



Howard Astronomical League Monthly Meeting

September 19th, 2024

Tonight's Agenda, September 19th, 2024

- ⇒ • Introductions
- Announcements
 - 2024 Schedule of Star Parties
 - Book of the Next Month
- Featured speakers – **Dr. Sarah Valencia, UMD/Goddard Spaceflight Center**
- What's Out in the Sky This Month...
 - Shallow Sky – **Jim Tomney**
- Astronomy Travel Report...
 - Vainu Bappu Observatory, Kavalur, Southern India – **Arjun Meenashi Sundar**
- Members' Astro-Images and Sketches
- Wrap-up & Discussion

HAL Star Parties...

HAL's 2024 Scheduled Star Parties

Month	Date	Invitees
March	09	Members
March	16	Public
April	06	Members
April	13	Public
May	04	Members
May	18	Public
June	08	Members
June	15	Public
July	06	Members
July	13	Public
August	03	Members
August	10	Public
September	07	Members
September	14	Public
October	05	Members
October	26	Public
November	02	Members
November	09	Public



Recent/Upcoming Events

- Public Star Party (Alpha Ridge) 9/14/2024 – Krystal Rolon, Richard Ren, Dale Ghent
- Impromptu Star Party (Alpha Ridge) 9/2/2024 – Jose Urias
- Impromptu Star Party (Alpha Ridge) 8/24/2024 – Richard Ren
- Andromeda Rising – Look to the Northeast in the early evening



Regional Star Party info...

<https://skyandtelescope.org/astronomy-resources/annual-stargazing-events/>

September 14th Public Star Party (Krystal Rolon, Victor Sanchez & Richard Ren Hosts)

23 HAL members set up their scopes, estimated over 300 visitors

- Krystal Rolon activities tent - lunar lander challenge, light-bright make your own constellations, and a coloring
- Bob Savoy Solar System exhibit table set up outside the HALO building
- Dale Ghent sharing views of the Crescent, Elephant Trunk, Eagle & Ring Nebulae, etc, within the observatory
- Grace Coventry views of various deep sky objects with her eVscope
- Phil Whitebloom had up to 300x magnification looking at the Moon through his 5" refractor
- Richard Ren and Jim Tomney shared views through the large Meade telescope out showing views mostly Saturn and The Moon



Book of the Next Month

Title:

- Space Shuttle Stories

Author:

