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## *Astronomical Stelae*

Among the prefatory matter of several medieval copies of the *Almagest* is a short text that appears to be a copy of an inscription that Ptolemy had engraved on a stele and set up at Canopus. This text begins:

As on the stele in Canopus: To the Saviour God, Claudius Ptolemaeus [dedicated] the elements and hypotheses of astronomy.... Erected in Canopus in the 10th year of Antoninus.<sup>75</sup>

The main content of the inscription is a list of parameters of the planetary theory — tropical and synodic periods, radii of epicycles, eccentricities, etc. Most writers have supposed that this inscription was based on the *Almagest*, and thus composed by Ptolemy after he had completed his masterwork, or else fabricated by some unknown writer of late Antiquity. Those who do not accept the authenticity of the Canobic inscription point to a few places where its parameters differ from those of the *Almagest*. However, Hamilton, Swerdlow and Toomer have argued that the Canobic inscription was an early work of Ptolemy's, composed, inscribed and dedicated before he had written the *Almagest*.<sup>76</sup> The departures of the parameters in the Canobic inscription from those in the *Almagest* are then explained by the fact that Ptolemy had not yet put his planetary theory into final form.

There is nothing extraordinary in a Greek astronomer inscribing a set of planetary parameters on stone and setting this up for public display. Indeed, one such inscription has actually been found. This is the so-called Keskinto inscription, found in 1893 at Keskinto, near Lindos, at the southern end of Rhodes. The inscription, dating from around 100 B.C., includes numerical values of planetary parameters and ends with an expression of thanksgiving to the gods. Another example of a public display of an astronomical system is an "astronomy of Eudoxus" which was written on whitened boards and contributed to the temple of Good Fortune at Delos. This no longer exists, but it is mentioned in the extant inventories (second century B.C.) of the temple. These public displays of the data of astronomical systems also have parallels in the history of philosophy. In the second century A.D., Diogenes of Oenoanda (in Lycia) erected a huge inscription of the tenets of Epicureanism.<sup>77</sup> Thus it is by no means implausible that the Canobic inscription is a genuine work of Ptolemy's.

What were Ptolemy's reasons for causing a stele to be engraved with astronomical parameters? The dedication to the Saviour God is consistent with the religious element that was sometimes present in Ptolemy's meditations on astronomy.<sup>78</sup> The stele may therefore have been intended as an expression of gratitude to the god who had helped him find the right way in astronomy. It may also have been intended to inspire due reverence in the passers-by who contemplated it. And, of course, it was Ptolemy's way of announcing his own success to a broader public. After all, if he had intended it merely as an act of private devotion, there would have been no need to include his own name in the inscription. Finally, the stele included an aesthetic aspect, for it represented a mathematical *tour-de-force*. Psychologically, Ptolemy's stele is related to the public display of sundials, globes and mechanical contrivances. The stele of planetary parameters, was, in part, a celebration of the achievements of the human mind.

Who was Ptolemy's Saviour God? There were, of course, many saviour gods in late Antiquity. But for Greek Egypt in Ptolemy's time, the most important was Sarapis. There was, moreover, a famous temple of Sarapis in Canopus.<sup>79</sup> Ptolemy's dedication of a stele to a Saviour god reveals a more ordinary, and less severely intellectual, strain in his religious feeling than one would infer from the references in the *Almagest* to the impersonal god of Aristotle.