

New

Braunfels

Astronomy

Club

BECAUSE HE'S OUT THERE

# Larry's Celestial Calendar & Newsletter

by Eric Erickson

305<sup>th</sup> Edition

Volume 25, Number 12

December 15<sup>th</sup>, 2022 to January 19<sup>th</sup>, 2023

Merry Christmas

Happy New Year

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Meeting Agenda

NBAC Observing Calendar

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Watch the ISS

My Celestial Pick

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Lagniappe

Cover Story> A Christmas Mystery?



- Open meeting and introduce new members (get names, email)
- Interesting observations, experiences
  - **TONIGHT: A SHADOW TRANSIT ON JUPITER BY GANYMEDE - STARTS AT 6:41PM!**
- Show and tell
- Current news and what's in our sky this month: *Member input + Newsletter*
- Events, outreach
  - Astronomy Night at TPML – 12/17/2022
  -
- Main feature(s) **NBAC 25<sup>th</sup> Anniversary**

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Coming up: **OUR 280<sup>th</sup> ASTRONOMY CLUB MEETING**  
**January 19<sup>th</sup>, 2023, from 6 - 8 pm** **TJ's on Loop 337**

[astronomynbtx.org](http://astronomynbtx.org) Email: [info@astronomynbtx.org](mailto:info@astronomynbtx.org)

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

 *Comal County Friends of the Night Sky.....* [facebook.com/groups/166098014710276/](https://facebook.com/groups/166098014710276/)  
[comaldarksky.org/](http://comaldarksky.org/) Email: [info@comaldarksky.org](mailto:info@comaldarksky.org)

# DECEMBER 2022/JANUARY 2023

SUN MON TUE WED THU FRI SAT

Cover Story – Many attempts have been made to nail down what the Christmas Miracle Star was. A major impediment is uncertainty surrounding the birth date of Jesus.

15

NBAC Meeting  
6:00

25 Year Anniversary!

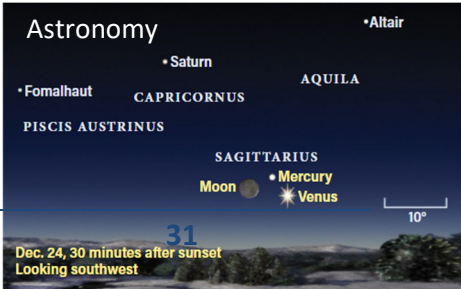
16

17

Astronomy Night  
Tye Preston Library  
Canyon Lake, 6:30

18 19 20 21 22 23 24

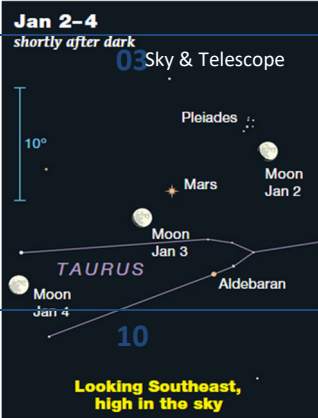
25 Christmas 26 27 28 29 30 31



01 02 03 04 05 06 07



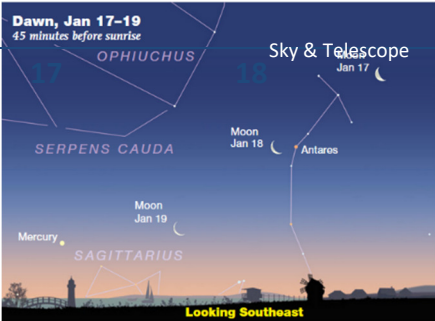
Happy New Year!



