Fun Facts:

**Gamma Arietis**

Computer Code: Gammaari

* **Other Names:**
  + Mesarthim (derived from an Arabic name of unknown meaning…maybe from Hebrew word meaning “minister”)
  + “The First Star of Aries” because during ancient times, it was the closest of the Ram’s star’s to the vernal equinox. (Precession, the 26,000 year wobble of the Earth’s axis, has since shifted the equinox westward to Pisces.)
* **Location:**
  + RA: 01h 54m 30s
  + Dec: 19⁰ 23’
* **Basics:**
  + This is a variable double star in Aries.
  + It was discovered as a double star in 1664 by Robert Hooke.
  + Both stars are very similar in appearance, but easily separated by a telescope.
  + Distance: 160-200 light years away
  + Orbital Period: > 5,000 years
  + Separated by 500 AU
  + Variable Period: 2.6 days (magnitude range: +4.62 to +4.66)
* **Gamma1**:
  + Temperature: 19,000⁰ F
  + Diameter: 2.03 Suns
  + Type: blue white star (main sequence)
  + B-V Color Index: -0.02, blue-white
  + Luminosity: 56 Suns visual
  + Magnitude: +4.83
  + Mass: 2.8 Suns
* **Gamma2**:
  + Temperature: 16,000 – 17,600⁰ F
  + Diameter: 3.38 Suns
  + Type: peculiar (see below)
  + B-V Color Index: -0.05, blue-white
  + Luminosity: 43 – 52 Suns
  + Magnitude: variable
  + Mass: 2.5 Suns
  + While Gamma1 is relatively ordinary, Gamma2 is an "Ap" star, the "p" standing for (spectrally) "peculiar." It is now known that such stars are actually highly magnetized, Mesarthim-2's magnetic field roughly 1000 times the strength of Earth's. The magnetism is concentrated into zones in which it aids in the separation of chemical elements (Gamma2 notably high in silicon). As the star rotates, these concentrations swing in and out of view, allowing the rotation period to be found (in this case 1.609 days) and causing subtle visual variations. Sophisticated spectroscopic examination and measures of Doppler shifts allow astronomers to create "pictures" of the surfaces of such stars, Gamma2 having the distinction of being the first to be so treated.