



# ASTROFILES

## Auburn Astronomical Society Newsletter

**March 2020**

*Newsletter Editor — John Wingard — [jwin1048@gmail.com](mailto:jwin1048@gmail.com)*

### Moon Phases

March 16 — Last Quarter

March 24 — New Moon

April 1 — First Quarter

April 7 — Full Moon

April 14 — Last Quarter

April 22 — New Moon

April 30 — First Quarter

May 7 — Full Moon

### Next Club Meeting and Events

Since our last newsletter, our world has totally changed. We are currently in a period of worldwide quarantine and social distancing to help minimize the spread of the COVID-19 virus. Public gatherings have been discouraged or even banned and at this point no one really knows how long these restrictions will be in place. Our next scheduled event will be to assist with National Astronomy Day events at the W. A. Gayle Planetarium in Montgomery on Saturday, May 2, 2020. This event would also serve as our quarterly meeting. However, it is not known if this will even be possible given the current conditions. We will just have to wait and see what happens. In the meantime, we as amateur astronomers have an excellent opportunity to spend some quality time enjoying our hobby from home. Other than the public outreach activities, amateur astronomy is generally a solitary activity anyway, so take advantage of it and enjoy!

### Stay in touch with us



<http://www.auburnastro.org>



<https://www.facebook.com/groups/79864233515/>

### We are still accepting your 2020 AAS dues

It's not too late to submit your club renewal dues for 2020. Many thanks to those that have already renewed. Renewal dues are \$20.00 for the year and can be sent to the address listed on the member application at the end of this newsletter. If you would like to join as a new member, dues are prorated based on the month of joining. This information is also listed on the member application.



The AAS would like to welcome our newest member, Perry Myer from Jacksons Gap, AL. Welcome aboard Perry!

# Astronomical League Suggested Guidelines for our member societies in dealing with the Coronavirus/COVID-19

Submitted by solaron Wed Mar 18, 2020 07:15 pm MDT

**3/17/2020**

With the ever-changing regulation changes from various levels of government, we are suggesting the following steps in responding to the coronavirus:

- Be alert for information from state and local government officials.
  - In many parts of the country, limits have been placed on the amount of people allowed to congregate, sometimes as few as 10, to better control the virus. In the interests of respecting science, it is strongly suggested you and your astronomy groups follow these local government guidelines, as much as possible, in your own area.
- Keep current with the latest accurate, scientific information regarding the virus from reputable source such as the CDC (Centers for Disease Control and Prevention): [cdc.gov](http://cdc.gov).
  - If information you read regarding miracle cures, etc. sounds too good to be true, it probably is. Refer to such sources as Snopes.com or FactCheck.org to check the accuracy
- Cancel astronomy outreach activities and meetings for at least the next month or so, in line with the trend toward suggested or required smaller group gatherings.
- Use internet means of conducting your society's business and staying in contact with your members—such as Skype, Zoom, etc.—during this challenging time.
- Do the basic tasks the professionals encourage:
  - Frequent hand washing with soap and hot water
  - Cough into a tissue, then toss into the trash, or use the elbow method.
  - Stay home if you are ill.
  - Clean off table surfaces, cell phone screens, electronic device keyboards, with wipes or disinfectants on a daily basis or more.
  - In your small group meetings, allow 6 feet space between chairs to further minimize the possibility of coming in contact with the virus.
  - Provide adequate tissues and wipes.
- When you do resume your outreach activities again, consider expanding your use of electronics means, as much as possible, in communicating with your members and also in your outreach activities, such as sharing telescope images to a monitor, to further decrease the spread of germs from our guests looking through telescope eyepieces.

We will get through this crisis, realizing that this is drastically restricting our astronomical family of societies in their outreach and day-to-day operations. Use this downtime to plan exciting programs for your outreach programs or make plans for your upcoming personal observing activities.

Thanks for your support as we all move through this challenge.



