

THE OBSERVER



Galaxy Wars M81 versus M82 - APOD March 25, 2008
Image Credit & Copyright: Ranier Zmaritsch and Alexander Gross

From the Desk of the President *by Gordon Rosner*

Greetings from your President.

As always, I sure hope everyone is well and keeping healthy during these times when things are getting optimistically better.

The club's Leadership Team met online on 19 May to discuss how the initial opening of GRCO, our observatory, on 26 April to private observing sessions was going. This was the club's first step to easing back into normal operations. These private viewing sessions are limited to small groups on Sunday through Thursday evenings that gave us an opportunity to see how our safety

measures fared under this initial operation. Our GRCO Manager, Claude Haynes, gave the team a detailed summary of how well the operation was going. The team unanimously agreed to continue with these events unless directed otherwise by the team. The team also agreed to meet on 30 June to discuss the possibility of opening GRCO to normal pre-pandemic operations. This would add opening the observatory to the general public on Friday and Saturday evenings from sunset to 9:30PM. The team unanimously agreed that more confidence in the pandemic downturn was required before this decision could be made.

UPCOMING EVENTS:

All meetings will be held online.

EVAC Meeting via Zoom - June 18th.

Bob King - "Adventures in Visual Observing".

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From the Desk of the President

by Gordon Rosner

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Of course this led to discussions about opening to in-person monthly membership meetings and outreach events. It was decided that not enough safety confidence has yet been gained to decide on a firm date. More time is needed. Plus, the mechanics of incorporating online availability to the in-person monthly meetings must be investigated. Our online meetings have been so successful that the team wants to continue online availability of our presentations to those who cannot attend the in-person meetings.

There are now two open club Leadership Team positions. One elected Board Member at Large and one appointed Properties Director.

First, a couple definitions. By Leadership Team, I mean the club's nine Board of Directors consisting of the four elected Executive Officers (President, Vice President, Secretary, and Treasurer) and the five elected Board Members at Large plus the appointed Administrative Officers such as the GRCO Manager, Newsletter Editor, Properties Director, and other appointed positions. Although anyone can bring suggestions and issues to the Leadership Team for discussion, only the elected nine member Board of Directors raise official motions and vote on incorporation or further actions needed.

The Board Member at Large position. Due to changing personal responsibilities that interfere with regular attendance to Board of Directors and Leadership Team meetings, David Hatch determined it was best for the club to resign his Board Member at Large position. David has been a driving force in our club filling many leadership positions and always volunteering for needed tasks. The Leadership Team is saddened by his decision, but we all wish him well and thank him for his selfless service over the many years.

So, we must fill this open Board of Directors position until the next general elections in November when all Board of Directors positions, including this one, will be up for nominations and election to their new terms.

This position is one of the five Board Members at Large that discusses beneficial ideas to the Club and collectively votes with the Executive Officers, if the idea should be incorporated or not. Since this is an excellent first step into official club leadership, I encourage anyone interested to let me know via the President's link on our website as

soon as possible so candidates can be voted on and the position filled during the upcoming June online membership meeting.

The Properties Director position. David Hatch also filled this position and decided to resign from it for the same reason. Again, David has done a wonderful job here for many years and when we open back up to in-person meetings, you must find him and give him a big personal "thank you" for his many years of service to the club.

The Properties Director is an appointed position with no term limit filled by a volunteer that does not require to be voted on by the general membership. A volunteer is nominated by a member of the Board of Directors and approved by a vote of the Board of Directors. This position receives notices that someone has a telescope or related equipment that they want to donate to the club. This position usually requires some local travel to the donator's location to evaluate the equipment, decide if it is usable, and if so, accepts the equipment and stores it in the club equipment shed. The position also provides suggestions to the Leadership Team on the use of the equipment which may include donating to an educational organization. For those who want to learn about the various types of telescopes first hand while performing a public service, this is the position for you. Again if interested, let me know via the President's link on our website.

