

New

Braunfels

Astronomy

Club

BECAUSE IT'S OUT THERE

Larry's Celestial Calendar & Newsletter

by Eric Erickson

314th Edition

Volume 26, Number 9

September 20th to October 18th 2023

NOTE: WE NOW MEET ON
WEDNESDAY AT TYE PRESTON
MEMORIAL LIBRARY

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Cover Story> The Annular Solar Eclipse

New Braunfels Astronomy Club

BECAUSE IT'S OUT THERE

September 20th, 2023

6:00 pm

Meeting 288

Agenda

- Open meeting and introduce new members (get names, email).
- Interesting observations, experiences.
- Show and tell.
- Current news and what's in our sky this month: *Member input, Newsletter.*
- Events, Outreach, Planning.
 - Report on the September 9, 2023, Sun Party at Schertz Public Library
 - Report on September 16, 2023, Astronomy Night at TPML
 - April 8, 2024 total solar eclipse planning with TPML
- Business
- Main Event
 - Encore presentation by Steve Ellery: **DSLR Astrophotography**

Coming up: **OUR 289th ASTRONOMY CLUB MEETING**

October 18th, 2023, from 6 - 8 pm


Tye Preston Memorial Library, Canyon Lake

Library website tpml.org

NBAC website astronomynbt.org

NBAC Email: admin@astronomynbt.org

 [Astronomy Friends New Braunfels.....](https://facebook.com/groups/354953995432792/)

 [Comal County Friends of the Night Sky.....](https://facebook.com/groups/166098014710276/)

comaldarksky.org/ Email: admin@comaldarksky.org

Astronomy Night at Tye Preston Memorial Library

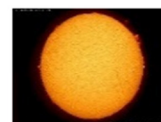
Canyon Lake, TX



2023



Date	Doors Open	Note
1/21/2023	7:00 PM	
2/18/2023	7:30 PM	
3/25/2023	8:30 PM	
4/22/2023	8:30 PM	
5/20/2023	2:00 PM	<i>Sun Party - wear sunscreen</i>
June, July, August		<i>No Scheduled Astronomy Nights</i>
9/16/2023	8:00 PM	Kickoff for the fall-winter season
10/14/2023	10:00 AM	<i>Sun Party - wear sunscreen</i> Annular solar eclipse - it will not reach annularity in Canyon Lake but will come close
10/21/2023	7:30 PM	<i>International Observe the Moon Night</i>
11/18/2023	6:30 PM	Crescent Moon
12/9/2023	6:30 PM	



Tye Preston Memorial Library
New Braunfels Astronomy Club

tpml.org

astronomynbtx.org  *Astronomy Friends New Braunfels*

There will be surprise giveaways at some evnts so join us!!

Comal County Friends of the Night Sky supports and encourages Astronomy Night

Website: comaldarksky.org Email: info@comaldarksky.org



Comal County Friends of the Night Sky Group

September/October 2023

SUN	MON	TUE	WED	THU	FRI	SAT
<p>On the Cover: An Annular Solar Eclipse is in some ways as special as a Total Solar Eclipse. Will you be in October's Annular path?</p>			SEP 20 NBAC Meeting 6:00 TYE PRESTON MEMORIAL LIBRARY, CANYON LAKE	21	22 	23 Fall Equinox 1:50 am CDT
24	25	 <p>Sky & Telescope</p> <p>After Sunset ESE</p>	27	28	29  Harvest Moon A full Moon that occurs nearest the fall Equinox.	30
OCT 01 Oct 1-2 10:30 p.m.  <p>Sky & Telescope</p> <p>Looking East</p>	02	 <p>Astronomy</p> <p>Oct. 4, 50 minutes before sunrise Looking east</p>	04	05	06 	07 1 a.m.  <p>Sky & Telescope</p> <p>Looking East-Northeast</p>
08		Dawn, Oct 10-12 1 hour before sunrise  <p>Sky & Telescope</p> <p>Looking East</p>	11	12	13	14  Annular Solar Eclipse Sun Party at TPML 10:00 AM
15	16		18 NBAC Meeting 6:00 TYE PRESTON MEMORIAL LIBRARY, CANYON LAKE			

Solar System Happenings

WHEN TO VIEW THE PLANETS	EVENING SKY	MIDNIGHT	MORNING SKY
	Saturn (southeast)	Jupiter (east)	Mercury (east)
	Jupiter (east)	Saturn (south)	Venus (east)
	Uranus (east)	Uranus (east)	Jupiter (west)
	Neptune (east)	Neptune (south)	Uranus (west)

Astronomy

- ✚ **The Sun** is ramping activity as solar maximum approaches, 2025.
- ✚ **Mercury** is a morning planet and its best views are coming. After its greatest western elongation on September 22nd, it continues to brighten, with Venus in the same sky.
- ✚ **Venus** is brilliant in the morning.
- ✚ **Earth** still spins, and we are still here to marvel at it all.
 - Annular Solar Eclipse occurs on October 14. Canyon Lake is outside annularity. See Cover Story