**This article is distributed by NASA Night Sky Network**

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit [nightsky.jpl.nasa.gov](http://nightsky.jpl.nasa.gov) to find local clubs, events, and more!

### **Hubble at 30: Three Decades of Cosmic Discovery**

David Prosper

The **Hubble Space Telescope** celebrates its 30th birthday in orbit around Earth this month! It's hard to believe how much this telescope has changed the face of astronomy in just three decades. It had a rough start -- an 8-foot mirror just slightly out of focus in the most famous case of spherical aberration of all time. But subsequent repairs and upgrades by space shuttle astronauts made Hubble a symbol of the ingenuity of human spaceflight and one of the most important scientific instruments ever created. Beginning as a twinkle in the eye of the late Nancy Grace Roman, the Hubble Space Telescope's work over the past thirty years changed the way we view the universe, and more is yet to come!

We've all seen the amazing images created by Hubble and its team of scientists, but have you seen Hubble yourself? You actually can! Hubble's orbit -- around 330 miles overhead -- is close enough to Earth that you can see it at night. The best times are within an hour after sunset or before sunrise, when its solar panels are angled best to reflect the light of the Sun back down to Earth. You can't see the structure of the telescope, but you can identify it as a bright star-like point, moving silently across the night sky. It's not as bright as the Space Station, which is much larger and whose orbit is closer to Earth (about 220 miles), but it's still very noticeable as a single steady dot of light, speeding across the sky. Hubble's orbit brings it directly overhead for observers located near tropical latitudes; observers further north and south can see it closer to the horizon. You can find sighting opportunities using satellite tracking apps for your smartphone or tablet, and dedicated satellite tracking websites. These resources can also help you identify other satellites that you may see passing overhead during your stargazing sessions.

