

= Antlia =

Antlia ( / ˈæntliː / ; from Ancient Greek ????? ) is a constellation in the Southern Celestial Hemisphere . Its name means " pump " in Latin ; it represents an air pump . Originally Antlia Pneumatica , the constellation was established by Nicolas @-@ Louis de Lacaille in the 18th century , though its name was later abbreviated by John Herschel . Located close to the stars forming the old constellation of the ship Argo Navis , Antlia is completely visible from latitudes south of 49 degrees north .

Antlia is a faint constellation ; its brightest star is Alpha Antliae , an orange giant that is a suspected variable star , ranging between apparent magnitudes 4 @.@ 22 and 4 @.@ 29 . S Antliae is an eclipsing binary star system , changing in brightness as one star passes in front of the other . Sharing a common envelope , the stars are so close they will one day merge to form a single star . Two star systems with known exoplanets , HD 93083 and WASP @-@ 66 , lie within Antlia , as do NGC 2997 , a spiral galaxy , and the Antlia Dwarf Galaxy .

= = History = =

The French astronomer Nicolas @-@ Louis de Lacaille first described the constellation in French as la Machine Pneumatique ( the Pneumatic Pump ) in 1751 ? 52 , commemorating the air pump invented by the French physicist Denis Papin . De Lacaille had observed and catalogued almost 10 @,@ 000 southern stars during a two @-@ year stay at the Cape of Good Hope , devising fourteen new constellations in uncharted regions of the Southern Celestial Hemisphere not visible from Europe . He named all but one in honour of instruments that symbolised the Age of Enlightenment . Lacaille depicted Antlia as a single @-@ cylinder vacuum pump used in Papin 's initial experiments , while German astronomer Johann Bode chose the more advanced double @-@ cylinder version . Lacaille Latinised the name to Antlia pneumatica on his 1763 chart . English astronomer John Herschel proposed shrinking the name to one word in 1844 , noting that Lacaille himself had abbreviated his constellations thus on occasion . This was universally adopted . The International Astronomical Union adopted it as one of the 88 modern constellations in 1922 .

Although above the horizon and hence visible to the Ancient Greeks , Antlia 's stars were too faint to have been included in any ancient constellations . The stars that now comprise Antlia lay within an area of the sky covered by the ancient constellation Argo Navis , the Ship of the Argonauts , which due to its immense size was split into several smaller constellations by Lacaille in 1763 . Ridpath reports that due to their faintness , the stars of Antlia did not make up part of the classical depiction of Argo Navis .

= = In non @-@ Western astronomy = = =

Chinese astronomers were able to view what is modern Antlia from their latitudes , and incorporated its stars into two different constellations . Several stars in the southern part of Antlia were a portion of " Dong 'ou " , which represented an area in southern China . Furthermore , Epsilon , Eta , and Theta Antliae were incorporated into the celestial temple , which also contained stars from modern Pyxis .

= = Characteristics = =

Covering 238 @.@ 9 square degrees and hence 0 @.@ 579 % of the sky , Antlia ranks 62nd of the 88 modern constellations by area . Its position in the Southern Celestial Hemisphere means that the whole constellation is visible to observers south of 49 ° N. Hydra the sea snake runs along the length of its northern border , while Pyxis the compass , Vela the sails , and Centaurus the centaur line it to the west , south and east respectively . The three @-@ letter abbreviation for the constellation , as adopted by the International Astronomical Union , is Ant . The official constellation boundaries , as set by Belgian astronomer Eugène Delporte in 1930 , are defined by a polygon of

twelve segments ( illustrated in infobox at top @-@ right ) . In the equatorial coordinate system , the right ascension coordinates of these borders lie between 09h 26.5m and 11h 05.6m , while the declination coordinates are between ? 24 @.@ 54 ° and ? 40 @.@ 42 ° .

= = Notable features = =

= = = Stars = = =

Lacaille gave nine stars Bayer designations , labelling them Alpha through to Theta , including two stars next to each other as Zeta . Gould later added a tenth , Iota Antliae . Beta and Gamma Antliae ( now HR 4339 and HD 90156 ) ended up in the neighbouring constellation Hydra once the constellation boundaries were delineated in 1930 . Within the constellation 's borders , there are 42 stars brighter than or equal to apparent magnitude 6 @.@ 5 . The constellation 's two brightest stars ? Alpha and Epsilon Antliae ? shine with a reddish tinge . Alpha is an orange giant of spectral type Stellar classification # Class KK4III that is a suspected variable star , ranging between apparent magnitudes 4 @.@ 22 and 4 @.@ 29 . It is located  $370 \pm 20$  light @-@ years away from Earth . Estimated to be shining with around 480 to 555 times the luminosity of the Sun , it is most likely an ageing star that is brightening and on its way to becoming a Mira variable star , having converted all its core fuel into carbon . Located  $710 \pm 40$  light @-@ years from Earth , Epsilon Antliae is an evolved orange giant star of spectral type K3 IIIa , that has swollen to have a diameter about 69 times that of the Sun , and a luminosity of around 1279 Suns . It is slightly variable . At the other end of Antlia , Iota Antliae is likewise an orange giant of spectral type K1 III .