Best ISS viewing for Canyon Lake/New Braunfels - From [Heavens Above](#)

Date	Start Time	Start Loc	Max Alt °	End Loc	Note
10/03	19:35	NNW	15	E	Enters Earth's shadow
10/04	20:22	NW	89	SE	Enters Earth's shadow as it approaches Saturn
10/05	19:33	NW	41	ESE	Enters Earth's shadow
10/06	20:20	WNW	23	S	Enters Earth's shadow
10/07	19:31	NW	50	SSE	
10/09	19:29	WNW	14	S	Low above the horizon
10/16	07:08	SSW	52	NE	Passes west of Venus and Regulus
10/17	06:19	SSW	24	ENE	Passes east of Venus and Regulus
10/18	07:06	WSW	40	NE	Passes east of Jupiter

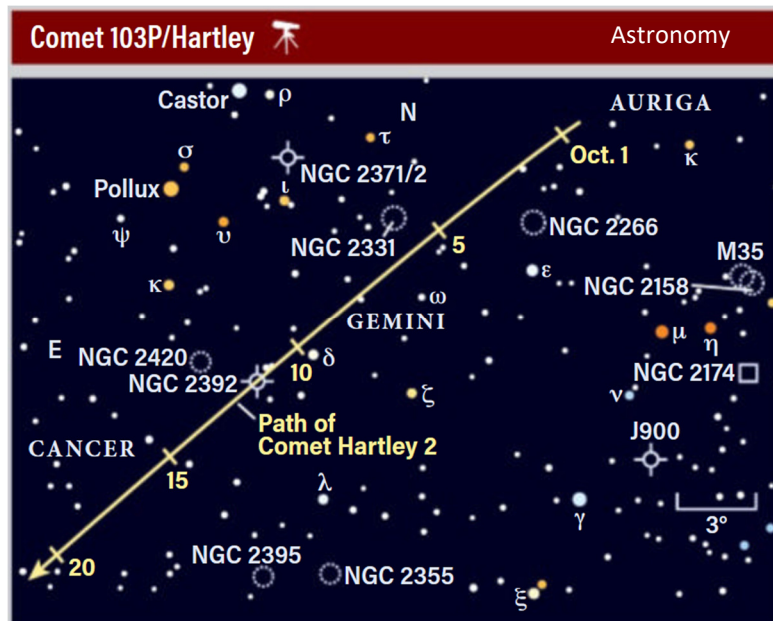
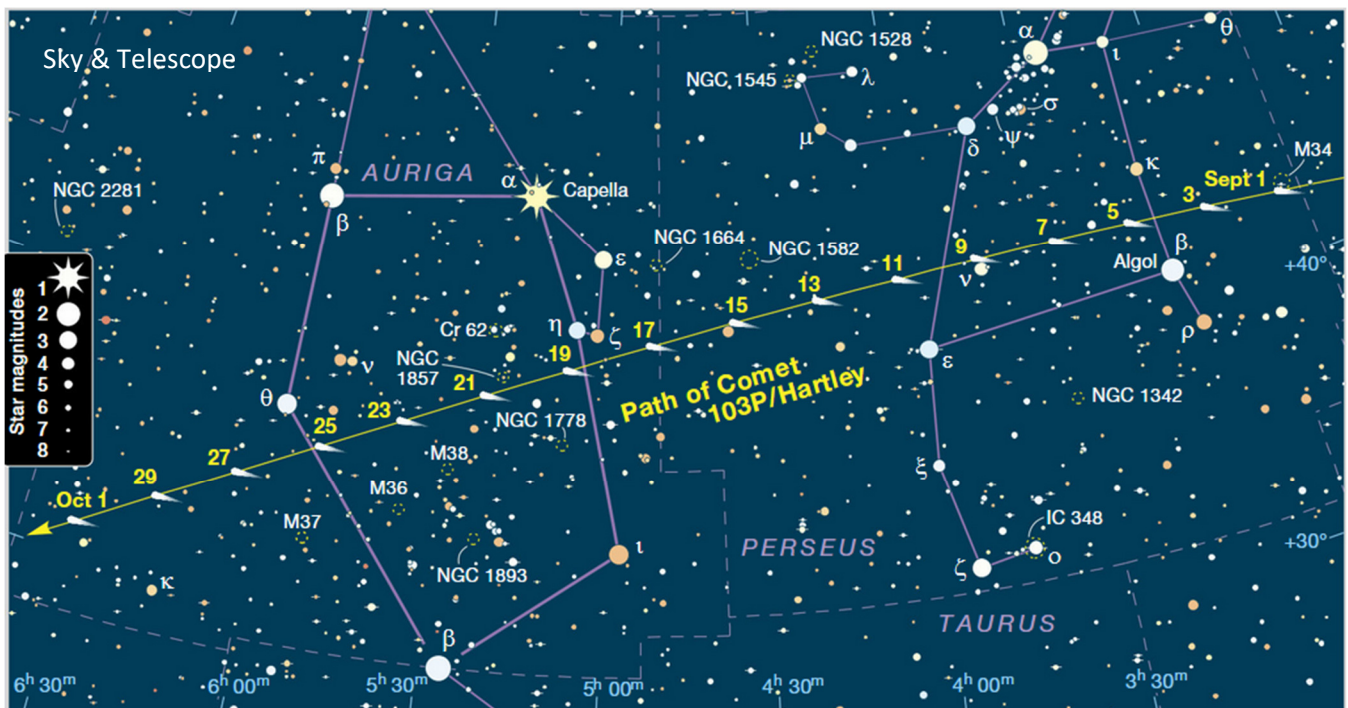
- ✚ **The Moon** dances with planets and stars. It gets in front of the Sun on October 14th for an annular solar eclipse. See Cover Story.
- ✚ **Mars** is low, low, low, in the west after sunset. It will not improve until after its conjunction with the Sun in November.
- ✚ **Jupiter** is well placed, rising by 8-9pm.
- ✚ **Saturn** is just passed opposition and a beautiful target.