Quadrantid Meteor Shower Peaks – See Below

08 09 10 11 12 13 14

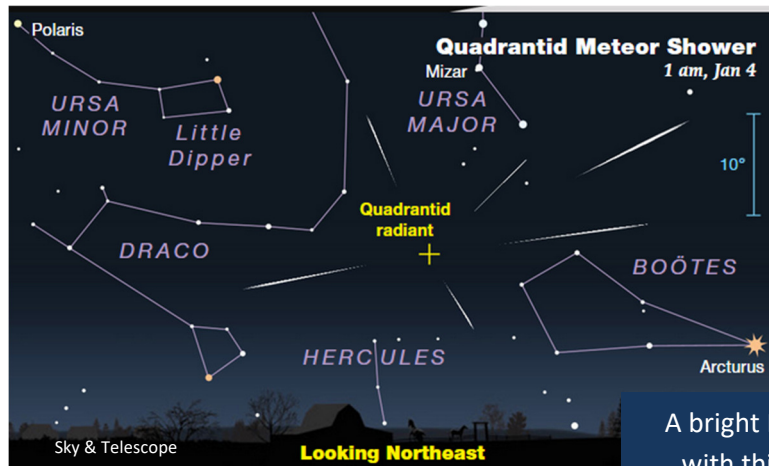
15 16 17 18 19



NBAC Meeting  
6:00

# Solar System Happenings

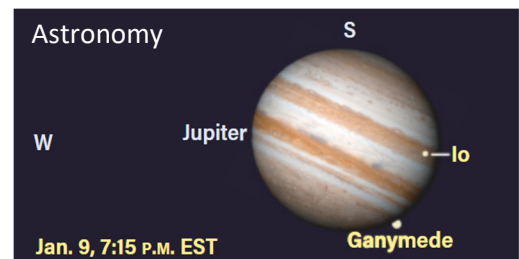
- ✚ **Mercury** is an evening planet, reaching greatest elongation on December 21<sup>st</sup>. **LOOK** in the southwestern sky on Christmas eve, just after sunset. Mercury, Venus, and a young crescent Moon form a pretty sight. It is heading for inferior conjunction with the Sun on January 7<sup>th</sup> so is setting soon after sunset. It becomes a morning planet after that.
- ✚ **Venus** is an evening planet, low in the southwest at sunset. **See Mercury** for a highlight.
- ✚ **Earth** still spins, and we are still here to marvel at it all.



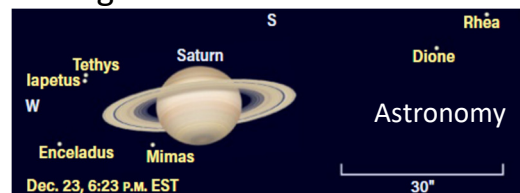
**Best ISS viewing for Canyon Lake/New Braunfels** - From Heavens Above

Date	Start Time	Start Loc	Max Alt °	End Loc	Note
12/16	06:29	SSW	49	NE	Close to the Virgo Cluster, Ring Nebula
12/18	06:30	WSW	40	NNE	Close to Comet C/2020 V2 (ZTF)
01/05/23	06:30	NNW	24	ESE	Close to Vega
01/07/23	06:29:48	NW	83	SE	Close to Arcturus, Antares
01/09/23	06:29:31	W	24	SSE	Close to NGC 5139 (Omega Centauri)
01/14/23	18:59	SW	71	NE	West of Mars, then close to M38 in Auriga
01/16/23	18:56	WSW	31	NNE	Rises close to Venus

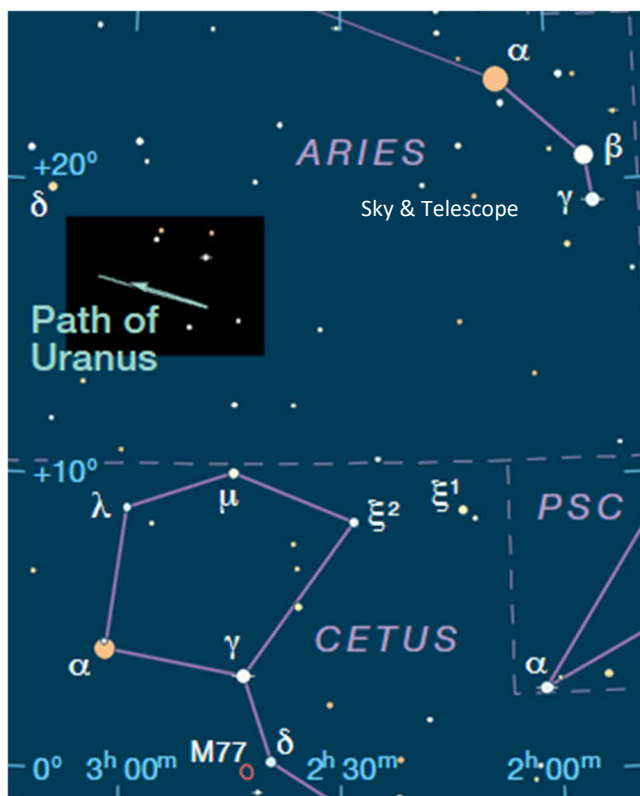
- ✚ **The Moon** dances with planets and stars. See December 24<sup>th</sup>.
- ✚ **Mars** is brilliant and big.
- ✚ **Jupiter** On December 15<sup>th</sup> an impressive shadow transit by Ganymede occurs, starting at 6:41 pm, then Ganymede transits Jupiter on December 29<sup>th</sup> starting at 9:11pm. Check out the show on January 9<sup>th</sup> as Io starts transiting at 6:15 pm and Ganymede emerges from behind Jupiter a few minutes later!



