ERRATA

Erratum: Stability of Resonance Rotation of a Satellite with Respect to Its Center of Mass in the Orbit Plane [*Kosm. Issled.*, vol. 44, , no. 2, 2006, pp. 170–181]

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(1) In paragraph before formula (3), the second sentence must be omitted and the text should read as follows:

When $\mu = 0$, general solution to Eq. (1) has the form $\varphi(t) = mt + \varphi_0$. Now let us assume that $\mu \neq 0$. We substitute m by $m + 2$ and consider the family of resonance modes $\varphi = (m + 2)t + \epsilon\pi + x$, where m is an integer number, $\epsilon = 0$ or 1 , and resonance detuning x is small. In this case, Eq. (1) is studied by the method of averaging which was first used for this problem by Chernous'ko [36]. Averaging leads to the following equation of mathematical pendulum

(2) In paragraph following formula (4), the term “pericenter” should be replaced by “attraction center” and the text should read as follows:

Stationary point $x = 0$ of Eq. (3) is stable if $(-1)\epsilon\mu\Phi m(e) > 0$. When $m = 0$, the case of stability with $\epsilon = 0$ ($\epsilon = 1$, respectively) means that the direction of one of two principal central axes of inertia of the satellite lying in the plane of the orbit, the moment of inertia with respect to which is smaller (larger, respectively), is always close to the direction toward the attraction center. The first case takes place for the Earth–Moon system. The effects of synchronization of orbital-rotational motions in the solar system are discussed in detail in [5, Ch. 8].

(3) Formula (32) should appear as follows:

$$= \frac{m}{8\pi} \int_{-\pi}^{\pi} \exp \{ im(\sin \theta - \theta) - m\eta(1 - \cos \theta) \} \times (\cos \theta - 1)^{l-2} d\theta. \quad (32)$$

(4) Formula (33) should appear as follows:

$$(1 - \eta^2)F_m^{(l+3)}(\eta) = 2\eta(m\eta + l)F_m^{(l+2)}(\eta) + [(4l - 1)m\eta + l(l - 1)]F_m^{(l+1)}(\eta) + l(2l - 3)mF_m^{(l)}(\eta). \quad (33)$$

(5) Formula (54) should appear as follows:

$$\Phi_{m-2}(\sqrt{1 - \eta^2}) = 4\left(a_0 + a_1\eta + \left(a_0 + \frac{a_2}{2}\right)\eta^2 + \left(a_1 - \frac{ma_0}{3}\right)\eta^3\right) + O(\eta^4). \quad (54)$$

(6) At the end of Section 4.3, the relation between b_1 and b_2 should appear as follows:

$$2b_2 = -b_1$$

(7) In Fig. 1 (curve I), the right-hand limiting value should be -0.5369 .