

ABSTRACT ONLY**THE ASYMMETRIC SUNRISE EFFECT ON
THALES’ ALLEGED MEASUREMENT OF THE
SUN ANGULAR SIZE**J. Cuadra^{1,2}

Reports from the 2nd and 3rd Century AD attribute the first measurement of the angular size of the Sun to Thales of Miletus, in the 6th Century BC. Cleomedes, also in the 2nd Century AD, described a method to perform the measurement, based on timing the duration of the sunrise. Several modern authors have suggested Thales used Cleomedes’ method, but others are skeptical of the connection. I present an objection that has not been discussed in the literature, namely, that the proportionality between the size of the Sun and the duration of sunrise is not constant, but changes with latitude and time of the year, due to what I call the “asymmetric sunrise effect”. I show that this effect is large enough to have prevented Thales from obtaining the roughly accurate recorded value.

Please find a copy of the poster at https://jrcuadra.github.io/plaga/larim_thales/ or read the full-length paper at <https://doi.org/10.1093/pasj/psad026>.

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