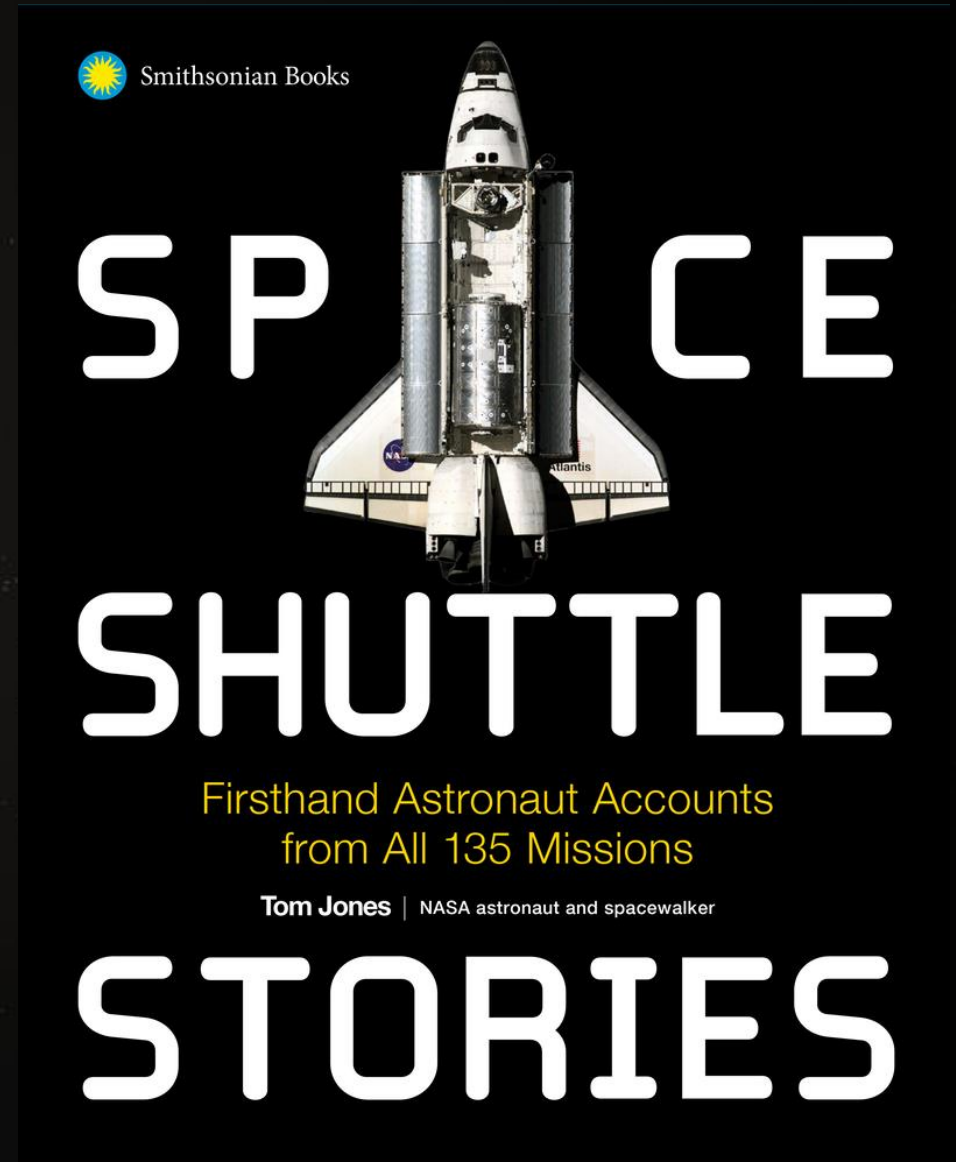
- Tom Jones

Length:

- 320 pages

Audience Level:

- Beginner Friendly
- Intermediate
- Advance/Experienced



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Topic: The Past, Present, and Future of Lunar Sample Analysis

Dr. Sarah Valencia

Dr. Sarah Valencia is a lunar geologist at the University of Maryland College Park and NASA Goddard Spaceflight Center through the Center for Research and Exploration in Space Science and Technology II program. Her research focuses on the formation and evolution of igneous lunar rocks using both lunar samples analysis and remote sensing techniques