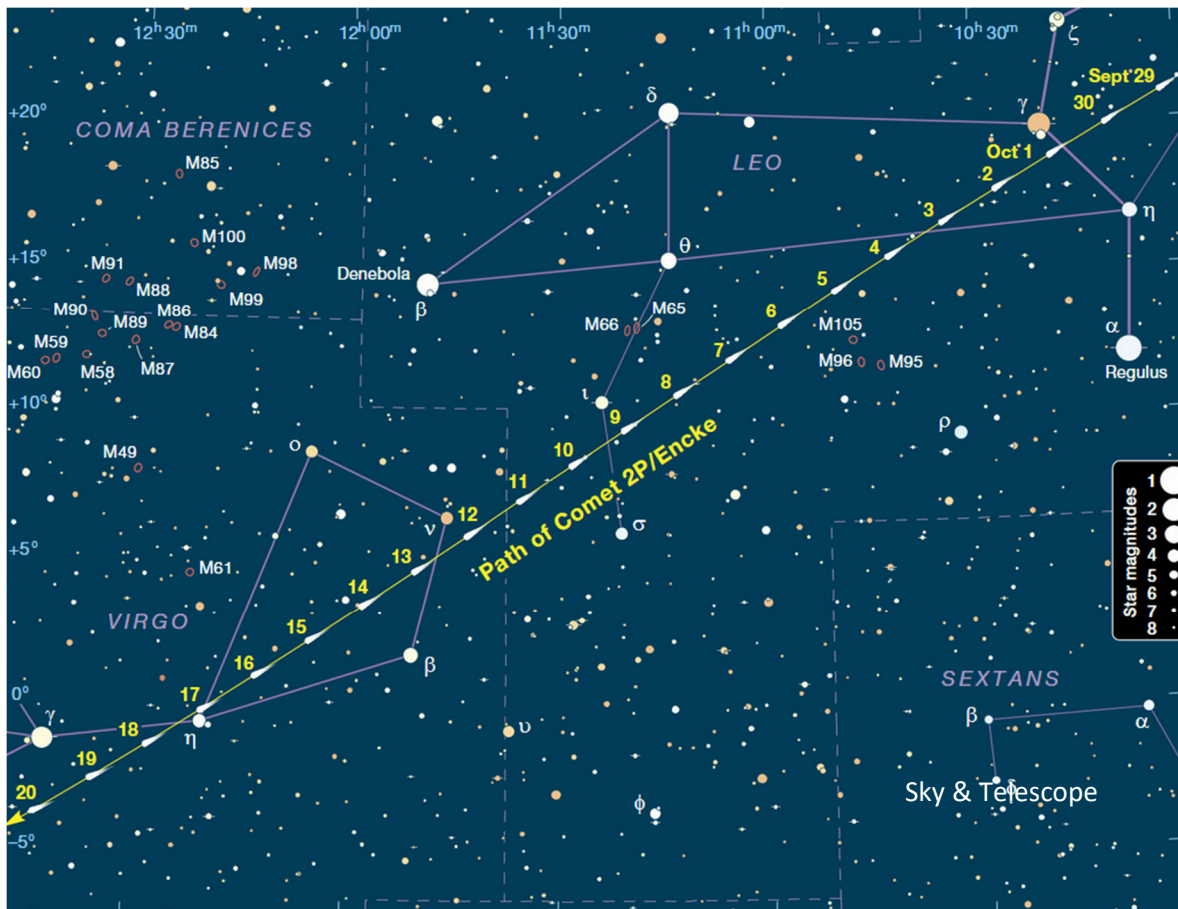
✚ **Uranus** is in Aries, and in a retrograde path now, moving west slowly. Find it by swinging 9 degrees northeast from Jupiter.

✚ **Neptune** is at its best, residing in Pisces.

