

Edited by Robert Shanks



Welcome to the newsletter of the Blackburn Leisure Astronomical Society, the one stop shop for news, future projects, events, visits, lectures and general communications. Please see our website of members' photographs and Publications at the link below.

Remember the observatory is open almost every Friday evening, and often on Tuesdays and other times by arrangement. In general as per the BLAS moto 'If it's clear we'll be here !'

Last meeting

The last BLAS meeting was held on April 22nd 2019. George King presented pictures of the Meade LX200 gearbox repair and the current night sky along with Sunspot 2308.

A membership update and summary of the clubs finances was also given. BLAS remains in a good cash positive position.

A new handset has been purchased for the 80mm telescope mount in dome 1.

Paul Money recently gave a HERAS lecture on the Voyager 1 & 2 space probes launched in 1977 which was relayed to those present by those that attended. The facts surrounding the flights and history of Voyager spacecraft can be found [here](#). This opened up group discussion around Kuyper belt and Oort cloud sizes locations and objects. One useful picture that shows mainstream thinking in regards of our position in relation to both Kuyper belt & Oort cloud can be found [here](#).

Discussion also posed some interesting questions around the black hole photograph by the Event Horizon Telescope shown in last months news letter, including the question "Are we actually looking into the black hole or would the gravitational lensing show us the picture from all directions ?".

As with all the big questions we await a definitive answer. If you are reading this and can add more, it would be very much appreciated.

Whilst on the subject of the black hole photograph, Brian Davies has come across an interesting Ted talk which helps to explain. See Einstein was Right - Part 2 overleaf...

BLAS Outreach

The BLAS Astronomy for Beginners learning sessions intended for members and non-members is continuing to progress well. The talks are proving very popular. A talk on The Lives of Stars was held on the 9th May was followed by the 6th talk, on Telescopes and Binoculars, on 23rd May.



Recent attendees of the learning sessions

Including the visitors attending these sessions, the total number of visitors to the BLAS observatory in 2019 so far is recorded below :-



January	91
February	73
March	119
April	121

Recent & Total visitors so far in 2019

For publication in this newsletter and general feedback, please contact Bob@5150time.co.uk
www.broughastronomy.co.uk Providing a window on the Universe for all !

Edited by Robert Shanks

Einstein Was Right ! – Part 2

Last months newsletter concentrated on the landmark first photograph of a Black Hole confirming Albert Einstein predictions. Not only was the black hole such a distant object to capture; it is also black as the name suggests and therefore can only be seen because of its effect on the light near it. As all astronomers are aware, seeing (and photographing) more and more distant objects, requires larger & larger telescopes. Even the Event Horizon Telescope (EHT), a series of linked telescopes around the world, forming an effectively Earth diameter telescope; was not comprised of enough telescopes to resolve the image the black hole at such distance all at once. Despite the huge amounts of data gathered by the EHT; there were relatively few observatories around the world to capture the surrounding light. So how on Earth did they do it ?

In this [TED talk](#), recorded in 2017 as the EHT project was getting underway, the inspirational computer scientist and imaging specialist Katie Bowman, explains how her and her team were developing the software algorithms that would piece the data together to form a photograph which would ultimately have enough statistical certainty to verify the prediction of one of one the greatest minds of all time.



[Katie Bouman \(Courtesy of TED\)](#)

Spaceflight History

50 years ago in May, Apollo 10 went to the moon with an “all up” mission to ensure a Lunar landing could be achieved. The Lunar module named ‘Snoopy’ was too heavy to achieve the first landing, but was to prove all the systems in lunar orbit. In engineering, the costs and validity of such tests are always questioned and Apollo 10 was no exception. The Apollo 10 mission came close to disaster when astronauts John Young and Eugene Cernan encountered serious problems with an abort mode designed to bring the lunar module back to the command module in case of emergency. The test of the abort mode resulted in the lunar module tumbling out of control in lunar orbit saved by the quick reactions of the crew with little fuel remaining. I wonder how different history would have been if the first crew had crashed on the moon of if NASA had decided not to test the abort program and Neil Armstrong had needed it.

More on the mission [here](#).



[Apollo 10 Mission Patch - Courtesy of NSA.](#)

John Young went on to fly Apollo 16 to the moon and test then the Space shuttle. Eugene Cernan commanded the Apollo 17 mission and was the last man to walk on the moon. Commander Tom Stafford later flew the landmark Apollo-Soyuz mission to rendezvous with the Russian Soyuz in 1975.

Did you know ?

Nasa maintain an astronomy picture of the day. Click [here](#) for the picture of the day or click [here](#) for stunning images back as far as 1995 !