

WEYMOUTH ASTRONOMY

Volume 14, Issue 2
6 September 2019

Trips / Events

Ideas for trips and events
always welcome!

events@weymouthastronomy.co.uk

Sept 18 CADAS—The Herschels of Berkshire by Alan Dowdell

Oct 1 WAS—AGM & Rodinia and the Boring Billion led by James Fradgley

Oct 16 CADAS—Galaxies: do mergers matter? By Chris Lintott

Nov 5 WAS—Review of Astro-Imaging Techniques by Alan Jeffris

Nov 20 CADAS—Pseudoastronomy: Hollow Moons and Flat Earths by Steve Tonkin

Dec 3 WAS—Lesser Known Winter Sky Wonders by Bob Mizon

Dec 18—Christmas social and members' images/short talks

The events for the British Astronomical Society (BAA) can be found at <https://britastro.org/meetings/2019>

WEYMOUTH ASTRONOMY

2019 – 2020 Subscriptions are now due
£15 Annual Membership
£3 per night for visitors

WAC Upcoming Events:

Oct 11 Ask The Panel

Nov 8 UFOs—REALLY? By Barry Fitzgerald

13 Dec Winter Social / Viewing Evening

Why don't you volunteer to give a short talk? What part of astronomy inspires you?

Pick a favourite object to speak on perhaps.

More to come!!

Sky Watcher



Welcome back from the summer break. As the nights are beginning to draw in and dark skies returning, this is a great time to have a look for the Summer Triangle. Have a look at the finder charts on page 3.

In Space News recently, the AGU released an interesting article on '**Nearest Star System May Have a Second Planet—The exoplanet candidate, tentatively named Proxima c, would be a frozen snowball.**'



This article is definitely worth a read. The key quote seems to be "Since low-mass stars are expected to host multiplanet low-mass systems, Proxima could certainly host other terrestrial planets we could not detect". You can find the article at https://eos.org/articles/nearest-star-system-may-have-a-second-planet?utm_source=eos&utm_medium=email&utm_campaign=EosBuzz082319

