



APRIL 2019

NIGHTFALL

A PUBLICATION OF THE HUACHUCA ASTRONOMY CLUB

PRESIDENT'S NOTES

April? March was so long I thought we'd have to skip April. So much has happened this March, not all good. Our quiet strength, Robert "Bob" Gent passed. Bob, with very little help from the rest of us, secured our connection to the dark skies here in Cochise County. Bob was the first person to meet me when I was moving out here, helping me pull my observatory dome from the U-Haul truck then whisking me over to his home to see his observatory and meet Terrie. That's an astronomer and a friend. I'm not a very emotional or spiritual person, but losing Bob hurt. Even though he and Terrie had moved back east for family interests, he remained personally connected to the club and all of us here. We had even talked about automating a telescope here for his use, but he laughed it off; I wasn't kidding. That's the least I could do for him. If you knew him, you wouldn't have been kidding either.

March also saw the second nearly annual swap meet and sale. Turnout on the selling side was good, but I have to work harder to get buyers next time. Still, some people got some great deals and the club made some money.

If it has been a month since you last got a peek at the night sky I'll try to catch you up: Orion is now in the west and setting in the late evening. There aren't any bright or even dim comets, only very dim dot comets. The winter Milky Way is setting in the evening as well, leaving just a few bright local stars near the zenith and to the east, such as the stars of Leo and the dimmer stars of Virgo. Between most of these stars, we are looking beyond the veil of our Milky Way and out into dark voids wherein other galaxies dwell. They come in a staggering array of forms, and many are visible with a modest sized (8"-10") telescope. Some of the brighter ones even show some structure.

So maybe it's time you to dust off your light buckets and start scanning Leo and Virgo and east of there. Anywhere there are no apparent stars are good areas to wander. Of course, if you don't like to happen upon them, use a star map or planetarium program. In addition, early April is a good time to try a Messier Marathon. Keith Mullen is having

one April 6 and we will be looking at some of the same objects at the Kartchner Caverns star party on the 6th.

You know what they say, "April, that's when the sky really clears up in the southwest." Yep, that's what they say. Oh, and get out there and stare

PLEASE WELCOME OUR NEW MEMBERS

Glen Sandy of Sierra Vista and Issac AshLind of Bisbee joined the club in March. Issac, our newest student member studies at Cochise College. Joining in April is Samantha Martin of Ft. Huachuca. Welcome! We are glad you joined.

AT THE APRIL 19 MEETING

Please note: the April meeting will be held in the Library Commons at Cochise College, Sierra Vista Campus.



Our guest speaker is Ekta Patel, a graduate student and NSF Graduate Research Fellow in the Department of Astronomy and Steward Observatory at the University of Arizona.

Ekta's research interests include the evolution and dynamics of satellite galaxies and their subsequent influence on their respective host galaxies in high resolution simulations.

She received her B.A. in Physics from New York University in 2014, where she worked on several research projects with Dr. David Hogg. At Steward Observatory, she works with Dr. Gurtina Besla to analyze both original and existing high-resolution simulations that help us understand the dynamical history of the Local Group. Dr. Patel is also a member of the TiNy Titans (TNT) collaboration and the HSTPROMO collaboration.

BOB GENT
AUG 21, 1947- MAR 23, 2019
A LIFE WELL-LIVED

We lost a good friend with the unexpected passing of Bob Gent. He was a mentor to many of us, a leader, a selfless volunteer, and a kind and gentle spirit. He leaves a void, not only in our club, but in our hearts.

We all knew Bob as a former club president, the point man for all things related to the dark sky, a tireless outreach participant, an enthusiastic astronomer and so very much more.



His loss will be felt far and wide. He was a past president of the International Dark Association – in fact he was with IDA at the beginning and was a lifelong supporter. He was actively working to establish the Ohio

chapter when his efforts were cut short. Bob was also a past president of the Astronomical League. I hope those of you that were witness to the League's tribute to Bob at the Casper Wyoming Alcon in August 2017 feel as privileged as I do to have shared his birthday celebration. Isn't it fitting that the universe itself would honor him with the gift of the Great American Eclipse for that birthday? And speaking of great Americans, Bob was quite proud of his military service in both the Army and Air Force.

In 2000, the International Astronomical Union honored Bob's long history of service to astronomy with the re-naming of the minor planet 1986 RG3 as "BobGent". That act speaks of a lifetime of accomplishment far too rich to relate here. Perhaps though, his greatest accomplishment is in the number of people he inspired and the large number of friends he leaves behind. RIP Bob. You will be greatly missed.



NASA NIGHT SKY NOTES APRIL 2019

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.org to find local clubs, events, and more!

MARS THE WANDERER

BY DAVID PROSPER

April's skies find Mars traveling between star clusters after sunset, and a great gathering **of planets just before sunrise.**

Mars shows stargazers exactly what the term "planet" originally meant with its rapid movement across the evening sky this month. The ancient Greeks used the term *planete*, meaning wanderer, to label the bright star-like objects that travelled between the constellations **of the zodiac year after year.**

You can watch Mars as it wanders through the sky throughout April, visible in the west for several hours after sunset. Mars travels past two of the most famous star clusters in our night sky: the Pleiades and Hyades. Look for the red planet next to the tiny but bright Pleiades on April 1st. By the second week in April, it has moved eastward in Taurus towards the larger V-shaped Hyades. Red Mars appears to the right of the slightly brighter red-orange star Aldebaran on April 11th. We see only the brightest stars in these clusters with our unaided eyes; how many additional stars can you observe through **binoculars?**

