

THE BETELGEUSE TIMES



Greek Mythos: Orion v. Scorpius

In Greek mythology, Orion was recognized as a skilled and gigantic huntsman who desired to kill all animals on the planet. The goddess of Earth, Gaia, heard this and became upset at the hunter. With this, the goddess ordered a scorpion to go after Orion. The hunter was severed by the scorpion. Their rivalry never ended, even as they were put in the sky as constellations. While Orion rises in the winter, Scorpius becomes more prominent in the summer. These two constellations never meet in the night sky.

WORD SEARCH

S B A S F N U T Z H
W U P S S N V E M S
V E P O T N X N F T
D R S E R E I T A A
E E S T R I R H O R
A D H N M G O I I E
N P N Z G H I N S M
N F F C E C R A R M
W M C W U O K R N Z
Z U G B R I G H T T

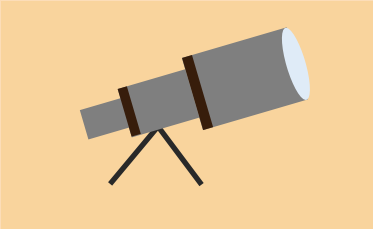
SUPERGIANT, ASTERISM, ORION, WEST
BRIGHT, TENTH, STAR, RED

Betelgeuse Fan Mail from: Betelgeuse Fan 3000

Her brightness beams throughout the night sky
Attracting naked eyes to her beauty
She is a ray of sunshine that shines brighter than the sun
She is red, but not any type of red
The bright red that mimics the color of freshly picked cherries
She says her name is Betelgeuse
I have never heard of such a name
Something is distinct about her
Maybe it's her large demeanor
Or her old age
Betelgeuse oh Betelgeuse you are such a sight to see
Oh Betelgeuse oh Betelgeuse

Send further fan mail to Betelgeusefanclub@gmail.com or
send it to the "right shoulder" in the constellation Orion

BRAND NEW TELESCOPE FOR SALE



astrophotography telescope. This telescope is perfect for viewing and photographing deep space objects with short exposure times. Ideal objects to view include M83, Bode's Galaxy, and Andromeda. Other great objects to view with this telescope include extra bright stars such as Sirius, Rigel, and Betelgeuse.

Selling for: \$12,000 USD.

Inquiries: +9990728391287 or StarMan@gmail.com

SUPERNOVA FALSE ALARM?

The famous bright red star we all know and love, Betelgeuse, in December of 2019, out of nowhere suddenly dimmed to about a third of its usual brightness. This was completely appreciated. Betelgeuse is currently at about 36% of its normal brightness, a change noticeable even to the naked eye. The European Southern Observatory (ESO) has noted. Their fans, scientists, started to call this the great dimming, that's why we have seen the hashtag #greatdimming blowing up on "Astronomy Twitter." Some sources have begun to speculate that the dimming was a potential sign that the star was beginning to die, collapsing and losing energy—a process that would eventually end in a giant supernova explosion.

Within just a matter of months, Betelgeuse quietly returned to its normal brightness, leaving its fans, and astronomers, completely perplexed. Now, almost two years after the initial dimming, numerous studies have been recently published in *Nature* proposing a theory for Betelgeuse's Great Dimming.

As it would turn out, the dimming of the star was just a veil of dust shrouding the star. To figure out what was happening to Betelgeuse, its fans, scientists and researchers, monitored the star's dimming with telescopes on Earth, which allowed them to see the details on its surface. They kept at it through April 2020, as the star returned to its normal brightness.

At the end of their observations, the scientists concluded that the star had simply belched out a large bubble of gas. Shortly afterwards, a patch of its surface cooled down enough to condense some of that gas into dust. The cloud of dust lingered for months, blocking Betelgeuse's light and making it appear darker and darker from Earth.

Even though Betelgeuse is not going supernova, its dimming still offered an important display of a critical cosmic process.

