



## Newsletter April 2022

Next Meeting: **Monday 25<sup>th</sup> March 7pm**

Location: **Kyle Academy,  
Overmills Road,  
Ayr KA7 3LR**

**Topics: AAS April Meeting: Member's Night – Bring your scopes, Misc kit, Books, Questions, Images,  
Chat Time – It's up to you!**

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## Presidents Word

This month is Members Night so don't forget to bring along your scopes, eyepieces, images and other astronomical curios that you are wondering about. If you have any thoughts on activities or talks this is the time to bring them up and chat about where the Society goes next.

On the 1<sup>st</sup> of May we have Cars on Campus at St Joseph's Academy in Kilmarnock. Gates open to the Public at 10am so if you would like to come along and help at our stand please do so. The more people we have the more members of the public we can talk to and the better chance you have of getting to look around the car show itself. Stephen has a small flier with details, so speak to him at the meeting if you can come along.

We have also been invited to Pipes in the Park at Rozelle Park in Ayr in June. This is a very well attended day with lots going on. It is a great opportunity to showcase the Society and attract new members. Unfortunately we have to pay to get a place! and although affordable, it's not cheap. With that in mind, if we are going to attend, we need to have definite commitment for support on the day to make it worthwhile and because there is quite a lot to organise if we are to have a successful day. Please speak to Stephen at the meeting for details and if you are interested, as we have to respond no later than 22 May.

In addition, remember that we have also been invited to attend a fair day at Dumfries House 29<sup>th</sup> July.

Finally we have the AGM coming up next month and we need some new blood on the committee. All positions are open. In order to get the Society up and running now that Covid is hopefully behind us, I am prepared to re-stand for President for the next year (but that doesn't preclude you from standing). Also Stephen has offered to re-stand as Treasurer.

If you would like to stand please let Stephen know at the meeting. Openings are available for Vice President, Secretary and two committee members as well as President and Treasurer. Don't be shy out your name forward. Assistance will be available if you are worried about actually doing the job.

Unfortunately I cannot attend the Members Evening so I look forward to seeing you all at our final meeting and AGM in May.



# Member Articles

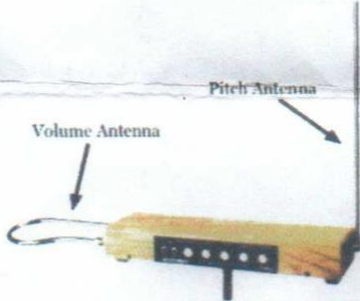
## Alex's Space

### Heavenly Harmonys

Music and Space was the theme of a recent radio programme which I caught by chance the other day. A random selection of topics based on the theme began with the gold discs carried by the VOYAGER spacecraft — a modern “message in a bottle”. While these spacecraft themselves might tell their finders about our scientific knowledge, the music carried on the discs was intended to convey something about our human character, but, while we might regard some of the music as beautiful, we don't even know whether it would be understandable to an alien civilisation, let alone have an aesthetic or emotional significance!

The traditional notion of the motion of the spheres was another aspect of the programme. Apparently the Greeks had first made the link between music and the motion of the planets, however, the heavens above are more likely to be filled with musical dissonances than harmonies! Beethoven's 9<sup>th</sup> symphony — it was his final one — represents the twinkling of the stars and also gives the “spooky” music which accompanies many science fiction films.

A literal connection between music and space is provided by the THEREMIN — named after its inventor Russian inventor Leon Theremin who patented the device in 1920. Never heard of it? well, neither had I, and, until I had undertaken some investigation, I had no idea what it was! It is in fact an early electronic musical instrument controlled without physical contact by the player (the thereminist), who controls the sound by moving their hands in an electromagnetic field. The THEREMIN was used to provide music for early science fiction films such as the original version of “The day the Earth stood still” (1951).



The final section of this really interesting programme focussed on the electronic music of some bands and groups who used spaceflight actuality, such as real mission control audio. Also included were short spoken excerpts based on the story of astronaut Major Tom from David Bowies “Space Oddity” — that's correct Oddity NOT Odyssey!!

If I had know this programme would be so fascinating, I would have attempted to record it — but I managed to scribble down the main points — although it did take me a L...O...N...G time to decipher my scribbles.