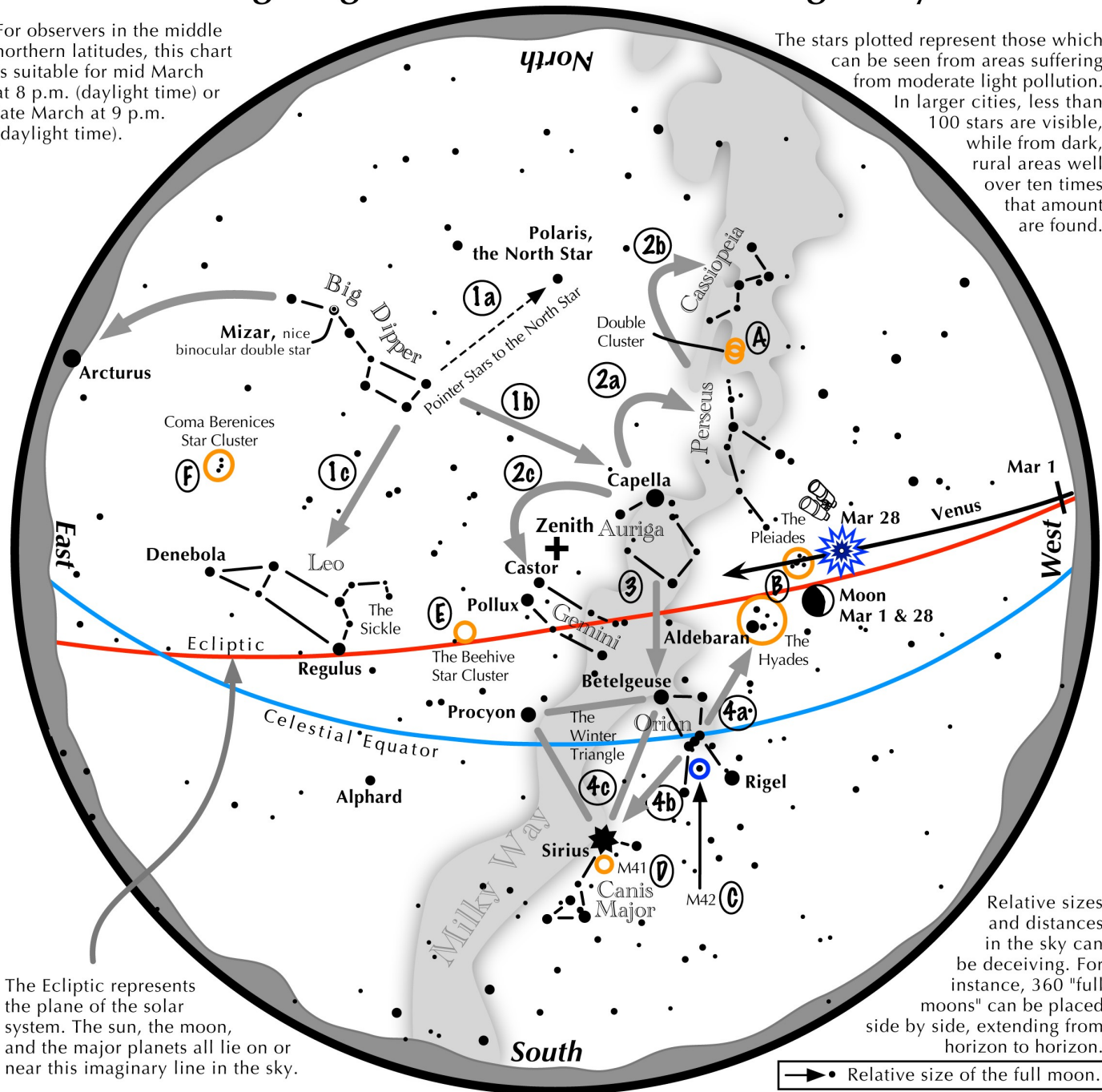
NASA has a dedicated site for Hubble's 30th's anniversary at [bit.ly/NASAHubble30](http://bit.ly/NASAHubble30). The Night Sky Network's "Why Do We Put Telescopes in Space?" activity can help you and your audiences discover why we launch telescopes into orbit, high above the interference of Earth's atmosphere, at [bit.ly/TelescopesInSpace](http://bit.ly/TelescopesInSpace). Amateur astronomers may especially enjoy Hubble's images of the beautiful objects found in both the Caldwell and Messier catalogs, at [bit.ly/HubbleCaldwell](http://bit.ly/HubbleCaldwell) and [bit.ly/HubbleMessier](http://bit.ly/HubbleMessier). As we celebrate Hubble's legacy, we look forward to the future, as there is another telescope ramping up that promises to further revolutionize our understanding of the early universe: the James Webb Space Telescope!

Discover more about the history and future of Hubble and space telescopes at [nasa.gov](http://nasa.gov).

# Navigating the mid to late March Night Sky

For observers in the middle northern latitudes, this chart is suitable for mid March at 8 p.m. (daylight time) or late March at 9 p.m. (daylight time).

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while in dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

→ • Relative size of the full moon.

## Navigating the March night sky: Simply start with what you know or with what you can easily find.

- 1 Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star. Its top bowl stars point west to Capella in Auriga, nearly overhead. Leo reclines below the Dipper's bowl.
- 2 From Capella jump northwestward along the Milky Way to Perseus, then to the "W" of Cassiopeia. Next jump southeastward from Capella to the twin stars of Castor and Pollux in Gemini.
- 3 Directly south of Capella stands the constellation of Orion with its three Belt Stars, its bright red star Betelgeuse, and its bright blue-white star Rigel.
- 4 Use Orion's three Belt stars to point northwest to the red star Aldebaran and the Hyades star cluster, then to the Pleiades star cluster. Travel southeast from the Belt stars to the brightest star in the night sky, Sirius. It is a member of the Winter Triangle.