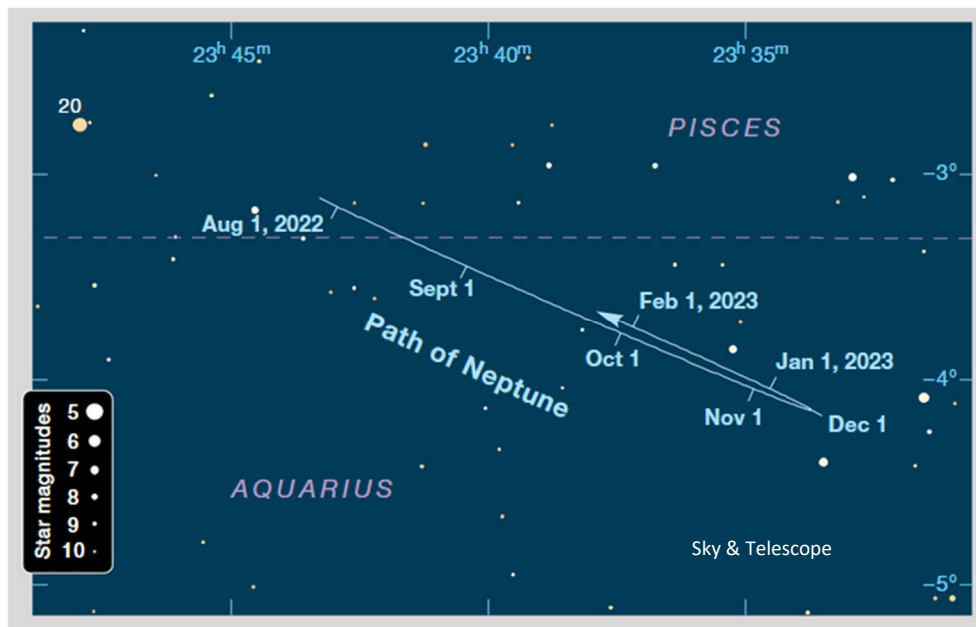
✚ **Saturn** is still a good target, but more southwest and west. It is setting earlier so catch it. On December 23 Tethys and Iapetus get nearly close enough to kiss.



✚ **Uranus** is in Aries, up most of the night – use binoculars or telescope and catch this gray-green dot.