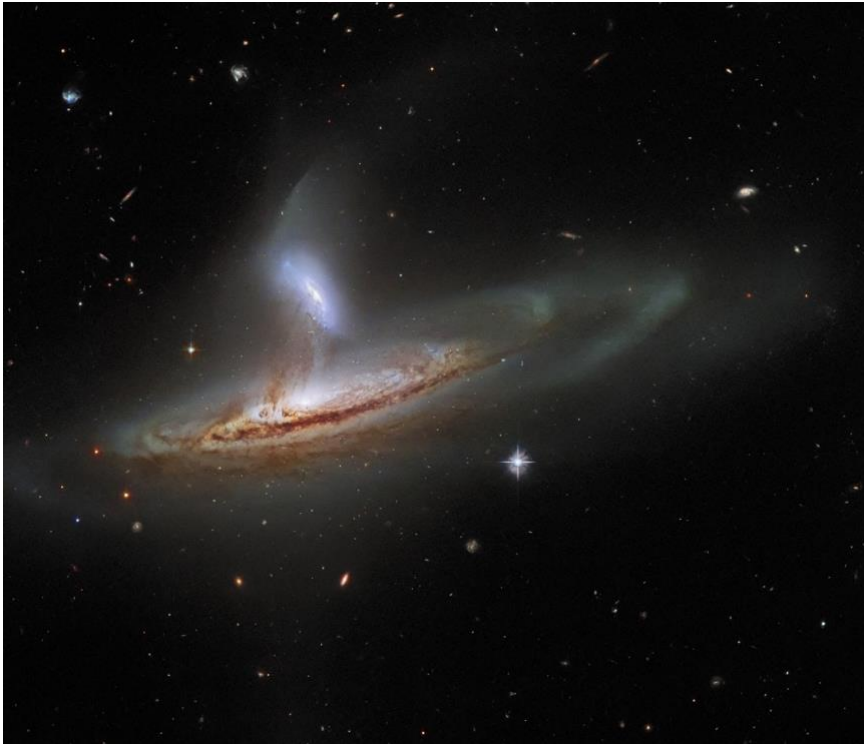
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## A revealing Hubble photograph

By Nick Martin



A newly released picture from the Hubble space telescope shows a remarkably 3-D looking picture of a pair of colliding galaxies Arp 282 which consists of the smaller polar-ring galaxy IC 1559 (top) and the larger spiral galaxy NGC 169 (bottom).

Galaxy collisions produce very interesting patterns because of the complex tidal forces generated when these massive but extended and diffuse objects interact gravitationally. The interactions involve the visible stars and dust clouds but also the invisible clouds of hydrogen gas – the raw material from which stars form. They lead to massive numbers of stars and non-stellar material being pulled from the partners forming often complex patterns. The interactions also compress the clouds of gas and dust leading to bursts of accelerated star formation -starburst galaxies.

The smaller IC1559 looks as though it has passed through the larger galaxy leaving a faint trail of stars below it. It is above NGC169 that the really interesting interactions are occurring.

The characteristic brown hue of the dust in giant molecular clouds shows the great stream being pulled from one or both of the galaxies. Also very obvious are the streams of stars linking the two objects. Brighter, blue starburst regions show where the streams converge on the main bodies of the partners. This is especially visible at the top of IC1559, where also a very characteristic stellar stream extends away from the interacting pair.

Aside from these characteristic tidal interaction features both galaxies show evidence of starburst activity. The whole of IC 1559 is glowing brilliantly with hot, young blue stars throughout its body. NGC 169's spiral arms also show enhanced brightness as the spiral wave generated by the passage of IC1559 ripple out and trigger bursts of star formation in its spiral arms.

The final feature of note is the brilliant nucleus of each galaxy. They are AGN – active galactic nuclei. The supermassive black holes at their centres are pulling in huge quantities of the displaced gas. This forms a brilliant, superheated accretion disc as 40% of the mass of the absorbed gas is turned into radiant energy. If the pictures had been taken in ultraviolet or X ray light the glare from the nuclei would overwhelm the more delicate features.

