Poster paper

WHERE DOES DUST MATTER EXIST IN THE SYSTEM OF PLUTO–CHARON?

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Below, in accordance with work (Perov 2015), we state regions of gas and dust motion in the Pluto and Charon system. Using the model of the restricted circle planar 3 body problem "Pluto–Charon–particle of negligible mass", data (http://nssdc.gsfc.nasa.gov/planetary/planets/plutopage.html), known for the considered bodies, we with help of numerical experiments find initial conditions x_{30} ($y_{30}=0$, initial velocity of m_3 equals 0) for m_3 that it makes several dozen revolutions along "closed" thin curves (Fig. 1 a, b).
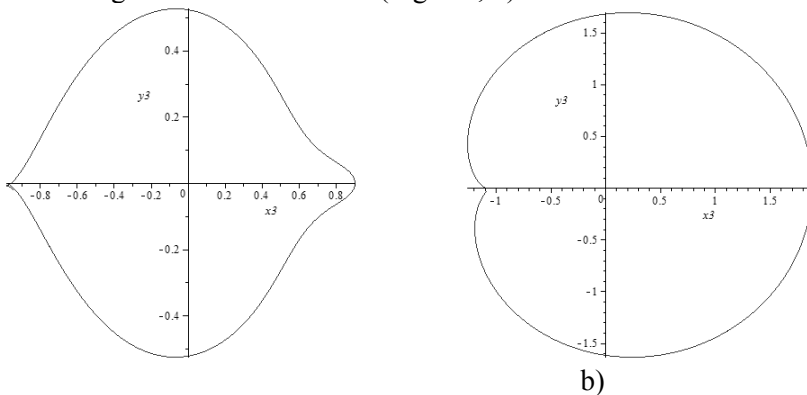
Fig. 1. Pluto (m_1)-Charon (m_2)-particle (m_3). x_{30}=-x_2-epsilon. m_1/m_2 = 8.194968553459. x_2=0.89124487; a) ε=0.08964. 0<t<8 units of time. 100000 points; b) ε=0.19559 . 0<t<15 units of time. 10000 points. Units of length=r_{12}.

References

Perov, N. I.: 2015, *46th Lunar and Planetary Science Conference*. Abstr. No. 1021.
http://nssdc.gsfc.nasa.gov/planetary/planets/plutopage.html