✚ **Comets:**

- Comet 103P/Hartley 2 is a short period comet (6.5 years) and while a fairly dim magnitude 10, it's catchable in small instruments. Larger glass will bring out more of its character. Start look for it in the late evening hours.
- Comet 2P/Encke is a short period (3.3 yr) comet. It's early morning apparition is just right for early risers. As October progresses so does it's brightness, maybe reaching mag 7. Note imaging opportunities.





My Celestial Pick: The Autumn Milky Way

I know, it's a lot! So, take your time, pace yourself, dwell on the things that tingle your senses.

The Milky Way is overhead, emanating from the Southwest and exiting in the Northeast. If your viewing area is open enough and dark enough, the Milky Way seems to hover over us like a floating veil. I know, we are losing darkness, but it's still visible, albeit as a dim veil. Give it a shot. Not to worry, I have included a sky chart to use during your tour.

I'm starting in the Northeast. M45, the Pleiades, will be rising around 9:30pm CDT in late September, as will Capella in Auriga. While not in the best position to view, they are harbingers of the coming winter, and all the winter night sky delights! Jupiter will join them for your viewing pleasure. You might choose to start in the southwest to catch some of the sights there before they set.

Getting back to the Milky Way, open cluster M34 is at the eastern edge and the Double Cluster (NGC869 and NGC884) is more interior, accompanied by a denser field of stars.

Moving southwest, we get a little off trail to view M31, the Andromeda spiral galaxy, then jump back in, across the Milky Way. Northwest of M31 lies open cluster M52 in Cassiopeia.

Open cluster M39 in Cygnus is nearly overhead and not far from Deneb, the Alpha star of Cygnus. Make a short hop from Alpha to Gamma Cygni and there is open cluster M29, a mere 1.7 degrees away from Gamma. Keep going southwest down Cygnus and check out Albireo the Beta star (stars) of Cygnus. It is a stunning optical double star.

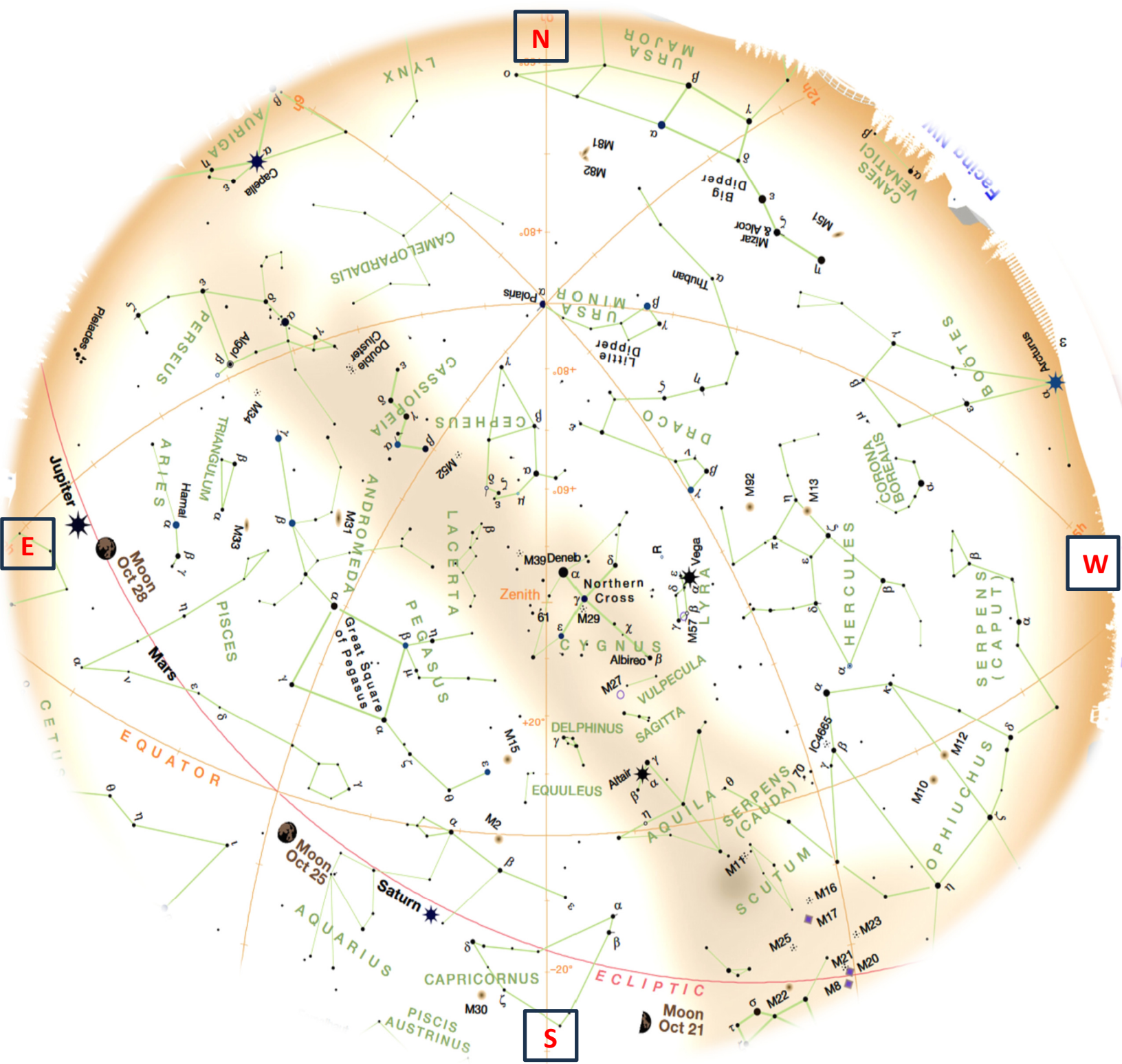
Next is a little bit of a challenge. Southeast of Albireo, in Vulpecula (the fox) lies one of the nicest planetary nebulae, M27, the dumbbell. To some it resembles an apple core. It's dimmish at magnitude 7.5 but catchable in small telescopes and even binoculars.

