

# New Braunfels Astronomy Club

Texas, USA

January 18<sup>th</sup>, 2018

224<sup>th</sup> Meeting

Larry's

## Celestial Calendar & Newsletter

January 19<sup>th</sup>, 2018 to February 15<sup>th</sup>, 2018 247<sup>th</sup> Edition

**Blue & Blood & Total Lunar Eclipse: A Trifecta**  
**Zodiacal Light**  
**Celestial Line Up**  
**NEW – ISS VIEWING SCHEDULE**

### Observer's Highlight Calendar for Clear Skies

Month Date Time Event

Month	Date	Time	Event
Jan	24	8:17 pm CST	First Quarter Moon
Jan	27	5:00 am CST	Aldebaran and the Moon get very close
Jan	31	Pre-dawn	Starting at 4:20 am CST, the Moon gets shadowed by our planet and will be in totality as it sets in the west at dawn. This is the second full Moon of January, a Blue Moon, and some say it will be a Blood Moon...deep orange-red.
Jan	31	7:27 CST	Full Moon
Feb	2-16	Evening	Get to a dark site and away from moonlight, and look westward after sunset. That tall pyramid of hazy light is sunlight reflected off zodiacal (ecliptic) dust.
Feb	7	9:54 am CST	Last Quarter Moon
Feb	8	Pre-dawn	A waning crescent Moon stands between Jupiter on its right and Mars on its left, with Antares below Mars.
Feb	11	Pre-dawn	The thin waning crescent Moon sits above Saturn and Sagittarius's Teapot.
Feb	15	3:05 pm CST	New Moon

