

Gravity Generation by Solid Spherical Iron Cores (SSIC) Embedded inside Host Celestial Spheres

Imran M. Khan, v1.28



Author's original-research note:

In this paper, we scientifically prove that the Solid Spherical Iron Cores (SSIC) residing inside each celestial sphere are the true source of gravity generation. Our theory universally confirms a SSIC radius of $17\% \pm 3\%$ that precisely maps into "100% Total Mass-Energy" as opposed to partial science solutions of today based on only ~5% visible matter. It is high time to fix/replace the partially correct Newtonian gravitational science with sound "100% Total Mass-Energy" based gravitation. First it was the 'Flat-Earth', then came the 'Earth is the center of the universe', and now we have '4.85% visible matter only matters'. When in fact 95.15% of our universe is composed of "DARK Mass-Energy". It is time again to correct our cosmological perspective!

Gravity Generation Profiles of Solid Spherical Iron Cores (SSIC) Embedded within Host Celestial Spheres

Imran M. Khan, v1.28

Keywords: *Quantum Mass-Energy (QME) theory, Gravity Generating Cores (GGC), Solid Spherical Iron Core (SSIC), Reverse Path Gravity-scaling (RPG), Core Surface Gravity (CSG), Gravity Generating Spheres (GGS), celestial Sphere Maximum Gravity (SMG), Newtonian Surface Gravity (NSG), Cosmic Core Gravitation constant (\mathcal{K}_C), Cosmic Mass-Energy constant (\mathcal{K}_M), Residual Surface Gravity (RSG), and Space Flux Field (SFF).*

ABSTRACT:

In this paper, we scientifically prove that the Solid Spherical Iron Cores (SSIC) residing inside each celestial spheres are the true source of gravity generation. Gravity generated from these SSIC surfaces is 23.84 times greater than the Newtonian Surface Gravity (NSG). The celestial sphere mass-energy in units of gravitation is 34.60 times greater than the NSG. In our research findings we also reveal two new predictable mass-energy universal gravitation constants to calculate SSIC surface gravity and the total mass-energy of all celestial spheres.

1.0 INTRODUCTION:

For the past three thousand plus years, from the ancient Greek philosophers and the Arab astronomers to the European scientists, mankind has been struggling to fully understand the source, cause, and nature of gravity. In this research paper, we theoretically derive the Reverse Path Gravity-scaling (RPG) methodology based on '100% Mass-Energy', that identifies, describes, and quantifies the true source and nature of gravity.

2.0 METHODOLOGY:

In this research paper we apply the three step scientific research methodology as follows:

- (i) First we develop the Reverse Path Gravity-scaling theoretical model
- (ii) We derive and express Earth's SSIC RPG model with mathematics
- (iii) We calculate RPG solar system SSIC gravity profiles, two new gravitation constants, and validate with solar system gravitation published data

We next apply our RPG laws to calculate Core Surface Gravity (CSG), celestial Sphere Maximum Gravity (SMG), Residual Surface Gravity (RSG), and the Space Flux Field (SFF). Using RPG theoretical methodology, we calculate SSIC gravitation and SMG results for the solar system's planets, moons and the sun.

2.1 Reverse Path Gravity-scaling (RPG) Methodology:

The RPG methodology applies the Inverse square law in the reverse direction moving from the known celestial sphere surface gravity to the SSIC surface. This is possible because dark matter, dark energy, and gravitation do not suffer permeability or permittivity losses, are invisible on the electromagnetic spectrum and do not interact with visible matter except gravitationally. Applying the RPG analyses on the entire solar system's sun, planets, and moons allows us to calculate the predictable Cosmic Core Gravitation constant (\mathcal{K}_C) and the Cosmic Mass-Energy constant (\mathcal{K}_M). These two cosmic constants are described below.

