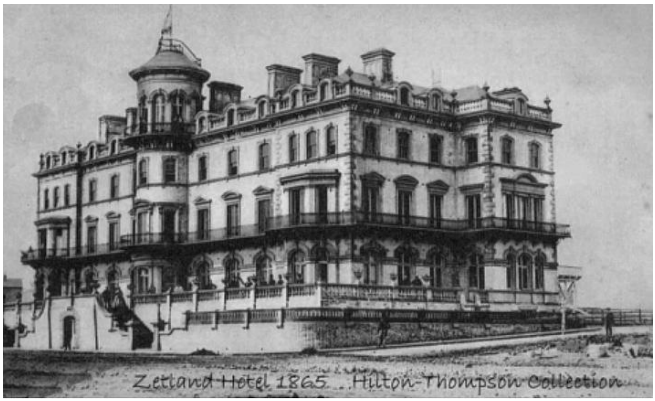
The Messenger

Mexborough & Swinton Astronomical Society

August 2017

AN OBSERVATORY IN SALTBURN BY THE SEA?



"The Zetland Hotel occupies a very commanding site fronting the south, and is an erection of palatial proportions and appearance, in the Italian style of architecture, from the designs of Mr Peachey, of Darlington. The foundation stone was laid by the Right Honourable the Earl of Zetland, in the year, 1861. The main front is five storeys in height, and 180 feet long; a broad terrace, approached by two flights of steps, runs along the front and sides, with balustrades which are here and there ornamented with elegant vases, filled with choice and brilliant flowers. A neat cast iron balcony runs round the second storey, from which a capital view is obtained of the surrounding locality. In the centre of the building is a semi-circular projection, in the upper portion of which is the telescope room, which forms a splendid observatory, and terminates in a tower rising above the rest of the edifice. The summit of this tower is gained by a staircase and on it is fixed a flagstaff, from which the Union Jack flutters in the breeze."

Samuel Gordon - The Watering Places of Cleveland, 1869



The Zetland today has been converted into flats and no longer operates as a hotel, although the telescope room was primarily used for watching boats and ships go past during the day there is evidence that it was also used to observe the moon and planets during the evening and night as an additional attraction for visitors to the hotel.

JORDIN KARE (OCT 1956 – JULY 2017)



Jordin Kare was a Scientist and Aerospace engineer who developed the "Mockingbird" spacecraft concept. He was also responsible for the "Sailbeam"| concept for an interstellar propulsion.
The "Mockingbird" was a design of a single stage rocket vehicle. It was to be fairly inexpensive, as befits a vehicle designed officially to serve as a target for ballistic missile defence systems.
It was found however if design properly, this simple target vehicle might do some more interesting things than simply get blown up. If fitted with a lightweight aluminium rocket engine burning a combination of hydrogen peroxide and JP-5 (jet engine fuel, "Jet Propellant 5"), It would, in fact, be possible that this modest target vehicle would be able to attain low Earth orbit with a payload of 10 kilograms… hence the nickname "bricklifter." Empty weight would be 75 kilograms; light enough to be picked up by two men. Full weight with payload and fuel would be 1500 kilograms; light enough to be carried by a largish pickup truck. It could also be launched from the back of a smallish pickup truck.

The 75 kilograms weight included the re-entry shielding to allow it to survive re-entry, landing gear and enough rocket propellant for a soft touchdown.
Jordin Kare also came up with the "SailBeam" concept in a report called "High-Acceleration Micro-Scale Laser Sails for Interstellar Propulsion" that he put forward for NASA's Institute for Advanced Concepts (NIAC). The idea was that if you accelerate vast numbers of tiny sails rather than one enormous one, you can bring the same amount of mass to high speeds with a less complex optical system. Using dielectric rather than metal sails, you can accelerate the sails much closer to their power source. The stream of microsails then becomes a source of propulsion as it is vaporized into plasma behind a departing starship.

The SailBeam Boosted Magsail (SBBM) solves a key problem of particle beam propulsion. A neutral particle beam will disperse as it travels, but a stream of low-mass microsails is not limited by such diffraction. The SailBeam concept discusses three ways to ionize the incoming sails. Lasers could be mounted on the starship that would vaporize the sails as they approached. Particle beams could perform the same function, a method seen as more efficient than lasers. Finally, the microsails could simply impact against a small mass of solid, gas or plasma placed directly behind the starship however this would be the least effective method.