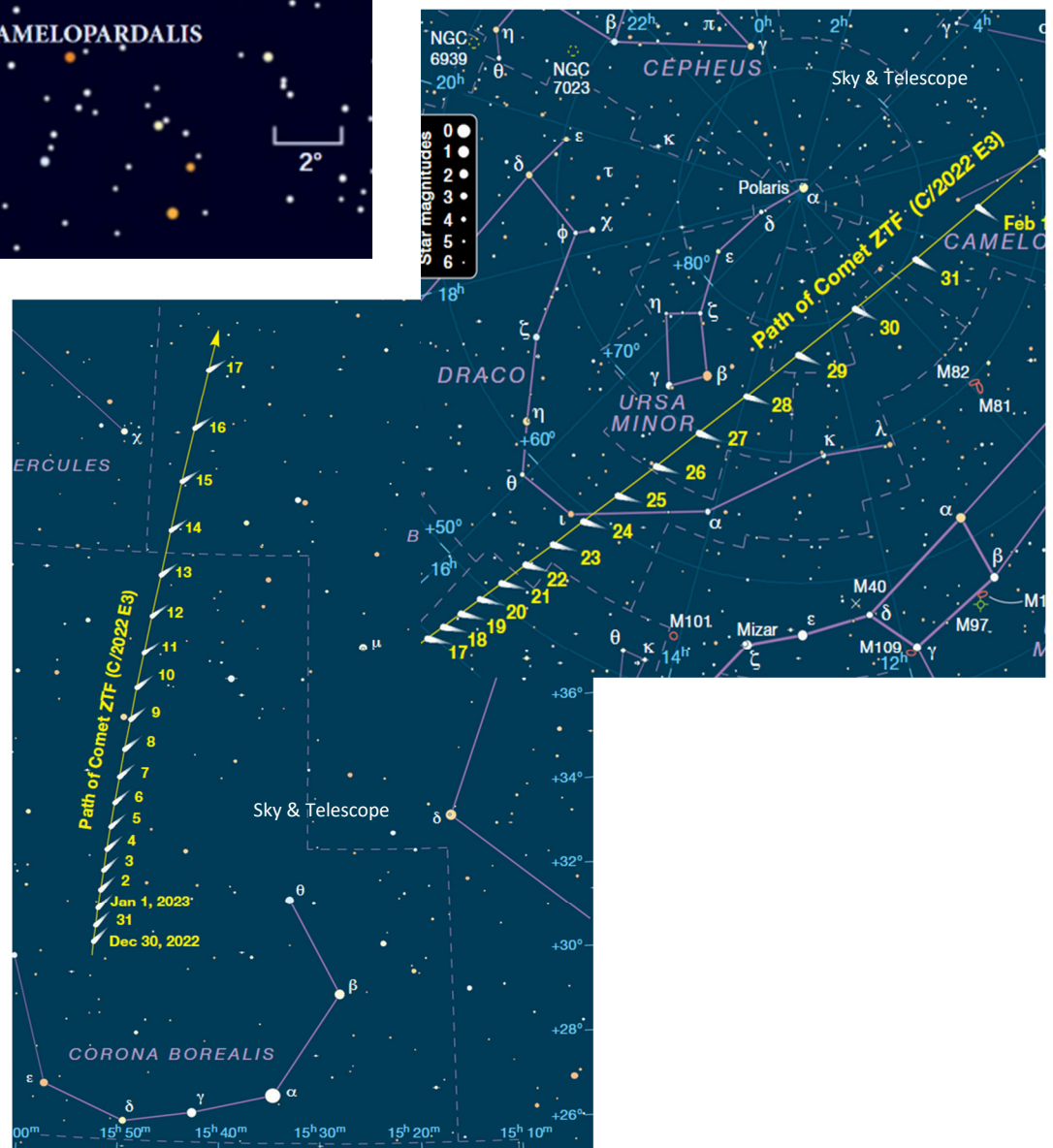
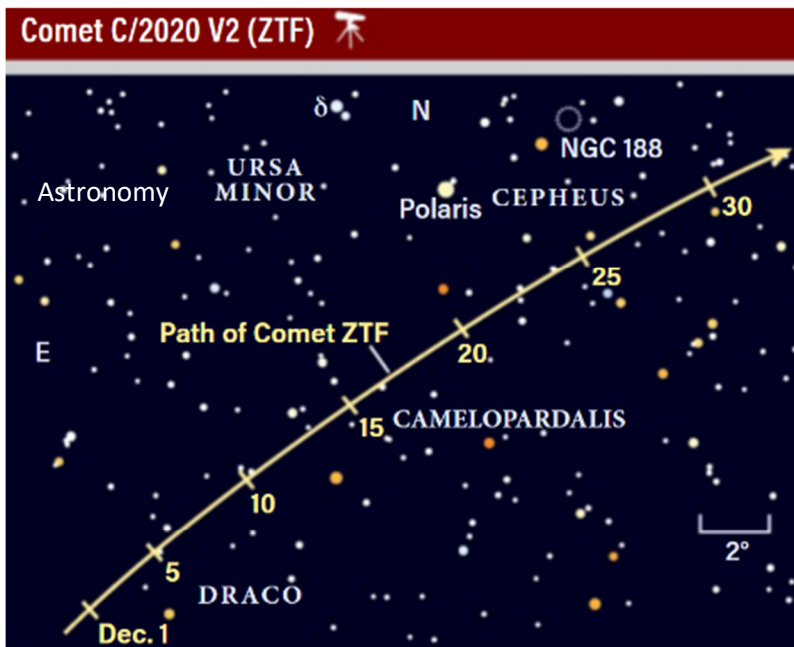


✚ **Neptune** is in eastern Aquarius, up most of the night. Use binoculars or telescope to see this blue dot.