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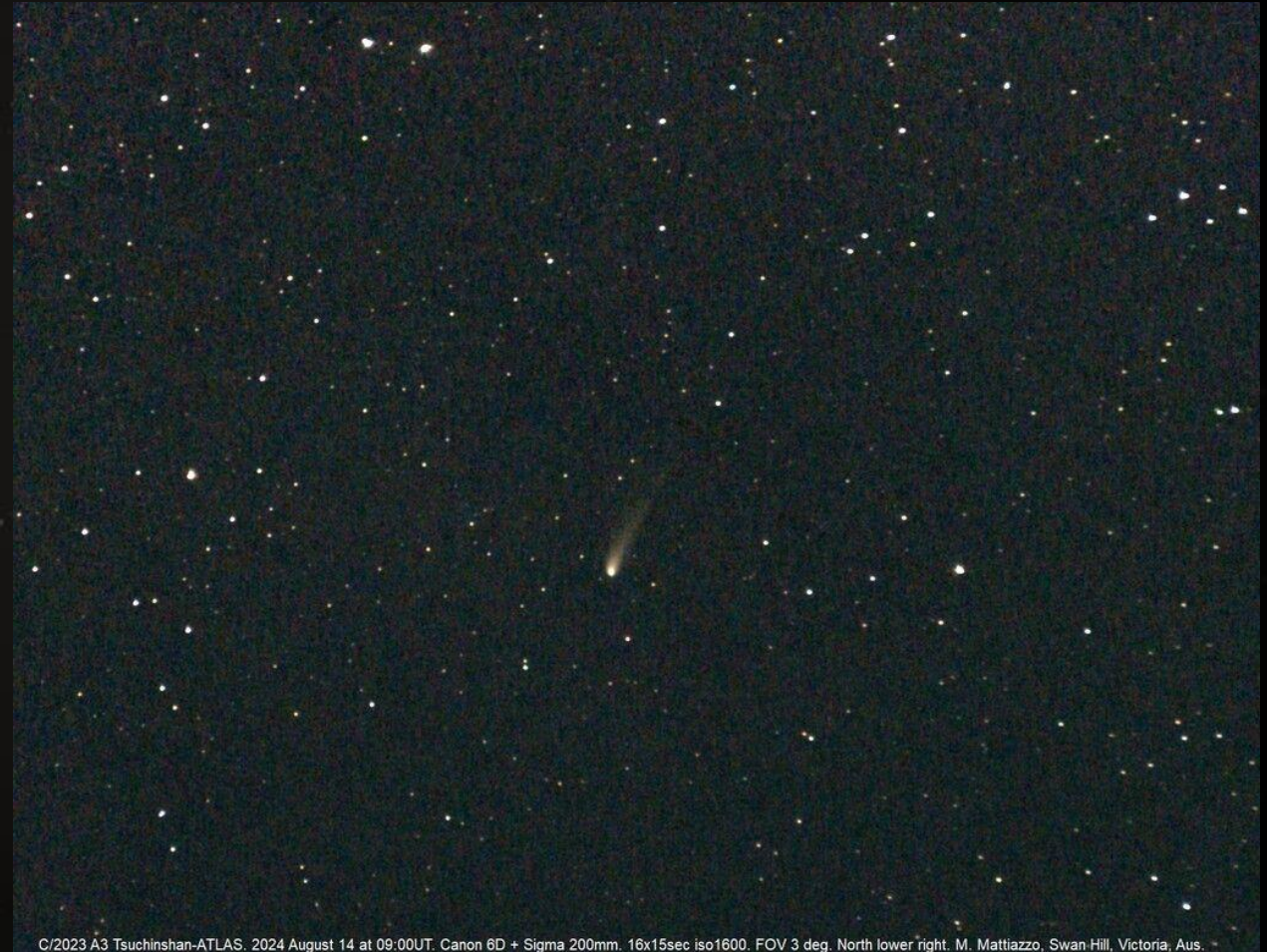
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Shallow Sky Highlights for Sep-Oct 2024

- *Mercury* is a poor target as it swings behind the Sun (Superior Conjunction)
- *Venus* is slowly climbing into the evening sky. Pairs with crescent Moon on Oct 5th.
- *Mars* has hit 7" in size, but still tedious to visually observe in the early morning and a bit challenging to image.
- *Jupiter* is still an early morning object for the most part, heading for opposition in Taurus on Dec 7th. Always lots of activity on this king of planets!
- *Saturn* well placed for observation. The rings are opening up slightly the next couple of months – can you make out Cassini's Division?

Comet Tsuchinshan-ATLAS (C/2023 A3)

- Reaches perihelion Sept 27th, and then perigee a few weeks later on October 12th
- Currently at around magnitude 5+ but hard to observe since it is close to the Sun in Sextens before dawn.



Comet Tsuchinshan-ATLAS (C/2023 A3)

- Predictions are for it to be 3rd-2nd magnitude as it emerges from the glare into morning sky.



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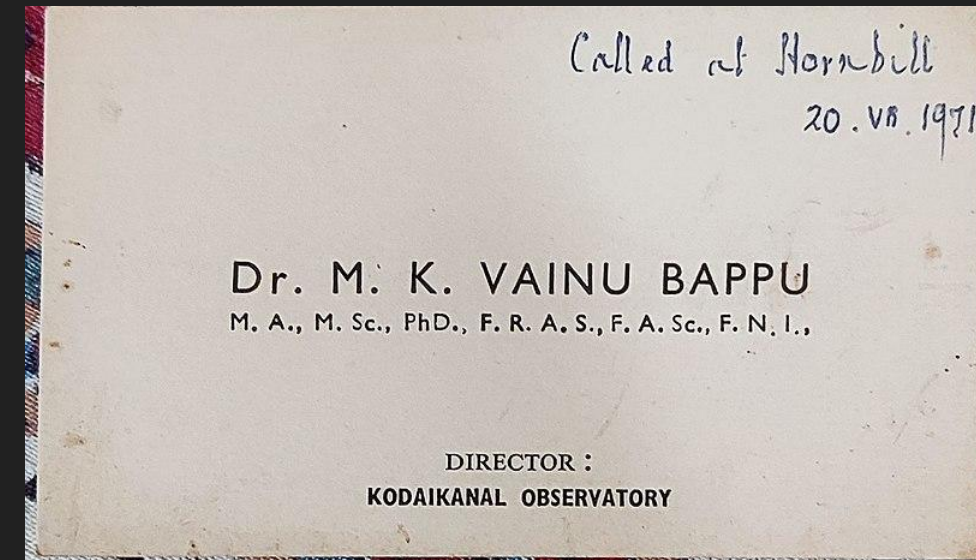
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Vainu Bappu Observatory