2.2 Cosmic Core Gravitation (\mathcal{K}_C) constant:

The core surface gravity of any Solid Spherical Iron Core (SSIC) or any Gravity Generating Core (GGC) in the universe can be calculated by multiplying its known Newtonian Surface Gravity (NSG) by the Cosmic Core Gravitation constant (\mathcal{K}_C). The \mathcal{K}_C constant is a predictable unit-less universal constant equal to 23.84. The theoretical results of the \mathcal{K}_C constant validation based on the analyses of the solar system's sun, planets, and moons is provided in Tables 1,2, and 3.

2.3 Cosmic Mass-Energy (\mathcal{K}_M) constant:

The total mass-energy of any celestial sphere or any gravity generating system in the universe can be calculated by multiplying its known Newtonian Surface Gravity (NSG) by the Cosmic Mass-Energy constant (\mathcal{K}_M). The \mathcal{K}_M constant is a predictable unit-less universal constant equal to 34.06. The theoretical results of

the \mathcal{K}_M constant based on the solar system's sun, planets, and moons is provided in Tables 1,2, and 3.

3.0 Reverse Path Gravity-scaling (RPG) Model:

To scientifically justify and derive the Reverse Path Gravity-scaling (RPG) methodology, following principles, assumptions, and inputs are established:

3.1 Nature of Mass-Energy forces:

- Cosmological principle applied for a homogeneous and isotropic distribution of mass-energy throughout the universe
- RPG methodology is based on 100% Mass-Energy, compared to Newtonian gravitation reference base of only ~5% 'Visible Matter'.
- For a given celestial sphere, the Mass-Energy Equivalence ratios as a function of mass, density, and gravitation forces are the same

3.2 Universal passive attractive nature of gravitation:

The passive attractive force of gravity is non-electromagnetic and does not interact with normal matter except gravitationally. It permeates through normal matter without suffering any losses, therefore:

- Permeability and Permittivity losses = 0

3.3 Solid Spherical Iron Core (SSIC) Radius:

For all gravity generating celestial spheres and formations in the universe, the QME research [1] indicates that all GGCs have radius: $R_C = 17\% \pm 3\%$ of R_S .

- $R_C = 17\% \pm 3\%$ of R_S ; $R_C = 0.17 * R_S$
where: R_C = SSIC core radius and R_S = celestial sphere radius

Previous geological Earth studies predict SSIC radius ranging from 1220 km[9] to 1278 km[8] with very large uncertainties [10]. However, most of these inner iron core radius study predictions are within the SSIC radius of $17\% \pm 3\%$.

- A SSIC radius of 17% will be applied. As our research results universally show that a SSIC $R_C = 17\%$ precisely balances gravitation with the mass-energy composition of all celestial spheres.[1]

3.4 Inverse Square Law:

Gravitation flux radiates, dissipates, and decays as a function of the Inverse Square law. From the known planet surface gravity measurement values, the Reverse Path Gravity-scaling (RPG) method applies the Inverse Square law in the reverse direction from the planet external surface to the SSIC source surface.

3.5 Shell Theorem:

RPG laws fully abide by both articles of the Shell theorem [2][3]

- I. Consistent with article one, the maximum gravitation or the total mass-energy of the entire celestial sphere can be viewed as being concentrated at the coincident SSIC and celestial sphere center point.
- II. Gravitation flux is generated from the SSIC surface such that no additional flux is generated beyond that point. Neither is any gravitational force exerted inside the SSIC sphere, nor from the sphere external surface.

4.0 Reverse Path Gravity-scaling (RPG) Derivations:

Based on these Mass-Energy properties, the Reverse Path Gravity-scaling laws can be accurately derived and formulated for any flux generating celestial sphere in the universe. From conventional physics and Inverse square law we know:

$$\text{Intensity} \propto 1 / (\text{Distance})^2$$

$$I = L/4\pi r^2 \text{ or } L = I * (4\pi r^2);$$

L= Luminosity or rate of flux passing through a surface area

I = intensity such as gravitation (g)

