May 2022

A newsletter of the
Houston Astronomical Society

GuideStar

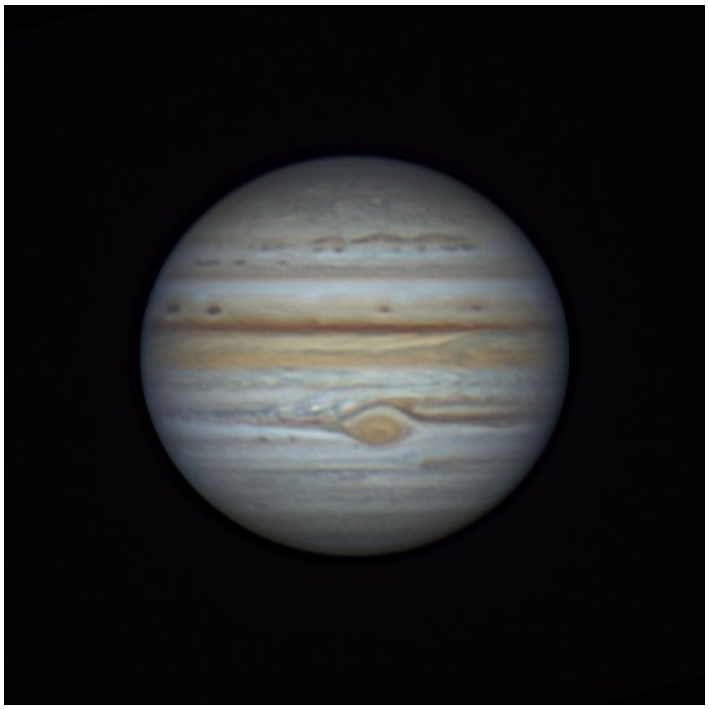

Photo by Sonny Manley, member

Jupiter with Great Red Spot, taken with C8 from backyard in Missouri City, TX

Fostering the Science and Art of Astronomy Through Programs that Serve our Membership and the Community

May 05, 2022, 7:00PM: Novice Presentation Via Zoom

"My Amazing Experiences at Kennedy Space Center"

with Bill Spizzirri

One of the advantages of traveling as an amateur astronomer is that you see and understand astronomy and space science related tourist attractions in a depth and from a perspective that others may not. Bill will share with us his travels to and experiences Kennedy Space Center with his signature wit and insight.

Speaker Bio: Bill Spizzirri has been an amateur astronomer for 50 years is a member of HAS and has also been a member of an astronomy club near Chicago for 36 years and counting. He served there as President for two years and has held other offices. Bill is now a retired software analyst and grandpa of three. His main astronomy activity these days is teaching children about our universe.

May 06, 2022, 7:00PM: May Regular Meeting - via Zoom

Characterizing Planets Around Other Stars: The Quest to Understand Planet Formation

With Dr. Christopher Johns-Krull

With over 5000 planets confirmed around other stars, the field of extra-solar planet studies is moving beyond merely discovering these worlds around other Suns, and is increasingly focused on characterizing planets to learn more about them. The wide variety and configuration of the planets we have discovered has caused us to reconsider many of our ideas of how planets form, and many questions still remain. Finding and characterizing planets around young stars provides new clues to understand planet formation.

This talk will describe recent work at Rice University that has for the first time been able to distinguish the formation pathway of a young planet.

The talk will then look forward to efforts underway to search for inhabited worlds around our nearest stellar neighbors.

Our Speaker : Dr. Christopher Johns-Krull is Professor of Astronomy at Rice University where he has been a member of the faculty since 2001. Chris received his Ph.D. from the University of California Berkeley after which he held several Postdoctoral and Research positions before he found his way back to Texas where he began his education by earning undergraduate math and physics degrees with High Honors from the University of Texas, Austin.

In addition to his own research and teaching responsibilities, Chris has actively served the astronomical community as a reviewer for several prominent journals and on numerous review boards and committees which organize and help the whole astronomical enterprise to run. He also has an extensive list of both honors and publications.

Of great interest to the amateur astronomy community is the high level of astronomy outreach Chris has done over the past 20 years throughout Texas, speaking to astronomy clubs, Astronomy Day, other public events such as at the McDonald Observatory, and to schools throughout the state. Chris is a very active member of the professional astronomy community a true friend amateur astronomy. We are privileged to have Chris present to HAS!

AP Corner - May 2022 - Finding Your Focus – Part 1

By Don Selle

It may seem obvious, but critical focus is one of the key attributes of a good astro-image. Critical focus is the technical term used to mean that the image is focused to the diffraction limit of the optical system (based on the physical properties of the system and how light interacts with it).