### Binocular Highlights

**A:** Between the "W" of Cassiopeia and Perseus lies the Double Cluster. **B:** Examine the stars of the Pleiades and Hyades, two naked eye star clusters. **C:** M42 in Orion is a star forming nebula. **D:** Look south of Sirius for the star cluster M41. **E:** M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux. **F:** Look high in the east for the loose star cluster of Coma Berenices.





## Another outstanding shot by AAS member Jay Hall



**NGC 2264, The Cone Nebula, Christmas Tree Cluster, Fox Fur Nebula. Maiden run with the new Chroma filters.**

Total integration time of 14.2hrs:

95x180" at unity gain of Ha

98x180" at unity gain of OIII

90x180" at unity gain of SII

Calibration frames:

50 Flats; Ha, OIII, and SII

50 Darks

50 Bias

Gear:

ES ED127MM FCD100CF w/0.7 reducer/flattener, with [Moonlite](#) focuser with high resolution stepper motor

ZWO ASI 1600MM-PRO and EFW loaded with Chroma Technologies 5nm Ha, 5nm OIII, 5nm SII, and LRGB filters

ES ED80CF FCD1 guide scope

Lodestar X2 guide camera

[iOptron](#) CEM120

[iPolar](#) pole scope

[Astrozap](#) dew heater strips

Pegasus Astro Ultimate Power Box V2

Processed in [PixInsight](#):

## Comet ATLAS is coming!

Recently discovered comet C/2019 Y4 (ATLAS) isn't bright enough to see with the unaided eye ... yet. But it's getting brighter. Will it provide a good show or will it be a flop? We should know soon enough!