Based on Inverse-square law, the gravitational Intensity at the sphere surface is given by: Source strength for sphere = $4\pi GM$

$$4\pi GM/4\pi r^2 = I = GM/r^2 = g$$

$$g_c * (\text{distance1})^2 = g_s * (\text{distance2})^2$$

$$\text{For spheres: } g_c * 4\pi R_c^2 = g_s * 4\pi R_s^2$$

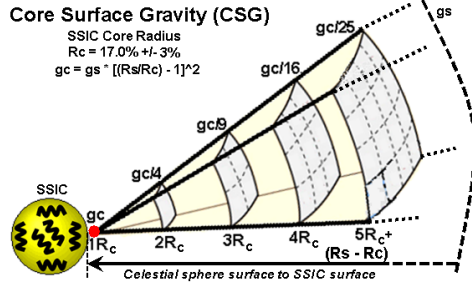


Figure-1: Shows RPG from celestial sphere external surface to SSIC surface in units of R_c minus one unit ($R_s - R_c$) to compute the SSIC source surface gravity.

4.1 RPG SSIC Core Surface Gravity:

Consistent with the Shell theorem second article, no force is exerted inside the SSIC or from the visible sphere external surface. Gravitational force flux is generated and radiated out only from the SSIC surface at location $R_c = 0.17 * R_s$. Therefore, we will apply the RPG from sphere surface to the SSIC surface which is equivalent to R_s minus R_c .

$$g_c * R_c^2 = g_s * R_s^2$$

where: $R_c > 0$; $R_s > 0$; and $R_c < R_s$

$$\text{RPG Distance to reach SSIC surface} \Rightarrow R_s^2 = (R_s - R_c)^2$$

Equivalent gravitation emitted at the SSIC core surface and sphere surface:

$$g_c * R_c^2 = g_s * R_s^2$$

Substituting radial distance from sphere surface to core surface:

$$g_c * R_c^2 = g_s * (R_s - R_c)^2$$

$$g_c = g_s * (R_s - R_c)^2 / R_c^2$$

$$g_c = g_s * (R_s/R_c - R_c/R_c)^2$$

Solving for SSIC core surface gravity with radius variables we get:

$$g_c = g_s * [(R_s/R_c) - 1]^2 \quad (1)$$

Substituting $R_c = 0.17 * R_s$ in Equation (1), to calculate the Cosmic Core Gravitation constant (\mathcal{K}_C):

$$g_c = g_s * [(R_s/R_c) - 1]^2 = g_s * [(R_s/0.17R_s) - 1]^2$$

$$g_c = g_s * [(1/0.17) - 1]^2 = g_s * [(1/0.17) - 1]^2$$

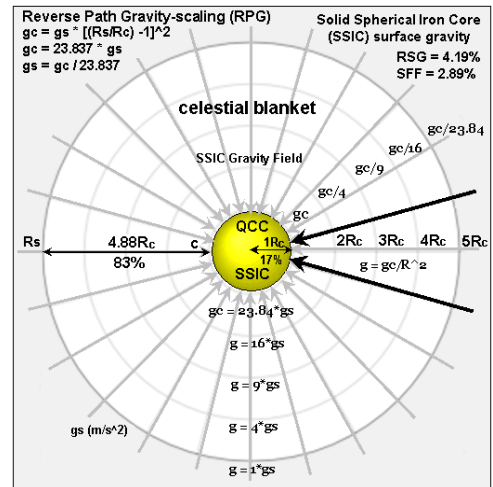
Solving for SSIC core surface gravity in terms of the \mathcal{K}_C we get:

$$g_c = g_s * 23.837 \Rightarrow (g_s * \mathcal{K}_C) \quad (2)$$

Re-arranging constant \mathcal{K}_C for the Newtonian surface gravity we get:

$$g_s = g_c \div 23.837 \Rightarrow (g_c \div \mathcal{K}_C) \quad (3)$$

Figure - 2: RPG Laws for SSIC Surface Gravity



4.2 RPG Celestial Sphere Maximum Gravity:

Analogous to the Shell theorem article one, the total mass-energy of a gravity generating sphere in units of gravitation, can be calculated as if its total mass-energy is concentrated at a single point at its center. Therefore, we will apply the RPG from sphere external surface to the sphere center.

