i. e. insensible, the probable error being much greater than the measured parallax itself.

The star has a large proper motion,[1] given as 2″.3 annually, which probably has shifted its position southwestward on the face of the sky by somewhat more than 1° since the time of Ptolemy; and great velocity in the line of sight was assigned to it by the earlier spectroscopists, even as high as seventy miles a second; but the later and accordant determinations, at Potsdam by Vogel and at the Lick Observatory by Keeler, reduce this to between 4 and 4¾ miles.

Its spectrum is Solar, of Secchi's second type, but with a remarkable mass of dark lines in the violet.

Arcturus culminates on the 8th of June.

β, 3.6, golden yellow.

Nakkar and **Nekkar** are from the Arabic name for the whole constellation.

The Chinese knew it as **Chaou Yaou,** or **Teaou,** words meaning "to beckon, excite, or move."

With γ, δ, and μ, it constituted the trapezium **Al Dhi'bah,** the Female Wolves, or, perhaps, Hyaenas, an early asterism of the Arabs before they adopted the Greek constellation; these animals, with others similar shown by stars in Draco and near it, lying in wait for the occupants of the ancient Fold around the pole.

β marks the head of the modern figure.

γ, 3.1.

Seginus appears on Burritt's *Atlas* from the Ceginus of the constellation.

Manilius termed it *prona Lycaonia*, "sloping towards, or in front of, Lycaon," referring to the Greater Bear, as the star marks the left shoulder of Boötes near to that constellation; and Euripides similarly wrote in his Ἴων of about 420 B. C.:

> Above, Arcturus to the golden pole inclines.

Flammarion gives to it the **Alkalurops** that is better recognized for μ. The Chinese called it **Heuen Ko,** the Heavenly Spear.

It is interesting to know that the variable ν is in the telescopic field with γ.

[1] This proper motion of some of the stars, *i.e.* the angular motion across the line of sight, was first detected by Halley, in 1718, from examination of modern observations, especially those of Tycho, on Arcturus, Aldebaran, and Sirius, in comparison with the ancient records.

δ, 3.5, pale yellow.

This star does not appear to be named, but in China was part of **Tseih Kung,** the Seven Princes; the other components being μ, ν, ϕ, ψ, χ^1, and χ^2, or *b*, in the right hand and on the Club, 20° northeast of Arcturus.

ε, Binary, 3 and 6, pale orange and bluish green,

lying 10° northeast of Arcturus, bore these titles in Arabia: **Al Mintakah al 'Awwā',** the Belt of the Shouter; **Izār,** the Girdle; and **Mi'zar,** the Waist-cloth,— all references to its place in the figure. This last word was turned by early European astronomical writers into **Micar, Mirar, Merer, Meirer, Mezen, Mezer, Merak,** and **Mirak,** similar to the title of β Andromedae, and all appropriate. The analogous **Perizoma** was used for it in the *Alfonsine Tables.*

Why it was so favored in nomenclature is not known, for with us it is noticeable only from its exquisite beauty in the telescope, whence it is fast monopolizing the name **Pulcherrima,** given to it by the elder Struve.

The components can be seen with a 2¼-inch glass, about 3″ apart, at a position angle of 325°. The period of their revolution is as yet undetermined, but they are thought to be approaching us at the rate of ten miles a second.

This pair was the chief object of Sir William Herschel's investigations for stellar parallax about 1782, in which, of course, he was unsuccessful, although he did not know the cause of his failure till years thereafter, when he recognized its binary character.

ζ, ξ, *o*, and π were **Tso She Ti,** an Officer, in China, on the left hand of the emperor.

η, 2.8, pale yellow.

Muphrid, Mufrid, and **Mufride,** of the Palermo and other catalogues, is from Ulug Beg's **Al Mufrid al Rāmiḥ,** the Solitary Star of the Lancer, and inexplicable unless on the supposition that it formerly was regarded as outside of the figure lines. Kazwini called it **Al Rumḥ;** and Al Tizini, with Al Naṣr al Dīn, more definitely, **Al Rumḥ al Rāmiḥ,** the Lance of the Lance-bearer, although inappropriately, for they designated its position as on Al Sāḳ, the Shin-bone, and it thus appears as **Saak** in some lists; but as the figure is now drawn η lies above the left knee.

It seems to have been included with Arcturus in the Euphratean **Sib-zi-anna.**