Most of us take critical focus for granted in the images we see and take daily. Our DSLR's with modern lenses, our point and shoot cameras and our smartphone cameras all come equipped with exquisitely accurate autofocus systems. This technology has been available at the consumer level for over 40 years, first in film cameras, later in digital cameras and has been continuously improved ever since.

Not so for astrophotography. Telescopes don't come equipped with the type of focus sensors that the early film cameras had. Astro-imagers had several different manual focus aids they could use, such as flip mirrors and Focault knife-edge focusers, but these were tedious to use and required considerable experience using them to achieve critical focus.

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Unique Telescopes for Kids - May 2022

By: Amelia Goldberg

This is an update on my project to get kids involved in astronomy by giving them their own personal telescope. I feel they will be more likely to use a telescope that is theirs, one they helped to design and decorate. This is my fourth project and I am very pleased with the outcome.

Valentino Dela Cruz is an active, curious and very smart four-year-old. He has been studying the solar system in school and is extremely interested in anything space oriented.

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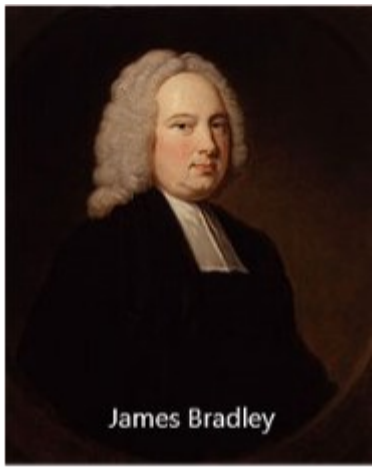
The Discovery of the Aberration of Starlight

By Don Selle



First published in the March 2012 issue of The GuideStar

I truly enjoy learning the history of astronomy, because I find that it is much more interesting way to learn the basics than getting them out of a textbook. It helps me to better understanding when I am able to visualize the path taken by the astronomer, as well as the struggles and small successes that lead to the discovery of new knowledge.

It is also encouraging for me to note that in the early days of astronomical science, it was "amateurs" who were making the discoveries and developing new techniques and technologies in the process. Few stories from the history of astronomy illustrate this better than the discovery of the aberration of starlight.

The development of our understanding of astronomy has been greatly enhanced by the application of the scientific method. Observations are made to test a theory, theories are modified to match observational evidence and at times unexpected results are obtained which lead to new discoveries. A classic demonstration of the scientific method from astronomy's early years is the discovery and description of the aberration of starlight by James Bradley, a very dedicated amateur, driven to understand what he was observing.

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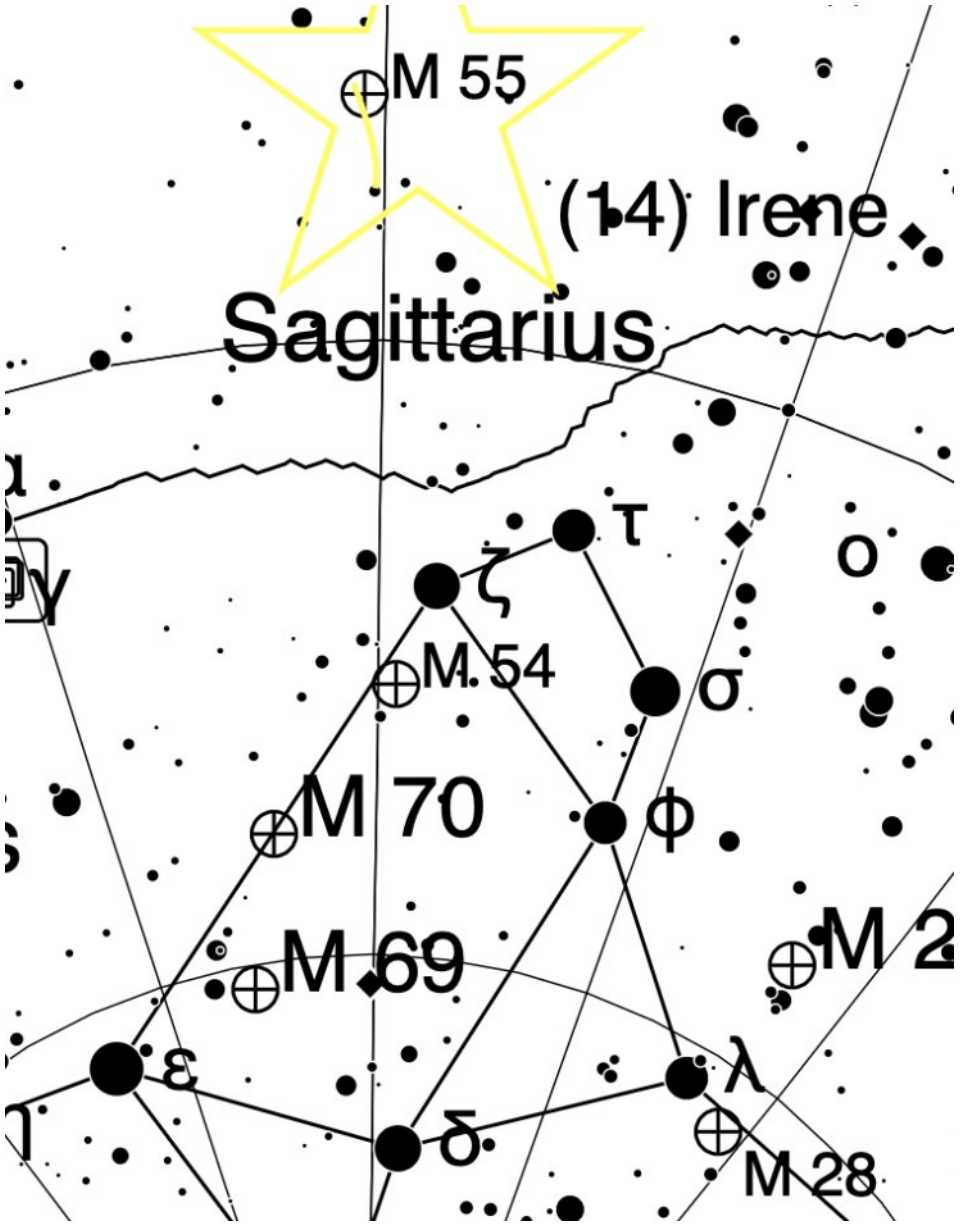
Messier Column - May 2022