South-southwest of M27 is bright star Altair, the alpha star of Aquila, the eagle. Following the Milky Way southwest from Altair you hit M11 in Scutum, the shield. M11 is also known as the "wild duck" cluster. Can you make out its V shape, resembling a flock of flying ducks?

Going southwest along the Milky Way we are headed into the mother lode of the summer Milky Way in Sagittarius, the archer, and Serpens, the serpent. But we're also headed into the murk of light pollution and thick atmosphere.

So, see what you can see based on the sky chart.

I hope you have a fun tour.

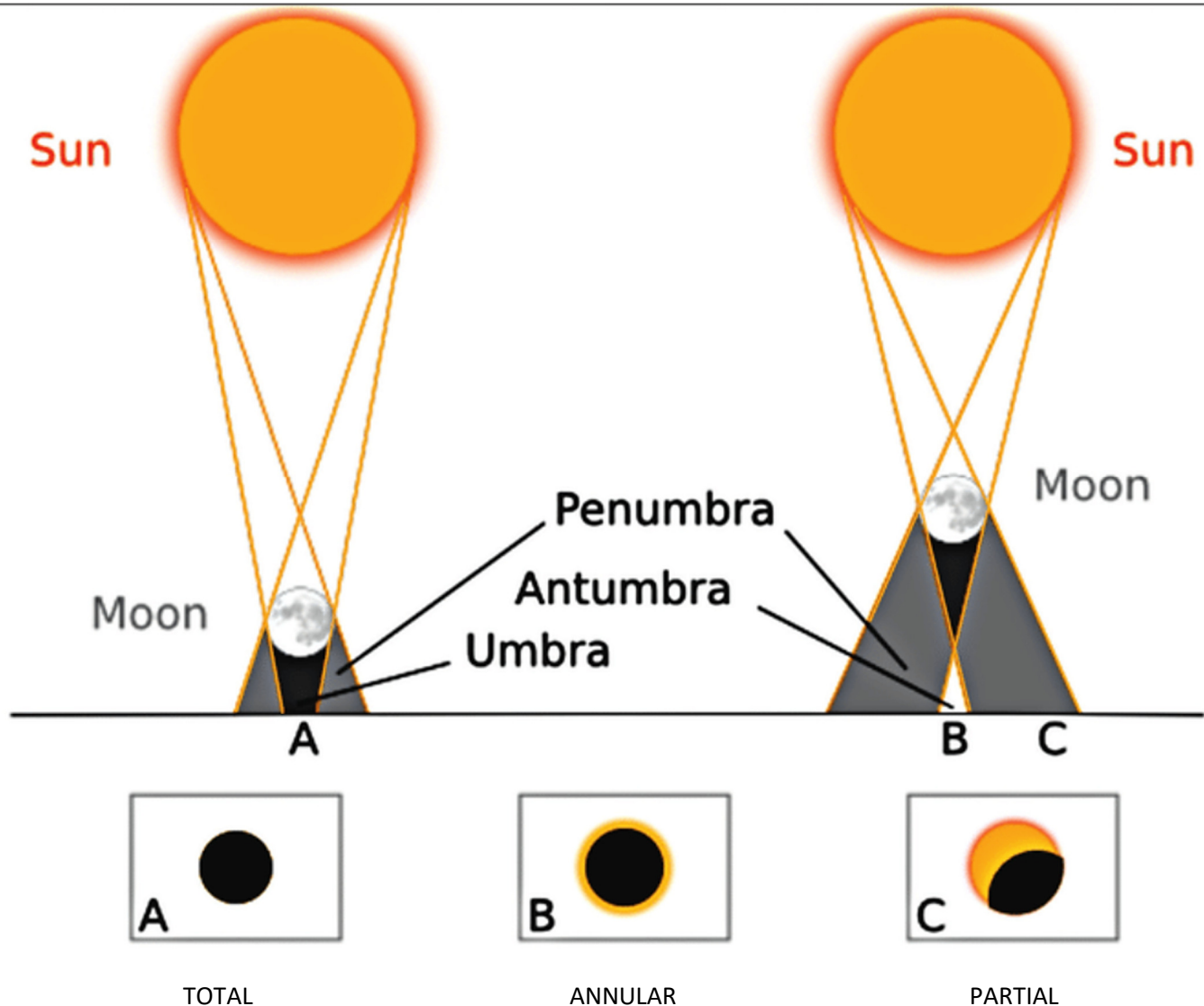


Imagining Imaging: Imaging Articles Needed!