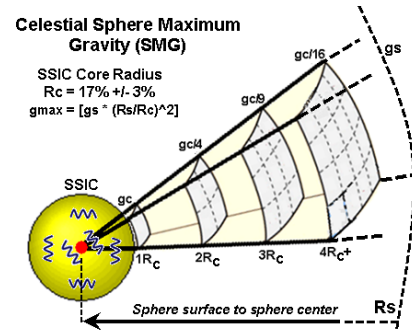


Figure-3: Shows RPG from celestial external surface to celestial sphere center in units of SSIC radii to compute the celestial Sphere's total mass-energy in units of gravitation.

Gravitation emitted at the sphere surface = $g_s * 4\pi R_s^2$

$$g_{max} * 4\pi R_c^2 = g_s * 4\pi R_s^2$$

where: $R_c > 0$; $R_s > 0$; and $R_c < R_s$

$$g_{max} * R_c^2 = g_s * R_s^2$$

$$g_{max} = g_s * R_s^2 / R_c^2$$

Solving for sphere maximum mass-energy in units of gravity we get:

$$g_{max} = [g_s * (R_s/R_c)^2] \quad (4)$$

Substituting $R_c = 0.17 * R_s$ in Equation (4), for Cosmic ME (\mathcal{K}_M) constant:

$$g_{max} = [g_s * (R_s \div 0.17R_s)^2] = [g_s * (1/0.17)^2]$$

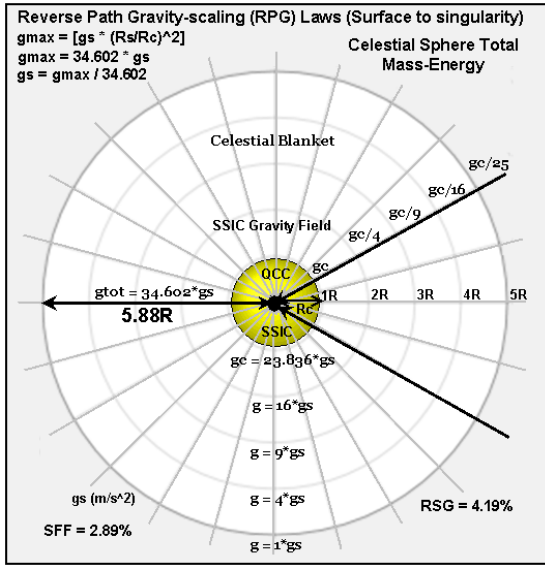
Solving for sphere total mass-energy in units of gravitation and \mathcal{K}_M , we get:

$$g_{max} = g_s * 34.602 \Rightarrow (g_s * \mathcal{K}_M) \quad (5)$$

Re-arranging constant \mathcal{K}_M in terms of Newtonian surface gravity we get:

$$g_s = g_{max} \div 34.602 \Rightarrow (g_{max} \div \mathcal{K}_M) \quad (6)$$

Figure - 4: RPG Laws for Total Mass-Energy



4.3 Earth's Total Mass-Energy calculations:

The total mass-energy of Earth in units of gravitation can also be calculated by repeating the above steps and extending all the way to Earth's center point.

From Equation (4) and Earth's known Newtonian gravity inputs we can derive Earth's total mass-energy in units of gravitation which is shown below:

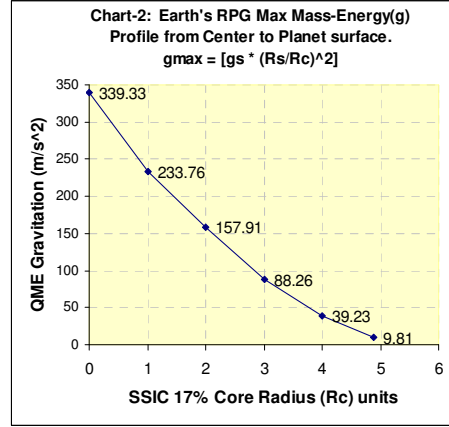


Chart-2: Shows Reverse Path Gravity-scaling profile from Earth's external surface to its center in units of R_c . Earth's maximum mass-energy in units of gravity is at its center point.

