New Braunfels Astronomy Club

Texas, USA

November 19th, 2020

255th Meeting (Zoom 8)
(Agenda Below)

Larry's Celestial Calendar & Newsletter

280th Edition

HAPPY THANKSGIVING

-by Eric Erickson

Venus and Mercury Mornings

The Moon and Planets Dance

Comet 88P/Howell

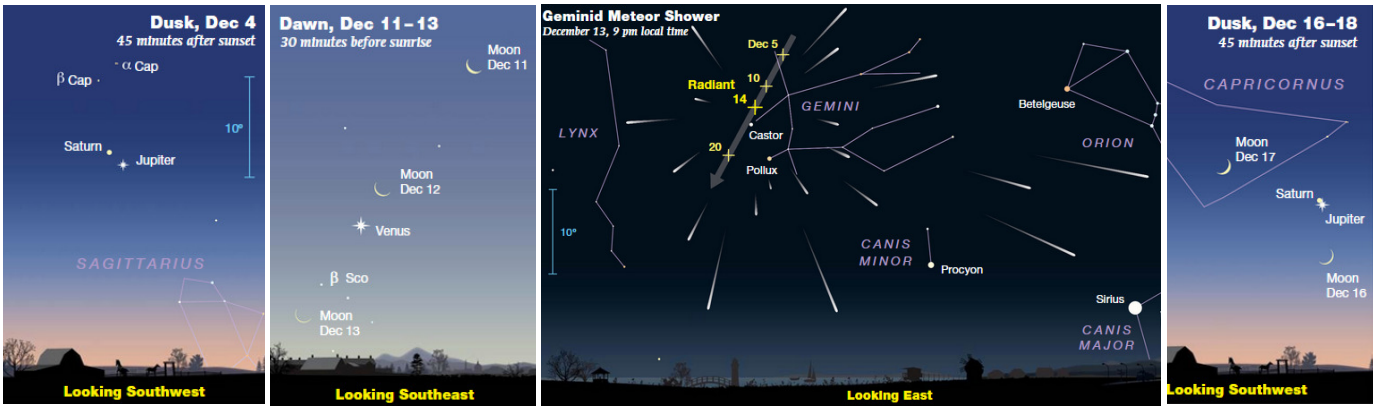
MARS! It's still Special

The Geminids are Coming 12/13-14

Jupiter & Saturn Getting Closer

Highlight Calendar for Clear Skies

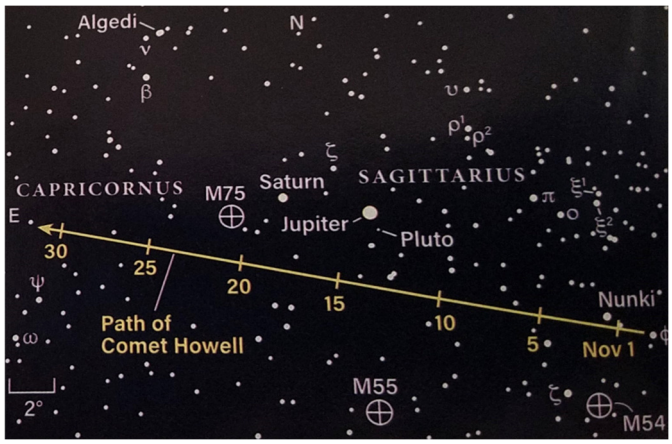
-From Sky and Telescope Magazine

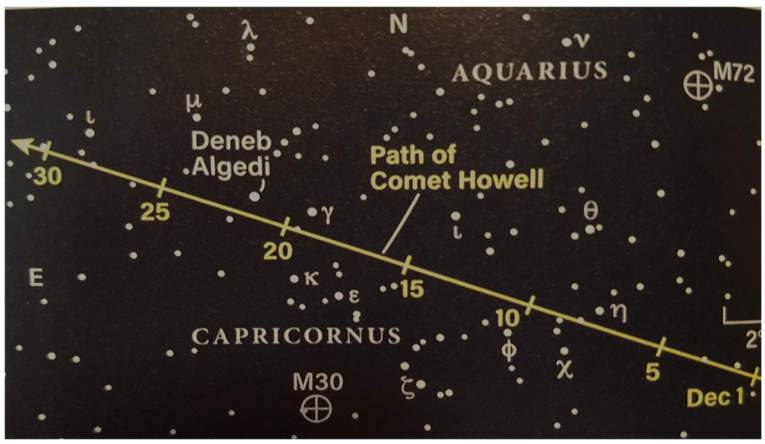


Solar System Observing

- Mercury is a morning planet and rises in the east well before the Sun. Look for it to pair up with Venus, the Moon, and Spica
- Venus is brilliant, a morning planet, rising about 3 hours before the Sun. It partners with the Moon, Spica, and Mercury
- Earth still spins, and we are still here to marvel at the wonders of our universe
- The Moon dances with Jupiter, Saturn, Venus, Mercury, and Spica.
- Mars is still a nice view though getting smaller
