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The Moon That Never Was (Maybe ?)

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After reading about the "Planet That Never Was" in the last issue of the Newsletter, I thought that our readers might be interested in a satellite which was photographed 13 times near the turn of the century but has never been seen since. This was Themis, a supposed tenth moon of Saturn.

Shortly after the discovery of Phoebe in 1898, W.M. Pickering announced that he had discovered another moon of Saturn, which he named Themis. The satellite was present on 13 plates taken by the Bruce telescope at the discovery of Phoebe. However, as Saturn was in the rich star fields of Scorpio and Sagittarius at the time, it was impossible to follow the satellite or distinguish it from the myriads of background stars. When Saturn arrived at a more suitable position for observation of its fainter satellites, Themis was no more to be seen. It has never been seen since.

Some orbital elements were released, based on measurements of the photographic plates. Themis' period was 20.35 days and its mean distance from Saturn was approximately 930,000 miles. This, in fact, is quite similar to that of Hyperion, but whereas the eccentricity and inclination of Hyperion's orbit are 0.0333 and 0.0° respectively, the inclination of the orbit of Themis was 30° and the eccentricity was 0.23, which puts the orbit in a far different plane from that of Hyperion.

If Themis was not a moon of Saturn, then what was it? The most reasonable theory is that it was an asteroid whose orbit brought it into the line of sight between the Earth and Saturn. Whether moon or asteroid

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the story of Themis is another of the unsolved riddles of the universe that make the study of Astronomy such an interesting pursuit.