4.3 Earth's SSIC Gravity Profile calculations:

RPG calculations require only three inputs to fully analyze and accurately quantify the gravitation profiles of celestial spheres. The three required inputs are:

1. R_s = Earth's sphere radius (R_s) = 6378100 meters
2. R_c = Earth's 17% SSIC core radius (R_c) = 1084277 meters
3. g_s = Earth's Newtonian surface gravity (g_s) = 9.807 m/s²

From these three inputs one can derive planet Earth's gravitation profile by applying the RPG methodology starting from the Earth's external surface to its SSIC surface.

From equation (4) and Earth's known Newtonian gravity we can modify and derive Earth's gravitation profile curve by:

$$g(x) = g_s * (R(x) \div R_c)^2; R_s \geq R(x) \geq R_c \quad (7)$$

Applying Equation (7) from Earth's external surface to Earth's SSIC surface we get Earth's gravitation profile shown in Chart-1 below:

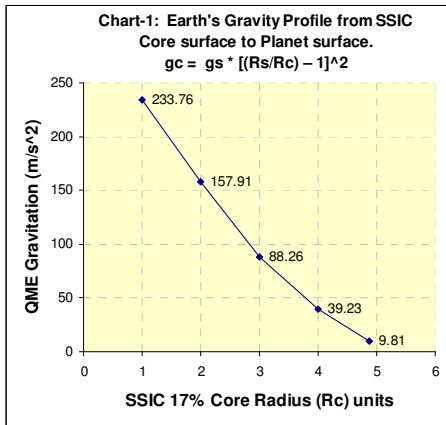


Chart-1: Shows Reverse Path Gravity-scaling gravitation profile from Earth's external surface in units of R_c to Earth's gravity generation source SSIC surface.

4.4 Residual Surface Gravity (RPG) & Space Flux Field (SFF):

The gravitation flux generating from all the SSICs radiates, dissipates, and depletes as a function of Inverse square ($1/r^2$) law. For all gravity generating celestial spheres in the universe, their Residual Surface Gravity (RSG) ratios can be calculated by dividing their Newtonian surface gravity (g_s) by their SSIC surface gravity (g_c) given by:

$$RSG = (g_s \div g_c) = 4.20\% \quad (8)$$

Similarly, for all gravity generating celestial spheres in the universe, their Space Flux Field (SFF) ratios can be calculated by dividing their Newtonian surface gravity (g_s) by their maximum mass-energy in units of gravity (g_{max}) given by:

$$SFF = (g_s \div g_{max}) = 2.89\% \quad (9)$$

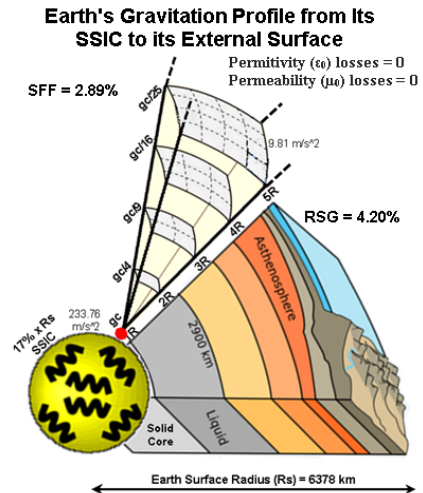


Figure-5: RPG shows Earth's Solid Spherical Iron Core (SSIC) generating gravitation flux permeating through the geological layers [7] to the planet surface (RSG) and beyond (SFF).