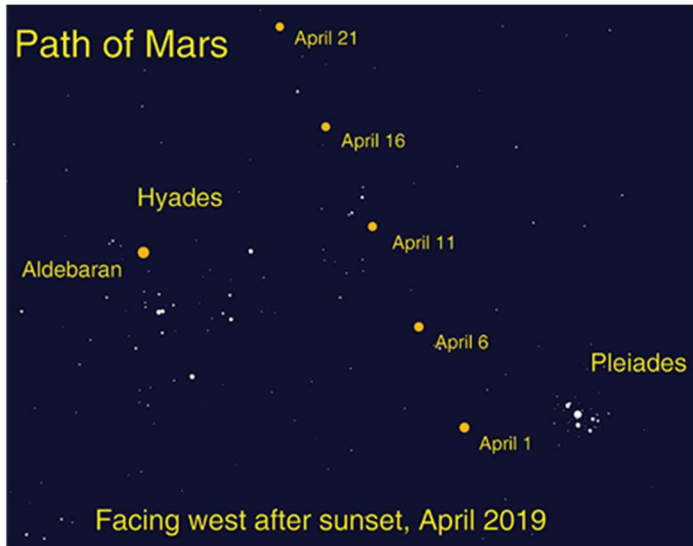
Open clusters are made up of young stars born from the same "star nursery" of gas and dust. These two open clusters are roughly similar in size. The Pleiades appears much smaller as they are 444 light years away, roughly 3 times the distance of the Hyades, at 151 light years distant. Aldebaran is in the same line of sight as the Hyades, but is actually not a member of the cluster; it actually shines just 65 light years away! By comparison, Mars is practically next door to us, this month just a mere 18 light minutes from Earth - that's about almost 200 million miles. Think of the difference between how long it takes the light to travel from these bodies: **18 minutes vs. 65 years!**

The rest of the bright planets rise before dawn, in a loose lineup starting from just above the eastern horizon to high above the south: Mercury, Venus, Saturn, and Jupiter.

Watch this month as the apparent gap widens considerably between the gas giants and terrestrial planets. Mercury hugs the horizon all month, with Venus racing down morning after morning to join its dimmer inner solar system companion right before sunrise. In contrast, the giants Jupiter and Saturn move away from the horizon and rise earlier all month long, with Jupiter rising before midnight by the end of **April**.

The Lyrids meteor shower peaks on April 22nd, but sadly all but the brightest meteors will be washed out by the light of a bright gibbous Moon.

You can catch up on all of NASA's current and future missions at nasa.gov



Caption: The path of Mars between the Pleiades and Hyades in April. Image created with assistance from Stellarium.

WANT ADS

FOR SALE: Celestron CGEM Equatorial Mount. Less than 3 years old, like new. Will hold an 11-inch SCT plus camera. Rated at 40 lbs. Tripod included. \$1000.00. Permanent pier also available.

Phone Bob Kepple at 520-366-0490 or see him at meeting.

FOR SALE: Nikon camera gear and lenses

Nikon D750 w/24-120 lens, five batteries, stock charger, Nikon mc-dc-2 remote cable release, box, manual, lens and body caps \$1500

Nikon 80-400 zoom, lens caps, soft case \$1275

Nikon 70-200 f/4, lens caps \$900

Nikon 50mm f/1.8 G, 85mm f/1.8 G, lens caps \$385 set

Tamron 15-30, lens caps, \$775

Nikon D7200, Nikon 18-140 lens, Nikon 18-300 lens,

Nikon mc-dc-2 cable release, two batteries, stock charger, manual, \$1100 as a set

Contact Mike J. Shade at mshade@q.com

FOR SALE: A nearly unused ZWO 1600 with CFW and filters, and an ASA 12" Astrograph

Contact Mike Mirot

CLUB OFFICERS AND CONTACTS

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HAC Apr-May Calendar of Events

SU	MO	TU	WE	TH	FR	SA
24	25	26 Jupiter/Moon	27  9:10 PM	28	29 Saturn/Moon and Pluto	30
31 Total solar eclipse during the transit of Venus.	1 Apr	2	3	4	5  1:50 AM	6 Kartchner Star Party noon to 9 PM
7	8	9 School Field Trip Patterson 9:30A 1:30P	10	11 Patterson Public Night 7:30 PM	12  12:06 PM Yuri's Day	13 UA Family Day Patterson Open House 10A-2P
14	15	16 Sisters Cities Students at Patterson 9A	17	18	19  4:12 AM HAC Meeting Library Commons	20 Earth day at Kartchner noon
21 	22	23 School Field trip Patterson 9:30A -1:30PM	24	25 Earth Day at Farmers Market 10A-2P	26  3:18PM Math & Science Patterson 8A-1P	27
28	29	30	1 May	2 Vesta 0.2° S of Moon	3 Mercury 3° N of Moon	4  3:46PM
5 Eta Aquariid meteors	6 Eta Aquariid meteors	7 School FT at Patterson 9:30am Eta Aquariid meteors	8	9 Patterson Public Night 7:30PM	10 HAC Meeting Student Union	11  6:12 PM Astronomy Day SV Library 10A-2P
12 	13	14	15 Chamber Leadership Class at Patterson	16	17 Double Adobe School at patterson 9:30AM	18  2:11PM Venus and Uranus 1.2°
19 Ceres and Moon 1.2°	20 Jupiter and Moon 1.7°	21	22 Saturn and Moon 0.5°	23	24	25
26  9:34AM	27  MEMORIAL DAY	28 Ceres at Opposition	29	30 Vesta 0.6° S of Moon	31 Uranus 5° N of Moon	

All event times MST. Join HacAstro to keep up to date with all of the Huachuca Astronomy Club events
Send an email to: HACAstro+subscribe@groups.io