

A Science Service Feature

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? WHY THE WEATHER ? Mailed February 14, 1928.

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FALSE DAWN

The earliest careful studies of the duration of twilight were made by the Arabian astronomers of the Middle Ages. A reason for their interest in this subject was that the Moslem religion prescribes daybreak -- the beginning of the morning twilight period -- as one of the five daily hours of prayer. Moreover, during one month in the year a strict fast is observed by the Mohammedans from daybreak to sunset. Hence as far back as the eleventh century the time of daybreak at various seasons of the year had been determined with considerable accuracy.

In this connection the same authorities learned to distinguish between the true dawn and an earlier faint illumination of the eastern sky known as "false dawn", frequently mentioned in the literature of the Orient. The line in the Rubaiyat, "Before the phantom of false morning died," refers to this phenomenon, which also gives the title to one of Kipling's tales.

False dawn is the zodiacal light; supposed to be due to the reflection of sunlight from fine particles of matter entirely outside the earth's atmosphere. It is best seen in low latitudes; especially in the pure air of tropical and subtropical deserts. In the United States it is visible at certain times of the year, though not where the glare of town lights prevails.

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