LATEST PAPPARAZI PHOTOS



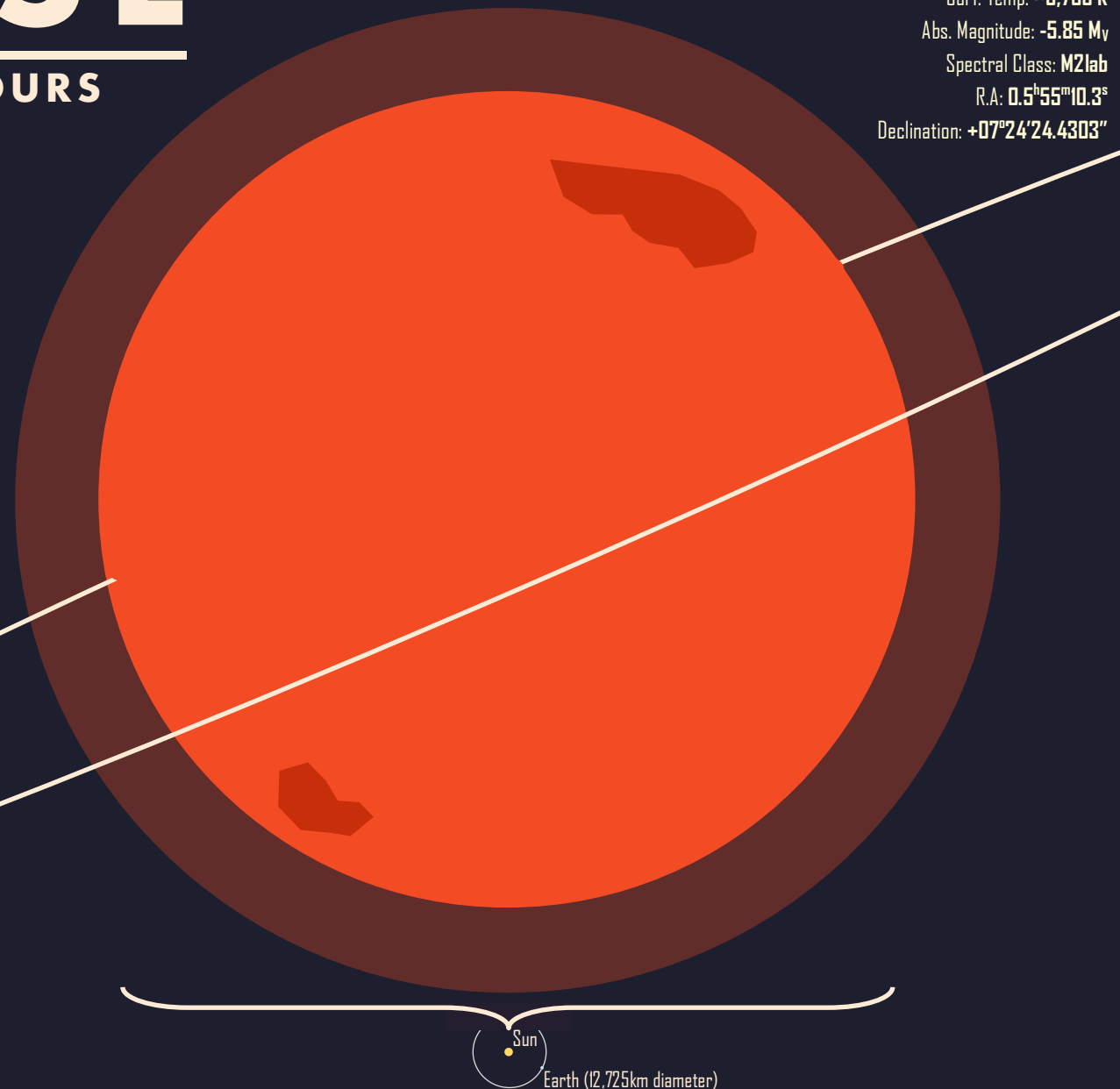
Reports have come out stating that Betelgeuse will only be allowing paparazzi photos from photographers in the northern hemisphere for the Winter, specifically in the east after the sunset during the early days in January. Insiders have told us that's when Betelgeuse is most bright and luxurious to view. During the months on either side of this period, namely mid-September through mid-March, Betelgeuse is visible to virtually everyone, all around the globe. Betelgeuse accepts photos from everyone at this time. This request is very important to Betelgeuse as to not tarnish their reputation by being photographed in sub-optimal conditions.