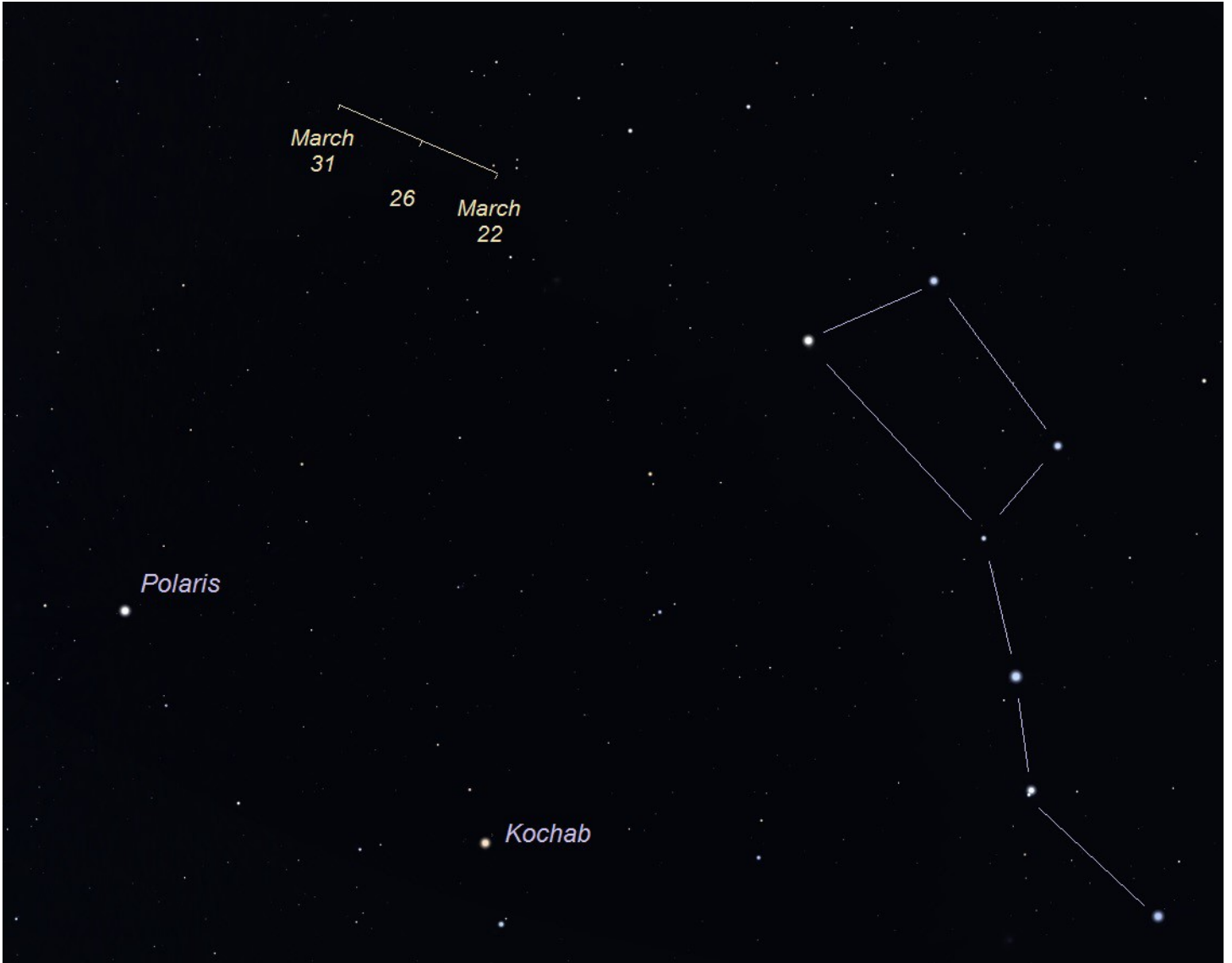


A recently discovered comet is getting the attention of astronomers and sky enthusiasts as it has become brighter than expected in the last few days. Astronomers using the ATLAS (Asteroid Terrestrial-impact Last Alert System) in Hawaii discovered Comet C/2019 Y4 (ATLAS) on December 28, 2019. As of mid-late March, it shines at about the brightness of an 8th-magnitude star – not visible to the eye yet – but within reach of medium-sized telescopes in dark skies. The comet is currently crossing Mars' orbit and is approaching the inner solar system. As it gets closer to us, it'll get brighter still. Please refer to the finder chart on the next page.

Comet ATLAS should become bright enough to be easily visible in binoculars, and perhaps bright enough to be seen with the unaided eye from dark sky locations.

Just know that comets are notoriously erratic and inherently unpredictable! We will have to wait to see how Comet Atlas performs.

## Finder Chart for Comet ATLAS



Location of Comet C/2019 Y4 (ATLAS) during late March 2020. Facing north-northeast at around 9 p.m. local daylight time (8 p.m. if you're not using daylight time) for all locations. In late March, the comet requires a small or medium-sized telescope, but it may be visible in binoculars very soon! Illustration by Eddie Irizarry using Stellarium.





## Auburn Astronomical Society Membership Application Form

Name:

---

Address:

---

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Date of Application\* \_\_\_\_/\_\_\_\_/\_\_\_\_

E-mail:

---

Telescope(s):

---

---

Area(s) of special interest:

---

---

Enclose: \$20.00 for regular membership, payable in January. *Full-Time* student membership is half the Regular rate.

If you are a NEW member joining after the first of the year, refer to the prorated table below

Jan \$20.00	Feb \$18.33	Mar \$16.66	Apr \$14.99	May \$13.33	Jun \$11.66
Jul \$10.00	Aug \$8.33	Sep \$6.66	Oct \$4.99	Nov \$2.33	Dec \$1.66

Make checks payable to: Auburn Astronomical Society and return this application to:

Auburn Astronomical Society  
c/o John Wingard, Secretary/Treasurer  
#5 Wexton Court  
Columbus, GA 31907

For questions about your dues or membership status, contact: [jwin1048@gmail.com](mailto:jwin1048@gmail.com)

**Thank you for supporting the Auburn Astronomical Society!**