

Howard Astronomical League

October 21, 2021



Astro Humor

SATURN



**UNDEFEATED SOLAR SYSTEM
HULA HOOP CHAMP!**

Welcome New Members and Guests



Officer Reports

HAL Officers/Positions 2021

President	Phil Whitebloom	president@howardastro.org
1st Vice President	Victor Sanchez	1stvp@howardastro.org
2nd Vice President	Jim Tomney	2ndvp@howardastro.org
Treasurer	Joel Goodman	hal_treasurer@howardastro.org
Secretary	Yvonne Chiarelli	secretary@howardastro.org
Event Coordinator	David Stein	events@howardastro.org
Publicity Chair +	Joel Goodman	halpublicity@howardastro.org
Observatory Director *	Dale Ghent	observatory@howardastro.org
Librarian +	Bob Dutilly	librarian@howardastro.org
ALCor +	Steve Jaworiwsky	halcor@howardastro.org
Webmaster *	Ken Sall	Use "Contact Us" Page

* Appointed as voting officers of the board of directors by President with board approval

+ Appointed non-voting member of the board except when position filled by an elected officer

OPEN HOUSE



October Public Star Party and International Observe the Moon Night



Hannah Broder



Hannah Broder

Success!

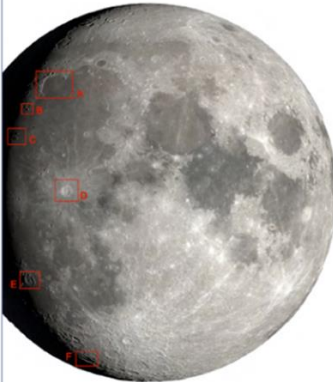
OBSERVE the MOON International OBSERVE the MOON NIGHT 2021 SATURDAY 16TH OCTOBER 16TH

NORTHERN HEMISPHERE MOON MAP FOR TELESCOPE VIEWING

Moon Map
This map was created for International Observe the Moon Night 2021. It depicts the Moon as it will appear from the northern hemisphere at approximately 11:00 PM EDT on October 16, 2021 (3:00 AM UTC on October 17). Many of the best views will occur along the terminator (the line between the day and night side of the Moon).

Selected Features
Some of the more interesting lunar landforms that have favorable lighting for viewing tonight are identified here. Details for each are on the reverse side of this map.

- A. Sinus Iridum
- B. Grimaldi's Domes
- C. Harbinger Mountains
- D. Copernicus Crater
- E. Gauss's Crater
- F. Schiller Crater



Map generated with NASA's Clip-A-Moon (https://svs.gsfc.nasa.gov/4376)

MOON.NASA.GOV/OBSERVE #ObserveTheMoon



GLENELG

COUNTRY SCHOOL



HAL Public and Members Only Star Parties

Month	Date	Invitees
		
		
October	30	Members
November	13	Public

October - November 2021 Astronomical Events

Source: <http://www.seasky.org/astronomy/astronomy-calendar-2021.html>



October 21, 22 - Orionids Meteor Shower. The Orionids is an average shower producing up to 20 meteors per hour at its peak. It is produced by dust grains left behind by comet Halley, which has been known and observed since ancient times. The shower runs annually from October 2 to November 7. It peaks this year on the night of October 21 and the morning of October 22. The full moon will be a problem this year for the Orionids. Its glare will block out all but the brightest meteors. But if you are patient, you should still be able to catch a few good ones. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Orion, but can appear anywhere in the sky.



October 25 - Mercury at Greatest Western Elongation. The planet Mercury reaches greatest western elongation of 18.4 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the morning sky. Look for the planet low in the eastern sky just before sunrise.



October 29 - Venus at Greatest Eastern Elongation. The planet Venus reaches greatest eastern elongation of 47 degrees from the Sun. This is the best time to view Venus since it will be at its highest point above the horizon in the evening sky. Look for the bright planet in the western sky after sunset.



November 4 - New Moon. The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 21:15 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.



