GRAVITATIONAL ATTRACION UPGRADE

The interaction of fields created by objects moving in space manifests orbital velocities which are function of the orbital distance. The decrease of velocity it happens to be not by the distance's **inverse square**, but by the inverse **square root** of said distance. Orbital velocities are also function of parent body's field magnitude. For the time being I will refer to this as a formula containing a constant, particular to each system. A planet around the Sun, or in a planet-satellite system a moon's orbiting velocity is $\mathbf{V=K/\sqrt{R}}$, or $\boldsymbol{V\sqrt{R}} = \mathbf{K.}$

This I deduced from $\mathbf{V1/V2} = \boldsymbol{\sqrt{R2}/\sqrt{R1}}$; The ratio of two orbital velocities is equal to the inverse square root of the orbital distances.

The data* we have available today was not existent during Kepler's and Newton's time. "We" can do better, like going to the Moon, Mars and beyond, for you and I on need to know. One other novelty here is that each system has its distinct constant. These constants are directly proportional to parent body's **geometrical size but not it's mass**.

To start with, we have a mass-less formulation, an effect decreasing with inverse square root and system constants part of the whole. The table provides sufficient data to play with and compare.

SUN, PLANETS SIZE and MASS CORRELATED TO SYSTEMS CONSTANTS

OBJECT	*Velocity V(km/s)	**Constant K(km/s)	*Radius r (Km)	**r / K	*MASS m (Kg)	**m / K E 21
Sun		364,312	696,000	1.910	1.99 E 30	5,462
Earth	29.79	633	6,378	10.075	5.98 E 24	9.44
Mars	24.13	206	3,397	16.490	6.42 E 23	3.10
Jupiter	13.06	11,122	71,398	6.419	1.89 E 27	169.90
Saturn	9.64	6,165	60,330	9.785	5.68 E 26	92.13
Uranus	6.81	2,408	26,145	10.857	8.73 E 25	36.25
Neptune	5.43	2,548	24,700	9.693	1.03 E 26	40.42
Smallest Largest Range	5.43 29.79	206 364,312	3,397 696,000	1.910 16.490 10.70		3.1 169.9 166.8

* Internet available data. ** Author calculated data. Anyone with a calculator and attraction upgrade interest, USA, the BRICS countries, anyone? God puts a ladder under the feet of the courageous. **David Nakov, January 21, 2018**