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R E C T O R

Thessaloniki, April 21, 2010

Dr Nikolaos K. Spyrou  
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ESA/PB-HME National Delegate of Greece

Dear Professor Spyrou,

Thank you very much for your letter of March 13<sup>th</sup>, 2010, regarding the naming of the Automated Transfer Vehicle (ATV) 4 of the European Space Agency as "*Aristarchos of Samos*". I found your proposal very interesting and I am happy to inform you that I fully endorse and support it.

It is well known, that the philosopher-astronomer-geometer-mathematician *Aristarchos*, whose birthplace was the island of Samos, in the ancient *Land of Ionia*, advocated that the Earth and the other planets are in circular orbits around the stationary Sun, a fact described in ancient historical texts. About two millenia later, this revolutionary idea of *Aristarchos of Samos* was adopted by *Copernicus*, who presented the theory of the Heliocentric System. However and unfortunately, the reference to the pioneering work of *Aristarchos* was, on purpose, suppressed. Nevertheless, Copernicus himself had admitted, as shown in the relevant texts, that the Heliocentric System was first suggested by ancient Greeks and particularly by *Aristarchos of Samos*.

*Claudius Ptolemy*, in his *Great Mathematician Syntax*, states that *Aristarchos* believed in the Heliocentric System, which was proclaimed by the Pythagorean philosophers *Iketas* and *Ekfantos*, and that he rejected the theory of the Earth-centred (Geocentric) Solar System. *Plutarchos*, in his work *About the Favourites Amongst the Philosophers*, writes that *Aristarchos* "... places the sun among the non-moving stars and the Earth moving along the solar cycle .....". Also, *Archimedes*, in his work *Sand Reckoner (Psammitis)*, writes: "... *Aristarchos of Samos* ... because he supposed that the vacant stars and the Sun remain still, the Earth orbits the Sun on the periphery of a cycle that lay in the middle ...".

*Aristarchos*, combined the heliocentric argument with the Earth's rotation around its axis. From his works, only a short treatise survives, entitled *On the Sizes and Abscesses of the Sun and the Moon* (published in Paris, 1810). Also, according to information given by the Byzantine writer *Aetios*, *Aristarchos* had also written other treatises, entitled *On Visions*, *On Eclipses* and *On Colours*.

Moreover, the Latin writer *Vitruvius* reports that *Aristarchos* had invented a device for measuring the height of the sun above the horizon at any time of day (perhaps a concave hemispherical ruler). This device, which others consider as a *sundial*, was called "skafion" (trough). It is also said that *Aristarchos* added the 1/1623 of the day to the *Kallipos's* calculation of the 365 days long year and that he observed the solstice of 280 BC.



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Therefore, Aristarchos's contribution, in the proposed heliocentric system, as the *Cosmos System*, has been effective and innovative, and one easily reaches the conclusion that "*the paternity of the heliocentric theory, originally and rightfully, belongs to Aristarchos*". This, by no means implies that we should underestimate the work of Copernicus, an, otherwise, really great Polish astronomer. It should clearly be noted with emphasis, that the real personal contribution of Copernicus on this issue lays, essentially, on the fact that he introduced the geometric mechanism of the geocentric system of Ptolemy to the heliocentric system of Aristarchos. But it is obvious that the whole effort was in a wrong path, because the real difficulty, namely, the faith that the planets move uniformly on circular orbits, could not be overcome.

After all the above, the conclusion is that "*Aristarchos was the first to introduce the correct and accepted today heliocentric theory, and that he founded Astronomy on the logical reasoning*". His contributions, a couple of millenia ago, to science and technology, and, of course, to Cosmology and Astronomy and, especially, to our Solar System have shaped contemporary science.

Consequently, Copernicus is not the originator, but, merely, the renovator of the heliocentric theory of Aristarchos. But this is not sufficient to award to Copernicus the recognition and authorship of the Heliocentric Theory, even if we take into account all the objective difficulties of the time for the heliocentric worldview.

It is our belief that the ancient Greek Ionian Philosophers should be credited, and that justice should be done to the great astronomer *Aristarchos of Samos*, who first suggested the Heliocentric System. By so doing the historical truth will be restored, and, at the same time, the true contribution of Greece will be acknowledged, promoted and widely recognised. We believe that *Aristarchos of Samos*, with his great contributions, *really, is* a historical character easily recognisable at both the European level and the international level.

For all the above reasons, I, on behalf of the Aristoteleion University of Thessaloniki, strongly and enthusiastically support your proposal, that ATV-4 be named "Aristarchos of Samos".

At the end, at a quite personal level, let me tell you that I consider this last suggestion and initiative of yours as an important continuation, during the last five or so years, of your tireless efforts, aiming at introducing the Aristoteleion University of Thessaloniki into the space age. I do really appreciate these efforts very much.

Yours sincerely

Professor Anastasios Manthos

Rector of the Aristotle University of Thessaloniki