November 4, 5 - Taurids Meteor Shower. The Taurids is a long-running minor meteor shower producing only about 5-10 meteors per hour. It is unusual in that it consists of two separate streams. The first is produced by dust grains left behind by Asteroid 2004 TG10. The second stream is produced by debris left behind by Comet 2P Encke. The shower runs annually from September 7 to December 10. It peaks this year on the night of November 4. The new moon will leave dark skies this year for what should be an excellent show. Best viewing will be just after midnight from a dark location far away from city lights. Meteors will radiate from the constellation Taurus, but can appear anywhere in the sky.



November 17, 18 - Leonids Meteor Shower. The Leonids is an average shower, producing up to 15 meteors per hour at its peak. This shower is unique in that it has a cyclonic peak about every 33 years where hundreds of meteors per hour can be seen. That last of these occurred in 2001. The Leonids is produced by dust grains left behind by comet Tempel-Tuttle, which was discovered in 1865. The shower runs annually from November 6-30. It peaks this year on the night of the 17th and morning of the 18th. Unfortunately the nearly full moon will dominate the sky this year, blocking all but the brightest meteors. But if you are patient, you should still be able to catch a few good ones. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Leo, but can appear anywhere in the sky.



November 19 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be fully illuminated. This phase occurs at 08:59 UTC. This full moon was known by early Native American tribes as the Beaver Moon because this was the time of year to set the beaver traps before the swamps and rivers froze. It has also been known as the Frosty Moon and the Dark Moon.



November 19 - Partial Lunar Eclipse. A partial lunar eclipse occurs when the Moon passes through the Earth's partial shadow, or penumbra, and only a portion of it passes through the darkest shadow, or umbra. During this type of eclipse a part of the Moon will darken as it moves through the Earth's shadow. The eclipse will be visible throughout most of eastern Russia, Japan, the Pacific Ocean, North America, Mexico, Central America, and parts of western South America. ([NASA Map and Eclipse Information](#))



December 4 - New Moon. The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 07:44 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.



December 4 - Total Solar Eclipse. A total solar eclipse occurs when the moon completely blocks the Sun, revealing the Sun's beautiful outer atmosphere known as the corona. The path of totality will for this eclipse will be limited to Antarctica and the southern Atlantic Ocean. A partial eclipse will be visible throughout much of South Africa. ([NASA Map and Eclipse Information](#)) ([Interactive NASA Google](#))

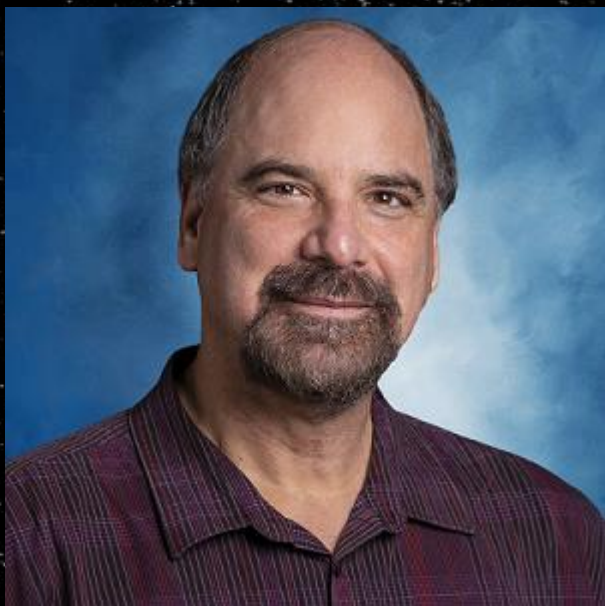


Victor Sanchez – M56
HALO – Alpha Ridge Park

HAL Wintertime Activities and Events?



