

## SOUTHERN CONSTELLATIONS, ARA THE ALTAR

Ara constellation is located in the southern sky. Its name means “the altar” in Latin. It is situated between Scorpius and Triangulum Australe. Ara was one of the 48 Greek constellations described by the 2nd century astronomer **Ptolemy**, and it remains one of the 88 modern constellations defined by the International Astronomical Union.

In illustrations Ara is usually depicted as an altar with its smoke 'rising' southward. However, depictions of Ara often vary in their details. In the early days of printing, a 1482 woodcut of **Gaius Julius Hyginus's** classic *Poeticon Astronomicon* depicts the altar as surrounded by demons burning incense. **Johann Bayer** in 1603 depicted Ara as an altar with burning incense; the flames rise southward as in most atlases. However, **Willem Blaeu**, a Dutch

uranographer active in the 16th and 17th centuries, drew Ara as an altar designed for sacrifice, with a burning animal offering. Unlike most depictions, the smoke from Blaeu's Ara rises northward, represented by *Alpha Arae*.

A more unusual depiction of Ara comes from **Aratus**, a Greek uranographer, in 270 BCE. **He drew Ara as a lighthouse**, where *Alpha, Beta, Epsilon, and Zeta Arae* represent the base, and *Eta Arae* represents the flames at the lighthouse's light.



Aratus of Soli, 315 BC – 240 BC) was a Greek didactic poet.

The crater Aratus on the Moon and the minor planet 12152 Aratus are named in his honour

### MYTHS

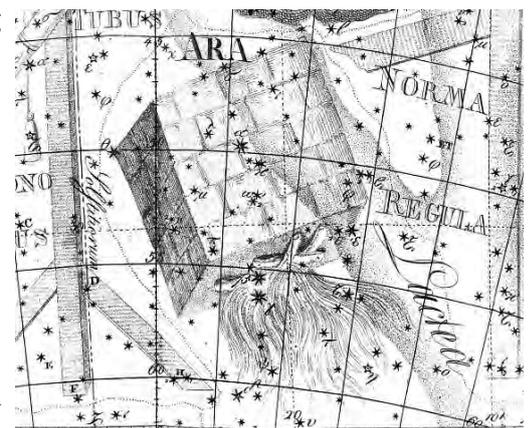
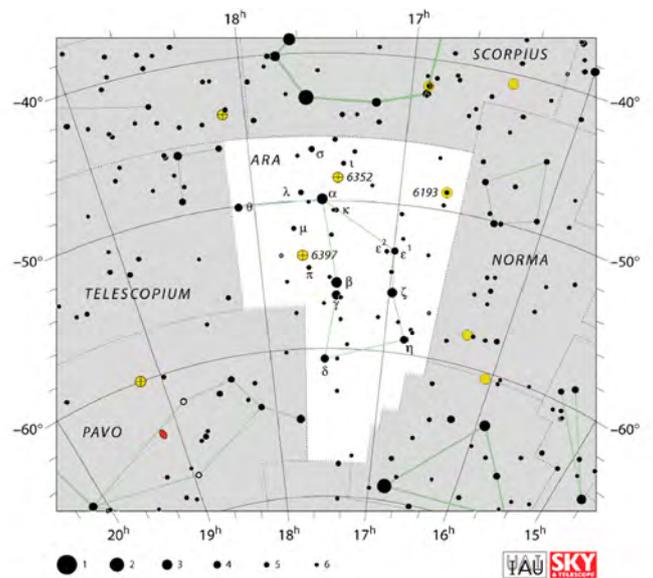
There are several myths associated with the constellation. In one of them, Ara represents the altar on which Zeus and other gods vowed to defeat the Titans and overthrow Cronus, who ruled the universe. **Cronus was one of the 12 Titans who had deposed his father Uranus, the previous ruler.** When a prophecy said that the same fate would befall Cronus he tried to prevent it from happening by swallowing all his children – Hestia, Demeter, Hera, Hades, and Poseidon. When the youngest child, Zeus, was born, his

mother Rhea hid him in Crete and gave Cronus a stone to swallow, telling him the stone was Zeus. When Zeus grew up,

he made Cronus vomit his brothers and sisters. **Once freed, they banded together to overthrow Cronus and the Titans.** The war between the Gods and the Titans lasted a decade and the gods won in the end. On Ara all the gods swore their allegiance to the supreme god Zeus. The smoke from the altar was said to pour out to create the Milky Way. Zeus became the god of the sky, ruling from Olympus, Poseidon became the god of the sea, and Hades the ruler of the underworld. Zeus placed the altar among the stars to commemorate the gods' victory.