Cover Story> The Annular Eclipse

The name annular eclipse is enigmatic to many people who are not into astronomy. Maybe it should be named the super partial eclipse!

Nah! Annular is just fine. It's descriptive and gives us the opportunity to have a conversation. As most of you know, an annular solar eclipse occurs under the same circumstances as a total solar eclipse, except for one. The Moon's distance from Earth. See the diagram below.



As you can see, the Moon is farther away from Earth so even though it gets right in front of the Sun, its angular size is too small to fully cover the Sun. The dark (umbra) shadow cannot reach Earth's surface, instead, coming to a focus somewhere outside Earth's surface. If you could get rocket ride out to or just past where the umbra comes to focus, you could experience it as a total solar eclipse.

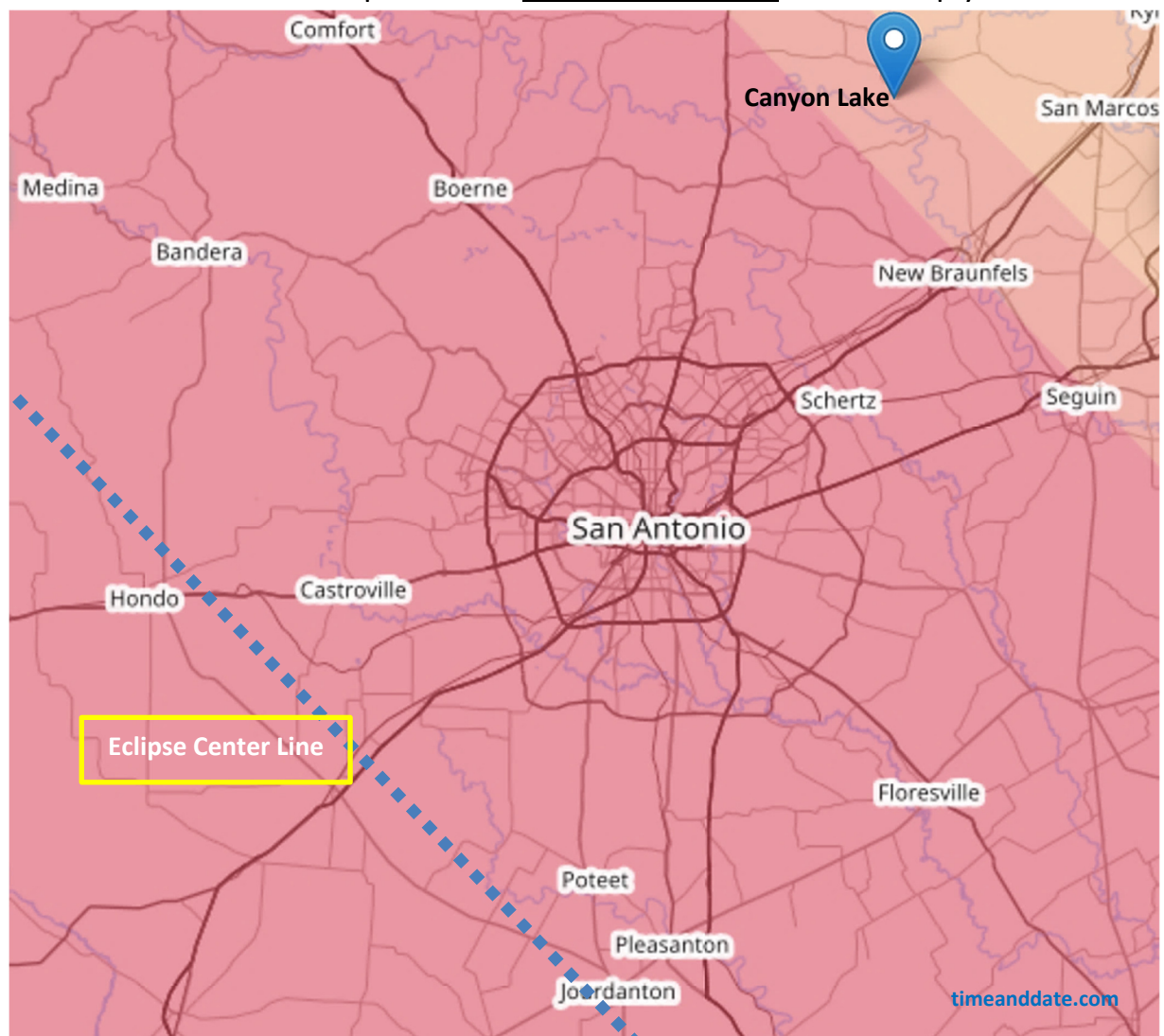
So, the reason it's named annular is due to the ring of sunlight that surrounds the Moon – called an annulus (ring). This annulus is also known as the "ring of fire".

