

## The Keskintos Astronomical Inscription Text and Interpretations

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*High on the crest of the hill which overlooks the plain of Keskinto, Nikias could see the ancient observatory. Masses of pink and white oleander clustered over the crumbling walls. Green crested lizards scuttled between the stones. The flat roofed building was encircled by silver-grey olive trees, heavy with fruit.*

*A stone stele stood in one corner of the courtyard. Nikias ran his fingers over the columns of letters and numbers which had been chiselled into the face of the stone. The names of the planets could be read at the head of the neat columns. The numbers appeared to Nikias to indicate various positional data, phases and rotations far beyond his understanding. At the bottom of the stone stele, partially obscured by the long grasses which had begun to climb its smooth face, were larger size letters. Nikias cleared aside the grass in order to be able to read these last words... 'A thanksgiving to the Gods.'*

Victor Kean<sup>1</sup>

### **Introduction.**

The medium of inscription on stone was employed by ancient Greek astronomers for two distinct purposes. *Parapegmata*, of which the best known and best preserved examples come from Hellenistic Miletus, correlated a schematized annual cycle of weather changes with the first and last risings and settings of constellations; these were essentially public resources, representing an important aspect of what it meant to be an astronomer from the fifth century B.C. to the 2nd century A.D.<sup>2</sup> The second variety of astronomical inscription is exemplified by Ptolemy's *Canobic Inscription* (preserved in copies of a manuscript transcription from late antiquity) and the inscription with which the present article is concerned.<sup>3</sup> These were lists of elements of models for the motions of the heavenly bodies, chiefly comprising numerical data. Formally both the *Canobic Inscription* and the Keskintos Inscription are

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<sup>1</sup> Kean 1991, 26–27.

<sup>2</sup> See the forthcoming monograph on Greco-Roman *parapegmata*, Lehoux 2007; for the Miletus fragments, see Lehoux 2005.

<sup>3</sup> On the *Canobic Inscription* see Hamilton, Swerdlow, and Toomer 1987 and Jones 2005.

votive inscriptions, that is, they are presented as a “thank offering” (χαριστήριον) to a god or gods. A votive inscription accompanied and explicated a gift offered to a god or gods, and the question what constituted the offering in the case of these astronomical inscriptions deserves consideration. Beyond being expressions of piety, moreover, they may have served to establish personal credit or even priority for their contents.

We possess only the last part, perhaps less than half, of the Keskindos Inscription, and this is damaged and full of obscurities. References to it in recent scholarship on Greek astronomy are few and mostly glancing. Nevertheless the inscription is a document of great significance for the history of Greek astronomy, because it provides technical information about mathematical planetary theory from a time, contemporary with or a little later than Hipparchus, from which there are scarcely any other sources. Of the fifteen surviving lines of text, the top thirteen are part of a tabulation of planetary periodicities, from which it is possible to draw inferences about the nature of the mathematical models with which they were associated. The fourteenth line defines units of arc, and the last is the dedication. The lost beginning of the inscription likely identified the astronomer who erected it (cf. the *Canobic Inscription*), and may have presented other kinds of astronomical data in addition to the lost seven lines that gave the periodicities of Venus and Mercury. One unverifiable possibility is that the table began with periodicities for the sun and moon. Further speculation about this lost portion is useless.

The present study offers the first edition of the inscription since its *editio princeps* published in 1894, together with an extensive interpretation of its contents—only the third such to appear, following those of Tannery (1895) and Neugebauer (1975). The reasons why this important and fascinating document has been so neglected, as well as the need for a new edition, will become evident as we review its modern history.

The Keskindos Inscription was first discussed publicly by the epigrapher F. Hiller von Gaertringen at the June 1894 meeting of the German Archeological Institute of Berlin. According to the report of the meeting in the *Archäologischer Anzeiger* (at that time published as a supplement to the Institute’s *Jahrbuch*), Hiller stated that the inscription was found 8 kilometres west of Lindos on Rhodes “an dem heutigen Orte Keskindos.”<sup>4</sup> The following year Hiller published the inscription as Text No. 913 in volume 12.1 of the series *Inscriptiones Graecae* (commonly abbreviated *IG*).<sup>5</sup> The circumstances of its discovery are briefly described a bit more fully in Hiller’s Latin introduction to the text, which I translate here:

Block of darkish marble, width 0.78 metres, height 0.30 metres, depth 0.29 (?) metres, damaged on the top and especially on the left side of the bottom. Found in the locality that is today called Κέσκινοτος, where ancient tombs indicate that there was a district belonging to the citizens of Lindos [*Lindiorum pagum*]. The place Κέσκινοτος is located about half an hour, i.e. about two kilometres from the citadel of Lartos towards the west

<sup>4</sup> [Anonymous] 1894, 125.

<sup>5</sup> *IG* 12.1, 148–149 with addenda at 207.