

ARCHAEOASTRONOMY

Maya meteor mystery

Planet. Space Sci. **144**, 112–125 (2017)

Credit: Sébastien Lecocq / Alamy Stock Photo

Maya records note precise astronomical observations of eclipses, Venus and the other planets. Their astronomer-priests were so advanced that they could calculate the length of the sidereal year to three decimal places — much more accurately than the Spanish at the time, who would lay waste to the Maya civilization and destroy most of the codices (screen-fold books) containing their astronomic records. Within the remaining codices, there are no explicit dates of meteor showers. Are the records simply too incomplete, or is there a systematic way of finding embedded information in the hieroglyphs? With this question in mind, J. Hutch Kinsman and David Asher use high-speed computers to model meteor outbursts and correlate them with significant Maya dates.

The authors focus on Eta Aquariid outbursts that the Maya would have observed in their classic period, AD 250–909. These meteor showers were derived from meteoroids released by Halley's comet, and are corroborated in concurrent Chinese texts. Indeed, the extreme outburst of AD 531 during a new Moon was followed four days later by an accession to the royal throne. Another in AD 849 may be correlated with a stone inscription on the following day, interpreted as “he/she/it forms the Earth”. There are six notable events, including four royal accessions, that occurred up to four days before a meteor shower, suggesting a level of prediction for staging important events. Although the authors do not provide conclusive evidence, they calculate that the chance for the pre- and post-shower accessions to fall randomly within four days of a meteor shower is only 4%.

May Chiao

Published online: 1 September 2017

DOI: 10.1038/s41550-017-0234-x