Jordin Kare died on July 19th 2017 from heart failure. Kare was the brother of Susan Kare, designer of the fonts and icons of the original Apple Macintosh user interface. Kare was also known as a as a composer, performer and recording artist of filk music. (Filk music being Filk has been defined as folk music, usually with a science fiction or fantasy theme)

Note: Doesn't the drawing above look similar to something stood in our club room?

MIKE HALLS AUGUST 2017 SKYNOPSIS



Diary (all times BST Greenwich, except Sunrise/Sunset, local (Sheffield) time).

1st	Twilight: 03.50, Sunrise 04.42, Sunset 21.37, Twilight 22; 29
2nd	Moon at Apogee 18.00, (405,207 km); Mercury at Aphelion 13.00
3rd	07.31 Saturn 3.5° South of Moon
7th	Full Moon, 18.20 Partial Lunar Eclipse; mag. 0.246
8th	Twilight 03.58, Sunrise 04.48, Sunset 21.34, Twilight 22.24; Moon at descending node
9th	23.00 Neptune 0.9° North of Moon
12th	19.00 Perseid meteor shower peaks
15th	Moon at Last Quarter; Twilight 04.08, Sunrise 04.47, Sunset 21.27, Twilight 22.16
16th	06.39 Aldebaran 0.4° South of Moon, possible occultation
18th	13.14 Moon at Perigee: 366 129 km
19th	05.00 Venus 2° North of Moon
20th	Venus 7.2° South of Pollux; Beehive Cluster 3.2°North of Moon
21st	New Moon
22nd	Twilight 04.20,Sunrise 05.06, Sunset 21.18, Twilight 21.52
25th	13.00 Jupiter 3.5° South of Moon
26th	21.00 Mercury at inferior conjunction
29th	Moon at First Quarter; Twilight 04.33, Sunrise 05.17, Sunset 21.08, Twilight 21.52
30th	11.25 Moon at Apogee, 404,307 km

The Solar System

Mercury and Mars	Poor viewing due to solar glare
Venus	Visible throuhout the month in the morning twilight, East-North-East
Jupiter	Visible in the early evening twilight in Virgo
Saturn	Low, South in the evening sky in Ophiuchus
Uranus and Neptune	Accompanying Venus in the morning sky
Perseids	Meteor shower peaking on the 12th

Comet 41P/Tuttle-Giacobini-Kresak may still be visible

NOTE : The occultation of Aldebaran occurs at about 7:45 am from Rotherham, the moon is just past last quarter. It maybe just possible to observe in daylight with a telescope.

THE THOUGHTS OF CHAIRMAN LES



I am told that the AGM was the fastest yet, I wonder if it was because I wasn't there!
There are a lot of plans being made for the future months in both observing, astrophotography and technical abilities in two or three fields. A lot of time and effort have already been put into all these plans so the least we can do is for us to take part in what I'm sure will be of advantage to us.
They observatory grounds need some serious attention and we need to organise a work party as soon as we can so if you feel that you can help with this let us know.
We have had some very interesting lectures this past month and thanks to everyone who took part.

Les Marsden

Chairman

GEMINI MISSION PATCHES

Project Gemini was a manned space programme when NASA worked out how to allow men to spend two weeks in space and then do all the activities that would allow them to go to the Moon. In a recent talk I mistakenly displayed a Gemini XII as the Gemini XX patch. Below is the complete set of patches for the ten manned flights.



KEEP YOUR EYES OPEN



Thursday 17th August – Alien Life? : Geoff Pike

Join us tonight for a partially humorous take on whether alien life exists and the search for extra-terrestrial intelligence.
Geoff Pike's background is in Materials Science, Bio-mechanics and the Pharmaceutical industry, having been a Medical Writer and Medical Rep with ICI and Medical Rep with Fisons . He subsequently set up and monitored asthma studies before going freelance covering about 15 disease areas after that.
He has been a member of the Barnsley University of the Third Age for about 3 years



Thursday 21st September – Life & Works of Edward Emmerson Barnard : Rod Hine

Rod is a former lecturer (Retired) at University of Bradford and previously a lecturer at Kenya Polytechnic. Originally from Chingford, Rod now lives in Bradford and is currently Chairman of the Bradford Astronomical Society.



Thursday 28th September – Triumphs of Voyager Part 2 : Paul Money

2017 is the 40th anniversary of the launch of the Voyager space probes to the outer solar system. These two talks takes a look at the remarkable mission and the many discoveries the Voyagers made and continue to make. Paul returns to continue the Voyager journey towards Uranus, Neptune and beyond. The first part of this talk was given on 18th May.