## Comets:

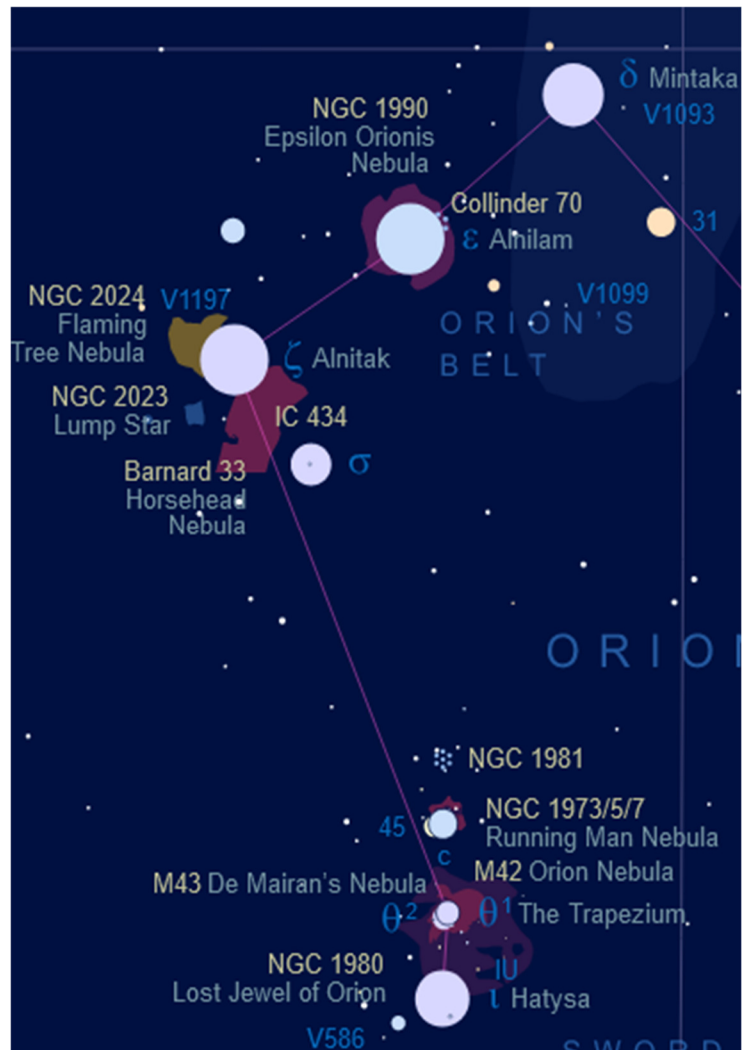
- Comet C/2020 V2 (ZTF) discovered by the Zwicky Transient Facility, is a dim ( $10^{\text{th}}$  magnitude) comet.
- Comet C/2022 E3 (ZTF) was discovered in March 2022 by the Zwicky Transient Facility. It is a magnitude 10 object currently in northern Serpens Caput. It will be better positioned for us by the end of December.





# My Celestial Pick: Orion's Belt & Sword

Orion is a pretty big constellation, full of visual and photographic treats. Other than the Big Dipper in Ursa Major, Orion's shoulders, belt, and knees combine into the most recognizable asterism in the northern sky. Orion's sword is a little trickier for many people. It is dimmer by comparison, but when pointed out, is easily seen. Orion's belt and sword make for a nice, compact region to explore. Enjoy the tour with wide field binoculars or a fast, rich-field telescope. Then, if possible, bump the power up for details. The image on the left is a correct perspective view.



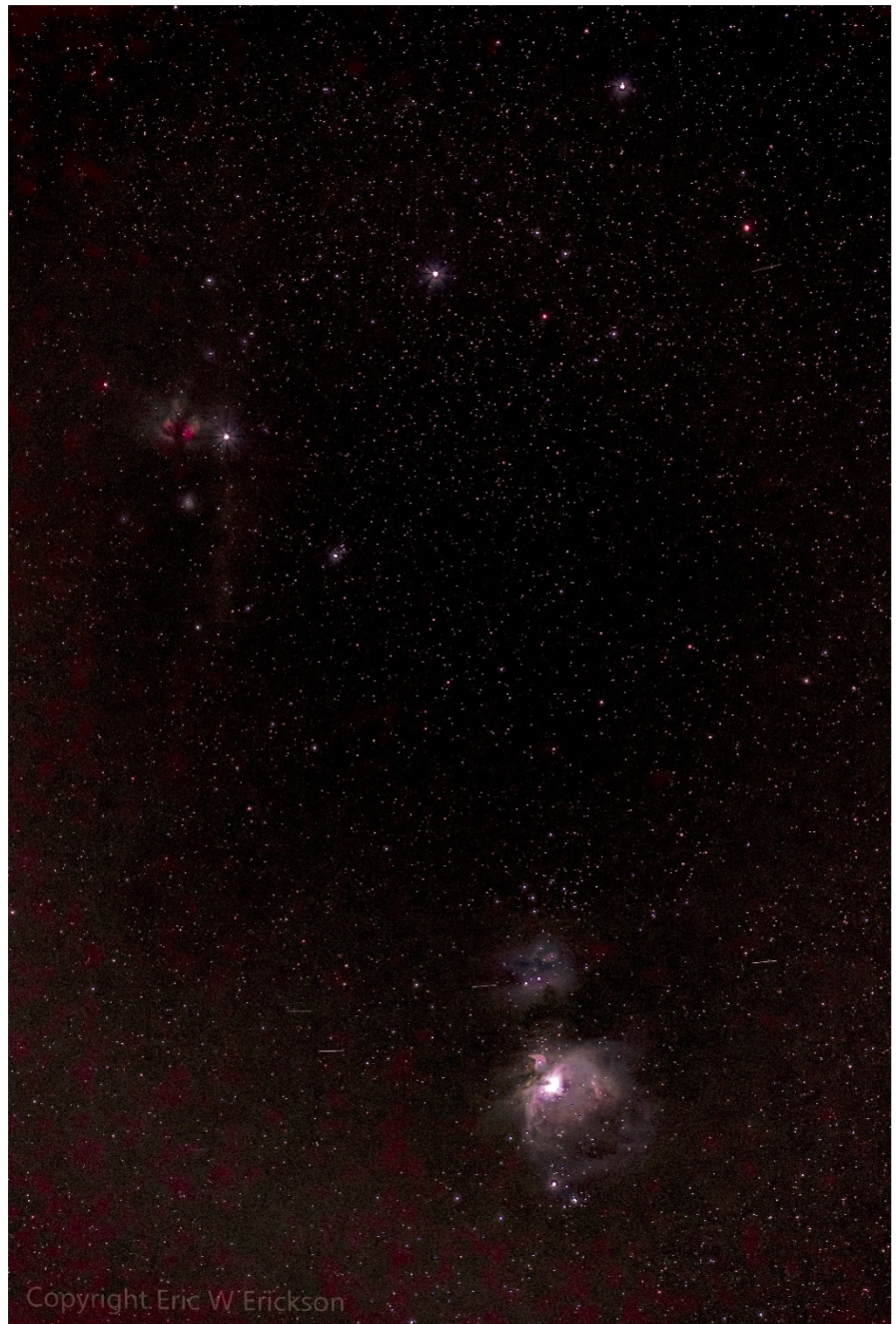
## *Imagining Imaging*: Platform for club and imagers needed!