November's Guest Presenter



Dr. Carrey Lisse
Johns Hopkins University
Applied Physics Laboratory

Topic: New Horizons and Kuiper Belt

HAL Members Astro Photos And Art



The Moon - 2021-09-25 07:56 UTC - Crater Tycho

Jim Johnson, Ashton MD

ZWO ASI290MM

Meade LX850 (12" f/8)

Losmandy G11



Jim Johnson
© 2021

Jupiter - 2021-09-25 01:14 UTC

Luminance Alternatives

Jim Johnson, Ashton MD

jup-2021-09-25-0114-JmsJhnsn-R-G-B.jpg

ZWO ASI290MM
TeleVue 2.5x PM
Meade LX850 (12" f/8)
Losmandy G11



L(R)RGB



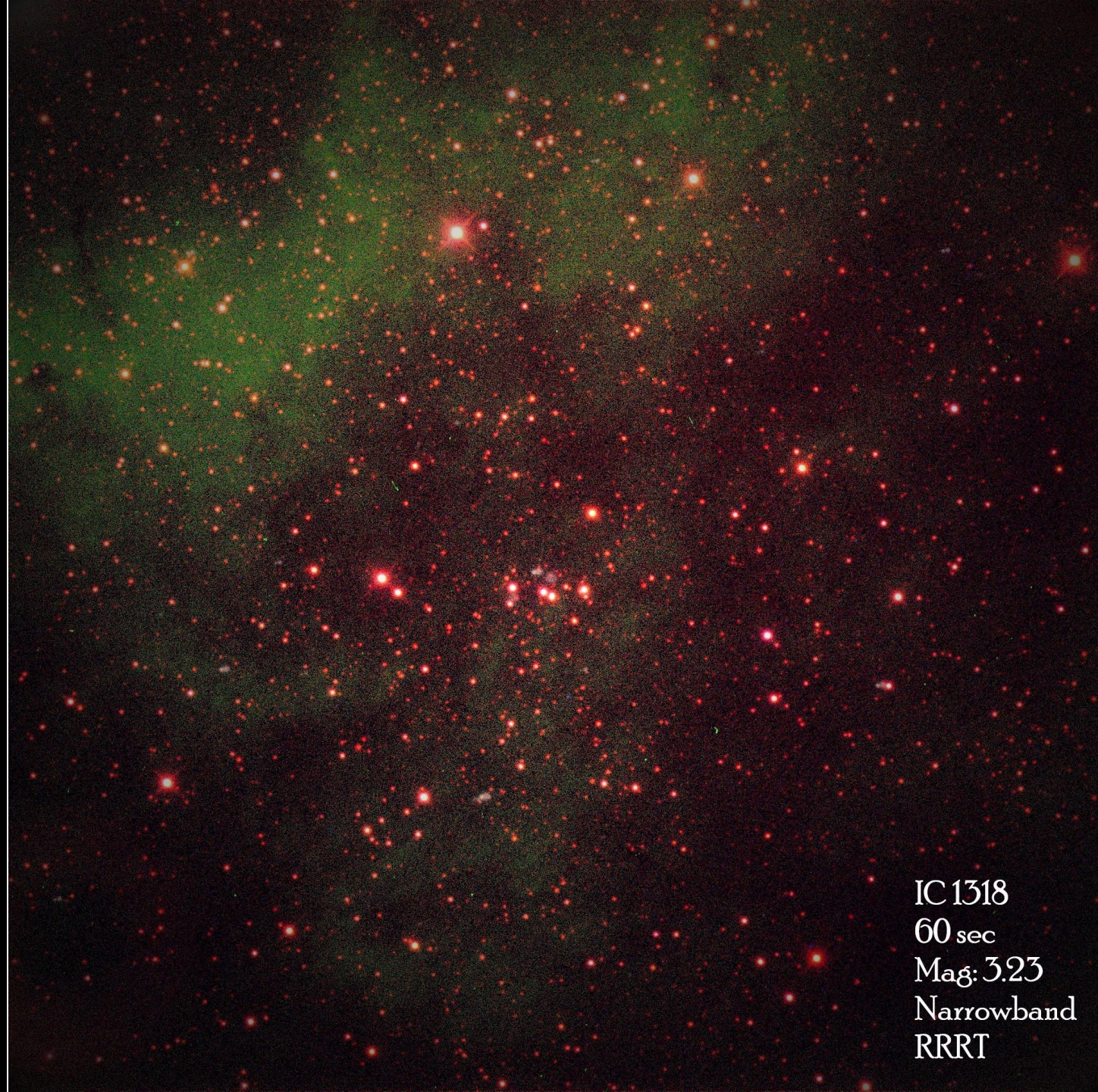
L(G)RGB



L(B)RGB

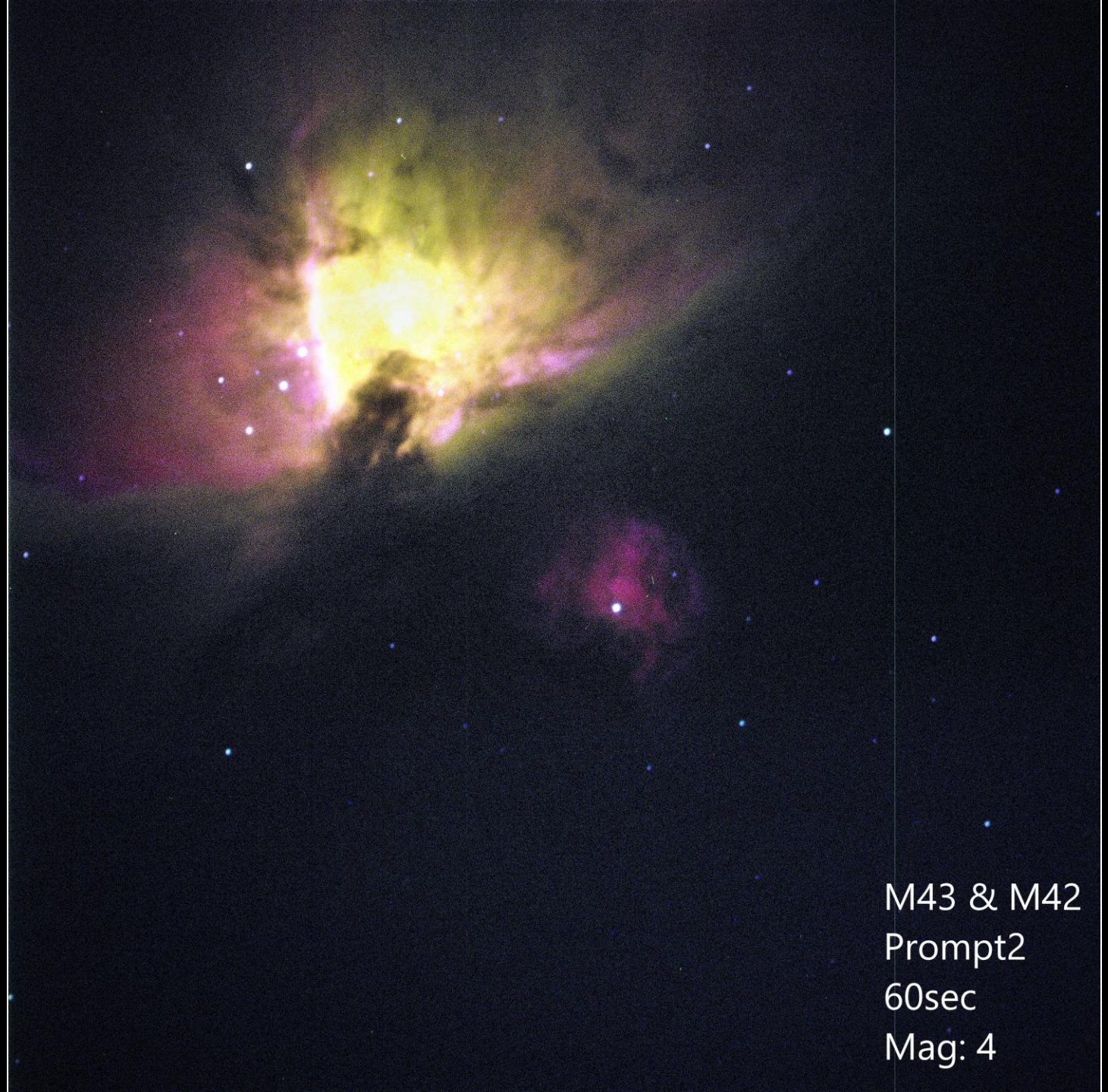
Jim Johnson
© 2021

Arjun Meenashi Sundar



IC 1318
60 sec
Mag: 3.23
Narrowband
RRRT

Arjun Meenashi Sundar