- Jupiter rises in early evening and looks great, getting closer to Saturn.
- Saturn rises an hour after Jupiter. They are getting closer now, toward their closest conjunction in centuries, in December.
- Uranus is in Aries.
- Neptune is in Aquarius
- Comet(s)
    - 88P/Howell is still with us. You will need a 4" aperture or greater. Maybe big binoculars will work.

-From Astronomy Magazine





- ISS viewing for New Braunfels (works for Canyon Lake too).
  - From Heavens Above

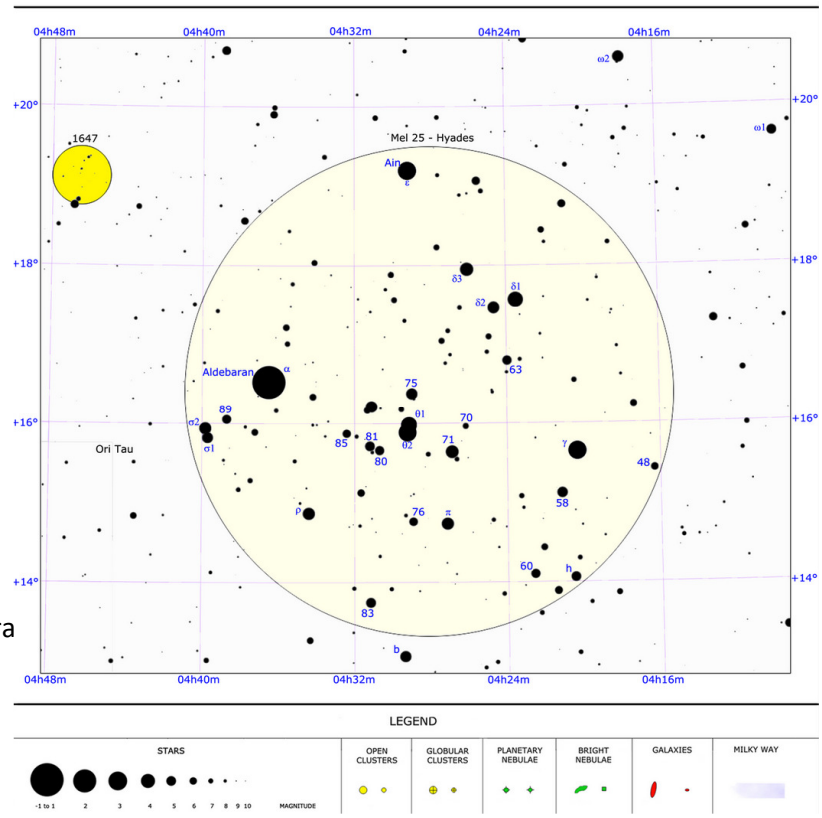
Date	Start Time	Start Loc	Max Alt °	End Loc	Note
11/20	18:49	W	17	N	
11/21	18:01	WSW	29	NNE	
12/09	18:22	NW	55	SE	
12/11	18:24	NW	33	SSE	Skims past Jupiter and Saturn

My Observing Pick: The Hyades

Taurus is rising. The bull rises butt first but for a good reason. He is facing Orion the hunter, not wanting to feel the sting of Orion's sword. The Hyades, with Aldebaran as a signpost make up Taurus's face and snout. The Hyades is a very spread out open star cluster and Aldebaran, while not a member, is a welcome highlight in the same field of view.

