The HH(Hula-Hoop) Model found out the Commensurability between Rotation of the Planet and Revolution of the Satellites

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Under the Hula-Hoop model, that is Mathematical Problem Solving(MPS) Model, i.e. the Relationship between Rotation of the Planet and Revolution of the Satellites, and also the Relationship between Rotation of the Sun and Revolution of the Planets, in Solar System.

We tried to apply the Observed Data to the above Hula-Hoop MPS Model, and find out the Commensurability or Resonance Relationships in many cases.

The Hula-Hoop MPS Model is described as below. Among our Solar System, a Planet P's Rotation period (D), and Revolution radius of the main Satellite,(K), and Radius of the equator of the Planet,(R).

Let's imagine a Large Hula-Hoop, which Diameter is the main Satellite's Revolution radius,(K), then Radius of the Hula-Hoop,(H) should be H=K/2.

Now, the Ratio of the Surrounds of Hula-Hoop and the Surrounds of the Equator of the Planet should be equals to (H/R),the Ratio.

Let multiply the Ratio by Rotation period of the Planet,(D), i.e. (H/R)xD = MxN , where N is an Integer's Ratio, and (M) is the Revolution period of the Satellite S.

That mean Commensurability or Resonance EXIST there. We also find the similar relationships below.

The Hula-Hoop MPS Model is described also as below. Among our Solar System, the Sun's Rotation period,(A), and Revolution radius of the Planet,(K), and Radius of the equator of the Sun,(R).

Let's imagine a Large Hula-Hoop, which Diameter is the Planet's Revolution radius,(K), then Radius of the Hula-Hoop,(H) should be H=K/2.
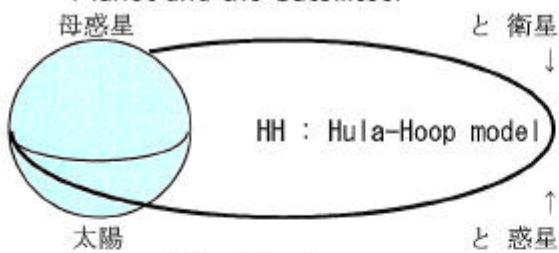
Now, the Ratio of the Surrounds of Hula-Hoop and the Surrounds of the Equator of the Sun is equals to (H/R), the Ratio of diameter of Hoop and Body.

Let multiply the Ratio by Rotation period of the Sun,(A), i.e. (H/R)xA = YxN , where N is an Integer's Ratio, and (Y) is the Revolution period of the Planet P.

That mean Commensurability or Resonance EXIST there. We find out a similar relationship between the Sun and the Planets, and also the Planets and the Satellites.
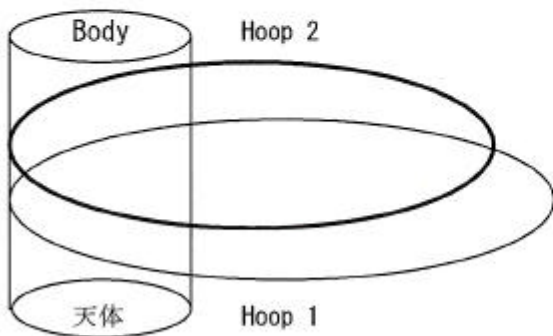That should be the Commensurability or Resonance in our Soler System.
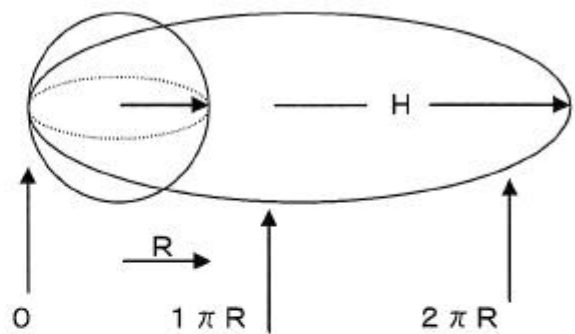
Planet and the Satellites.

母惑星　　　　　　　　　　　　と　衛星
↓

HH : Hula-Hoop model

↑
太陽　　　　　　　　　　　　　と　惑星

Sun and the Planets.

共鳴関係が成立つ為には，フラフープの「大きさ」
が，相互に「尽数関係」になっている筈である。

Body　　　　　Hoop 2

天体　　　　　Hoop 1

フラフープの半径は：H ．直径は：K とする。
直径：K は，公転軌道の半長径を使用している。

H

0　　　　　　R　　　　　　

0　　　　　1πR　　　　　2πR

フラフープの接点は，回転と共に移動している。
出発の０点に戻るまでの回転を，「フープ自転」，
振り回される回転を，「フープ公転」と定義する。