Happy Autumn Equinox to All! Until next time...SLK



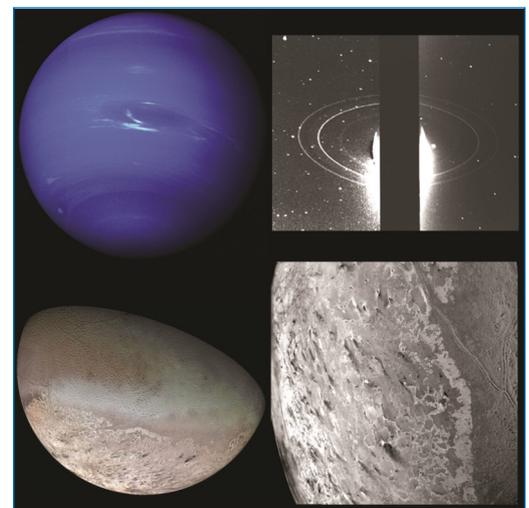
Chill Out: Spot an Ice Giant in August

by David Proper

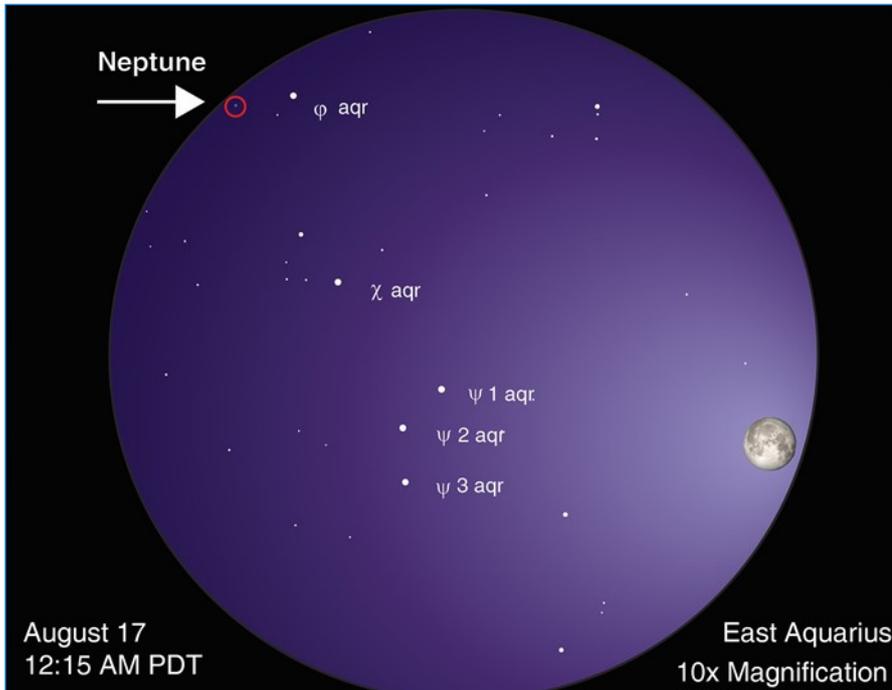
Is the summer heat getting to you? Cool off overnight while spotting one of the solar system's ice giants: **Neptune!** It's the perfect way to commemorate the 30th anniversary of Voyager 2's flyby.

imaginary line from bright southern star Fomalhaut up to the Great Square of Pegasus, then mark a point roughly in the middle and search there, in the eastern edge of Aquarius. If you spot a blue-ish star, swap your telescope's eyepiece to zoom in as much as possible. Is the suspect blue "star" now a tiny disc, while the surrounding stars remain points of white light? You've found Neptune!

Neptune is too dim to see with your unaided eye so you'll need a telescope to find it. Neptune is at opposition in September, but its brightness and apparent size won't change dramatically as it's so distant; the planet is usually just under 8th magnitude and 4.5 billion kilometers away. You can see Neptune with binoculars but a telescope is recommended if you want to discern its disc; the distant world reveals a very small but discernible disc at high magnification. Neptune currently appears in Aquarius, a constellation lacking in bright stars, which adds difficulty to pinpointing its exact location. Fortunately, the Moon travels past Neptune the night of August 16th, passing less than six degrees apart (or about 12 Moon widths) at their closest. If the Moon's glare overwhelms Neptune's dim light, you can still use the its location that evening to mark the general area to search on a darker night. Another Neptune-spotting tip: Draw an



Clockwise from top left: Neptune and the Great Dark Spot traced by white clouds; Neptune's rings; Triton and its famed icy cantaloupe surface; close of up Triton's surface, with dark streaks indicating possible cryovolcano activity. Find more images and science from Voyager 2's flyby at bit.ly/NeptuneVoyager2 Image Credit: NASA/JPL

Chill Out (more!)

Neptune and Uranus are ice giant planets. These worlds are larger than terrestrial worlds like Earth but smaller than gas giants like Jupiter. Neptune's atmosphere contains hydrogen and helium like a gas giant, but also methane, which gives it a striking blue color. The "ice" in "ice giant" refers to the mix of ammonia, methane, and water that makes up most of Neptune's mass, located in the planet's large, dense, hot mantle.

Finder chart for Neptune. This is a simulated view through 10x50 binoculars (10x magnification). Please note that the sizes of stars in this chart indicate their brightness, not their actual size. *Moon image courtesy NASA Scientific Visualization Studio; chart created with assistance from Stellarium.*