In talking about LUPUS the Wolf last time we mentioned another Greek myth where Ara represents the altar of King Lycaon of Arcadia on which Lycaon prepared the meal intended to test the divinity of Zeus; for which Zeus turned him into the wolf Lupus. According to another account Ara was the altar on which the Centaur offered his sacrifice of Lupus.

**Ara was also known as the altar that Noah built after the great flood** when his ark came to rest on Mt. Ararat. Noah built an altar to God with timber from the ark (where else could he have found wood on that barren peak) and made an offering: "And the Lord smelled the pleasing odour..." [Gen 8:21]. (the first altar mentioned in the Bible)



Johann Elert Bode's illustration of Ara, from his Uranographia (1801)

**Ara is among the smaller constellations** (63rd in size), occupying an area of 237 square degrees. The neighboring constellations are *Apus*, *Corona Australis*, *Norma*, *Pavo*, *Scorpius*, *Telescopium*, and *Triangulum Australe*. Ara belongs to the Hercules family of constellations, together with *Aquila*, *Centaurus*, *Corona Australis*, *Corvus*, *Crater*, *Crux*, *Cygnus*, *Hercules*, *Hydra*, *Lupus*, *Lyra*, *Ophiuchus*, *Sagitta*, *Scutum*, *Serpens*, *Sextans*, *Triangulum Australe*, and *Vulpecula*.

The constellation Ara has seven stars with known planets, but no Messier objects. There are no meteor showers linked to this constellation.

## FACTS, LOCATION & MAP

### Major stars in Ara

*Beta Arae* is an orange K-type bright giant (possibly supergiant), approximately 603 light years distant. With an apparent magnitude of 2.84, it is the brightest star in the Ara constellation.

*Alpha Arae*, the second brightest star in Ara, is a variable Be star, a B-type star with prominent emission lines of hydrogen in its spectrum. Its apparent magnitude varies between 2.76 and 2.90. 240 light years from Earth it rotates very quickly (470 km/s) and the star is surrounded by an equatorial disk of ejected material.

*Gamma Arae* is a blue-white B-type supergiant, approximately 1140 light years distant and apparent magnitude of 3.5. It has a visual companion 17.9 arcseconds away. The companion is a white A-type main sequence dwarf.

*Zeta Arae* is another orange K-type giant, about 574 light years distant. It has an apparent magnitude of 3.12.

*Mu Arae* (HD 160691) is a main sequence G-type star that has four known planets in its orbit with masses similar to that of Jupiter. It is approximately 50 light years distant and has an apparent magnitude of 5.12.

### DEEP SKY OBJECTS IN ARA

Ara contains several notable deep sky objects: the Stingray Nebula, the open cluster NGC 6193 and the globular cluster NGC 6397.

**NGC 6193** is a large open cluster that contains 27 stars, many of them binaries. The cluster lies eight degrees west and one degree north of *Alpha Arae*. Its estimated age is 3 million years, has a visual magnitude of 5.2, is 15' in diameter, and lies approximately 4,300 light years from Earth. The two hottest stars in the cluster are responsible for the illumination of NGC 6188, an emission nebula also located in Ara constellation.

**NGC 6379** is a bright globular star cluster located three degrees to the northeast of Beta Arae. It contains about 400,000 stars. The cluster is approximately 7,200 light years distant, which makes it one of the nearest globular clusters to us. It was first discovered in the mid-18th century by the French astronomer **Nicolas Lacaille**. The cluster is notable for the number of blue stragglers it contains. (Blue stragglers are main sequence stars that are bluer, two to three times more massive, and a few magnitudes above the stars at the main sequence turn-off point for the cluster.)

**The Stingray Nebula** (Hen 3-1357) is a planetary nebula approximately 18,000 light years from Earth. **It is the youngest planetary nebula known.** The central star is a white dwarf that has a companion 0.3 arcseconds away. The nebula has an apparent magnitude of 10.75. Even though it is significantly smaller than most other planetary nebulae discovered so far, **the Stingray Nebula is 130 times larger than our solar system.** AK



Ara as depicted in the 1723 edition of Johann Bayer's Uranometria

