The Chinese knew these two stars as **Tsze Fe**; while ϵ, individually, was **Ta Tsze**, the Crown Prince.

ζ, Double, 3.7 and 6,

is Burritt's **Adhafera, Aldhafara,** and **Aldhafera,** by some confusion perhaps with Al Ashfār of the near-by ϵ and μ. It is on the crest of the mane, and was one of the *manzil* Al Jabhah; sometimes taking the latter's name, as in Baily's edition of Ulug Beg.

From a point a little to the west of ζ, and not much farther from γ,[1] issue the **Leonids,** the meteor stream of November 9th to 17th, its maximum now occurring on the 13th–14th, which about every thirty-three years has furnished such wonderful displays, the last in 1866 and the next due in 1899.

Their first noticed appearance may have been in the year 137, since which date the stream has completed fifty-two revolutions. According to Theophanes of Byzantium, the shower was seen from there in November, 472; but the late Professor Newton, our deservedly great authority on the whole subject of meteors, commenced his list of the Leonids with their appearance on the 13th of October, 902, the Arabian Year of the Stars, during the night of the death of King Ibrahim ben Ahmad, and added:

It will be seen that all these showers are at intervals of a third of a century, that they are at a fixed day of the year, and that the day has moved steadily and uniformly along the calendar at the rate of about a month in a thousand years.

Oppolzer's and Leverrier's observations showed the identity of their orbit with that of Tempel's comet, I of 1866; and they are supposed to have entered our system by some comparatively recent action, as they still come in shoals and are not lengthened out in a continuous line. It was suggested by Leverrier, and confirmed by Adams, that Uranus may have produced this effect early in the year 126 of our era.

Apparently the most remarkable showers in the long Leonid history were the one observed by Von Humboldt and his companion Bonpland on the 12th of November, 1799, from Venezuela, and by various other observers throughout the western hemisphere; and that of November 13, 1833, splendidly seen from this country. The lesser one of the 13th–14th of November, 1866, was more especially noticeable from the Old World, and others, remarkable yet gradually declining, were annually seen from 1867 to 1869.

These meteors appear at an elevation of from sixty-one to ninety-six miles, during the latter part of the night, at a speed of forty-four miles a

[1] When first observed the radiant point was in Cancer.

second,[1] and generally are characterized by a greenish, or bluish, tint, with vivid and persistent trains. It probably was to them that Milton alluded in his

> Swift as a shooting star
> In Autumn thwarts the night.

The stream seems to be lengthening, and consequently thinning out, so that the great displays of long period may eventually cease, while the annual may become more brilliant than now.

Many other meteor streams are visible about the same time as the Leonids, Mr. W. F. Denning having given a list of sixty-eight; the brightest of these, the **Ursids,** being often mistaken by the casual observer for the Leonids, as their radiant, near μ Ursae Majoris, is less than 20° distant from the radiant in Leo.

θ, 3.5,

in the *manzil* Al Zubrah, shares with δ the title **Al H·arātān,** Al Bīrūnī saying that "when they rise Suhail is seen in Al Izak,"— wherever this may be. The *Century Cyclopedia* gives **Chort** as the individual name, from the combined title. Ulug Beg substituted the 5th-magnitude Fl. 72 for δ as the second member of the *manzil*, his translator placing them *in coxis*, "in the hips," as does the Heis *Atlas*.

In China it was **Tsze Seang,** the Second Minister of State.

ι, Binary and perhaps variable, 4.6 and 7.4, yellowish — possibly varying.

Reeves mentioned this as **Tsze Tseang,** the Second General.

The lesser star is suspected of change in color and in brilliancy down to the 9th magnitude. The components now are about 2″.6 apart, at a position angle of 57°.

$\varkappa$, Double, 4.8 and 10.5, yellow and blue.

This was designated by Ulug Beg as **Al Minḫar al Asad,** the Lion's Nose, still correct for it as laid down on the Heis *Atlas*, although now never used as a star-title.

The components are 3″ apart, at a position angle of 203°.8.

[1] It is owing to this great velocity that no Leonid has ever been known to reach the earth's surface, its substance being dissipated by the intense heat occasioned by the resistance of the atmosphere.