**Spot the Stars of the Summer Triangle by David Prosper**

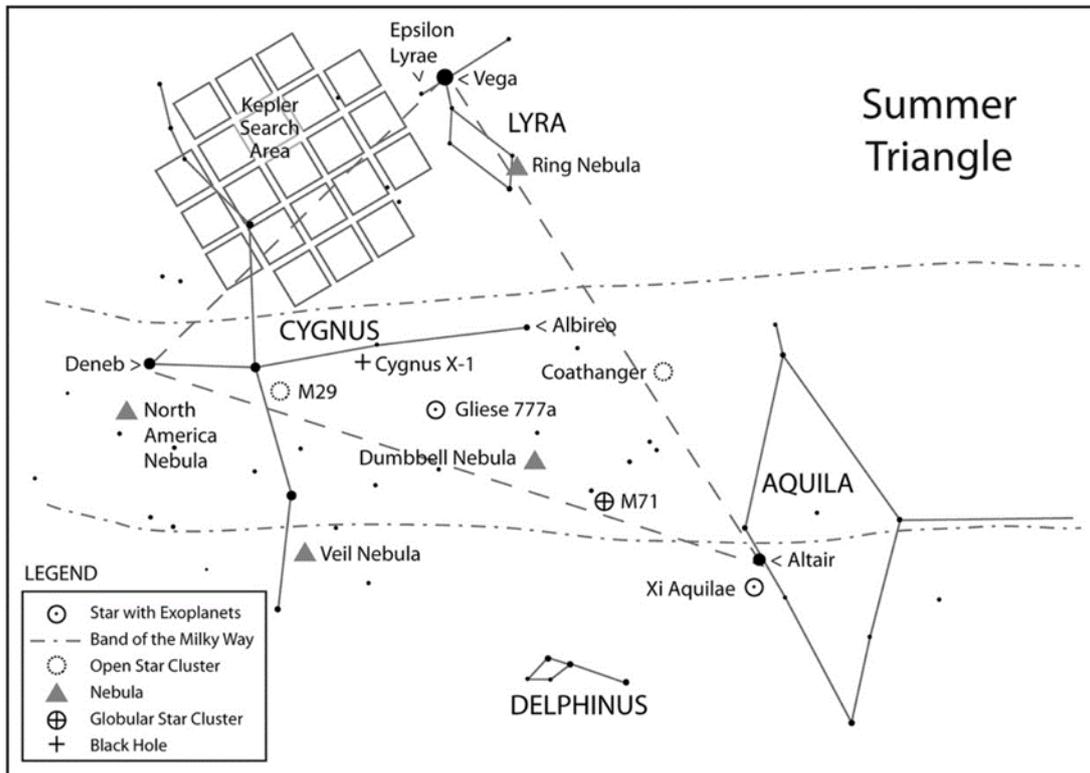
September skies are a showcase for the **Summer Triangle**, its three stars gleaming directly overhead after sunset. The **equinox** ushers in the official change of seasons on September 23. **Jupiter** and **Saturn** maintain their vigil over the southern horizon, but set earlier each evening, while the terrestrial planets remain hidden.

The bright three points of the **Summer Triangle** are among the first stars you can see after sunset: Deneb, Vega, and Altair. The Summer Triangle is called an **asterism**, as it's not an official constellation, but still a striking group of stars. However, the Triangle is the key to spotting multiple constellations! Its three stars are themselves the brightest in their respective constellations: Deneb, in Cygnus the Swan; Vega, in Lyra the Harp; and Altair, in Aquila the Eagle. That alone would be impressive, but the Summer Triangle also contains two small constellations inside its lines, Vulpecula the Fox and Sagitta the Arrow. There is even another small constellation just outside its borders: diminutive Delphinus the Dolphin. The Summer Triangle is huge!