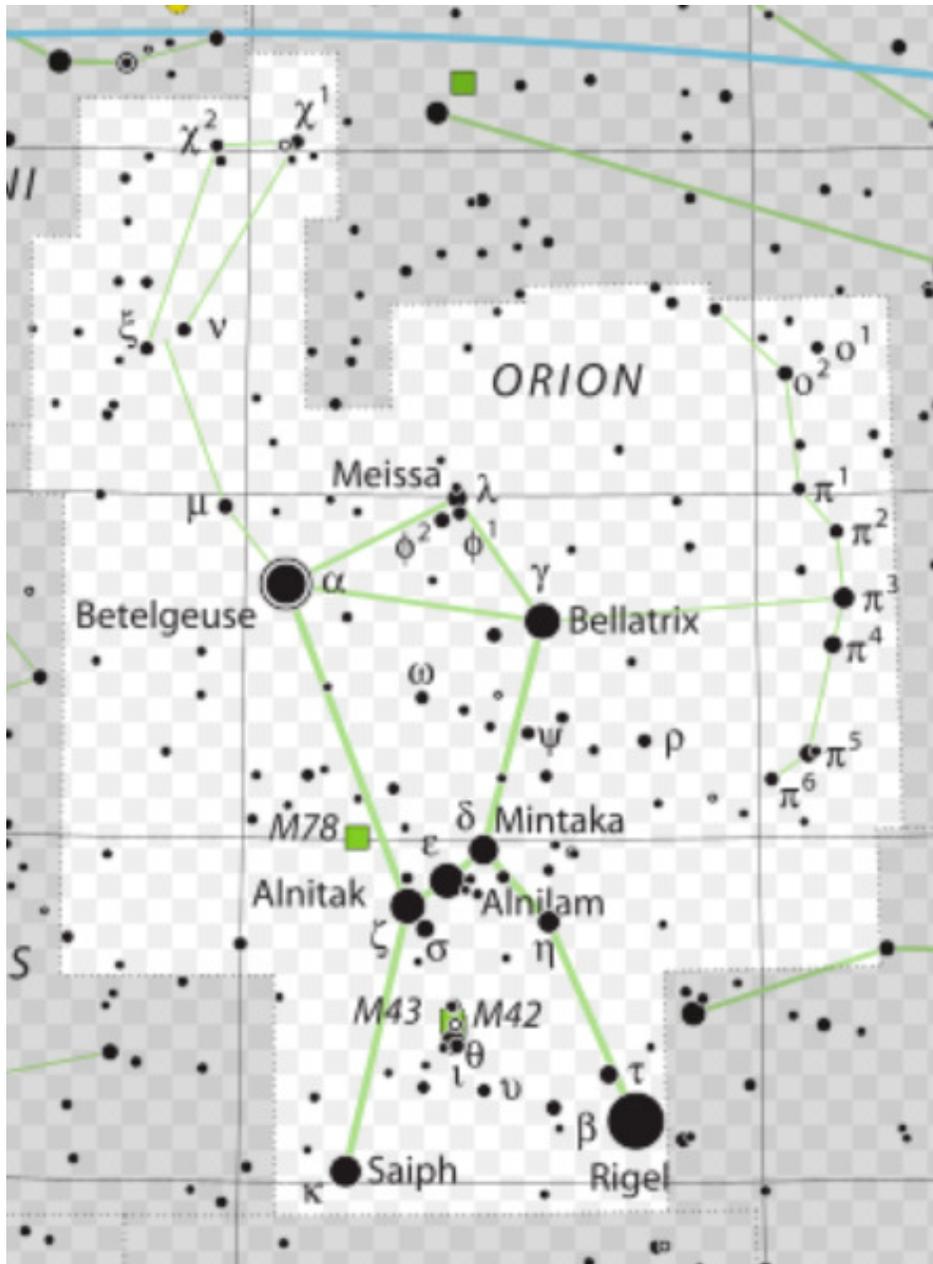
# Solar System Roundup

- ✚ **Mercury** is a morning “star”, now heading for superior conjunction and slowly getting closer to the Sun. It will enter the evening sky afterward, around February 17<sup>th</sup>.
- ✚ **Venus** is in the Sun’s glare until the latter part of February, when it sets an hour later than the Sun.
- ✚ **Earth** still spins, and we are still here to marvel at the wonders of our universe.
- ✚ **The Moon** teams up with Mars, Jupiter, and Saturn in the early morning hours at various times. January 31 brings a total lunar eclipse, visible to us as it sets in the morning hours.
- ✚ **Mars** is a morning “star” but not so good for observing. It gets brighter slowly and teams up with Jupiter and the Moon in the pre-dawn sky. Look for it to separate from Jupiter as time progresses.
- ✚ **Asteroid(s)** 20 Massalia is in eastern Taurus, at magnitude 9. It heading east, away from M1 and is about 4-5° east of M1. It will backtrack starting on January 26. 7<sup>th</sup> magnitude dwarf planet Ceres is in Cancer heading northwest. On February 4<sup>th</sup> it will be about 1° north of Tau (τ) Cancri.
- ✚ **Jupiter** is a morning “star” and teams up with Mars and the Moon. It is rising earlier each day and by February’s end will be up before midnight.
- ✚ **Saturn** is a morning “star” and teams up with the Moon and Sagittarius.
- ✚ **Uranus** is best observed late at night, in Pisces.
- ✚ **Neptune** can be viewed before midnight in Aquarius.
- ✚ **Pluto** is in Sagittarius and not viewable.
- ✚ **Comet(s)** PANSTARRS (C/2016 R2) is another dim (magnitude 10-11) comet. It’s from the Oort cloud and is in Taurus, northwest of the Hyades, and heading toward M45 (Pleiades). By January 31<sup>st</sup> it will be just southeast of the Pleiades. On February 5<sup>th</sup> it will be east of the Pleiades, on an arc taking it north-northeast toward Perseus.
- ✚ **ISS Viewing for New Braunfels (works for Canyon Lake too)**

Date	Start Time	Start Location	Direction
Jan 21	19:08:08	South horizon	ENE along the horizon
Jan 23	18:58:56	SW horizon	Northeast high in the sky
Jan 25	18:50:47	WSW horizon	NW arc to NE 30° altitude
Feb 12	19:17:09	NW horizon	ESE up to 40° altitude
Feb 13	20:01:22	WNW horizon	S along the horizon
Feb 14	19:08:18	NW horizon	SSE high in the sky

# My Observing Pick: Orion

The hunter in Greek mythology, and subject of paintings and carvings from 35,000 years ago, Orion is a fantastic constellation, with bright stars, asterisms, and nebulae. This is a constellation that really resembles its name. Too bad he has such a pin-head.



Name	Object Type	Location	Description
M42/M43	Nebulae	Middle "star" in sword	Molecular clouds, star forming regions
Trapezium	Open Cluster	Inside M42	Asterism of very young stars formed in the nebula
M78	Nebula	About 6° NE of M42	Smaller nebula, looks cometary
Cr 70	Open Cluster	Surrounding the belt	Large, loose open cluster encircling the belt
-----		Sword Objects	Use low power and wide field centered on M42

## What is it?

### True Field of View (TFOV)

This is the area of sky, space, whatever your telescope/eyepiece combo actually encompasses. The Apparent field (AFOV) of view is how wide it looks at the eyepiece. For example: An eyepiece with an 82° apparent field of view (ultra wide) and producing 82x with a telescope results in a 1° true field of view. That's about two full Moon's worth of field and that's pretty wide. To determine a telescope/eyepiece true field of view :  $AFOV \div \text{Magnification} = TFOV$

Next Month: Zodiacal Light

## Opportunities for NBAC Reach out

Mark deKiewiet has provided the following opportunities to help other Organizations

### Palmetto State Park

Contact: Liz Palfini

(830) 672-3266

[liz.palfini@tpwd.texas.gov](mailto:liz.palfini@tpwd.texas.gov)

### Total Lunar Eclipse

6:30a to 8:00a

Wed, January 31, 2018

Liz Palfini

(830) 672-3266

[liz.palfini@tpwd.texas.gov](mailto:liz.palfini@tpwd.texas.gov)

It's a blood moon morning at Palmetto SP. A total lunar eclipse will be visible in the early morning hours.

Join park staff for an early morning event that literally happens during a blue moon. January 31 marks the second full moon in January making it a blue moon. On top of that fun fact we will also experience a total lunar eclipse or blood moon just before the moon sets in the horizon. We're hoping the park overlook will provide good viewing that morning. We'll have our telescope out.

Bring your thermos; it will probably be chilly. Program is free.

# New Braunfels and Guadalupe Master Naturalists

The New Braunfels and Guadalupe Master naturalists do not have any lectures on the night sky. Astronomy is in their curriculum, but they have no one to present. They are looking for someone to present a 45-minute talk + 15 minute Q&A at one of their monthly meetings. Guadalupe is look for someone in February next year.

## Coming up: OUR 225<sup>th</sup> ASTRONOMY CLUB MEETING

Thursday, **February 15<sup>th</sup>**, 2018, from 7 – 9:00 p.m., held in the conference room of TJ's restaurant on Loop Road (337). Have dinner and/or a beverage if you like.

The New Braunfels Astronomy Club can be reached at [www.astronomyntx.org](http://www.astronomyntx.org)

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