5.0 RESULTS:

5.1 SSIC Gravity Profile Theoretical Results Summary for the Solar System and the Universe model:

The SSIC gravity generation profiles using the Reverse Path Gravity-scaling (RPG) methodology were applied to the universe and the solar system's planets, and sun to calculate the Core Surface Gravity (CSG), Sphere Maximum Gravity (SMG), Residual Surface Gravity (RSG) and the Space Flux Field (SFF). The results confirm that the SSIC CSG Cosmic Core Gravitation constant (\mathcal{K}_C) value of 23.84, which gives a CSG value that is 23.84 times larger than the Newtonian Surface Gravity (NSG). The Cosmic Mass-Energy constant (\mathcal{K}_M) was calculated to be 34.60 times greater than the NSG, proving that the mass-energy flux characteristics are identical in all celestial spheres. For all of the solar system's planets and sun, the RSG was calculated to be 4.20%, while the Space Flux Field contribution was calculated to be 2.89%. For detailed RPG Solar system gravitation profile results see Table-1 below.

Table-1 – SSIC Gravity Profile Results for Solar System's¹ Planets, Sun, Moons, and the Universe²

Celestial Sphere	Newtonian gravity	Core gravity	Maximum ME(g)	Cosmic Core \mathcal{K}_C	Cosmic ME \mathcal{K}_M	RSG gs/gcore	SFF gs/gmax
Mercury	3.70	88.20	128.03	23.838	34.603	0.04195	0.028899
Venus	8.87	211.44	306.92	23.838	34.602	0.04195	0.028900
Earth	9.81	233.76	339.33	23.836	34.601	0.04195	0.028901
Mars	3.71	88.46	128.41	23.837	34.603	0.04195	0.028900
Jupiter	24.79	590.93	857.79	23.837	34.602	0.04195	0.028900
Saturn	10.44	248.86	361.25	23.837	34.602	0.04195	0.028900
Uranus	8.69	207.15	300.69	23.838	34.602	0.04195	0.028900
Neptune	11.15	265.79	385.81	23.838	34.602	0.04195	0.028900
Pluto	0.62	14.78	21.46	23.839	34.613	0.04195	0.028891
Moon	1.62	38.62	56.06	23.840	34.605	0.04195	0.028898
Sun	274.00	6531.44	9480.97	23.837	34.602	0.04195	0.028900
Universe (QME model)	5.17E-12	1.23E-10	1.79E-10	23.828	34.588	0.04197	0.028912
Averages:				23.837	34.602	0.0420	0.0289

5.2 SSIC Gravity Profile Results for the Solar System Major Moons and Minor Planets:

The RPG results for RSG, and the SFF for each moon are same. Proving once again that the mass-energy flux characteristics are identical for all SSICs in the universe. The solar system's Moons results show slightly higher (by 0.4%) SSIC cosmic core constant (\mathcal{K}_C) value of 23.93 and a cosmic mass-energy constant (\mathcal{K}_M) value of 34.73 compared to the solar system planets averages. This variation is attributed to larger NSG measurement uncertainty associated with the solar system distant minor moons. The Solar system's moons and minor planets SSIC gravitation profile detailed results are summarized in Table-2 below:

Table-2 – SSIC Gravity Profile Results for the Solar System's major Moons³ and Minor Planets