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### Orion's Belt and Sword Region

This single exposure shows the ease with which you can capture night sky beauties. More effort and care in capture, such as making Flats & Darks, Guiding, multiple exposures to stack, will make it *BETTER*. That's a fact! Look below Alnitak, ( $\zeta$  Orionis). The Horsehead is barely there. Notice numerous, parallel short trails in this frame, due to Space-X Star Link satellites.

Optics	Canon 300mm f4 EF L
Mount	Losmandy G11
Camera	Canon EOS 6D MKII
Exposure	01/27/2020: 30 seconds @f4.5, ISO 2500, unguided
Postprocessing	Adobe Lightroom





# Cover Story> A Christmas Mystery?

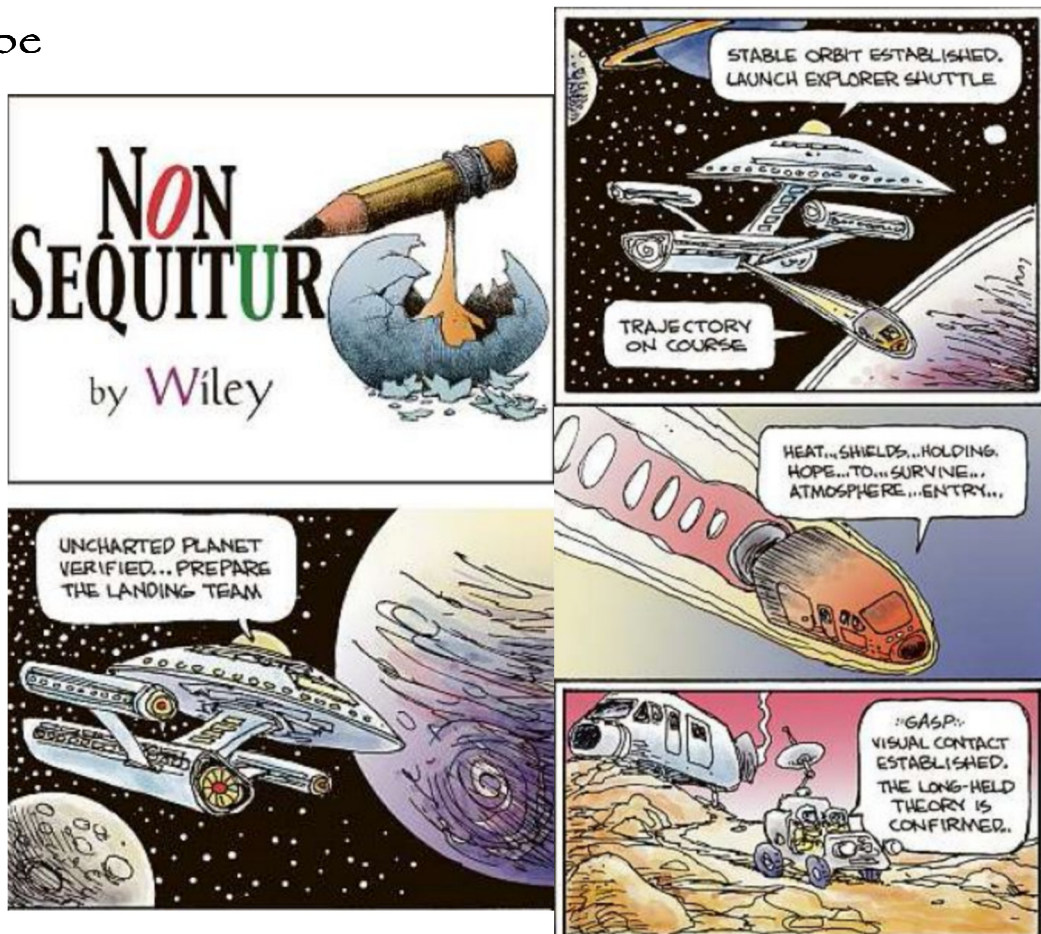
Many have tried, no one has succeeded. That is, to determine with good confidence if there was a natural event coincident with the vision by three Magi of a brilliant “star” hovering above the town of Bethlehem – heralding the birth of a new Jewish King.