by Jim King

Why did Charlie chase comets???

Given the incredible and efficient technologies used to discover comets in the twenty-first century, both on Earth and in space, many of today's telescopic observers pursue comets mostly as objects of passing interest—especially when they blaze forth to naked-eye splendor or threaten to hit the earth…or other planets. Note, however that owing to the same leaps in technology, some amateur astronomers across the globe also conduct extremely serious studies of, and searches for comets, and have contributed greatly to the science. Nevertheless, to the mid-eighteenth-century observer, comets were among the most mystifying sights in the sky. The astonishing appearance of six-tailed C/1743 XI (Cheseaux's comet of 1744) – one of the greatest since the dawn of modern astronomy – may have inspired Messier's lifelong passion for comets.



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Night Lights: Aurora, Noctilucent Clouds, and the Zodiacal Light

by: David Prosper

Have you spotted any “night lights”? These phenomena brighten dark skies with celestial light ranging from mild to dazzling: the subtle light pyramid of the zodiacal light, the eerie twilight glow of noctilucent clouds, and most famous of all, the wildly unpredictable and mesmerizing aurora.

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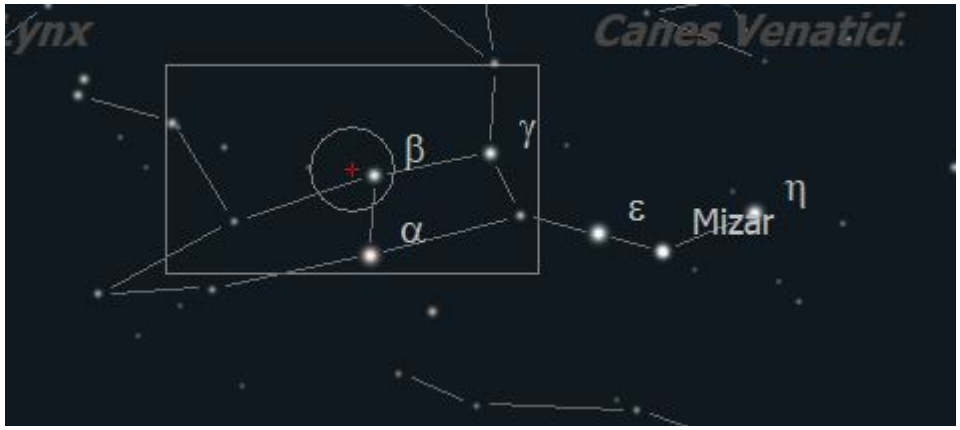
This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Asterisms – Broken Engagement Ring

By Steve Goldberg

Asterism: a grouping of stars that form a recognizable pattern.



This month's asterism is called the "Broken Engagement Ring". It is located near the bowl of the Big Dipper. It is made up of a semi-circle of stars, about 15 minutes in size.

Constellation: Ursa Major

Right Ascension: 10h 51m 00.0s

Declination: +56° 09' 00"

Magnitude: 7 to 11

Size: 15 minutes

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HAS members receive this newsletter monthly. Others interested in HAS must subscribe directly.

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