# Remembering Hale-Bopp

By Marc Charron

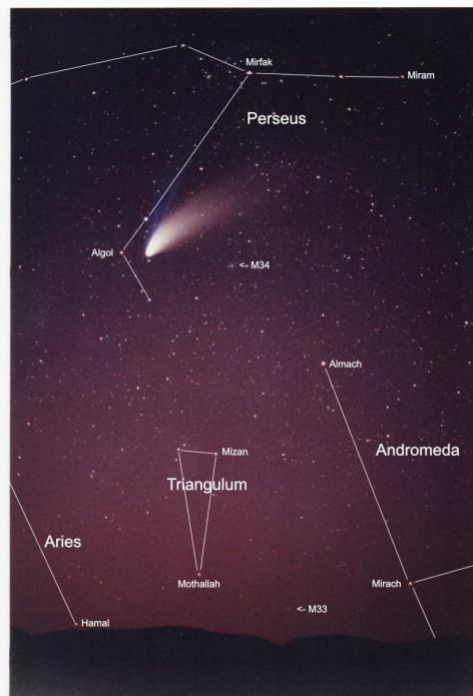
For those of us old enough to remember, it is hard to believe that it has been 25 years since Hale-Bopp graced our skies. While comet C/2020 F3 Neowise put on an excellent show back in July 2020 it paled in comparison to what Hale-Bopp did in the spring of 1997. On April the 1<sup>st</sup> it passed perihelion before heading back out into deep space not to return for about 2,400 years, so there is no point waiting up for it! Perhaps if we are lucky, we might get another great comet in the next few years, it would be a shame if we had to wait another 25 or more years until the next one!

Here are a couple of images I took of the comet back in April of that year.

Hale-Bopp at perihelion on the 1<sup>st</sup> of April 1997



Hale-Bopp on the 9<sup>th</sup> of April 1997



## April/May Observing

### General

Galaxy season is well underway and the time to view them is before mid-May when we begin to lose astronomical darkness. The sun has been quite active so while we lose our darkness there is something we can observe in the daytime, as long as it is done with **proper solar filtering**, as the observing the sun without adequate projection can cause **instant blindness**. An active sun may also generate auroras, so it is worth checking out some apps that indicate the chances of seeing it. One I use is Aurora Watch UK.

### Planets

Currently the position of most of the planets is not well suited for observation, as Venus, Mars, Jupiter, Saturn and Neptune are low in the morning sky for this period. Saturn is the best placed for early risers, the rest are more difficult. Mercury is currently visible in the evening sky and will remain so until mid-May. Uranus is in Ares, but is now too close to the sun in the sky to be observed.

### Comets

There are no easily observable comets at the moment.

### Meteor Showers

The one major meteor shower to look out for is the Lyrids, which peak at 5am on the 22<sup>nd</sup> of April. The moon will cause some interference as it will be a day before last quarter, but it is also low on the horizon making less of a problem. The Lyrids run from about the 16<sup>th</sup> to the 25<sup>th</sup> of April.

### ISS

The ISS is visible in the from the 28<sup>th</sup> of the April, but moves further into the night as the period progresses. Consult <https://www.heavens-above.com> for specific times and location. For ISS transits check out <https://transit-finder.com/>.



