

ALCOR ABOUT 2,300 YEARS AGO.— ζ Ursæ Majoris (Alcor), known in Indian literature as Arundhati, has never been known to modern astronomy as a variable star. There is, however, in the Mahabharata, what appears to be an unmistakable, though quasi mythological, reference to its having been a variable during the time indicated by the events of the story—if we take them to be true—or at least during the time when that part of the work happened to be composed. The passage containing the reference runs as follows :—

“ Even the auspicious and well-behaved Arundhati, celebrated amongst all creatures, had been jealous of the illustrious Vasishtha of great purity of mind and always devoted to the good of his wife. Arundhati insulted even that wise Muni amongst the (celestial) seven. In consequence of such insulting thoughts of hers, she has become a little star, like fire mixed with smoke, sometimes visible and sometimes invisible, like an omen portending no good (amongst a constellation of seven bright stars representing the seven Rishis).”*

The seven stars of the Great Bear are known as Sapta Rishis or the seven Rishis, in Sanskrit literature and ζ Ursæ Majoris is the sage Vasishtha, whose wife Arundhati is. She is regarded in Indian mythology as the highest pattern of wifely devotion and it is even to-day part of the Brahmanical marriage ceremonies for the bridegroom to lead the bride out to show her the star Arundhati. Prof. V. S. Apte in his Sanskrit-English

* See p. 452 “ Mahabharata, translation by Pratap Chandra Roy, C.I.E.” New edition, 1919, by Datta Bose & Co., Calcutta.

Dictionary says :—“ Though a woman she was regarded with the same—even more—veneration as the Sapta Rishis.”

The passage from the Mahabharata given above, taken along with this last statement, indicates that Arundhati was originally at least as bright a star as any of the celestial seven, but on account of her sinful thought about her devoted husband became a little star, “ sometimes visible and sometimes invisible.”

There is also evidence to show that this star, some centuries ago, was not as bright as it is to-day and was only just on the border of visibility. For it is well known that the Arabs used this star for testing eyesight,* and it is stated in the Indian medical work Susruta† that he to whom Arundhati was not visible must consider his death near at hand. It would, therefore, seem that Arundhati is still a variable star, on her way slowly to recover her ancient glory.

It is, however, very difficult to determine exactly at what period of the world's history the star was a variable of the description sometimes visible and sometimes invisible. Great orientalists have not yet agreed as to the date of the Mahabharata. E. W. Hopkins says: “ As a whole the poem dates from 400 B.C. to 400 A.D., this representing the centuries during which the whole poem was developed into its present shape.” While Dahlmann is of opinion that the Mahabharata must be considered as pre-Buddhistic. A third view, namely that of Jacobi, is “ that the contents of the Mahabharata belong to a pre-Achæmedian period, though its present form cannot possibly be later than the second or third century B.C.”

From the opinions quoted above it would seem that 400 B.C. would be a fair estimate of the Mahabharata in its present form and that Alcor was a variable star of low magnitude at that time.

I would also like to see in the phrase “ like fire mixed with smoke ” a reference to nebulous matter enveloping the star, but since we do not know how the ancients in the absence of powerful instruments could have suspected the existence of such, I am afraid my idea would be considered rather far-fetched if not preposterous.—P. R. CHIDAMBARA.
