise perfect flight end with the craft flipping over upon landing when the left landing gear failed to deploy. According to NASA, the November 11th test verified and validated the performance of the **Dream Chaser** in the final moments of landing. The vehicle met expected models for a future return from the space station. **Dream Chaser** was lifted by a helicopter and flown more than 10,000 feet in altitude before being dropped. It flew the same final approach and landing profile that it would have were it returning from the ISS. According to SNC, the test article included orbital vehicle avionics and flight software for the first time to provide orbital vehicle design validation. In 2016, NASA awarded SNC a contract under the Commercial Resupply Services 2 (**CRS-2**) program and said that the 2017 free-flight test helped prepare the spacecraft for service under the program in which **Dream Chaser**, along with SpaceX's **Dragon** and Orbital ATK's **Cygnus** cargo ships, will service the ISS through at least 2024. The latter two have been supplying the outpost since 2012 and 2014, respectively. SNC hopes to fly the first **Dream Chaser** to the ISS as early as 2020. Under the **CRS-2** contract, SNC, as well as the other companies, would send at least six cargo missions to the outpost. The **Dream Chaser Cargo System** will launch atop an Atlas V rocket. It will sport an expandable cargo module at the rear that will feature solar panels and a docking mechanism. In total, the spacecraft is expected to be able to deliver more than 12,000 pounds of pressurized and unpressurized cargo to the ISS.

