

# Master Astronomer Program Continuing Education

## Fall 2018

### Top 20 Astronomy Websites (according to Leesa and Zach...)

#### American Association of Variable Star Observers

Leesa

URL: <https://www.aavso.org/>

Everything you never wanted to know about spectroscopy can be found here. Obviously, stars are hard. There's no way around that. But stars, spectra, spectroscopy, and variable stars are all incredibly important in astronomy, and the AAVSO offers a lot when it comes to stars.

#### Ask an Astronomer

Leesa

URL: <http://curious.astro.cornell.edu/>

If you have a question about space, chances are, someone else has the same question out there. The astronomy staff at Cornell University have put together a list of common astronomy questions (and some not so common ones) that are answered quite thoroughly. They even label the answers 'Beginner', 'Intermediate', or 'Advanced' to let you know what kind of a ride you're in for.

#### Astrobites

Leesa

URL: <https://astrobites.org/>

Astrobites is a level up from Cornell's *Ask an Astronomer*. They assume you have a pretty fundamental knowledge of astronomy already. A lot of what they do is break down recent papers in astrophysics, so the topics can range widely from cosmology to planetary science.

#### Astronomical Society of the Pacific

Leesa

URL: <https://www.astrosociety.org/>

The Astronomical Society of the Pacific is head and shoulders above most astronomy organizations. They blend education, outreach, and astrophysics almost seamlessly. You can spend an inordinate amount of time on this site, and find resources for virtually anything. Of particular note is a list of resources for teachers: <https://www.astrosociety.org/education/astronomy-resource-guides/web-sites-for-college-astronomy-instructors/>

#### Astronomy Cast

Leesa, Zach

URL: <http://www.astronomycast.com/>

A superb weekly podcast on astronomy hosted by an astronomy educator and an astrophysicist. You can learn about astronomy on your way to work, while cleaning, while mowing the lawn, etc.

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### Astronomy Event Calendar Leesa

URL: <http://www.seasky.org/astronomy/astronomy-calendar-current.html>

This site contains lists of notable celestial events for each year through 2030. Extremely useful when planning star parties and other astronomy outreach events.

### Astronomy Picture of the Day Zach

URL: <https://apod.nasa.gov/apod/astropix.html>

A great choice for your internet browser home page, NASA's Astronomy Picture of the Day highlights a cool new astronomy-related photo each day, along with informational text written by astronomers Robert Nemiroff and Jerry Bonnell. Hyperlinks take you to more in depth information about the object(s) featured in the image. The extensive archives are worth a look as well; go through them all and you'll be a true master of astronomy!

### Clear Sky Charts Zach

URL: <http://cleardarksky.com/csk/>

The astronomer's weather forecast! Astronomers are generally interested in just one thing: will it be clear or not? This website contains detailed cloud cover forecasts for over 6000 locations throughout North America, letting you know at a glance the prognosis for your observing session. Speaking from experience, this is the forecast I put the most stock into when planning events. It is eerily accurate, especially in spring, fall, and winter. Their forecasts also include seeing and transparency, something you're unlikely to find from the Weather Channel or any other weather website. Drawbacks: forecasts are available only 48 hours out, plus they tend to be less reliable during the summer monsoon season when cloud cover is more random and hard to forecast.

### Communicating Astronomy with the Public Leesa

URL: <https://www.capjournal.org/issues/index.php>

Communicating astronomy with the public is a key part of the Master Astronomer Program, and it's very different from just knowing facts about astronomy. Interpretation techniques, engaging audiences, and reaching a wide variety of people can be challenging (especially when you're standing outside on concrete, in the cold, late at night). There's no reason to reinvent the wheel. CAP Journal has so many articles and tips on engaging with the public in the real world, it's invaluable.

### EarthSky.org Zach

URL: <http://earthsky.org/>

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A go to source for information on what's happening in the night sky right now, and in coming weeks and months. The site publishes a daily article, "*Tonight*", highlighting something new you can see in the night sky every evening.