Celestial Moons	Newtonian gravity	Core gravity	Maximum ME(g)	Cosmic Core \mathcal{K}_C	Cosmic ME \mathcal{K}_M	RSG gs/gcore	SFF gs/gmax
Earth - Moon	1.62	38.62	56.06	23.840	34.605	0.04195	0.028898
Jupiter - Europa	1.31	31.32	45.47	23.836	34.604	0.04195	0.028898
Jupiter - Callisto	1.24	29.44	42.73	23.838	34.599	0.04195	0.028902
Jupiter - Io	1.80	42.81	62.15	23.836	34.605	0.04195	0.028898
Jupiter - Ganymede	1.43	34.04	49.41	23.804	34.552	0.04201	0.028942
Saturn - Titan	1.35	32.23	46.78	23.874	34.652	0.04189	0.028858
Saturn - Rhea	0.26	6.29	9.13	24.192	35.115	0.04134	0.028478
Saturn - Tethys	0.15	3.48	5.05	23.200	33.667	0.04310	0.029703
Saturn - Dione	0.23	5.53	8.03	24.043	34.913	0.04159	0.028643
Saturn - Mimas	0.06	1.53	2.21	25.500	36.833	0.03922	0.027149
Saturn - Enceladus	0.11	2.69	3.91	24.455	35.545	0.04089	0.028133
Saturn - Iapetus	0.22	5.32	7.72	23.857	34.619	0.04192	0.028886
Uranus - Ariel	0.27	6.41	9.31	23.829	34.610	0.04197	0.028894
Uranus - Titania	0.38	9.03	13.11	23.826	34.591	0.04197	0.028909
Uranus - Umbriel	0.20	4.77	6.92	23.850	34.600	0.04193	0.028902
Uranus - Oberon	0.35	8.25	12.00	23.844	34.682	0.04194	0.028833
Uranus - Miranda	0.08	1.88	2.73	23.500	34.125	0.04255	0.029304
Neptune - Triton	0.78	18.57	26.96	23.808	34.564	0.04200	0.028932
Pluto - Charon	0.29	6.87	9.97	23.854	34.618	0.04192	0.028887
Ceres	0.28	6.67	9.69	23.821	34.607	0.04198	0.028896
Eris	0.82	19.55	28.37	23.841	34.598	0.04194	0.028904
Averages:				23.926	34.729	0.0418	0.0288

¹ The surface gravity inputs in the Table-1 second column were obtained from the NASA Planetary Fact Sheet website, and Wikipedia [4].

² The Universe dimensions data was obtained from Wikipedia [5].

³ The solar system moons NSG gravity input data was obtained from NASA Planetary Fact Sheet website, Wikipedia [4].

5.3 Universe GGC Gravity Profile Results for all Major Celestial Formations:

Beyond the planet and the moons, the GGC gravity profiles using the RPG framework can be calculated for all mass-energy flux generating formations such as the neutron stars, galaxies, black holes, and the universe itself. The RPG results in Table-3 show that the universe large scale structure including neutron stars, galaxies, black holes, and the universe validate the Cosmic Core constant (\mathcal{K}_C) equal to 23.84 for all GGCs. Similarly, the results also validate the Cosmic Mass-Energy constant (\mathcal{K}_M) value of 34.60 required to calculate the total mass-energy of a celestial sphere or formation in units of gravity multiplied by their respective NSG.

Table-3 – Universe GGC¹ Gravity Profile Results for all Major Celestial Formations²

QME Celestial Formations	Newtonian gravity	Core gravity	Maximum ME(g)	Cosmic Core \mathcal{K}_C	Cosmic ME \mathcal{K}_M	RSG gs/gcore	SFF gs/gmax
Sun	274.00	6531.44	9480.97	23.837	34.602	0.04195	0.028900
Earth	9.81	233.76	339.33	23.836	34.601	0.04195	0.028901
Moon	1.62	38.62	56.06	23.840	34.605	0.04195	0.028898
Neutron Star	1.24E+12	2.96E+13	4.30E+13	23.871	34.677	0.04189	0.028837
Milkyway Galaxy	3.51E-04	8.36E-03	1.21E-02	23.818	34.473	0.04199	0.029008
Stellar Black Hole	1.47E+12	3.52E+13	5.10E+13	23.946	34.694	0.04176	0.028824
Intermediate Black Hole	1.33E+11	3.16E+12	4.59E+12	23.759	34.511	0.04209	0.028976
Universe (QME model)	5.17E-12	1.23E-10	1.79E-10	23.828	34.588	0.04197	0.028912
Averages:				23.842	34.594	0.0419	0.0289

¹ GGC = SSIC, SSNC, SSQC: 17% ±3.0% radius Solid Spherical Iron Cores, Neutron Cores, and Quark-gluon-plasma Cores respectively [1].

² Table-3 second column NSG input data inputs were obtained from Wikipedia [4][5][6].

