Using clues from star and sun positions mentioned by the ancient Greek poet Homer, scholars think they have determined the date when King Odysseus returned from the Trojan War and slaughtered a group of suitors who had been pressing his wife to marry one of them.

It was on April 16, 1178 BC that the great warrior struck with arrows, swords and spears, killing those who sought to replace him, a pair of researchers say in Monday’s online edition of Proceedings of the National Academy of Science.

Experts have long debated whether the books of Homer reflect the actual history of the Trojan War and its aftermath.

Marcelo O. Magnasco of Rockefeller University in New York and Constantino Baikouzis of the Astronomical Observatory in La Plata, Argentina, acknowledge they had to make some assumptions to determine the date Odysseus returned to his kingdom of Ithaca.

But interpreting clues in Homer’s *Odyssey* as references to the positions of stars and a total eclipse of the sun allowed them to determine when a particular set of conditions would have occurred.

“What we’d like to achieve is to get the reader to pick up the *Odyssey*, and read it again, and ponder”, said Magnasco, “and to realize that our understanding of these texts is quite imperfect, and even when entire libraries have been written about Homeric studies, there is still room for further investigation”.

Their study potentially adds support to the accuracy of Homer’s writing.

“Under the assumption that our work turns out to be correct, it adds to the evidence that he knew what he was talking about,” Magnasco said. “It still does not prove the historicity of the return of Odysseus”, he said. “It only proves that Homer knew about certain astronomical phenomena that happened much before his time”.

Homer reports that on the day of the slaughter the sun is blotted from the sky, possibly a reference to an eclipse. In addition, he mentions more than once that it is the time of a new moon, which is necessary for a total eclipse, the researchers say. Other clues include:

- Six days before the slaughter, Venus is visible and high in the sky.
- Twenty-nine days before, two constellations - the Pleiades and Bootes - are simultaneously visible at sunset.
- And 33 days before, Mercury is high at dawn and near the western end of its trajectory. This is the researchers’ interpretation, anyway. Homer wrote that Hermes, the Greek name for Mercury, traveled far west to deliver a message.
“Of course we believe it’s amply justified, otherwise we would not commit it to print. However we do recognize there’s less ammunition to defend this interpretation than the others”, Magnasco said.

“Even though the other astronomical references are much clearer, our interpretation of them as allusions to astronomical phenomena is an assumption”, he added in an interview via e-mail.

For example, Magnasco said, Homer writes that as Odysseus spread his sails out of Ogygia, “sleep did not weigh on his eyelids as he watched the Pleiades, and late-setting Bootes, and the Bear”.

“We assume he means that as Odysseus set sail shortly after sunset, at nautical twilight the Pleiades and Bootes were simultaneously visible, and that Bootes would be the later-setting of the two”, Magnasco explained. “It is a good assumption because every member of his audience would know what was being discussed, as the Pleiades and Bootes were important to them to know the passage of the seasons and would be very familiar with which times of the year they were visible. Remember the only calendar they had was the sky”.

Since the occurrence of an eclipse and the various star positions repeat over different periods of time, Magnasco and Baikouzis set out to calculate when they would all occur in the order mentioned in the Odyssey.

And their result has Odysseus exacting his revenge on April 16, 1178 BC.¹

¹ This is as close as could be to the traditional date of 1180 BC. What the author does not mention is that Homer tells us how long Odysseus took to get home, which means one could actually also calculate the date when the Trojan war ended (Editor).