### Exoplanet Catalog

Leesa

URL: <http://exoplanet.eu/catalog/>

This is possibly my favorite database of all time. It's so searchable. It's so sortable. It's unbelievably user-friendly. And it *cites its sources for everything*, and the sources for every single planet are right there at the bottom of every page. You want to find the first planet ever discovered? Boom. Done. You want to find the system with the highest amount of planets? So simple. You want to find the darkest planet, the smallest planet, the biggest, the most massive, the shortest orbit, the circumbinary planets? It is just so easy. If my Internet were on fire, I'd run back in to save this website.

### Heavens Above

Zach

URL: <https://www.heavens-above.com/>

Enter your geographic location for detailed satellite and iridium flare predictions. You can also get star charts and finder charts for bright comets, asteroids, planets, all customized for your specific location!

### Impact Earth

Zach

URL: <https://www.purdue.edu/impactearth/>

This website might be the most fun you ever have on the internet! Have you ever wondered what would happen if Southern Utah were hit by a 200 meter iron asteroid? Fret no longer. This interactive program from Purdue lets you simulate asteroid and comet impacts by selecting impactor size, composition, impact speed & angle, and numerous other parameters. It then spits out a detailed analysis of the resulting destruction so you can determine whether any given impact would cause a bad day, a bad decade, or the mass extinction of all life on Earth!

### International Dark Sky Association (IDA)

Leesa, Zach

URL: <http://darksky.org/>

The website of the International Dark Sky Association is a one-stop shop for information on dark sky preservation. You'll find dark sky education materials, ideas for how to get involved in your community, how to become a citizen scientist on artificial light at night, how to find dark places to observe the night sky, and many other topics. They are the experts when it comes to combating light pollution and saving our dark night skies!

### New World Atlas of Artificial Night Sky Brightness

Zach

URL: <https://cires.colorado.edu/Artificial-light>

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Looking for a dark place? This interactive map shows you what light pollution conditions are like anywhere in the world, as of 2016.

### Night Sky Network Outreach Resources

Zach

URL: <https://nightsky.jpl.nasa.gov/download-search.cfm>

NASAs Night Sky Network is a consortium of astronomy clubs and other outreach associations across the country. My favorite thing about the Network is the great interactive astronomy activities they provide. Instructions and materials for dozens of activities are available on their website. They are great for rainy nights, or to augment your astronomy interpretation at star parties. More than a few Master Astronomer workshop activities were derived from Night Sky Network activities!

### Personal Pages of Astronomers

Leesa

URL: <http://www.richardbell.net/personal.html>

They obviously want you to find them, or astronomers wouldn't have so many blogs.

### SpaceWeather

Leesa

URL: <http://www.spaceweather.com/>

Check and see whether the Sun will have any spots today! If you have a telescope outfitted with a white light filter and set up for solar viewing, then waiting for the Sun to be interesting becomes the next big challenge. With SpaceWeather you don't have to set up your scope every day crossing your fingers.

*(Zach adds: This is also a good website for information on meteor showers, aurorae, and other transient astronomical and atmospheric phenomena. This site would have made my list as well when I lived further north and seeing an aurora was more than a pipe dream!)*

### STARS - James Kaler

Zach

Leesa,

URL: <http://stars.astro.illinois.edu/sow/sowlist.html>

This website is not pretty. It looks like a geocities website from the late 90s. But it's an amazing resource by an astrophysicist who knows more about stars than possibly any human being should ever know. Once you scroll down to the list, you'll find all the named stars and can click on them. You can also go through stars by constellation. The really wonderful thing about this website is that the information is reliable, and Kaler takes a tough subject and makes it readable and understandable. It's an invaluable site.

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Universe Today  
Zach

URL: <https://www.universetoday.com/>

My go-to site for astronomy news and information on new discoveries in space. Articles are generally well-written, accurate, and include links to primary sources in case you want to explore more.

### Honorable mentions:

<http://www.planetary.org/> (Leesa, Zach)

<http://www.iceinspace.com.au/> (Leesa)

<https://www.skyandtelescope.com/> (Leesa)

<https://solarsystem.nasa.gov/> (Zach)

<http://htwins.net/scale/index.html> (Zach)

<https://twitter.com/FakeAstropix> (Zach)