Arjun Meenashi Sundar

Introduction

- The Vainu Bappu Observatory was founded in 1960's by M.K Vainu Bappu, a leader in Indian astronomy.
- Vainu Bappu was the only indian astronomer to be the head of the International Astronomical Union.
- He is considered the father of modern Indian Astronomy.
- Vainu Bappu has discovered a comet, an asteroid, and has an effect named after him (Wilson-Bappu Effect).



Observatory Campus

The Vainu Bappu Observatory consists of four telescopes (currently):

- Vainu Bappu Telescope, 2.3 Meter Reflector
- Carl Zeiss Telescope, 1 Meter Reflector
- 15 inch Refractor
- 30 inch reflector

Each of these telescopes have different purposes and different equipment installed.
These telescopes are used for private research.

2.3
Meter



30
inch



1
meter



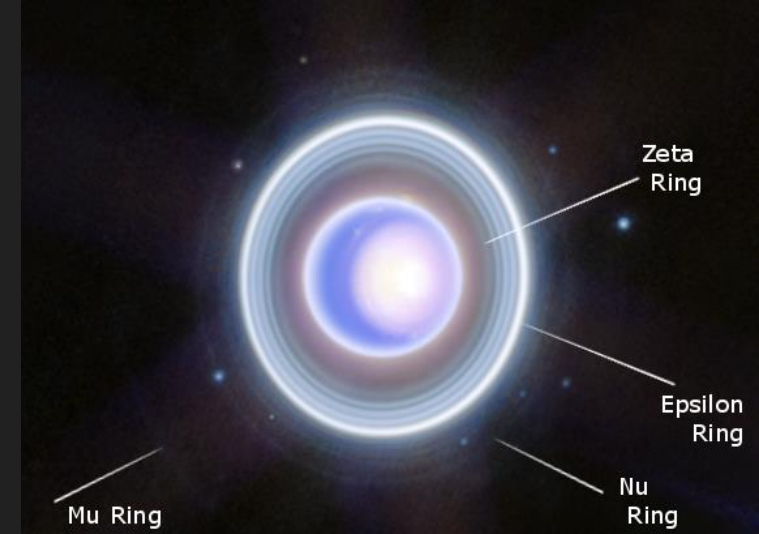
Discoveries

The Vainu Bappu Telescopes have made a few discoveries, including:

- The discovery of rings around Uranus
- The discovery of six new asteroids
- The presence of a thin atmosphere around Ganymede

There is also a lot of research going on currently, including:

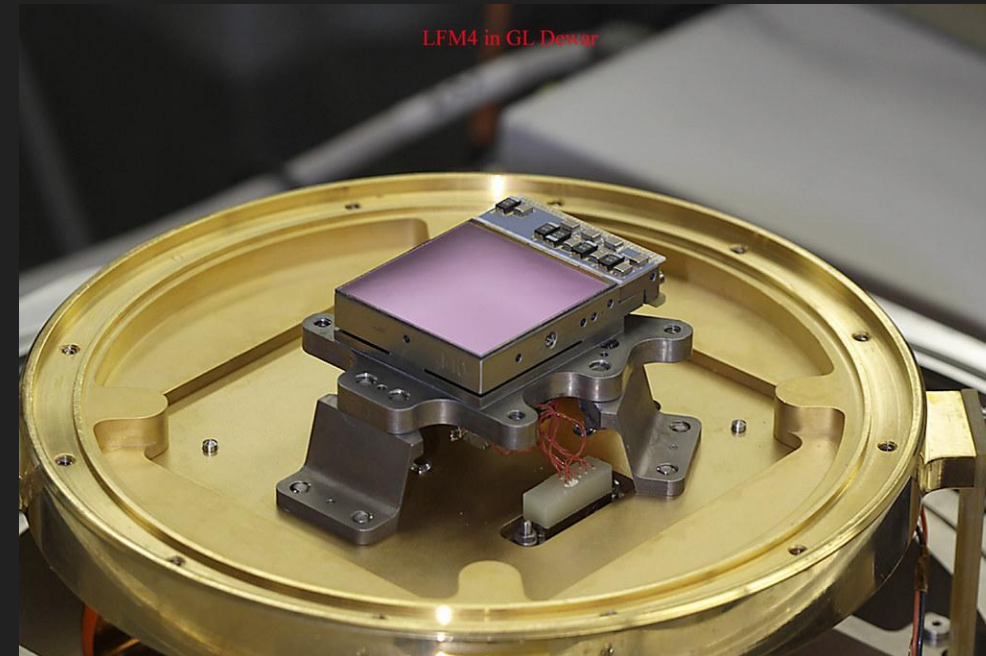
- Ultraflow Dispersion Spectroscopy of stars in the LMC
- Observations of stars, star clusters, novae, supernovae, blazars, galaxies, optical imaging of gamma-ray burst fields, stellar populations, and solar system objects