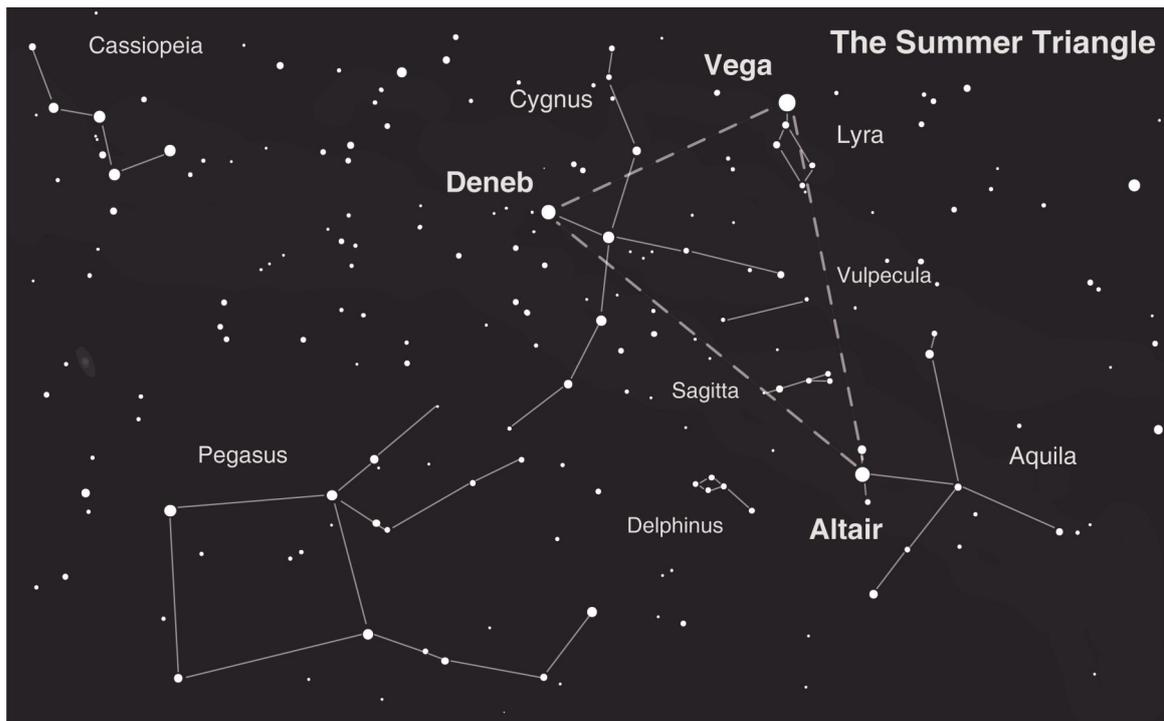
The **equinox** occurs on September 23, officially ushering in autumn for folks in the Northern Hemisphere and bringing with it longer nights and shorter days, a change many stargazers appreciate. Right before sunrise on the 23rd, look for Deneb - the Summer Triangle's last visible point - flickering right above the western horizon, almost as if saying goodbye to summer.

The Summer Triangle region is home to many important astronomical discoveries. Cygnus X-1, the first confirmed black hole, was initially detected here by x-ray equipment on board a sounding rocket launched in 1964. NASA's Kepler Mission, which revolutionized our understanding of exoplanets, discovered thousands of planet candidates within its initial field of view in Cygnus. The Dumbbell Nebula (M27), the first planetary nebula discovered, was spotted by Charles Messier in the diminutive constellation Vulpecula way back in 1764!

Planet watchers can easily find **Jupiter** and **Saturn** shining in the south after sunset, with Jupiter to the right and brighter than Saturn. At the beginning of September, Jupiter sets shortly after midnight, with Saturn following a couple of hours later, around 2:00am. By month's end the gas giant duo are setting noticeably earlier: Jupiter sets right before 10:30pm, with Saturn following just after midnight. Thankfully for planet watchers, earlier fall sunsets help these giant worlds remain in view for a bit longer. The terrestrial planets, Mars, Venus, and Mercury, remain hidden in the Sun's glare for the entire month.



Once you spot the Summer Triangle, you can explore the cosmic treasures found in this busy region of the Milky Way. Make sure to “Take a Trip Around the Triangle” before it sets this fall! Find the full handout at bit.ly/TriangleTrip



This wider view of the area around the Summer Triangle includes another nearby asterism: the Great Square of Pegasus.