

Albireo's Better Looking Cousin

By Chris Costanza

So you love Alberio, that handsome couple of stars in Cygnus? Everybody knows Albireo, the gorgeous double star made up of a beautiful golden giant and fainter blue companion.

Yes, these stars in Cygnus are beautiful jewels in the night sky. You could gaze at them all night long and marvel at their beauty. Until, of course you happen to sight Almaak (or Almach), an easy to find star in Andromeda. Use your favorite star map or atlas, where you'll find Almaak marked as Gamma Andromedae.

Imagine seeing the stars of Alberio, but much closer together, both in separation on the sky and in true distance from each other. The pair's primary is a giant golden star which has a diameter 80 times that of our Sun (large enough to swallow the orbit of Venus) and a luminosity 2,000 times that of our daytime star. The dimmer blue star (known as Almach B,C, and D) is also actually a triple system of three white dwarf stars. The white dwarf stars together orbit the gold primary star at a distance of about 600 AU (600 times the Sun-Earth distance). Although the golden primary is 9.6 arc seconds on the sky from the other stars, they orbit each other too closely to be seen as anything other than a single star in our telescopes.

The entire Almaak (or Almach) system is about 355 light years from Earth. It's exciting to think that the light you could see from this gem tonight left the stars about 120 years before our country was born!

Let's compare these figures with the data for the more familiar Alberio (Beta Cygnus). Alberio is slightly more distant at about 380 light years away. Golden-hued Albireo's A (itself a binary) has a diameter of 50 times our Sun and a luminosity of 950 times that of our star. There is debate as to whether the golden star and the blue star are gravitationally bound, but if they are, then they would be at least 3700 AU) and would have an orbital period about each other of 75,000 to 100,000 years.

But what *really* matters for the observer - the *most* important attribute here or anywhere in the universe - is how they *look*. And of course, we all know the axiom about "beauty being in the eye of the beholder".

So, I challenge every one of you reading this to do the following - view both gorgeous doubles on the next clear night. The fall is a fine time to see both stars well-placed on the sky. As dusk falls, Cygnus rides high near the meridian and Andromeda "chases" the Great Square of Pegasus, both rising prominently in the east. Use your telescopes and decide for yourself - is the pair of stars in Alberio the homecoming king and queen of the stars, or is it Almaak?

Be sure to post your opinions on the ASLI mailing list, and we will keep track.

See star maps below.



