Newsletter May 2019

Next Meeting: **20th May 2019**

It is time for the

Kyle Academy, Overmills Road, Ayr, KA7 3LR

Content

President's Word

Mars 2020 Rover

NASA's 2020 Mars rover and the spacecraft that will carry it to the red planet a little more than a year from now are taking shape at NASA's Jet Propulsion Laboratory in California.

The nuclear-powered 2020 rover is a close relative of the Curiosity rover that landed on Mars in 2012 and is now working its way up the lower slopes of Mount Sharp in the heart of Gale Crater. But the new model features a variety of upgrades and improvements, along with a suite of powerful instruments to look for signs of past martian life and to cache rock and soil samples for eventual return to Earth.

Engineers at NASA's Jet Propulsion Laboratory integrate the Mars 2020 rover's motor controller assembly. The rover, a close twin of the Curiosity rover now exploring Gale Crater on the red planet, is scheduled for launch in the summer of 2020. Image: NASA/JPL-Caltech

A critical part of that work is fitting components together – stacking – several times to make sure everything will fit properly inside the nose cone fairing of an Atlas 5 rocket.

Stacking is an important milestone in mission development, because as good as our computer models are, we still need to put it together to show that the bolt holes line up and everything fits together," said David Gruel, assembly, test and launch operations (ATLO) manager for Mars 2020 at JPL.

The first step in the stacking procedure was mounting the rocket-powered descent stage on top of a rover mockup. After multiple fit checks, the aerodynamic "backshell" was lowered into place. Once that was complete, and more fit checks verified the hardware matched the blueprints, a protective nose cone was placed over the spacecraft's folded parachute, followed by attachment to the cruise stage that will power Mars 2020 during its seven-month trip. The stack then was rotated back to its original position for attachment of the lander's heat shield.

The completion of stacking clears the way for acoustic vibration testing to make sure the spacecraft is up to the sound and shaking of launch followed by thermal vacuum chamber testing to expose the craft to a simulated space environment.

“Nothing is static with this mission,” said Gruel. “After the acoustic and thermal vac tests, the stacked spacecraft is returned to the assembly building for de-stack, then more testing and more work. Until the hold-down bolts on the Atlas rocket blow and our rover is headed to Mars in July of 2020, there is almost always something being assembled, tested or modified.”

AGM

Yep... It’s that time of year again ! On the 20th May we have our AGM at Kyle academy.
The AGM is usually short and to the point, with this year, most of the positions filled by committee members from last year. The only real change being Isabelle Grogg who has had to stand down as the Newsletter Editor, due to studying for an Astro Degree. Fortunately we have someone step up to the plate to take the position, which is indeed a load of my mind... Thank you Marc!

Volunteers to stand are as follows:

Roger Harman, (President)

Karen Smith, (Vice President)

Stephen Wolohan, (Treasurer)

Angela Gribbin, (Secretary)

Stephanie Warren, (Media Officer)

Marc Charron, (Newsletter Editor)

Derek Oldfield, (Ordinary Member)

Nick Martin, (Ordinary Member)

Graham Longbottom, (Ordinary Member)

William Harding, (Ordinary Member)

Dave Hancox, (Ordinary Member)

The format of the evening will start with the AGM which as I have intimated, shouldn’t take too long then we have a buffet meal arranged, followed by an evening’s astro-entertainment which is yet to be finalised but sounds thrilling!

So I hope to see as many of you at Kyle Academy as can make it, to make the evening a really enjoyable one!

Clear Skies
Roger Harman

Events

Meeting AGM 20th May, Kyle Academy, Overmills Road in Ayr !!NEW LOCATION!!

We meet again at the same location as last month at Kyle Academy.

Meeting 29th April

Dr John Veitch and Roger Harman

Dr John Veitch is a lecturer at University of Glasgow and works in the Institute for Gravitational Research. He gave us an insight about his involvement in analysing data from LIGO which detects gravitational waves from the collision of black holes.

Cars on Campus 5th May in Kilmarnock

Thank you for all helpers to organise and set up the AAS stall at Cars on Campus. There were plenty of gadgets for the visitors to look at such as a spectroscope, various telescopes for the night sky and the club's solar telescopes. Lots of information such as books, solar glasses etc were available for everybody to use – even a powerpoint presentation was available. Hopefully that got some curious people more interested in Astronomy.

Dave's Article

Astrophotography Talk At Ayrshire Hospice Staff Photography Club – 23 April 2018

Talk and pictures seemed to go down well, I fine buffet was laid on at halftime.


NGC 3187


CRAB NEBULA M1 30/03/2019


M81 BODES GALAXY & M82 CIGAR GALAXY
31/03/2019

Library

Open for business!

THE LIBRARY IS A RESOURCE FOR MEMBERS -PLEASE SUPPORT IT AND MAKE USE OF IT

The Library list is also available on the website under "links" and can be downloaded

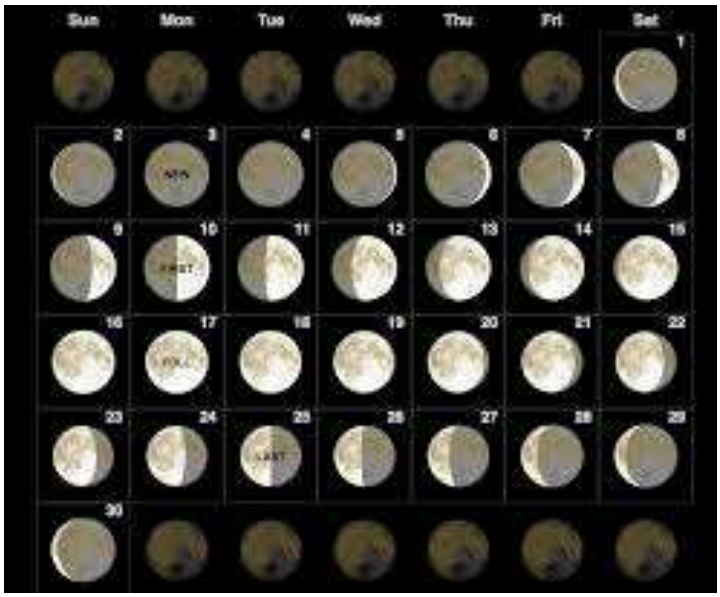
The library is now full up - if you would like to obtain a list or borrow an item

– contact Alex at the next meeting or give him a call on 01563 520887.

Unfortunately Alex does not have email, however messages via library@ayrastro.com will reach him the old fashioned way after a short delay but please contact him directly if at all possible.

THE LIBRARY IS WAITING FOR YOUR CALL!! There are a lot of interesting items to borrow

Moon phases June 2019



And finally…. ☺