I mention every month, remember our newsletter's member article feature is available. We are accepting a one page or so article on any astronomy related topic from our membership. Tell us about your equipment, how you got started in astronomy, your road to astrophotography, outreach programs you have done, any observatories you have visited or any other astronomy related subject. Remember this is YOUR club. If it was interesting to you, it will be interesting to all of us. So, become a published astronomer and submit a member article to me via the 'Contact President' link on our website.

As I also mention every month, everyone should remember that live member presentations are always a fun and valuable part of our monthly online Zoom meetings. These are about ten minutes or so long regarding any astronomy related subject you would like to share with the club. I encourage you to do one of these. Just let me know

From the Desk of the President

by Gordon Rosner

Continued from page 2

if you would like to do one by using the 'Contact President' link near the bottom of the main page of our EVAC website. I'll then get back with you and we can discuss. If needed, we can also do a dry run sometime before the actual meeting.

Our next online Monthly General Meeting will be on Friday, 18 June starting at the usual 7:30PM. The main presentation will be by Bob King titled "Adventures in Visual Observing". Bob is a retired photojournalist and photo editor and writes for Sky & Telescope's website and magazine and maintains the Astro Bob astronomy blog. Don't miss this one as we all are involved in visual observing and I'm sure Bob will have suggestions for all of us.

As always, a reminder that there are three ways to receive a notification link via an email to register for the next on-line monthly General Meeting. You only need to do one

of the following and only once to continue to receive the email on how to register for the upcoming meetings:

1. Send a one-time email request to vp@evaonline.org.
2. Sign up for the evac-announce@freelists.org mailing list.
3. Sign up for the AZ-observing@groups.io mailing list.

Another way to get notifications of any special online events and how to register, is to join the [EVAC Facebook](#) page and occasionally check for special event announcements. These will also be announced during our monthly General Meetings.

I'll 'see you' at our 18 June meeting. "Keep your feet on the ground and keep reaching for the stars."

Your President,
Gordon Rosner

EVAC Zoom Meeting Notes for 2021 May 21st, at 07:30 P.M. AZ Time

by Wayne Thomas

Here are the Meeting minutes including details of the presentations. (The recorded video of the meeting can be viewed at: [May's Video Recording](#).)

President Gordon Rosner welcomed those in the "audience" to the virtual meeting at 7:33 p.m. His first slide presented the meeting agenda:

- Welcome
- Introductions
- Club News
- Member presentations:
 - Steve Dodder - Coordinator Position Open, North Rim Grand Canyon Star Party.
 - Wayne Thomas: Asteroid Occultations, Successes and Opportunities.
- Main Presentation:
 - Dave Eicher: "Inside the Universe's Star Cities."

Under club news, he reminded us that all club sponsored events with personal contact are still cancelled, except for private star parties at GRCO for a few participants following guidelines for preventing the spread of the Corona Virus.

Member presentations are always welcome. Send Gordon a note if you are interested in making one. If you would like to write an article for the Observer, submit a draft to the president for his review. Our monthly meetings on Zoom are being recorded and each can be viewed via its link on the EVAC website (scroll down a bit after clicking on the link), <https://www.evaonline.org/events-meetings>.

Our next regular club meeting will be virtual on Zoom at 7:30 p.m. Friday June 18. Bob King, a contributor to Sky & Telescope magazine will present on "Adventures in Observing." Register for the meeting in the usual way by the link in the invitation email.

Gordon introduced Steve Dodder, Coordinator of the North Rim Grand Canyon Star Party, who spoke on "Grand Canyon North Rim Star Party Coordinator Needed for 2022." Steve shared images taken at previous in person star parties from past years.

Gordon next introduced Wayne Thomas, an asteroid occultation contributor who spoke on "Occultations around Phoenix, Successes & Opportunities in May." Wayne shared

EVAC Zoom Meeting Notes for 2021 May 21st, at 07:30 P.M. AZ Time

by Wayne Thomas

Continued from page 3

successful asteroid occultations observed by members of the local community including a video of one such event. He also described events remaining in May which will require traveling to have a high probability of success.

Tom Mozdzen then introduced the featured speaker, Dave Eicher, Astronomy Magazine's Chief Editor who spoke on "Inside the Universe's Star Cities."