Located near Alpha is Delta Antliae , a binary star ,  $430 \pm 30$  light @-@ years distant from Earth . The primary is a blue @-@ white main sequence star of spectral type B9.5V and magnitude 5 @.@ 6 , and the secondary is a yellow @-@ white main sequence star of spectral type F9Ve and magnitude 9 @.@ 6 . Zeta Antliae is a wide optical double star . The brighter star ? Zeta1 Antliae ? is  $410 \pm 40$  light @-@ years distant and has a magnitude of 5 @.@ 74 , though it is a true binary star system composed of two white main sequence stars of magnitudes 6 @.@ 20 and 7 @.@ 01 that are separated by 8 @.@ 042 arcseconds . The fainter star ? Zeta2 Antliae ? is  $380 \pm 20$  light @-@ years distant and of magnitude 5 @.@ 9 . Eta Antliae is another double composed of a yellow white star of spectral type F1V and magnitude 5 @.@ 31 , with a companion of magnitude 11 @.@ 3 . Theta Antliae is likewise double , most likely composed of an A @-@ type main sequence star and a yellow giant . S Antliae is an eclipsing binary star system that varies in apparent magnitude from 6 @.@ 27 to 6 @.@ 83 over a period of 15 @.@ 6 hours . The system is classed as a W Ursae Majoris variable ? the primary is hotter than the secondary and the drop in magnitude is caused by the latter passing in front of the former . Calculating the properties of the component stars from the orbital period indicates that the primary star has a mass 1 @.@ 94 times and a diameter 2 @.@ 026 times that of the Sun , and the secondary has a mass 0 @.@ 76 times and a diameter 1 @.@ 322 times that of the Sun . The two stars have similar luminosity and spectral type as they have a common envelope and share stellar material . The system is thought to be around 5 ? 6 billion years old . The two stars will eventually merge to form a single fast @-@ spinning star .

T Antliae is a yellow @-@ white supergiant of spectral type F6Iab and Classical Cepheid variable ranging between magnitude 8 @.@ 88 and 9 @.@ 82 over 5 @.@ 9 days . U Antliae is a red C @-@ type carbon star and is an irregular variable that ranges between magnitudes 5 @.@ 27 and 6 @.@ 04 . Approximately 900 light @-@ years distant , it is around 5819 times as luminous as the Sun . BF Antliae is a Delta Scuti variable that varies by 0 @.@ 01 of a magnitude . HR 4049 , also known as AG Antliae , is an unusual hot variable ageing star of spectral type B9.5Ib @-@ II . It is undergoing intense loss of mass and is a unique variable that does not belong to any class of known variable star , ranging between magnitudes 5 @.@ 29 and 5 @.@ 83 with a period of 429 days . UX Antliae is an R Coronae Borealis variable with a baseline apparent magnitude of around 11 @.@ 85 , with irregular dimmings down to below magnitude 18 @.@ 0 . A luminous and remote star , it is a supergiant with a spectrum resembling that of a yellow @-@ white F @-@ type star but it has

almost no hydrogen .

HD 93083 is an orange dwarf star of spectral type K3V that is smaller and cooler than the Sun . It has a planet that was discovered by the radial velocity method with the HARPS spectrograph in 2005 . About as massive as Saturn , the planet orbits its star with a period of 143 days at a mean distance of 0 @. @ 477 AU . WASP @- @ 66 is a sunlike star of spectral type F4V . A planet with 2 @. @ 3 times the mass of Jupiter orbits it every 4 days , discovered by the transit method in 2012 . DEN 1048 @- @ 3956 is a brown dwarf of spectral type M8 located around 13 light @- @ years distant from Earth . At magnitude 17 it is much too faint to be seen with the unaided eye . It has a surface temperature of about 2500 K. Two powerful flares lasting 4 ? 5 minutes each were detected in 2002 . 2MASS 0939 @- @ 2448 is a system of two cool and faint brown dwarfs , probably with effective temperatures of about 500 and 700 K and masses of about 25 and 40 times that of Jupiter , though it is also possible that both objects have temperatures of 600 K and 30 Jupiter masses .

== = Deep @- @ sky objects == =

Antlia contains many faint galaxies , the brightest of which is NGC 2997 at magnitude 10 @. @ 6 . It is a loosely wound face @- @ on spiral galaxy of type Sc . Though nondescript in most amateur telescopes , it presents bright clusters of young stars and many dark dust lanes in photographs . Discovered in 1997 , the Antlia Dwarf is a 14.8m dwarf spheroidal galaxy that belongs to the Local Group of galaxies .

The Antlia Cluster , also known as Abell S0636 , is a cluster of galaxies located in the Hydra @- @ Centaurus Supercluster . It is the third nearest to the Local Group after the Virgo Cluster and the Fornax Cluster . The cluster 's distance from earth is 40 @. @ 5 Mpc ( 132 @. @ 1 Mly ) to 40 @. @ 9 Mpc ( 133 @. @ 4 Mly ) Located in the southeastern corner of the constellation , it boasts the giant elliptical galaxies NGC 3268 and NGC 3258 as the main members of a southern and northern subgroup respectively , and contains around 234 galaxies in total .