In Greek mythology the Hyades are the five daughters of Atlas, who has the rough job in exile of holding up the world and celestial sphere. Always drama. They are also half-sisters of the Pleiades and I suppose that's another good story. Its five brightest stars are evolving into the red giant phase, having consumed the bulk of their hydrogen.

The Hyades: Caldwell 41, Collinder 50, Melotte 25



Roberto Mura

Imagining Imaging: Platform for club imagers…images and imagers needed!

The Universe is not Lumpy

When I was a field rep Thanksgiving was my happy time. I planned my schedule to allow a road trip into northeastern Texas and northwestern Louisiana the week of Thanksgiving. OK, I know it's just Monday through Wednesday and a lot of driving, but it's the most beautiful driving. Often there is a chill in the air, with trees turning color. My favorite trip – On Monday I'd make a stop at Lufkin TX then spend the night in Nacogdoches. On Tuesday stop in San Augustine TX, Many LA, then spend the night in Natchitoches LA. Although it was Thanksgiving week Natchitoches would have Christmas everywhere! Even the hotels would be decked out with the spirit of the season. After my Wednesday morning visit, I would head back home, making stops in Leesville LA and Jasper TX. My Thanksgiving loop, no matter how I did it, put me in the spirit.

Thanksgiving Day is a different story. There is a certain level of stress. Will the turkey be good? Will the stuffing be good? How about the cranberry sauce, green beans, and sweet potatoes? Will conversations go off the rails? Will the gravy be smooth?

Like Thanksgiving gravy, there is a bit of stress surrounding the theory of our universe's large-scale structure. I know, a long segue.

The standard model of our universe predicts a somewhat lumpy structure, with galaxies clumping into galaxy clusters and clusters clumping into webs. Until now this appeared to be the case, it appears to be true when looking at a few degrees of sky. But our universe is big, way big! So big it took a team of investigators a long while to study enough of it to make conclusions. Called the KIDS (Kilo-degree Survey) Collaboration, this team examined 1,006 square degrees of sky, including 31 million galaxies! Their conclusion, our universe is much smoother than predicted.

So?! What's the big deal? Well, it seems this surprise indicates our current physics is somehow flawed. It also seems to be associated with another stressor in physics, the Hubble Constant controversy. The Hubble Constant is our universe's expansion rate, and its value determines the ultimate fate of our universe (never ending expansion, big rip, big crunch). Right now, physicists are arguing over this value. It varies depending on the type of measurement and that is unexpected. Something funny is going on in physics and like Isaac Asimov said, most great discoveries are not noted by "eureka!", they are noted by… "that's funny". Like, that's unexpected but cool.

Could it be physicists are on the verge of discovering a New Physics? Let's hold on for a "that's funny".

Eric Erickson

Coming up: OUR 256th ASTRONOMY CLUB MEETING

December 17th 2020, from 7 – 9:00 p.m. ZOOM meeting

New Braunfels Astronomy Club	astronomynbtx.org
Astronomy Friends New Braunfels	https://www.facebook.com/groups/354953995432792/
Comal County Friends of the Night Sky	https://www.facebook.com/groups/166098014710276/
Mick Homer-First Contact	mhomer2012@yahoo.com

New Braunfels Astronomy Club Meeting

Date: _____

Agenda

- Open meeting and introduce new members

- Interesting observations, experiences

- Show and tell

- What's in our sky this month?
    - Newsletter – Eric Erickson

- What's going on – events, outreach

- Main feature(s)

    - Bob Keyser - Mysterious lights near Marfa! The Marfa Lights part 2

- Open for discussion
- Feedback and close the meeting