THE GLASS UNIVERSE - DAVA SOBEL (4th. ESTATE, LONDON)

This excellent book by the author of "Longitude" and "Galileo's Daughter" relates the story of the women mathematicians at the Harvard College University, Massachusetts. The women were employed as "Human Computers", at a time when they didn't even have the vote, to interpret the telescopic observation of their male counterparts.
A Scots women who came to the observatory as a maid and went on to identify more than three hundred variable stars; a deaf young women who designed a stellar classification system adopted the world over.

Mike Hall

SOLAR OBSERVING DAY, JULY 16th











ASTRONOMICAL TERMS IN THE UXBRIDGE ENGLISH DICTIONARY

Apollo	Roman god of chicken
Canopus	Tinned Korean cat delicacy
Cosmos	Lettuce fungus
Declination	Fascist regime run by one half of a Geordie duo
Deimos	Small green plants that don't flower at night
Eclipse	Yorkshire hair grips
Equatorial Mounting	Number 29½ in Kama sutra
Equinox	Laughing gas for horses
Europa	Man who catches sheep with a lasso
Geocentric	Behaving strangely at stone circles
Io	The start of a song for little mining people
Newton	Redesigned weight
Orbit	Part of a paddle
Phobos	A fake man in charge
Pole Star	popular adult entertainer
Registax	Payment made by one of the Krays to HMRC (Not Ronnie)
Retrograde	Michael dresses like Lew
Right Ascension	The correct way to get out of bed
Rocket	Instruction to help baby sleep
Singularity	Being laughed at for not having a partner
Titan	Mrs Widdecombe is drunk again
Triton	What you do in the Fitting room in Marks
Tycho	Shop selling neckwear
The Van Allen Belts	Collection of Dutch support devices
Waxing Moon	Painful exhibitionism
Wednesday	"At what hour does the sun rise?"
Zenith	A bit like Zen



The reaction to Mr Chairman's cries of "Who's buying me a drink?" was immediate

DIARY

Date	Time	Location	Subject / Event	
Wed Aug 2nd	**13:30**	**Observatory**	**Solar Photography**	*Paul D'Silva*
Thu Aug 3rd	**19:45**	**Club Room**	**Chasing a Solar Eclipse**	*Tony Morris*
Sun Aug 6th	**13:30**	**Observatory**	**Solar Photography**	*Paul D'Silva*
Wed Aug 9th	**13:30**	**Observatory**	**Solar Photography**	*Paul D'Silva*
Wed Aug 9th	**20:00**	**Club Room**	**Executive Committee Meeting**	
Thu Aug 10th	**19:45**	**Club Room**	**Making a Solar Filter**	*Paul D'Silva*
Sun Aug 13th	**10:00**	**Old Moor RSPB**	**See the Sun as never before**	
Thu Aug 17th	**19:45**	**Club Room**	**Alien Life?**	*Geoff Pike*
Thu Aug 24th	**19:45**	**Club Room**	**PVE Training Talk**	*Les Marsden*
Sat Aug 26th	**13:00**	**Club Room**	**Processing Solar Imaging Data**	*Mick Nicholls*
Thu Aug 31st	**19:45**	**Club Room**	**Autumn Sky**	*Andy Kirton-Vaughan*
Sat Sep 2nd	**18:30**	**TCP**	**A Night Under the Stars**	*Les Marsden*
Thu Sep 7th	**19:45**	**Club Room**	**TBA**	
Wed Sep 13th	**20:00**	**Club Room**	**Executive Committee Meeting**	
Thu Sep 14th	**19:45**	**Club Room**	**Stars : Part 1 Constellations and other groupings**	*Roy Gunson*
Sat Sep 16th		**TCP**	**Funday**	
Thu Sep 21st	**19:45**	**Club Room**	**Life & Works of Edward Emmerson Barnard**	*Rod Hine*
Thu Sep 28th	**19:45**	**Club Room**	**Triumphs of Voyager : Part 2**	*Paul Money*
Fri Sep 29th	**19:45**	**Observatory**	**PVE**	*Les Marsden*

Old Moor RSPB – Manvers Way, Barnsley, S73 0YF
TCP - Thryberg Country Park
PVE – Public Viewing Event – Bookable Only
CAE – Community Access Event
PO – Public Outreach
TBA – To be announced – (otherwise – We don't know!)

Web site: http://msas.org.uk
Meeting room is at Swinton Working Men's Club, Station Street, Swinton, South Yorkshire, S64 8AU.
Observatory is at Lee Brook Lane, Hoober, S62 7SH
Mexborough & Swinton Astronomical Society is Registered Charity N° 1064103 in England & Wales

For submissions to The Messenger - Editor: Roy Gunson: royg@gmx.co.uk