Dave's talk spanned over 100 years of the history of our understanding of galaxies beginning with Edwin Hubble's discovery of a Cepheid Variable star in the Andromeda Nebula. His talk included many major contributions by various astronomers regarding the cosmic distance scale, the expansion of the universe, the theory of inflation, estimates of the number of galaxies and stars in the

The Backyard Astronomer

by Bill Dellenges

A 16x70 Binocular Trek Above Polaris' Neighborhood

A 16x70 binocular is a magnificent instrument with which to cruise the night sky. I have six pairs of binoculars ranging in size from an 8x28mm to 28x100mm and my APM 16x70mm is my favorite – a nice package of considerable power and aperture. Caveat: While they are hand holdable, I prefer them tripod mounted (which could be said for any binocular over 10x).

So, let's get this show on the road by making our first port of call at Polaris. I bring you here not to split this 18.6" double star, because you won't with a 16x70 or smaller binocular. That required the 28x100 bino raised to 50x. But the 4.1° real field of the 16x70 nicely captures the **Diamond Ring** asterism where Polaris, the brightest star in the grouping, represents the bright diamond on a ring. The ring's band is comprised of a staggered string of nine stars, all fainter than Polaris.

While in the area of Ursa Minor let's attack the double star **32 Camelopardalis**. Normally this would be a tough guy to find among the very faint stars of that constellation, but lucky for you it abuts the Lessor Bear, whose stars we can use to find it. Imagine a line from Polaris to Kochab (Beta Ursa Minoris) the brightest star in the Little Dipper's Bowl. Move away from Polaris along that line about 1/3 of the way to Kochab – then stop. Go about 3 degrees off

universe, globular clusters, pulsars, black holes, clusters of galaxies, and dark matter. He then discussed where in the Milky Way Galaxy, life might be more likely. Closer to the center of the galaxy it is more dangerous, while farther out the stars and hence planets have fewer metals (elements more massive than Helium).

Our next meeting will be on Friday, June 18, at 7:30 p.m. via Zoom.

Gordon adjourned the meeting at 9:08 p.m. Attendance maximum was 76.

Wayne Thomas
Secretary EVAC

that line away from the Dipper and you should sweep it up. Though it's a tad tight at 22" for a 16x70, this equal magnitude beauty was split convincingly.

For our next stop we move northwest to pay a visit to **M81 and M82**, two galaxies near the Head of Ursa Major. Perhaps the simplest way to find them is to extend a line from Phecda (Gamma U. Maj.) to Dubhe (Alpha Maj.) and then beyond an equal distance. You should see two faint fuzzy objects somewhere in your binocular field. The two galaxies are neighbors, both about 12 million light years away. Astronomers believe they have been interacting with each other at least twice, the latest pass 10 million years ago which has distorted the shape of M82. The two galaxies fit easily in the 16x70's 4.1° field with room to spare. It amazes me that a binocular can actually show detail in galaxies so far away – M81 has the distinct shape of a spiral galaxy and is noticeably brighter than the ruffled looking M81.

We now head for **Draco the Dragon** to examine two double stars. But first take a few minutes to see if you can trace out this long, meandering mythical beast. This mission, should you choose accept it, is both challenging and rewarding. It helps before this task to refer to a star atlas so you know what you're in for. Start at the end of Draco's

The Backyard Astronomer

by Bill Dellinges

tail, 4th magnitude Lambda Draconis (two close unrelated stars) located between the two Bowls of the Dipper (the Big Dipper's Pointer stars point roughly toward it). This time of year, a string of faint stars of the Dragon's body run above the Little Dipper's bowl, turn downward to about the elevation of Polaris, then starts climbing upwards again terminating at the distinctive quadrilateral of four stars representing the Dragon's head (not far from the star Vega). By the way, they can be used to gage the brightness of other visible stars, as their magnitudes are approximately 2, 3, 4, and 5! (also true of the Little Dipper's four bowl stars!). Now put your bino on the dimmest star in the Head of the Dragon, **Kuma, Nu Draconis**. This double is like seeing cat's eyes in a dark alley (4.9, 4.9, 62"), reminiscent of our old friend 32 Camelopardalis but wider and brighter.

