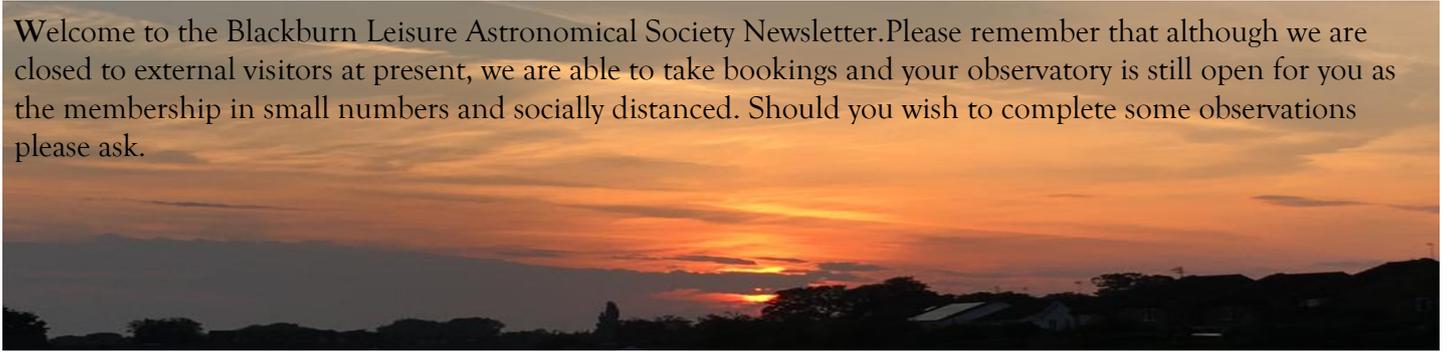


Edited by Robert Shanks

Welcome to the Blackburn Leisure Astronomical Society Newsletter. Please remember that although we are closed to external visitors at present, we are able to take bookings and your observatory is still open for you as the membership in small numbers and socially distanced. Should you wish to complete some observations please ask.



Meeting News!

The summer lifting of lockdown restrictions led to last month's meeting on Monday 24th August being held at the observatory where 10 people were able to attend.

Tim Old gave an update on Mars exploration and the exciting times ahead. Due to the close proximity of Earth and Mars, 2021 will see 3 more probes land next year.

An overview of the Perseid meteor shower observations was given by Andy Russell and some audio highlights from the recent 40Gb of recorded data were given. Multiple audio files lasting around 20 seconds or so were observed. See newsletters 15 & 23 [here](#) for details of how this was achieved [the audio files will be posted on the BLAS website shortly]. Discussion also ensued on next steps in Radio Astronomy.

BLAS 2020 investment plans to attract funding continue to evolve and productive meetings with Blackburn Leisure have taken place.

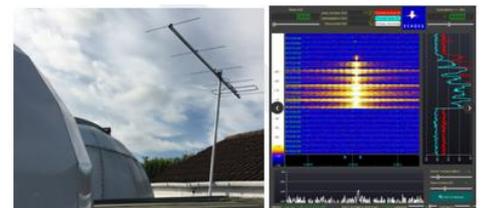
With the current tightening of lockdown rules and seasonal weather changes, the committee have taken the reluctant decision that we will return to Zoom only hosted monthly meetings until further notice. This includes the September meeting to be held Monday 28th September. Hope to see you on-line.

Informal Friday evening Zoom chats amongst the membership will continue as normal. Please also talk to us if you are struggling with the Zoom chat or technology.

R a d i o N e w s

As a result of the Perseids Meteor observations, work has begun on a more permanent and secure aerial installation between the domes and we now have a Raspberry Pi! Yes, this cheap and capable piece of electronics will ultimately stream meteor data automatically and provide the membership and interested external organisations with this data over the internet.

Our Radar Astronomy work has also attracted the interest of friends in South Africa at the Pretoria centre who are keen to understand our approach and we have offered a lecture to them. It is hoped, longer term, that these collaborations will enable our members to attend their meetings and vice versa. Whilst we continue to look at how to make Observations work for everyone in the current climate, an adaptation of the approach to radio data gathering has also been mooted which could provide real time optical observations for those unable to attend or get the dome due to either disability or lockdown restriction. Watch this space!



Edited by Robert Shanks

"Life will find a way."

- Michael Crichton, Jurassic Park.

Last months news centered on potential for life on Mars and the 40 year search beginning with the Viking landers. Continuing the theme of potential life within our solar system, Andy Russell has researched the paper published in Nature & kindly written the following article...

The news in the scientific community has been dominated over the past few weeks by the discovery of trace quantities of phosphine PH_3 in the upper atmosphere of Venus. On Earth, this highly reducing gas is either produced by industrial processes or by bacteria and is rapidly oxidised, as would be the case within the highly acidic Venusian atmosphere, and hence there must be an ongoing process by which it is constantly replenished.

The absorption line in the millimetre wavelength was first observed in data from the JCMT radio telescope in Hawaii by a team lead by Jane Greaves of Cardiff University, and was verified by measurements made using the ALMA radio telescope in Chile. Most of the paper, published in Nature, is devoted to validating the scientific results and eliminating all other possible geological and photochemical sources.

Phosphorus is seldom seen in its elemental form and most commonly occurs on Earth as phosphate ions $[\text{PO}_4]^{3-}$ due to its affinity for oxygen. It is an essential element for life and occurs everywhere, from the phospholipid cell membrane to the ladder of the DNA double helix - it is even traded as the universal currency of metabolism as adenosine triphosphate (ATP).

The paper can be read [here](#). *Andy Russell*



The British Astronomical Association has have recently hosted a series of webinars. Recent webinars have included topics such as the search for dark matter and comet Neowise reported in newsletter No. 22 that many of you photographed. Upcoming webinars are listed [here](#) and the next webinar entitled "Observing Occultations" will be held on September 30th at 19:00. They are free of charge and if you cannot attend the webinars live they are recorded on YouTube and can be found [here](#).



In the light of the ongoing problems with the Corona virus, HERAS will be providing this season's lecture series via the Zoom web platform. The details of the speakers can be found [here](#), and the first presentation entitled "How The Universe Will End" by Prof. Brad Gibson (Director of the EA Milne Centre for Astrophysics at the University of Hull) will be held at 8:00 pm on Wednesday 14th October. Contact Helen Marshall for further details.

On a final note George King is looking for a volunteer with a strimmer to trim the weeds around the observatory.

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