BETELGEUSE

THE STAR 700 TIMES THE SIZE OF OURS

Betelgeuse's Numbers (Nerdy Stuff)

Mass: $\sim 18 M_{\odot}$
Luminosity: $\sim 65,000 L_{\odot}$
Surf. Temp: $\sim 3,700 K$
Abs. Magnitude: $-5.85 M_V$
Spectral Class: M2Iab
R.A: $05^h55^m10.3^s$
Declination: $+07^{\circ}24'24.4303''$



Betelgeuse is about **650 light-years** from us. This is so far away, that if Betelgeuse were to disappear, we wouldn't stop seeing it's light until around 650 years from now!

Speaking of disappearing, Betelgeuse is a red supergiant nearing the end of it's life. This means that Betelgeuse will actually disappear "soon" in a violent explosion called a **Supernova**. ("soon" still means several thousand years)



As a red supergiant, Betelgeuse has exhausted its main-sequence **hydrogen** supply and is now burning **helium** in its core. A helium-burning core causes Betelgeuse's core to be much hotter and produce more energy, causing it to expand into the giant that we see in the night sky. Just because Betelgeuse is so giant doesn't mean its hotter nor heavier than a normal (main-sequence) star like our sun. Betelgeuse is so big, that you could fit roughly **700 million suns** inside of it, but it only weighs at most around **20 suns**. Betelgeuse's surface is also **colder** than our sun's by about 2000° Kelvin!



Betelgeuse has a diameter roughly equal to that of Jupiter's orbit around the sun. Which is roughly **1.2 billion km**. Our sun has a diameter of only **1.4 million km**.



The name "Betelgeuse" sounds silly, but it was actually a misspelling of the Arab name for the star: *Yad al-Jauza* meaning "hand of al-Jauza" (Orion). Europeans misspelled it as *Bat al-Jauza*, which translates to "armpit of al-Jauza." The name stuck and eventually began being spelled and said the way we do it today.

The Real Betelgeuse

This real photo of Betelgeuse was taken and colorized using the RRRT observatory operated out of UNC in Chapel Hill.



WHAT IS BETELGEUSE

As a prominent red supergiant shining brilliantly in the night sky, Betelgeuse is a star that has captured humanity's heart and attention for centuries now.

Located in the "right shoulder" in the constellation Orion (or left shoulder, as seen from Earth), Betelgeuse, also recognized as Alpha Orionis, is one of the brightest stars shining in the night sky. Additionally, it is one of the largest stars ever discovered.

What exactly is Betelgeuse?

Betelgeuse is a red supergiant star that has a distinctive orange-blue hue. The stars that make up this class are nearing the end of their lives. They are also the largest stars in the universe because they puff up and expand out into space in their old age.

Betelgeuse is much younger than our nearly 5-billion-year-old Sun, at roughly 10 million years old. However, while it is much younger, it is also much more massive and will burn through its materials faster. Which therefore will have a shorter lifespan than a star like our Sun.

Besides its recognizable and distinct color, Betelgeuse is particularly easy to spot because of its brightness. It is often ranked as the tenth-brightest star in the sky. (It can be much brighter or much dimmer at times.) Betelgeuse is about 7,500 to 14,000 times brighter than the Sun. How crazy is that?

Betelgeuse is one of the largest stars visible to the unaided eye. This means that no special tools are required to see this star. It's about 700 times the size of the Sun and around 15 times more massive. Betelgeuse is so huge that, if we replaced our Sun with Betelgeuse, it would stretch past Jupiter's orbit. So bizarre!

Even though this star is large and bright, Betelgeuse is not that hot, with a surface temperature of roughly 6,000 degrees Fahrenheit (over 3,300 degrees Celsius) – cooler than our Sun's about 10,000-degree Fahrenheit (over 5,500 degree-Celsius) surface.