Instruments

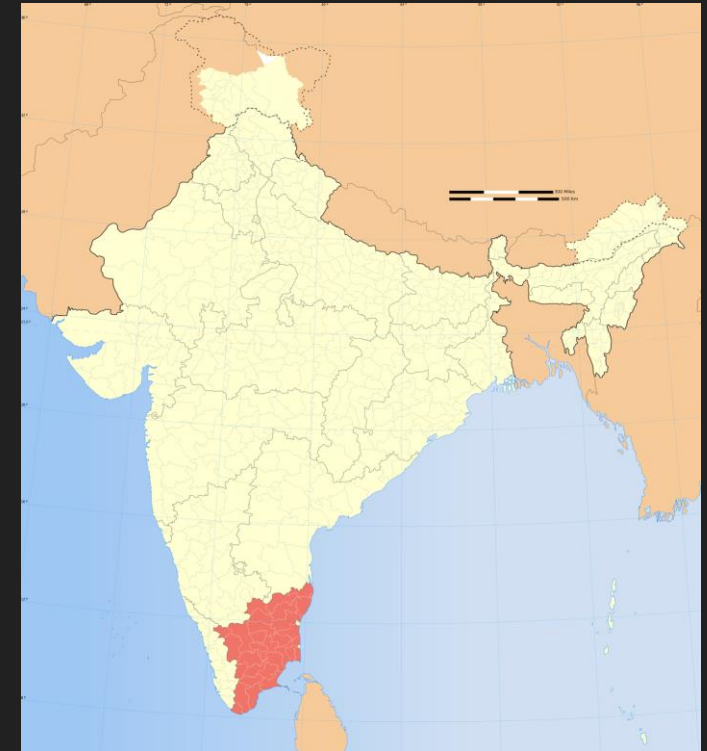
The Vainu Bappu telescope has many different instruments on it, each suited for the wide variety of needs that the astronomers there require. Some of the instruments are:

- Imaging Cameras
- High Resolution Echelle Spectrograph
- Medium Resolution Spectropolarimeter
- Medium Resolution Optometrics Research Spectrograph
- Visual-Band Spectral, Narrowband, and Broadband filters



Location

The Vainu Bappu Observatory is located in Kavalur, Tamil Nadu, on the Javadi Hills. This location is close to the equator, and thus offers views to both northern and southern hemisphere targets. A majority of nights in this location is clear, allowing for optimal research time. The sky there is a Bortle 5, making it not ideal but nonetheless a great place to observe. This campus hosts the second largest telescope in Asia, the 2.3 Meter Vainu Bappu Observatory.



Conclusion

I personally enjoyed this visit very much. The scene up to the mountain was serene, although the road was a little bumpy. The mountain chain was very intricate, with rivers and falls making the scene calm. The weather there also wasn't very humid and hot, allowing for the telescopes to properly operate.