## Member Images

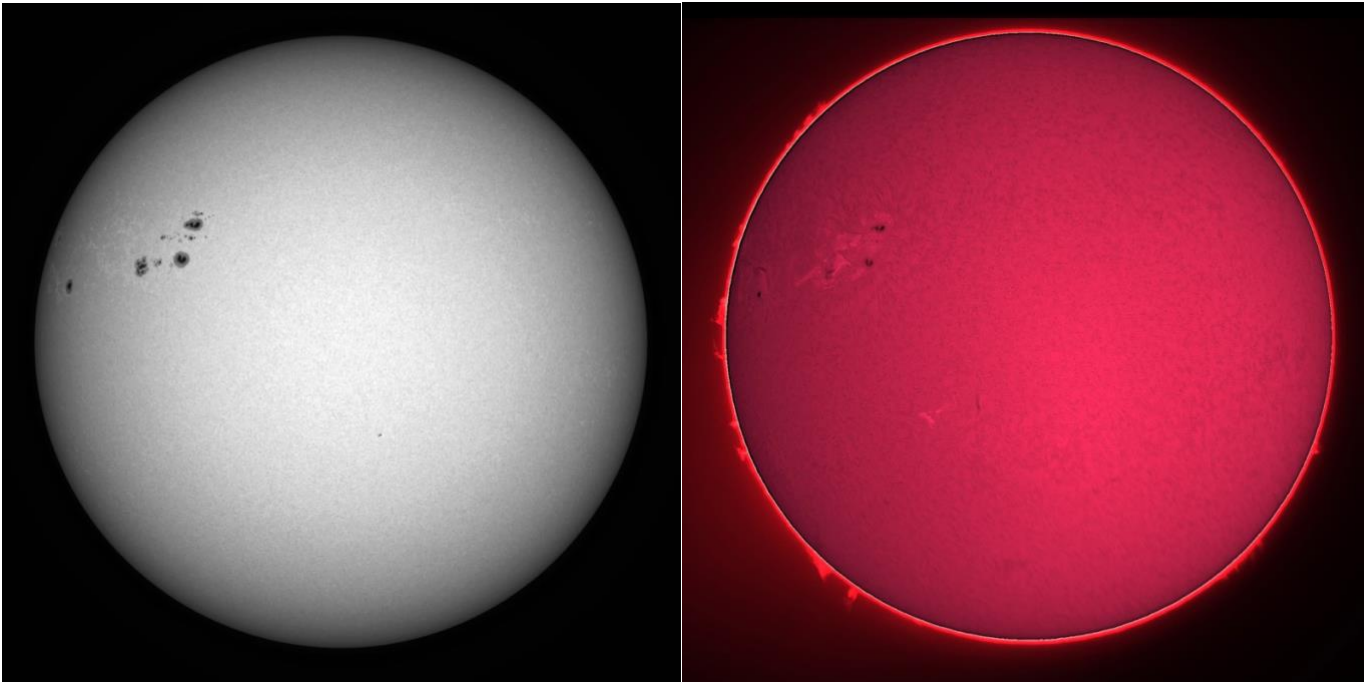
By Marc Charron

M81 and 82 taken with TMB 130/1200

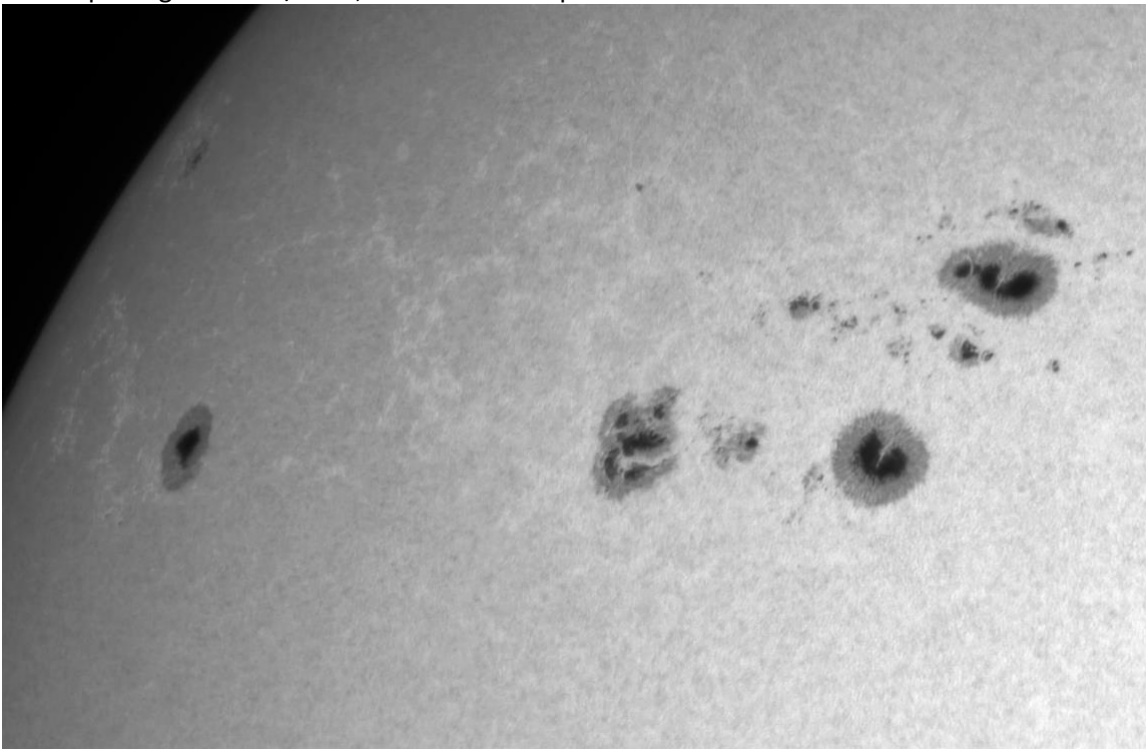


Solar

White light (70mm f6 triplet at prime focus) and Ha with PST taken on the 20<sup>th</sup> of April