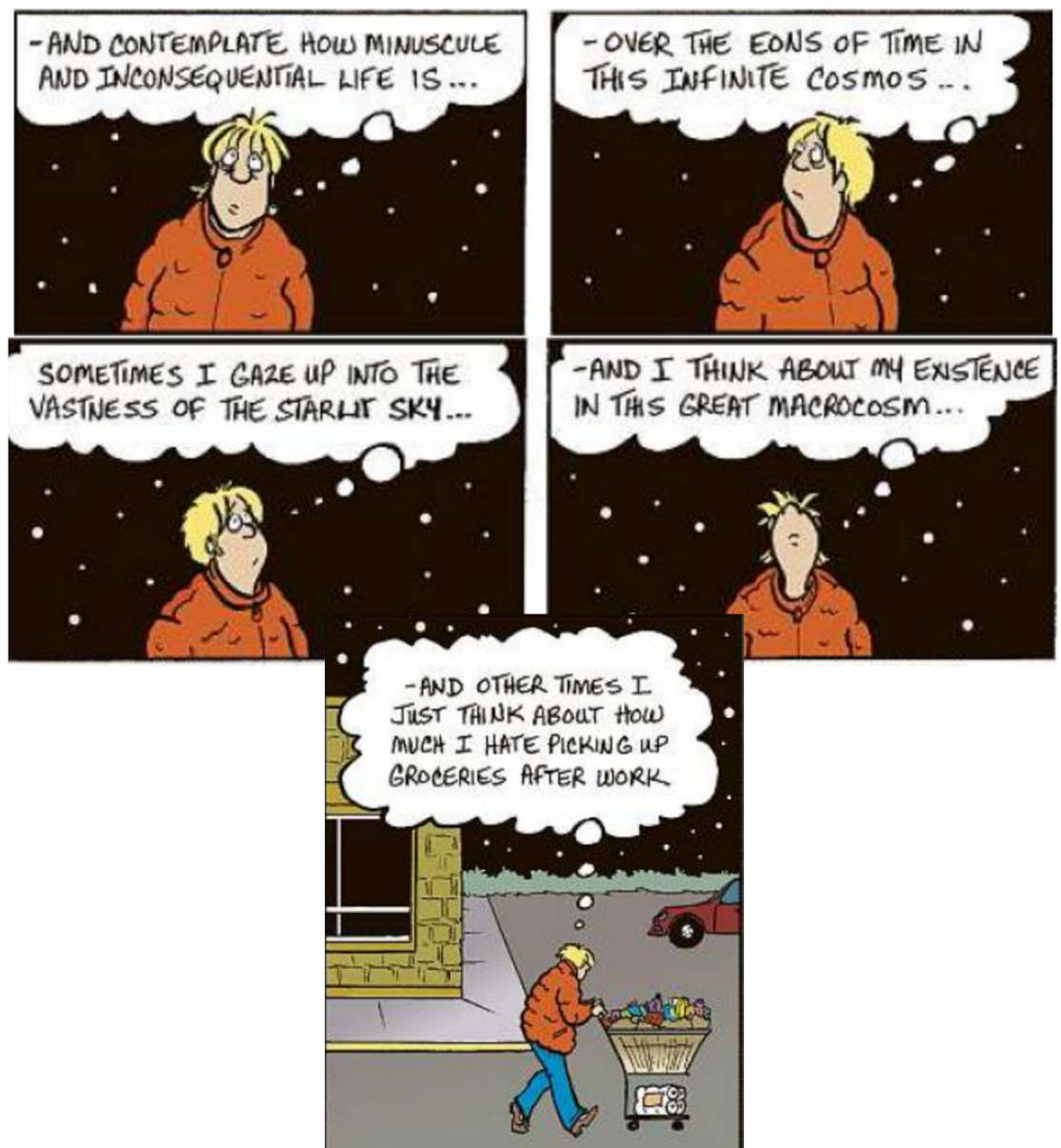
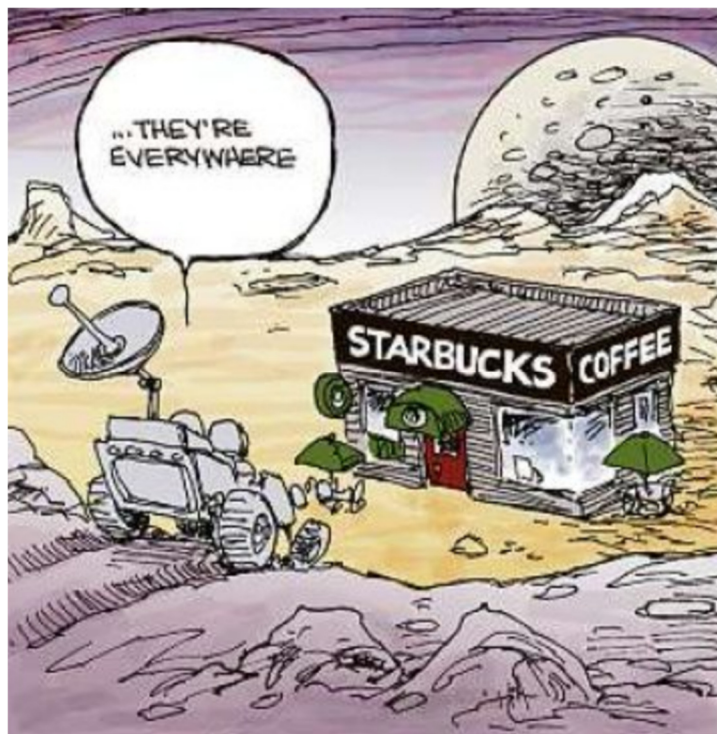
The accuracy of our calendar appears pitifully poor when trying to reconcile the birth of Jesus. Why? So many versions and translations. The Hebrew calendar was descendant from Babylonian and did not concur with the Julian calendar in use throughout the Rome controlled middle east at that time. The Julian calendar was inaccurate and had to be fixed, so we have the Gregorian calendar today. No one knows the exact birth date (or year) of Jesus. Oh, sure, lots of theological, historian, and scientific types have calculated what they believe to be that date. So, what is that date? It varies, depending on the source. Sometime between 7 and 3 BCE is the best estimate. Also, the Magi story itself is considered a fabrication to embellish the birth story.