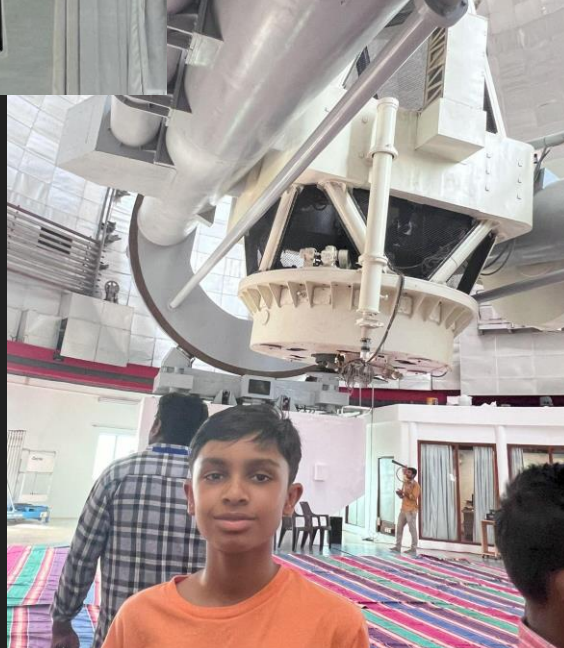
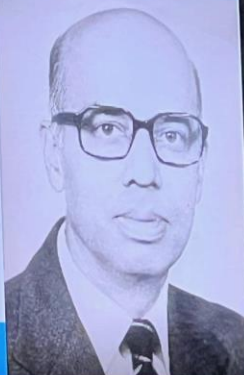


Pictures



Manali Kallat Vainu Bappu
(19 August 1927 - 10 August 1991)

- He was an Indian astronomer.
- He was the only Indian who became president of the International Astronomical Union (IAU).
- He is known as Father of Modern Astronomy in India.
- Bappu helped to establish several astronomical institutions in India, including the Vainu Bappu Observatory which is named after him.
- He discovered the Wilson-Bappu effect jointly with American astronomer Olin Chaddock Wilson.



Thank you for Listening!

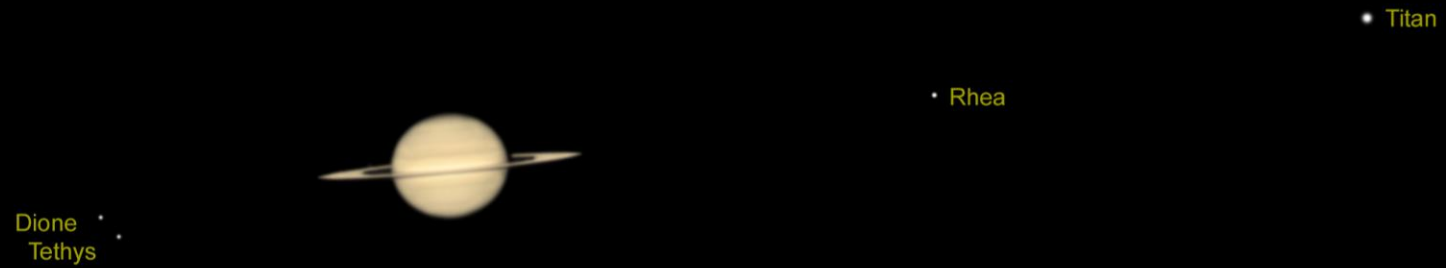
Youtube video: [Vainu Bappu Observatory / Indian Institute of Astrophysics, Kavalur, India](#)

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Saturn & Moons



Date: 22-August-2024
Time: 00:15 to 02:30 EDT
Location: Deck of House
Drawing by: Richard Orr

Telescope: 155mm Refractor
Eyepiece: 3.5mm Delos (312x)
Filters: Green #58 & Blue #80A
Orientation: Correct Image