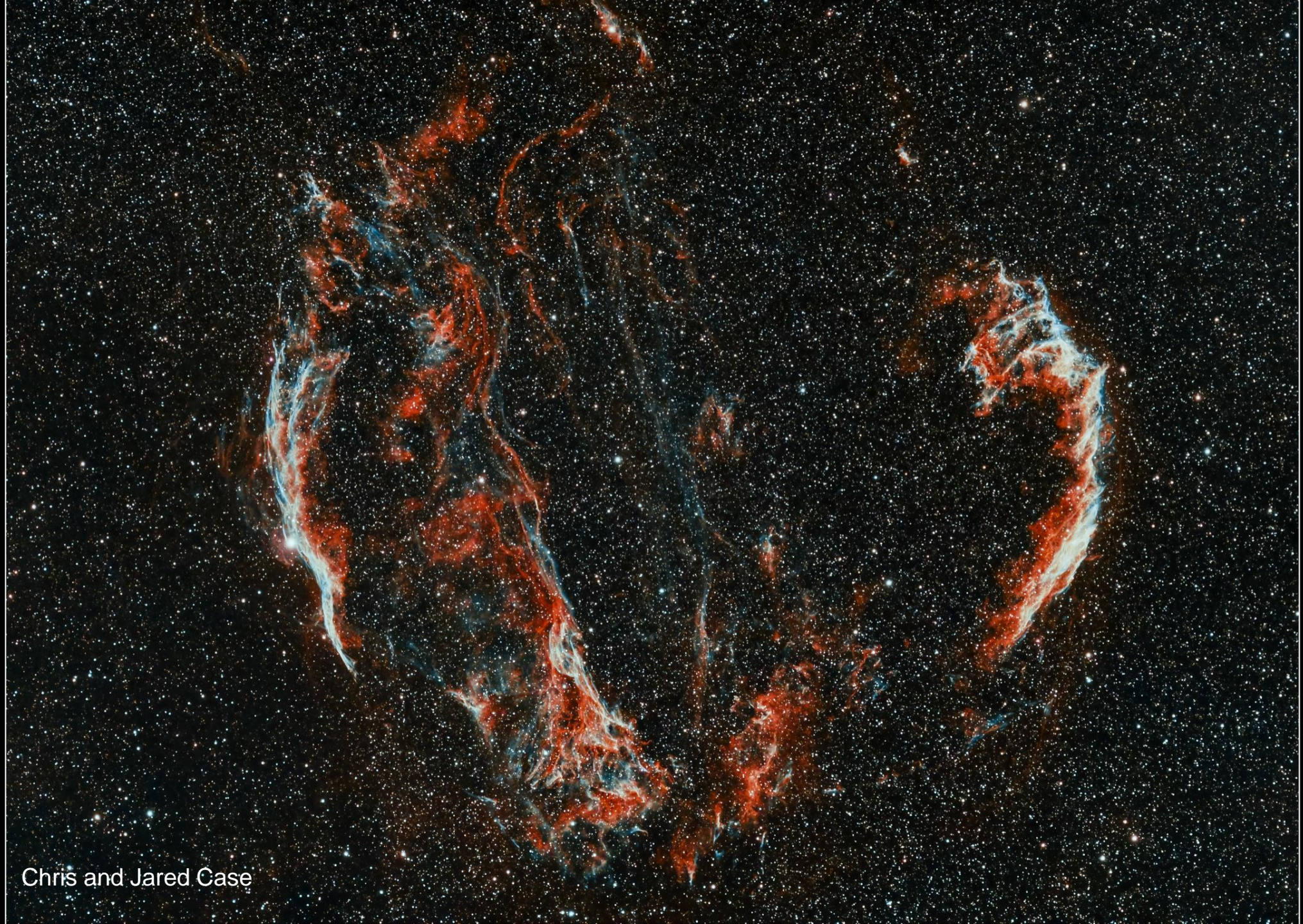
M43 & M42
Prompt2
60sec
Mag: 4

Arjun Meenashi Sundar

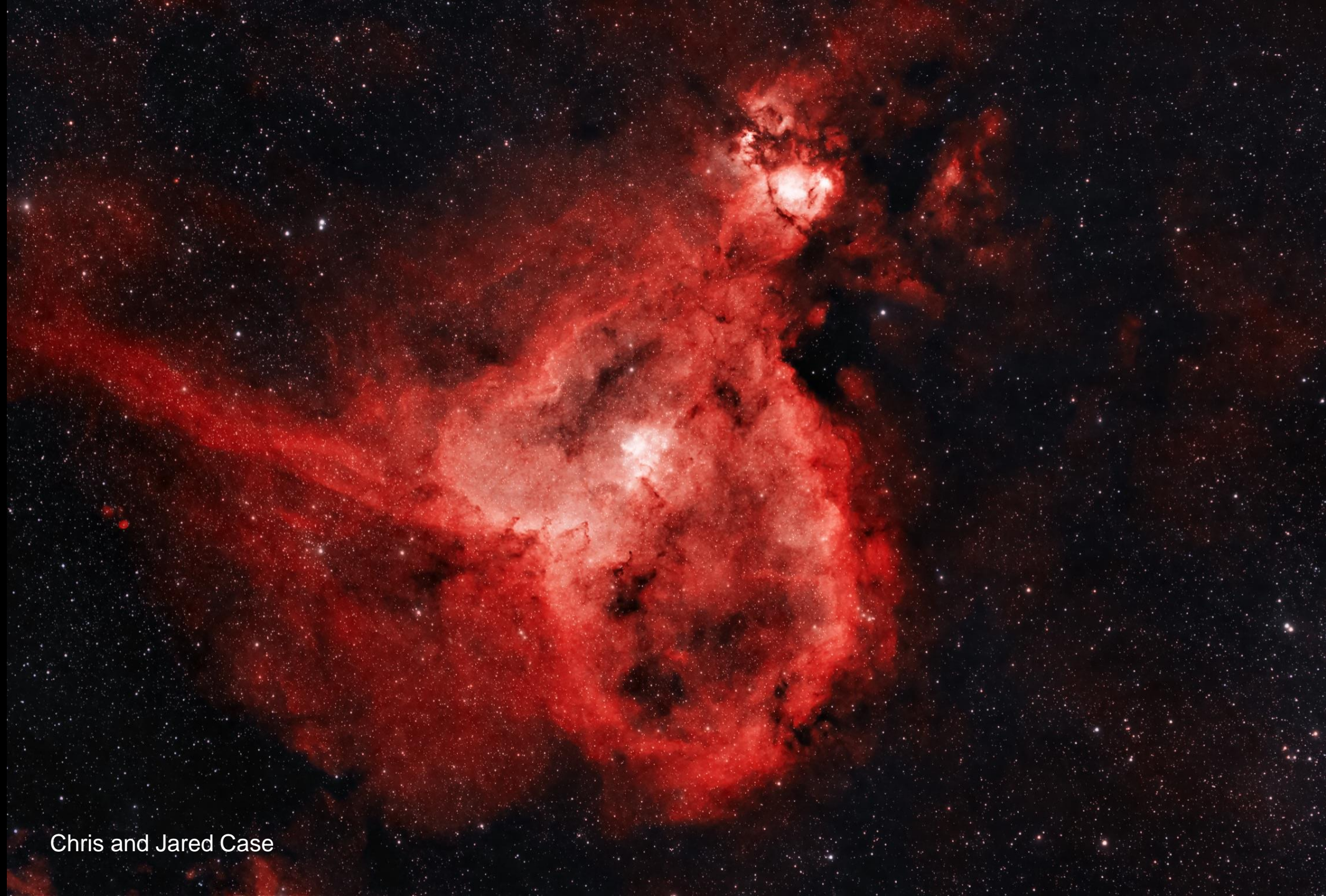


M8
Narrowband
Prompt2
60sec
Mag: 6.8






Chris and Jared Case



Chris and Jared Case