Before leaving the Dragon's lair, let's take a quick look at the wide double star **16 and 17 Draconis** (AC Mag 5.1, 5.5, Sep 90.2" AB Mag 5.4, 6.4, Sep 3.2"). To track it down in this sparse stellar area, note that a line through the two brightest stars in the Head of Draco, Gamma and Beta Draconis, point directly west to it. Even a handheld 8x42 bino will split the AC pair. An 85mm refractor at 100x will split the AB pair.

EVAC Outreach Events

by Gordon Rosner

Again, unfortunately another very short column this month. All outreach events remain cancelled due to supporting the public health concerns. For more information, see the President's column at the beginning of this newsletter or at the top of the EVAC website.

M13 in Hercules. What? Take on a globular cluster with a binocular? Why not, we started with two galaxies and it's in the "neighborhood" just a stone's throw to the south of the quadrilateral Head of Draco. Sidebar: I have roamed the night sky for over 60 years and still have trouble making out the constellation of Hercules (especially if I haven't seen it in a year). The problem is, its brightest star Rasalgethi (Alpha Herculis) is only magnitude 2.7 and the fainter stars comprising the Strong Man's arms and legs are all over the place. Fortunately, the four star "Keystone" asterism of his torso saves the day (Pi, Eta, Epsilon and Zeta). The trapezium shaped box, centrally located in the constellation, eventually catches your eye and you know you're on target. Also, the celestial gods have been kind in placing M13 right on a line connecting Eta and Zeta Herculis about 1/3 of the way from Eta to Zeta. Sixth magnitude M13 looks impressive in the 16x70, bright, round, nebulous and distinctly brighter towards its center. My first impression was surprise at how bright it looked in just a binocular. It's hard to believe that little soft glow is a group of 300,000 stars in a ball 100 light years in diameter 23,000 lights years away. One can't help but wonder what may be going on in there.

As always, still looking very forward to our outreach program getting back and to hearing all those "OH WOW's" we so love to hear.

Gordon Rosner
EVAC Outreach Events Coordinator

Find Out What's Happening – Join EVAC-Announce List

If you would like to receive email announcements about EVAC meetings and activities, please join the EVAC–Announce mailing list. Click on the link below to subscribe. Enter your full email address in the box titled User Options and press OK. You will receive a confirmation email. Your privacy is respected by EVAC and we will never sell your email address, or use it for non-club relevant solicitations. This mailing list is designed for communication from EVAC, and does not enable users to respond to the message. If you wish to contact club officers, please use the list in the Contact-Us area on the Home page of our EVAC website. To subscribe to the EVAC–Announce mail group click: <http://www.freelists.org/list/evac-announce>. To unsubscribe use the same link, enter your email address and select Unsubscribe from the “Choose An Action” list. Another list to consider is AZ-Observing@groups.io, simply click on this link <https://groups.io/g/AZ-Observing> and follow the instructions on the page. EVAC also has a Facebook Group where members may share ideas, photos, and Astronomy related information. To join: [EVAC Facebook Group](#).

The Gilbert Rotary Centennial Observatory (GRCO) also has a Facebook Group where members may share ideas, photos, and Astronomy related information. To visit, please click on [Gilbert Rotary Centennial Observatory - GRCO](#).

LAST QUARTER MOON ON JUNE 2 AT 12:24

NEW MOON ON JUNE 10 AT 03:52

FIRST QUARTER MOON ON JUNE 17 AT 20:54

FULL MOON ON JUNE 24 AT 11:39



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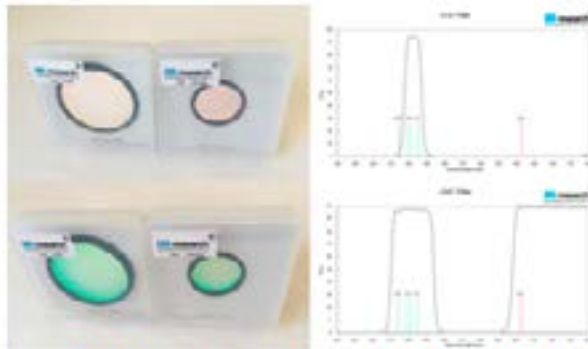
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Monthly Meetings will be presented live online using Zoom. See the EVAC Website for updates. All other events are on hold until health concerns are resolved.

