Seven Sisters

Located in the constellation of Taurus, the Pleiades star cluster, also known as the Seven Sisters and Messier 45, is a conspicuous object in the night sky with a prominent place in ancient mythology. The cluster contains hundreds of stars, of which only a handful are commonly visible to the unaided eye. The stars in the Pleiades are thought to have formed together around 100 million years ago, making them 1/50th the age of our sun, and they lie some 130 parsecs (425 light years) away.It is among the nearest star clusters to Earth and is the cluster most obvious to the naked eye in the night sky.

The cluster is dominated by hot blue stars, which have formed within the last 100 million years. Dust that forms faint reflection nebulosity around the brightest stars was thought at first to be left over from the formation of the cluster but is now known to be an unrelated dust cloud that the stars are currently passing through. Astronomers estimate that the cluster will

survive for about another 250 million years, when it will have dispersed due to gravitational interactions with the spiral arms of the galaxy and giant molecular clouds.
Distance:The distance to the Pleiades is an important first step in the so-called cosmic distance ladder, a sequence of distance scales for the whole universe. The size of this first step calibrates the whole ladder, and the scale of this first step has been estimated by many methods. As the cluster is so close to the Earth, its distance is relatively easy to measure.

Composition: The cluster is about 12 light years in diameter and contains approximately 500 stars in total. It is dominated by young, hot blue stars, up to 14 of which can be seen with the naked eye depending on local observing conditions. The arrangement of the brightest stars is somewhat similar to Ursa Major and Ursa Minor. The total mass contained in the cluster is estimated to be about 800 solar masses.
The cluster contains many brown dwarfs, which are objects with less than about 8% of the Sun's mass, not heavy enough for nuclear fusion reactions to start in their cores and become proper stars. They may constitute up to 25% of the total population of the cluster, although they contribute less than 2% of the total mass. Astronomers have made great efforts to find and analyze brown dwarfs in the Pleiades and other young clusters, because they are still relatively bright and observable, while brown dwarfs in older clusters have faded and are much more difficult to study.

Mythology

The nine brightest stars of the Pleiades are named for the Seven Sisters of Greek mythology: Sterope, Merope, Electra, Maia, Taygete, Celaeno and Alcyone, along with their parents Atlas and Pleione

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Their parents were Atlas, a Titan who held up the sky, and the oceanid Pleione, the protectress of sailing.

After a chance meeting with the hunter Orion, the Pleiades and their mother became the object of his pursuit. Enamoured with the young women he pursued them over the face of the Earth. In pity for their plight, Zeus changed them into a flock of doves, which he set in the heavens. Thus the olympian added the penalty of the absence of his wife and family to the Titan's original punishment of eternally supporting the heavens from the Earth.

The name of the cluster itself is of Greek origin, though of uncertain etymology. Suggested derivations include: from plein, to sail, making the Pleiades the "sailing ones"; from pleos, full or many; or from peleiades, flock of doves.

The Hindu Mythology

In Hindu mythology, the god Murugan(Skanda/Subrahmanya/Kartikeya) was raised by the six sisters known as the Kṛttikā and thus came to be known as Kārtikeya (literally "Him of the Kṛttikā"). According to the Mahābhārata, Murugan was born to Agni and Svāhā, after the latter impersonated six of the seven wives of the Saptarṣi and made love to him. The Saptarshi, hearing of this incident and doubting their wives' chastity,

divorced them. These wives then became the Kṛttikā.