6.0 CONCLUSION:

1. True gravity originates at the surface of Solid Spherical Iron Cores (SSIC) that reside inside each celestial gravity generating sphere. The Newtonian Surface Gravity (NSG) we experience at the surface of the planet is only the Residual Surface Gravity (RSG) from the SSIC source.
2. Newtonian Surface Gravity (NSG) most precisely calculates gravitation for the known 4.85% visible matter. However, NSG does not fully account for the missing 95.15% mass-energy in units of gravitation (i.e., Dark Matter & Dark Energy). Reverse Path Gravity-scaling (RPG) methodology, on the other hand, fully accounts for 100% gravitational mass-energy composition of any celestial planet in the universe.
3. The core surface gravity of any Solid Spherical Iron Core (SSIC) or any Gravity Generating Core (GGC) in the universe can be calculated by multiplying its known Newtonian Surface Gravity (NSG) by the Cosmic Core Gravitation constant (\mathcal{K}_C). For all SSICs and GGCs their respective core surface gravity is 23.84 times greater than their NSG.
4. The Total Mass-Energy of any celestial gravity generating sphere or any gravity generating system in the universe can be calculated by multiplying its known NSG with the Cosmic Mass-Energy constant (\mathcal{K}_M). The total celestial sphere mass-energy in units of gravity is 34.06 times greater than their respective NSG.
5. Reverse Path Gravity-scaling calculation results completely validate both new universal constants presented namely: Cosmic Core Gravitation constant (\mathcal{K}_C) and Cosmic Mass-Energy constant (\mathcal{K}_M).
6. All celestial GGS in the universe have a 17% ±3% radius SSIC embedded within their host sphere situated at the sphere center.
7. The SSIC effective gravitational halo size is always proportional to $4.88 * R_C$ relative to its SSIC radius of 17% ±3%.

8. After attaining Celestial Equilibrium (CEQ), each celestial sphere produces a passive attractive Halo of Space Flux Field (SFF) of ≤ 2.89% relative to its total mass-energy. This residual SFF is radiated out to the adjacent space where it further declines as a function of Inverse square law. The residual surface gravity of 2.89% of total mass-energy from each celestial sphere cumulatively fills up the entire universe to form the SFF. All celestial bodies float in this SFF gravitational flux also called the cosmic-web or the space fabric.

7.0 REFERENCES:

[1] Khan, Imran M., (2017), "Discovery of the true Source, Cause, and Nature of Gravity, Dark Matter, and Dark Energy by the Quantum Mass-Energy (QME) Theory." www.gsjournal.net/Science-Journals/Research%20Papers/View/7205

[2] Newton, Isaac (1687), Philosophiae Naturalis Principia Mathematica. London. pp Theorem XXXI. (Shell Theorems)

[3] I. Newton (1687); *Mathematical Principles of Natural Philosophy* (Translated by F. Cajori), University of California Press, Berkeley (1964).

[4] Wikipedia Solar system Reference values data: https://en.wikipedia.org/wiki/Solar_System

[5] Wikipedia Universe Reference values data: <https://en.wikipedia.org/wiki/Universe>

[6] Wikipedia Earth Physical characteristics values data table: <https://en.wikipedia.org/wiki/Earth>

[7] Robertson, Eugene C., (26 July 2001). "The Interior of the Earth". USGS.

[8] Dziewonski, Adam M; Anderson, Don L. (June 1981), "Preliminary Reference Earth model" PREM. 'Physics of the Earth and Planetary interiors' 25 (4): 297-356

[9] Monnereau, Marc, Calvet, Marie, Margerin, Ludovic, Souriau, Annie (May 21, 2010), "Lopsided Growth of Earth's Inner Core". Science 328 (5981): 1014-1017

[10] Jordan, T. H. (1979), "Structural geology of the Earth's interior". Proceedings of the National Academy of Sciences of the United States of America 76 (9) 4192-4200.

Earth Radial Location	RPG Gravity Profile
Earth surface (SSG)	9.807 m/s ²
Earth Core surface (CSG = 23.837 * SSG(g))	233.76 m/s ²
Earth center max (SMG = 34.602 * SSG(g))	339.33 m/s ²