



Newsletter February 2020

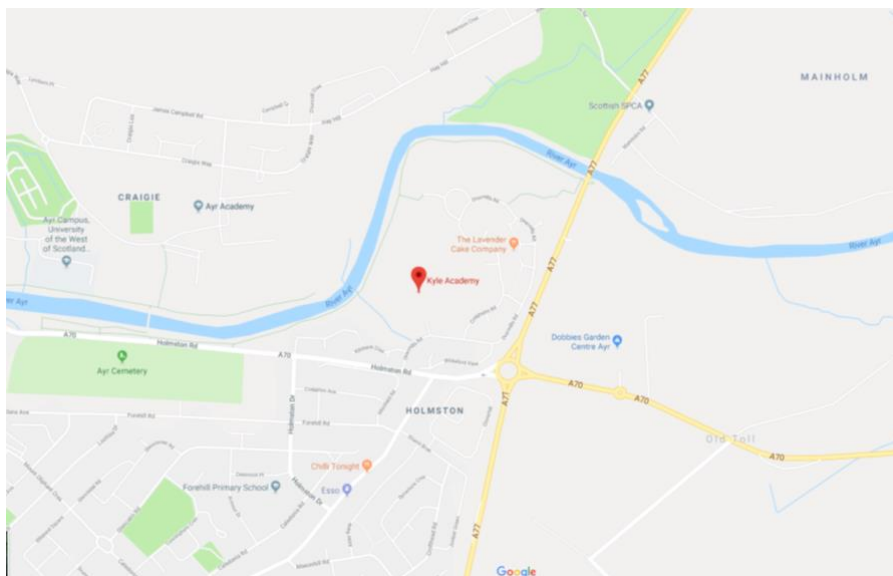
Next Meeting: **24th February 2020, 7pm**

Speaker: Ronald Evans
Topic: Sun in a Bottle

Kyle Academy, Overmills Road, Ayr, KA7 3LR

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President's Word

I do hope that you have all survived the recent storms with minimal disruption and damage. It seems that the South took a severe hit with many areas suffering flooding and wind damage, where we were quite lucky here in the North. Perhaps we are more prepared for inclement weather, but wind strength did seem to be far stronger in England, Wales and Southern Ireland.

The latest news from Nasa, regarding space exploration, is that the current US administration has provided, in its 2020 budget, a proposal of \$25.2 billion for various projects. The budget increases funding for innovative programs that would land astronauts on the Moon and support preliminary missions and advanced technologies that would enable further exploration. The budget also supports a broad range of high-performing NASA programs that are not directly supporting the Moon to Mars program, and includes reductions to some lower-performing programs. These include eliminating SOFIA (Stratospheric Observatory for Infrared Astronomy) telescope, saving taxpayers more than \$80 million per year. According to the US government administration, SOFIA is an expensive telescope mounted on a 747 airplane that is less scientifically productive than other missions with similar costs.

NASA's top-priority mission is to return American astronauts to the Moon by 2024 and build a sustainable presence on the lunar surface as the first step on a journey that will take "America to Mars". The budget provides funding for the programs that support this goal, including \$3.4 billion for the development of lander systems, over \$700 million to support lunar surface activities, and \$233 million for robotic precursor missions to Mars that would also conduct cutting-edge science. The Budget also funds a broad range of other NASA programs, including supporting enhanced commercial activities in earth orbit, exciting space science missions, and research to improve air travel and remotely piloted aircraft. The budget redirects funds from lower priority programs to fulfill the President's promise to get Americans back to the Moon, apparently.

The budget funds key components of NASA's Moon to Mars campaign, including: the Space Launch System (SLS) and the Orion crew capsule to support a first uncrewed test launch and a steady crewed launch; the Lunar Gateway, a small way station around the Moon; commercial launch capabilities to enable regular, low-cost access to the lunar vicinity and surface; and commercial lunar landers to enable cargo delivery and human access to the lunar surface. The Gateway and landers would be launched on competitively procured vehicles, complementing crew transport flights on the SLS and Orion. The Budget defers funding of upgrades—known as "Block 1B"—for the SLS, and instead focuses the program on completing the initial version of the SLS and ensuring a reliable SLS and Orion annual flight cadence. While a potentially beneficial future capability, the costly Block 1B upgrades are not needed to land astronauts on the Moon.

So for those of you who are looking to see humans setting up a base on the Moon and possibly Mars, we may be one step further down that line. Like all such projects, time will tell if they come to fruition. Keep your fingers crossed!



Clear Skies!
Roger Harman



February/March Observing

General

One can only help for a break in the weather as the last few weeks have not been very good for observing. Orion now dominates the early evening sky, but as the night moves on sinks slowly in the west, with Gemini, Cancer and Leo becoming prominent in the sky.

Planets

Mercury – it will be hard to observe in late Feb, as it reaches inferior conjunction on the 25th, after that it will move to the morning sky, but will be difficult for observers in the UK to observe.

Venus – is continuing its rise in the evening sky and will be magnitude -4.3 by the end of Feb. It will reach its greatest elongation on the 24th of March, where about 30 minutes after sunset it will be about 35 degrees above the horizon, achieving a magnitude of -4.5.

Mars, Jupiter and Saturn - are located fairly close together in the morning sky, to left of Sagittarius, however, they will be difficult to see from Scotland as they are very close to the horizon, not rising much above 5 degrees before dawn renders them invisible.

Uranus – is low in the evening sky, and will be within two degrees of Venus on the 8th of March.

Neptune – it is also moving into conjunction with the sun on the 8th of March and will not be visible.

Meteors

There are no meteor showers taking place in late Feb or March. The next prominent shower is the Lyrids which takes place on the 22nd of April.

Comets

Comet 2017/T2 PanSTARRS is still visible in the sky. It is currently around 9th magnitude and may brighten a bit in March. It is now moving away from the Double Cluster in Perseus, into Cassiopeia. During the first and second weeks of March it will be near the Heart and Fish Head Nebulas, as its moves towards Camelopardalis.

ISS

The International Space Station will do a pass most mornings up to the 12th of March, then to be followed by evening passes starting on the 20th of the month and on into April. It can typically be seen moving in an arc from the south west to the south east.



Member Images

Marc Charron

Green Flash 5th of February from Ayr Beach



Winter Milky Way over SDSO



Comet 2017T2 PanSTARRS on 18 January


























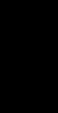
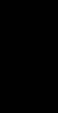
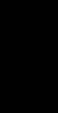





Comet 2017T2 PanSTARRS on 26th and 30th of January skirting the Double Cluster (left to right)



Moon Phases

March 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 	2 	3 	4 	5 	6 	7 
8 	9 	10 	11 	12 	13 	14 
15 	16 	17 	18 	19 	20 	21 
22 	23 	24 	25 	26 	27 	28 
29 	30 	31 				



March Sky Chart

