Erratum to: Asymmetric Periodic Solutions in the Restricted Problem of Three Bodies

K. E. Papadakis · M. I. Rodi

Published online: 17 February 2010
© Springer Science+Business Media B.V. 2010

1 Erratum to: Earth Moon Planet (2010) 106:37–53 DOI 10.1007/s11038-009-9345-4

In our effort to extend our present results on the asymmetric periodic orbits in the restricted three-body problem, we found that the results in this paper concerning the case of the Earth-Moon mass distribution (subsection 2.2) are not correct.

The equations of motion of the restricted problem have the symmetry property, with respect to the x -axis, that if $x = x(t)$, $y = y(t)$ is a particular solution, then $x = x(-t)$, $y = -y(-t)$ is also a solution (see Szebehely 1967, p. 426). The corresponding symmetry property, with respect to y -axis, is also true in the case where the two primary bodies are equal, i.e. $\mu = 0.5$ (subsection 2.1 in our results) but it is not true for $\mu \neq 0.5$ (subsection 2.2 in our results).

So the results of subsection 2.2 should be ignored. The numerical determination of the asymmetric periodic orbits in this case ($\mu \neq 0.5$), needs a different procedure which we are applying at this time and will present in a future article.

Reference

V. Szebehely, *Theory of Orbits* (Academic Press, New York, 1967)

The online version of the original article can be found under doi:[10.1007/s11038-009-9345-4](https://doi.org/10.1007/s11038-009-9345-4).

K. E. Papadakis (✉) · M. I. Rodi
Department of Engineering Sciences, University of Patras, 26504 Patras, Greece
e-mail: k.papadakis@des.upatras.gr

M. I. Rodi
e-mail: marrod@upatras.gr