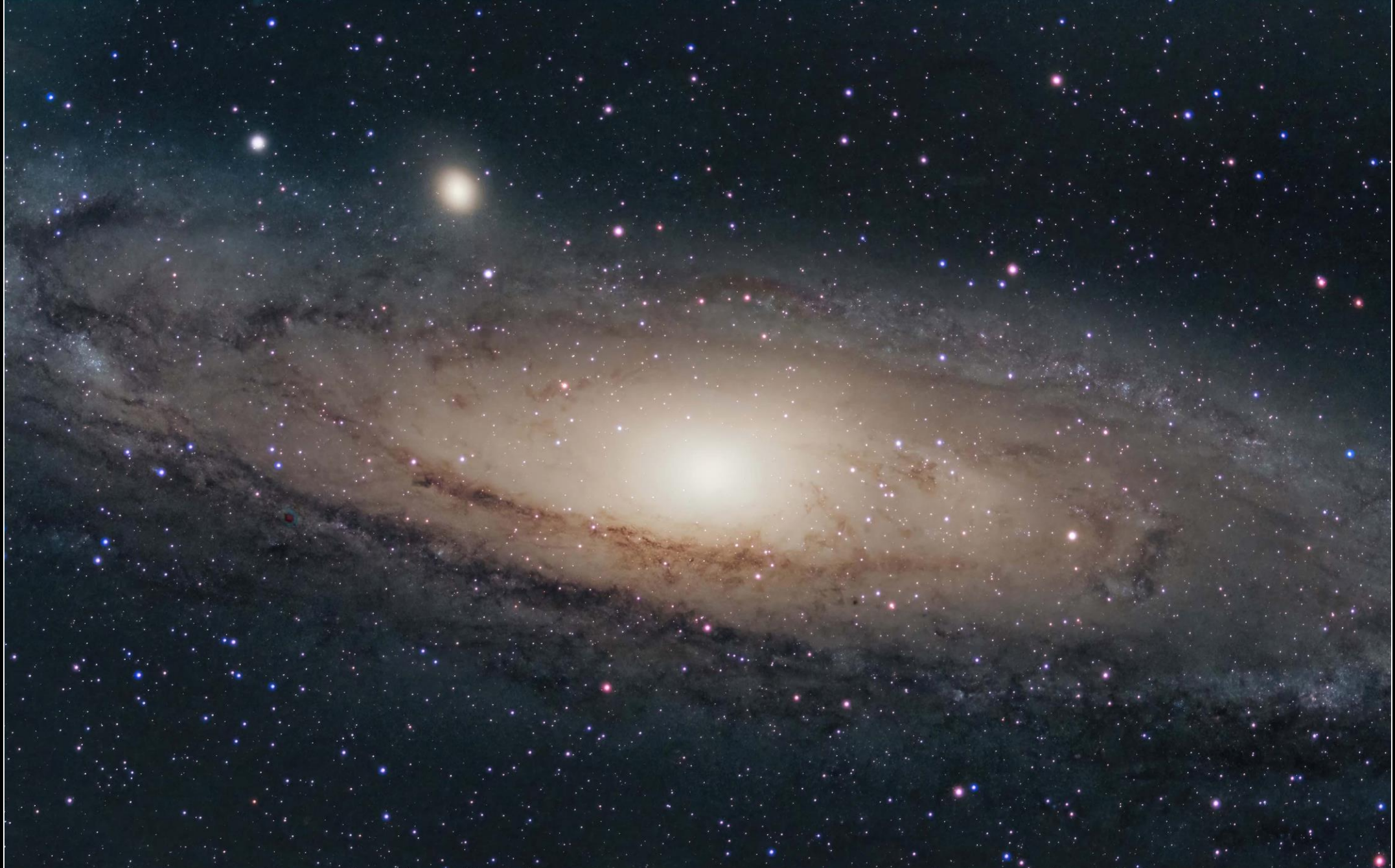
Cygnuswall – Brad Martin



NGC7380 – Brad Martin



Othereheis – Brad Martin

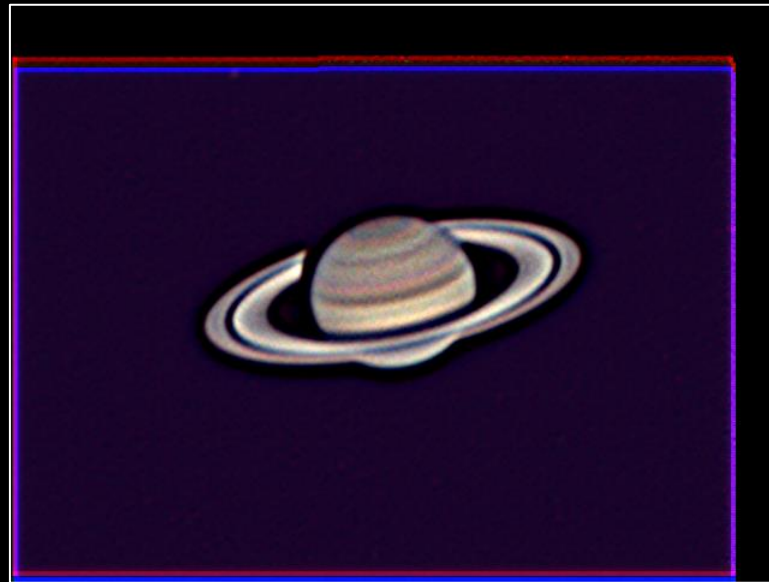
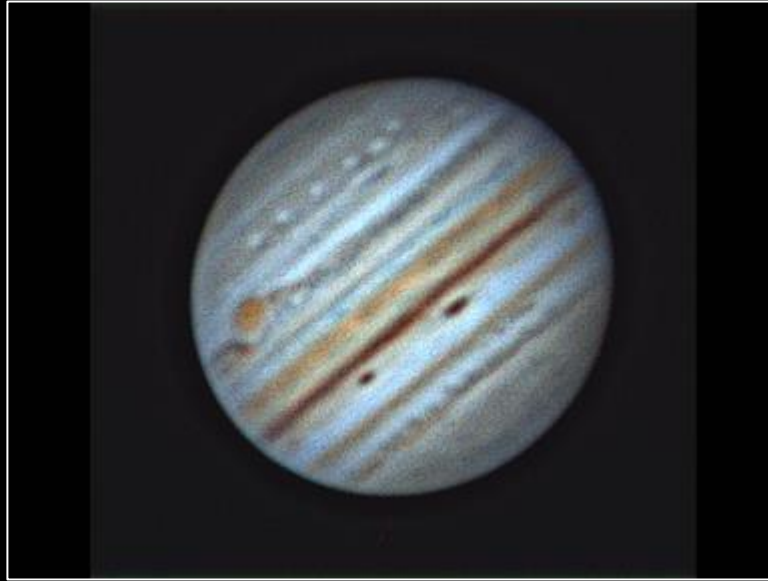


Andromeda – Brad Martin



Cavev8 – Brad Martin







Stephan's Qunitet
Sept (24,26), 2021
Alpha Ridge Park

8-inch F/8 RC
LRGB (69,30,30,29)x4min
10 hours 32 min Total

ASI1600MM-C
Gain 0 (5e/ASDU)
Wayne Baggett



Kurt Bauch



Kurt Bauch – NGC6960



Thank You

CLEAR SKIES!