

WEYMOUTH ASTRONOMY

Sky Watcher

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Trips / Events

Ideas for trips and events
always welcome!

events@weymouthastronomy.co.uk

Society Meetings cancelled until further notice—Please check their websites for the latest schedule

In the meantime, the British Astronomical Association has moved their meetings to an online format. Live streamed on release and 'catch-up' on Youtube available. These webinars are Open to All.

<https://britastro.org/>

BAA live webinars, 7pm every Wednesday

<https://www.youtube.com/user/britishastronomical>

If you are interested in giving a talk or workshop, let the organisers know. They like to offer new titles in their programme line-up.



Summer is upon us in the Northern Hemisphere with the prospect of high pressure systems.



There are other unique meteorological phenomenon worth keeping an eye out for. In late May, a fellow astronomer phoned to say that a unique air mass was heading my way in about 5 min time. Low and behold, an upside-down rainbow appeared in the sky! The elusive Circumzenithal Arc! During the day I had been following some amazing cloud formations due to high level winds plus Parhelia (Sun Dogs) and the

22 degree halo. Unfortunately, I would have missed this due to timing without such a fortuitous call! Moral of the story, keep looking upwards. Day or night! Until next time...SLK



Mars's Latest Visitor: NASA's Perseverance Rover!

by David Prosper

NASA's latest Mars rover, Perseverance, is launching later this month! This amazing robot explorer will scout the surface of Mars for possible signs of ancient life and collect soil samples for return to Earth by future missions. It will even carry the first off-planet helicopter: Ingenuity. Not coincidentally, Perseverance will be on its way to the red planet just as Mars dramatically increases in brightness and visibility to eager stargazers as our planets race towards their closest approach in October of this year.

Perseverance's engineers built upon the success of its engineering cousin, Curiosity, and its design features many unique upgrades for a new science mission! In February of 2021, Perseverance will land at the site of an ancient river delta inside of Jezero Crater and ready its suite of seven primary scientific instruments. The rover will search

for traces of past life, including possible Martian fossils, with WATSON and SHERLOC, two advanced cameras capable of seeing tiny details. The rover also carries an amazing instrument, SuperCam, to blast rocks and soil outside of the rover's reach with lasers to determine their chemical makeup with its onboard suite of cameras and spectrometers. Perseverance will also take core samples of some of the most promising rocks and soil, storing them for later study with its unique caching system. Future missions will retrieve these samples from the rover and return them for detailed study by scientists on Earth. Perseverance also carries two microphones so we can hear the sounds of Mars and the noises of its instruments at work. It will even launch a small helicopter -



Perseverance inspects a cluster of interesting Martian rocks with its instruments in this artist rendering by NASA JPL/Caltech

WAC Upcoming Events:

| | Watch website for online options. |
|---------|--|
| 14 Aug | Online 'Zoom' Meeting - Geoff Kirby - Unbelievable Astronomy |
| 11 Sept | Online 'Zoom' Meeting - Stephen Tonkin - Ten Ways the Universe Tries to Kill You |
| 9 Oct | Online 'Zoom' Meeting - David Bacon - The Dark Energy Survey |

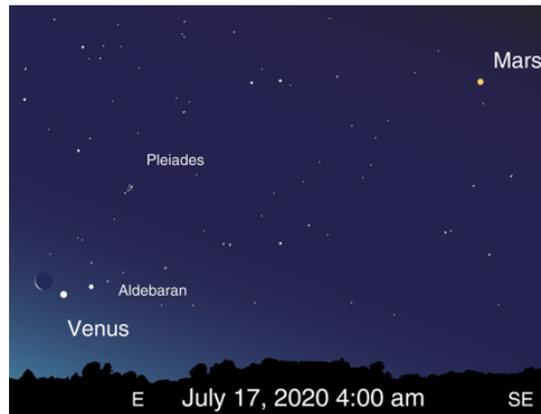
Mars (more!)

Ingenuity - into the Martian atmosphere as a trial for future aerial exploration!

Would you like to contribute to Mars mission science? You can help NASA's rover drivers safely navigate the Martian surface by contributing to the AI4Mars project! Use this tool to label terrain features on photos taken of the Martian surface by NASA missions to help train an artificial intelligence algorithm to better read their surrounding landscape: bit.ly/AI4Mars

The launch of Mars Perseverance is, as of this writing, scheduled for July 20, 2020 at 9:15am EDT. More details, updates, and livestreams of the event are available on NASA's official launch page: bit.ly/Mars2020Launch . Dig deep into the science of the Mars 2020 mission and the Perseverance rover at: mars.nasa.gov/mars2020/ .

Find out even more about past, present, and future Mars missions at nasa.gov.



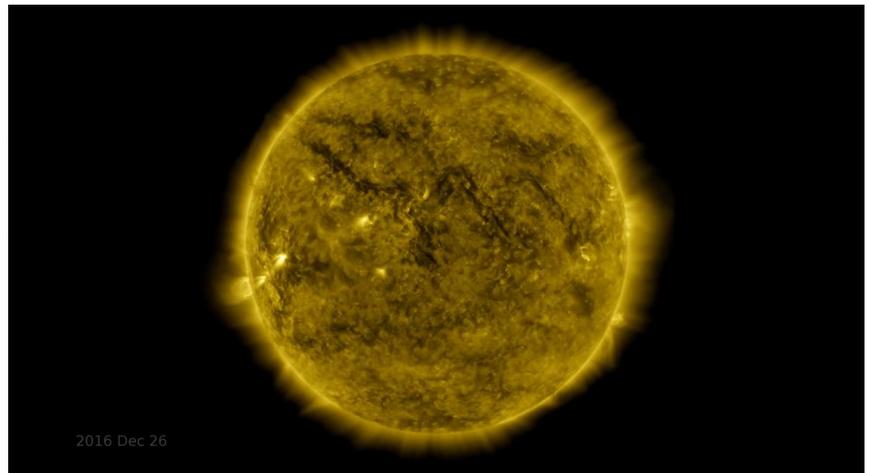
Observe Mars yourself over the next few months! Mars can be found in early morning skies throughout July, and by the end of the month will rise before midnight. Mars gradually brightens every night until the close approach of Mars in October. The pre-dawn skies of July 17 present an especially nice view, as the waning crescent Moon will appear near Venus and Aldebaran.

**On The Web****Watch a 10-Year Time Lapse of Sun From NASA's SDO**

As of June 2020, NASA's Solar Dynamics Observatory – SDO – has now been watching the Sun non-stop for over a full decade. From its orbit in space around Earth, SDO has gathered 425 million high-resolution images of the Sun, amassing 20 million gigabytes of data over the past 10 years. This information has enabled countless new discoveries about the workings of our closest star and how it influences the solar system.

<https://youtu.be/l3QQQu7QLoM>

This 10-year time lapse of the Sun at 17.1nm shows the rise and fall of the solar cycle and notable events, like transiting planets and solar eruptions.

**SPACEX - ISS Docking Simulator**

<https://iss-sim.spacex.com/> Try your hand at docking the SPACEX craft to the ISS. Warning, this takes a delicate and slow approach to maintain correct attitude and docking linkage. If you succeed, let us know!