Distance: 808,715,523 miles
Magnitude: 0.68
Size: 44 x 17 arcseconds

Jupiter – August 23, 2024 at ~4:40 AM

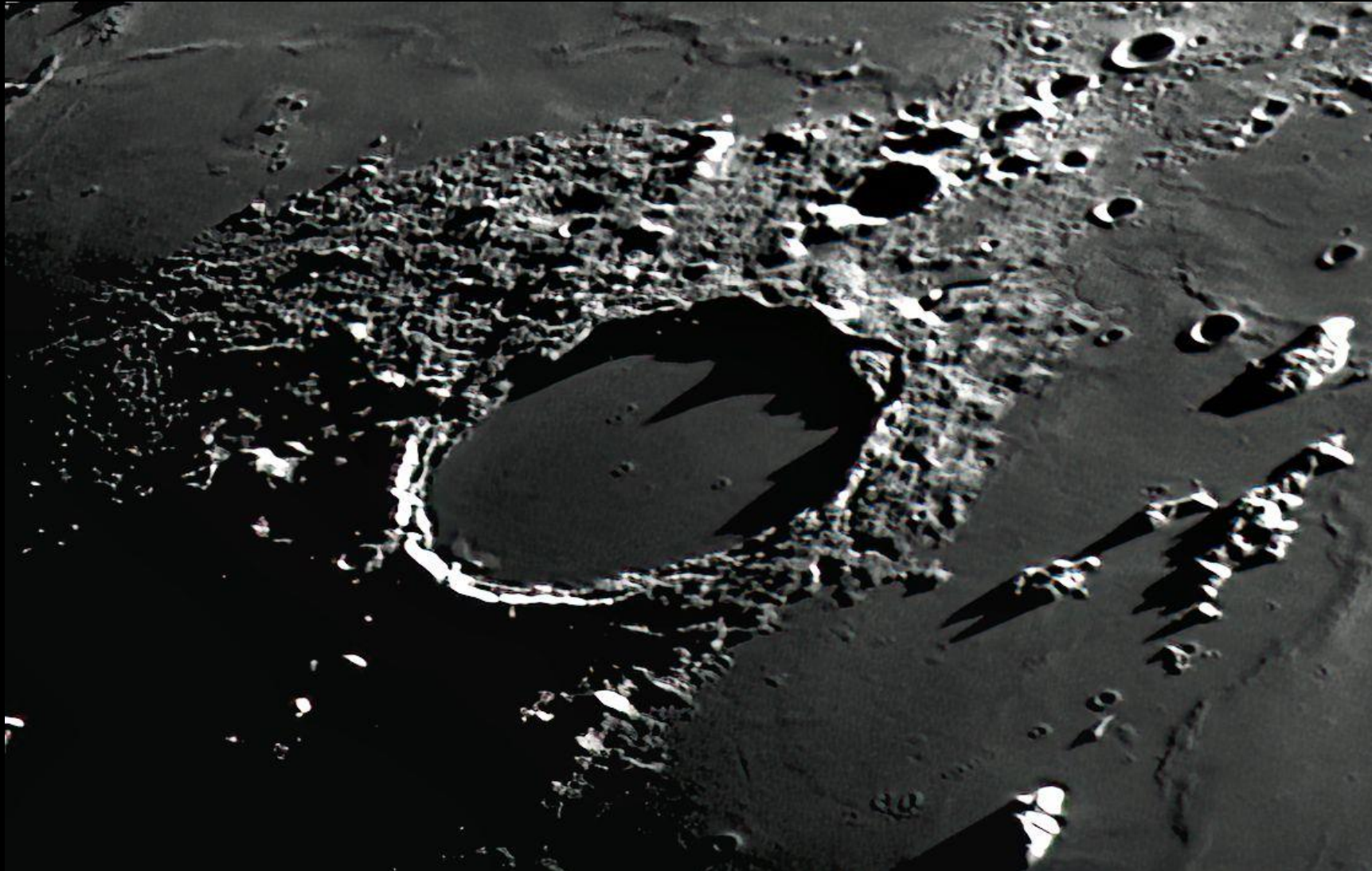
North
Equatorial
Dark
Formation



GRS

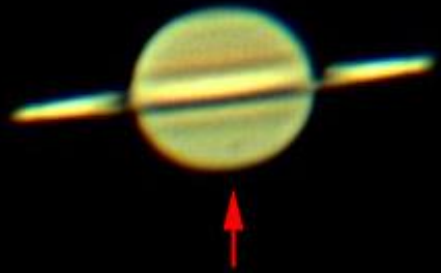
Anti-cyclones
A2. A3. A4

Plato – August 27, 2024 at ~5:40 AM



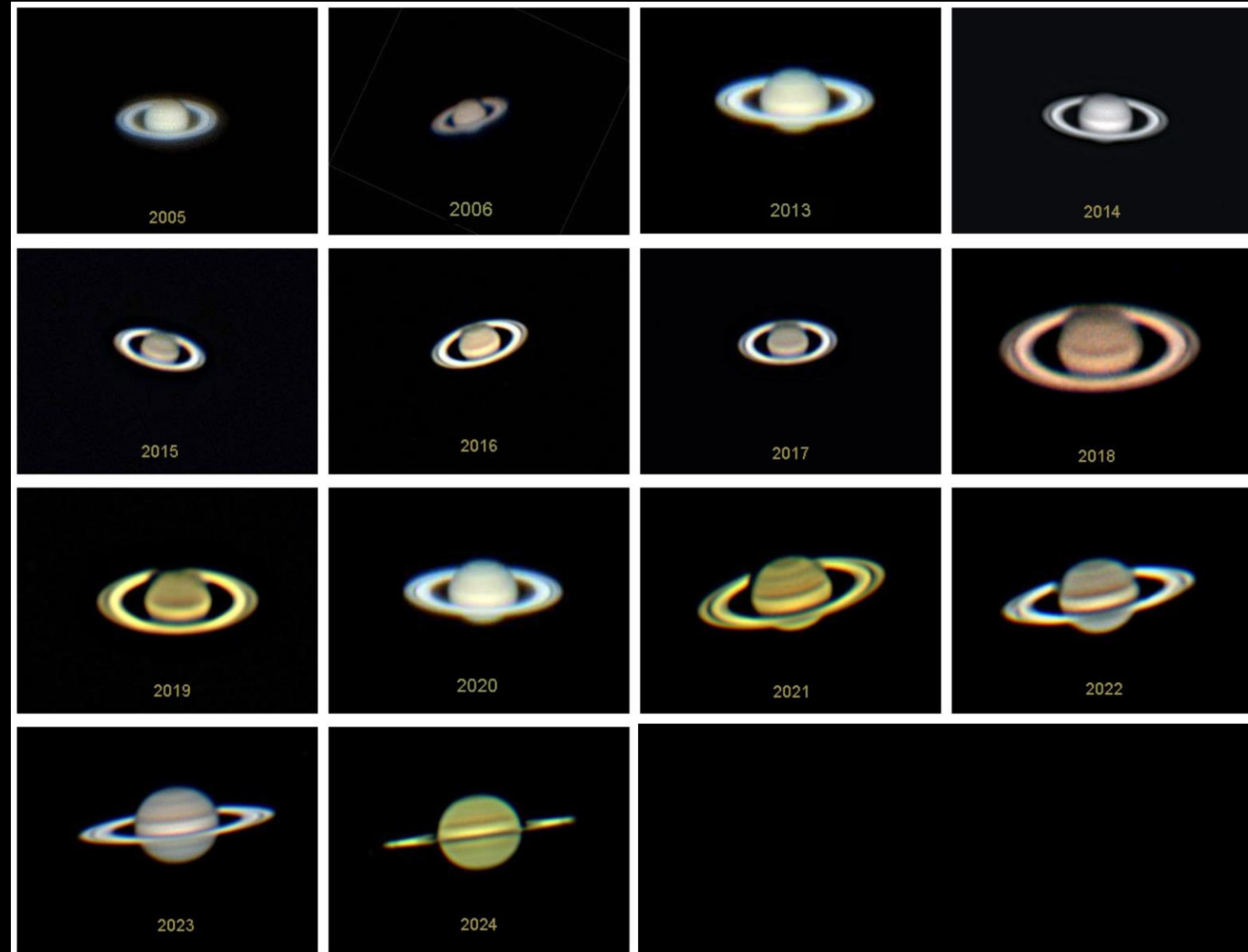
Saturn through the years 2005 to 2024

Various camers and telescopes so scale is not consistent.



Shadow of Rhea transiting
12 August 2024


0022 0039 0107



 Seestar S50

Ellicott City / 2024.09.07 22:16

Saturn

 Seestar S50

Ellicott City / 2024.09.07 22:19

Saturn

1min

Harrini Meenashi Sundar



Seestar S50

M 31

Ellicott City / 2024.09.07 23:28

46min



Seestar S50

NGC 6960

Ellicott City / 2024.09.07 22:13

36min



Michael R Connelly
m81,m82 7hr September 2024

Michael Connelly



ACO 426 - Perseus Galaxy Cluster - 10f5 + QHY236M - RGB - 13'Hrs

Gene Handler



M27 - Dumbell or Butterfly? - 10f5 + QHY286M - HaOIII RGB - 17.5 Hrs



John
2014

Jim Johnson

Thank you