My question then, why do scientists and historians bother? That event is tied to the emergence of a supernatural existence. Jesus was a man in historical context, but he was God (the holy trinity - Father, Son, and Holy Spirit/Ghost) in theological context. God is supernatural. From the immaculate conception of Mary onward events surrounding the birth, life, death, and most importantly, resurrection of Jesus are steeped in miracles. I suggest the Bethlehem Star was supernatural, not the coincidental occurrence of a comet, supernova, nova, planetary conjunction, etc. And guess what, no one can prove otherwise. That is, until someone develops a time machine, then keeps hunting and pecking around the past until the correct time is hit upon.

I pity the fools who have wasted their time and energy, their institutions time and money, their governments time and money, trying to associate a natural phenomenon incidence with the supernatural. *Eric Erickson*

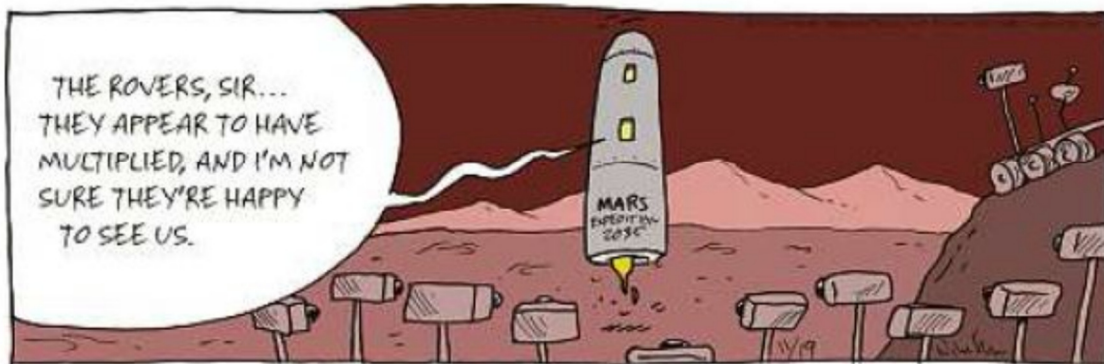
## Lagniappe







## CARPE DIEM



## CARPE DIEM



## PARDON MY PLANET



## SPEED BUMP