The monthly general meeting is your chance to find out what other club members are up to, learn about upcoming club events and listen to presentations by professional and well-known amateur astronomers.

Our normal in-person monthly meetings have temporarily been cancelled, and are replaced with an online Zoom meeting.

Our meetings are held on the third Friday of each month at the Southeast Regional Library in Gilbert. The library is located at 775 N. Greenfield Road; on the southeast corner of Greenfield and Guadalupe Roads. Meetings begin at 7:30 pm.

Visitors are always welcome!



**Southeast Regional Library
775 N. Greenfield Road
Gilbert, Az. 85234**



JUNE 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

June 18 - EVAC Monthly Meeting Live Online via Zoom.

The EVAC Monthly Meeting will be held live online via Zoom. All other meetings and events have been cancelled until further notice.

JULY 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

July 16 - EVAC Monthly Meeting Live Online via Zoom.

The EVAC Monthly Meeting will be held live online via Zoom. All other meetings and events have been cancelled until further notice.

East Valley Astronomy Club – 2021 Membership Form.

IMPORTANT: All memberships expire on December 31 of each year

New Member Dues (select according to the month you are joining the club)

	Individual	Family	
January, February & March	\$30.00	\$35.00	
April, May & June	\$22.50	\$26.25	
July, August & September	\$15.00	\$17.50	
October, November & December	\$37.50	\$43.75	<i>(Includes following year)</i>

Renewal (current members only):

\$30.00 Individual **\$35.00 Family**

Astronomical League: \$7.50 Annually (per person)

Name Badges: Quantity: _____

\$10.00 Each

Name to imprint: _____

Total amount enclosed:

Please make check or money order payable to EVAC
Payment will be made using PayPal

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Address:

Email:

City
State
Zip

URL
For website

Would you be interested in our outreach program? Yes No

How did you discover East Valley Astronomy Club?

Liability Release Form

In consideration of attending any publicized Star Party hosted by the East Valley Astronomy Club (hereinafter referred to as "EVAC"), the receipt and sufficiency of which is hereby acknowledged, I hereby affirm that I and any related entities, predecessors, successors, affiliates, attorneys, guarantors, insurers, transferees, assigns, parents, spouses, children, subsidiaries, accountants, officers, directors, employees, agents, shareholders, members, and trustees, past and present, hereby forever release, acquit and discharge to hold EVAC and its related entities, predecessors, successors, affiliates, attorneys, guarantors, insurers, transferees, assigns, parents, spouses, subsidiaries, accountants, officers, directors, employees, agents, shareholders, members, and trustees, past and present, from any and all causes of action, claims, losses, damages, liabilities, expenses (including attorneys' fees) and demands of any nature whatsoever, known or unknown, that in any way relate to, arise out of, or concern EVAC and/or my presence on the premises of any EVAC Star Party and related areas, whether or not those causes of action, claims, damages, liabilities, and demands are part of the specific subject matter of EVAC or any EVAC Star Party. This release is intended to and does cover all injuries and damages, and the consequences thereof, whether known or unknown at the time of the execution of this release, which have occurred or may hereafter occur or which may hereafter be discovered, and which may have been caused or may be claimed to have been caused by the said incident, and specifically includes, but is not limited to, bodily injuries, mental and emotional injury, pain and suffering, medical treatments, and loss of earnings or income.

My signature upon this form also indicates agreement and acceptance on behalf of all minor children (under 18 years of age) under my care in attendance. EVAC only recognizes those who are members or invitees and who also have a signed Liability Release Form on file as participants at an EVAC Star Party.

Signature _____

Date _____

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www.evaonline.org

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