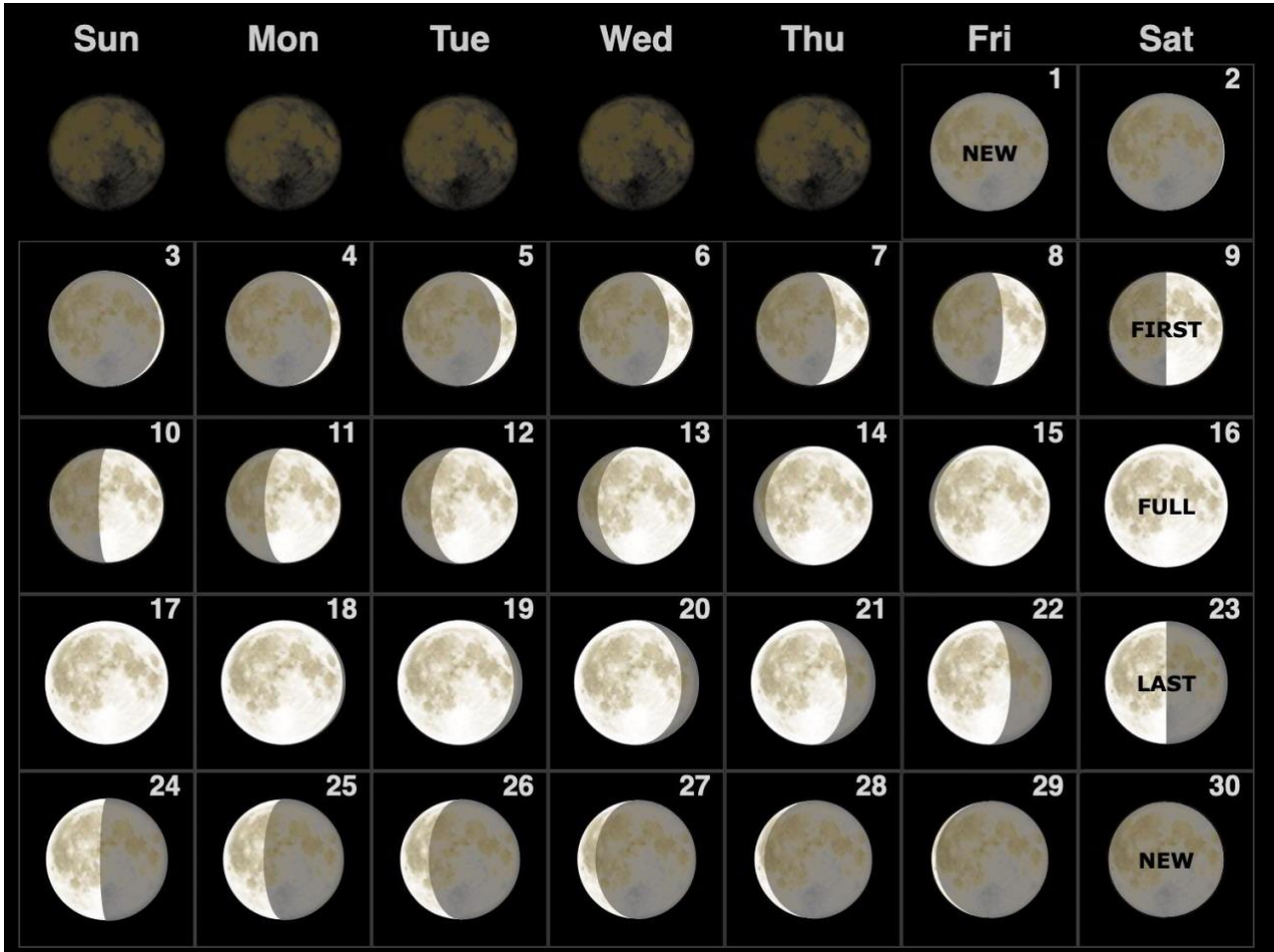


Close up using TMB 130/1200, the middle sunspot could well have been a character out Sesame Street.



# Moon Phases

## May 2022





# May 2022 Sky Chart