An annular solar eclipse, like partial solar eclipses, or the partial eclipse portions of a total solar eclipse, require effective eye protection. Most notably, rely only on eclipse glasses, solar safety film, or welder's glass #14 with ISO 12312-2 certification. There are many suppliers that provide them, such as optical equipment suppliers, astronomy supply sellers, hobby stores. Your local library will probably have information.

In the graphic below, anywhere inside the darker PINK is in the path of annularity. Canyon Lake will not experience annularity but will be close. Southwest and northwest New Braunfels will experience annularity. Hondo is near the centerline. Annularity lasts longer the closer to centerline you are.

For example: San Antonio, Schertz, Floresville, Bandera, Boerne: The partial eclipse begins around 10:23 am, Annularity begins near 11:54 am, lasting 4 minutes, 21 seconds. Then the partial phase resumes until it ends at 1:33 pm. Go to timeanddate.com and look up your specific location.

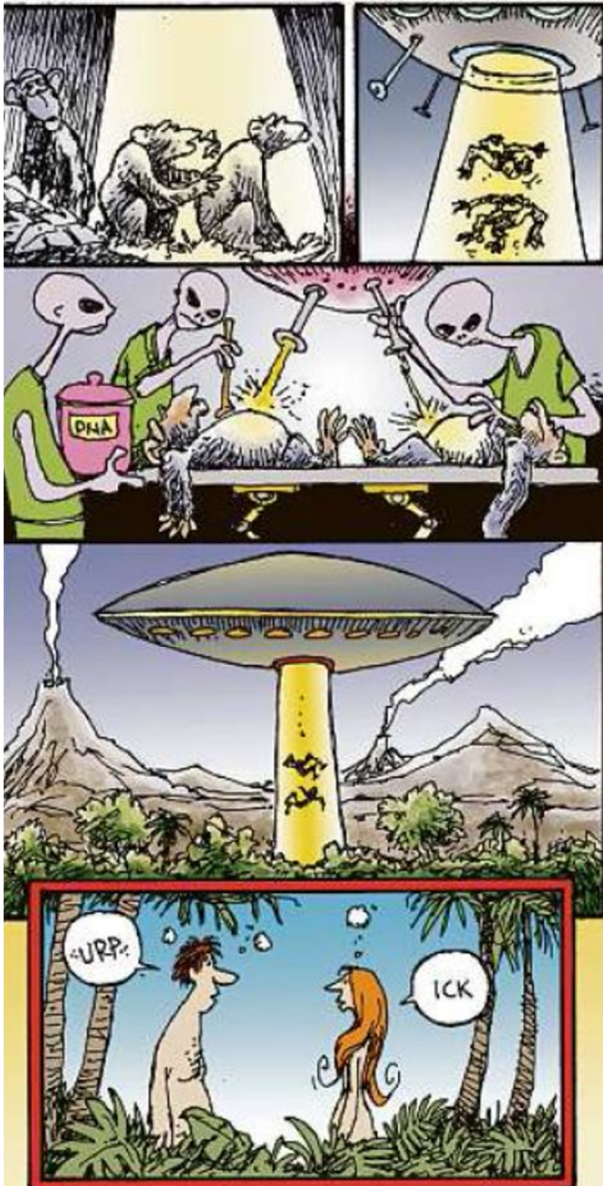
Eric Erickson

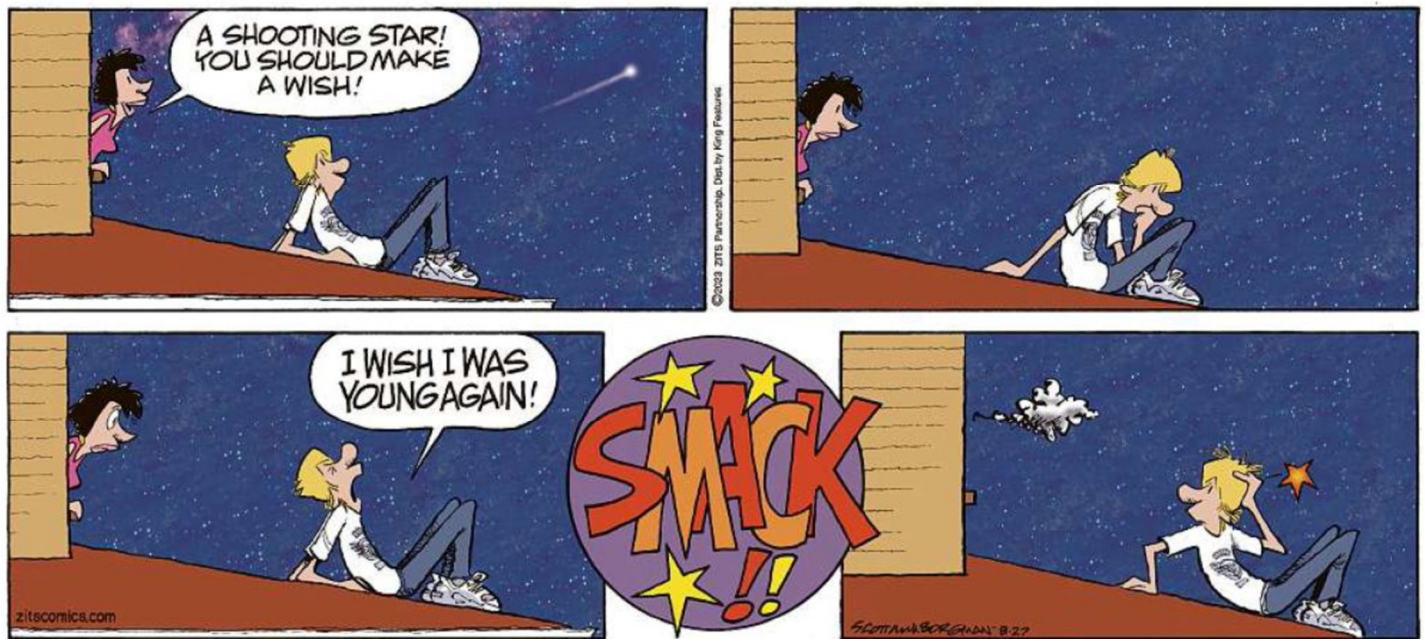


Lagniappe

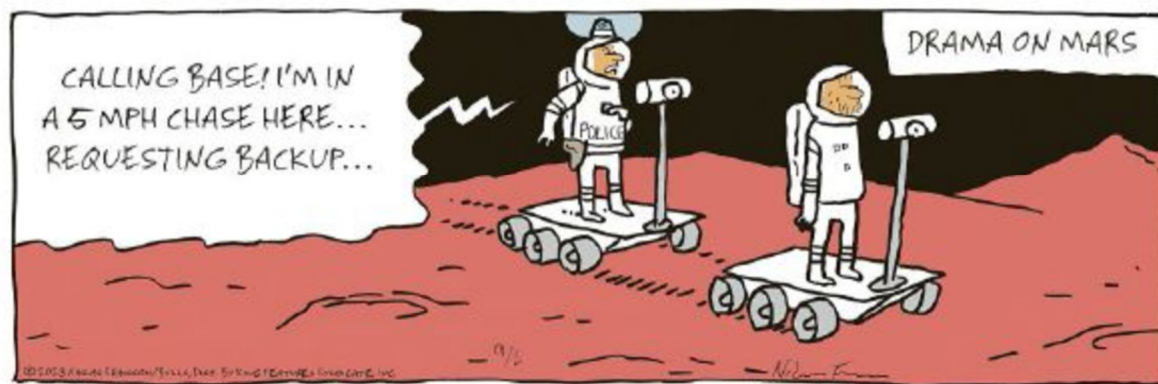
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by Wiley

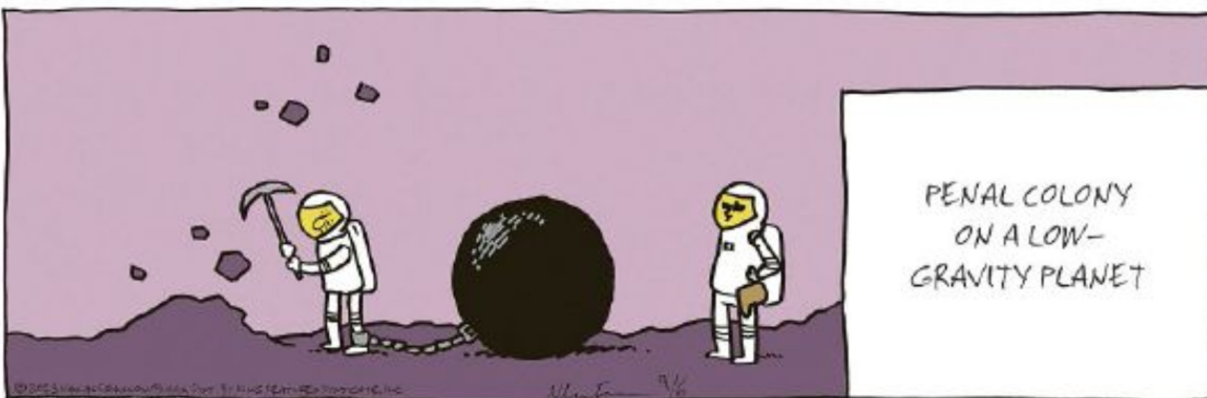




CARPE DIEM



CARPE DIEM



SPEED BUMP



THE OTHER COAST

