We have seen (Vol. 1 No. 1) (1) That Earth is a transverter mill for the transversion of cosmic circulation into Earth's own cosmorbital orbitation. (2) That in this work, she exerts only 5.7ths of her energy of transversion. How does Earth exert the rest of her energy of transversion? For exert it all, she must. Non-exerted energy is non-existent energy. Earth can exert her transversion energy only in transversion of translatory motion into her own orbitation. To search out, how, under His tuition, how, in her total orbitation to her own orbitation. To search out, how, in her total orbitation to her own orbitation. To search out, how, in her total orbitation to her own orbitation.

All the cosmic circulation that Earth receives at her present cosmorbital radius in her present cosmorbital time, Earth transverts into her present cosmorbital orbitation. She has no surplus cosmic circulation to transvert. Therefore, Earth must exert her surplus energy of transversion upon her present cosmorbital motion. That means that Earth must expend her surplus energy of transversion in transverting her present cosmic orbit into 5.7 epicyclic epicycles.

As we found that Earth's solar gravitation is Earth's centripetal urge toward the smaller cosmorbit (16.4 million miles) and that it is counterbalanced by the centrifugal urge of Earth's rotating molecules toward the larger cosmorbit (538 million miles); so now, likewise, we find that Earth's lunar gravitation is her centripetal urge toward the 500 mile Lunorbit; and that it is counterbalanced by the centrifugal urge of Earth's rotating molecules toward the 3,000,000 mile Lunorbit.

As we found that Earth's actual, complement cosmorbit is a mean proportional between the two demanded cosmorbits; so now, likewise, we find that Earth's actual compromise Lunorbit (210,000 miles) is a mean proportional between the two demanded Lunorbits.

As Earth's 5.7 epicycles are required to enable cosmorbital centrifugy to equal Earth's centripetal centrifugy. As we found that Earth's cosmorbital speed square multiplied by Earth's radius gave the same demanded orbit (64 square times 4,000 miles, equals 16.4 million miles); so now also we find that Earth's Lunorbital speed square (4.6 times Earth's radius) gives for Earth's demanded Lunorbit 18,000 miles.

As we found that Earth's cosmorbital time square (183,400 days) multiplied by Earth's radius gave us for the cosmorbital radius demanded by Earth's molecules for their discrete, cosmorbital revolution 520 million miles; so now, likewise, we find that Earth's Lunorbital time square (784 days) multiplied by Earth's radius (4,000 miles) gives us for the Lunorbit 500 mile Lunorbit. As, at present cosmorbital radius 250,000,000 miles) 5.7 epicycles of 280,000 miles radius and 64 day period are required to enable cosmorbital centrifugy to equal Earth's centripetal centrifugy of rotation; so, likewise, at Earth's present Lunorbital radius (240,000 miles) 13 epicycles of 8,500 mile radius and of 2.14 day period are required to make Earth's lunorbit centrifugy equal to Earth's centripetal centrifugy of rotation.

As Earth's 5.7 epicycles born by Earthly cosmorbital around the cosmic center causes Earth to appear to trace a serpentine path along her cosmorbit. Half the time inside thereof, and half the time outside thereof; so, likewise, Earth's 13 epicycles upon her lunorbit cause her to appear to trace a serpentine path along her lunorbit, half the time inside and half the time outside thereof.

The Moon's libration in longitude is caused, in part by the reaction of her unceasing contribution of her energy of rotation to the acceleration of Earth's Lunorbital motion against the unceasing variation in length of Earth's lunorbit radius and speed, due to Earth's epicycles.

Of course, all the foregoing discussion raises the inevitable question: Does Earth revolve around her moon? If so, what evidence is there thereof? Abundant evidence and conclusive. The evidence of Earth's revolution around her moon divides itself temporarily into (1) evidence already in your hand, and (2) evidence readily obtainable. Should nature thereof, this evidence...
days, the centrifugal of each monthly epicycle must equal that of Earth's pure rotation as an orb, considered apart from the centripetal centrifugy of Earth's rotating molecules; and apart from this centrifugy of their revolution around Earth's axis of rotation. This centrifugy of Earth's pure rotation as an orb, we have learned (Vol. 1, No. 1) is satisfied precisely when its centrifugal equation is \( d \) above \( t \) equal 1. That the radius of each of the 5.7 monthly epicycles in terms of Earth's radius may equal the time of revolution therein in terms of Earth's time of rotation; the radius of each of the 5.7 monthly epicycles must equal 64 of Earth's radii or 256,000 miles. Epicyclic speed (64 above 64) equals 1, and epicyclic centrifugy equals Earth's centrifugy of pure rotation.

The centrifugy of each of the 5.7 epicycles equals that of Earth's pure centrifugy of Earth. The total epicyclic centrifugy of all of the 5.7 epicycles is 5.7 times that of Earth's pure rotational centrifugy. Since the 5.7 epicycles are borne around the cosmic center once a year by Earth's cosmic orbit, they thereby become a part of Earth's total cosmorbital. Therefore, Earth's total cosmorbital centrifugy becomes 5.7 times the fraction 1 above 5.7. This equals 1. Thus Earth's total cosmorbital centrifugy becomes equal to Earth's rotational centrifugy.

This was the situation, with a 365 day year of 50 0.4 days each, when Earth captured the rotating orb, Luna; and imprisoned her in the center of Earth's monthly epicyclic orb; and robbed her of all her separate rotation, appropriating it to the acceleration motion in Earth's monthly epicyclic orb; which from now on we may name Earth's Lunorbit to contra-distinguish it from Earth's other orbit, which we may name her cosorbit. This capture, imprisonment, and depoolation of Luna caused important changes in Earth's Lunorbitation: (1) shortened the radius of Earth's Lunorbit; (2) changed it from a circle to an ellipse; (3) hastened Earth's Lunorbit motion; (4) thereby shortened Earth's Lunorbital time, and increased the number of Earth's months from 5.7 to 13; (5) changed the equation of Earth's Lunorbital centrifugy from \( d \) above \( t \) equals 1 to \( d \) above \( t \) square equals 1, thereby reducing it from equality with Earth's pure rotational centrifugy to one 13th of the Earth's total rotational centrifugy; and (6) altered the effect of Earth's Lunorbitation upon Earth's tides. In effect, these changes, Luna gave up all her separation to Earth's Lunorbitation, and still ceaselessly continues to surrender it for the eternal maintenance of these changed conditions.

Now that Earth has at the center of her lunar orbit a rotator that, like a shaft to its pulley, contributes its rotatory to the acceleration of Earth's Lunorbital motion; just as the sun at the center of Earth's solar orbit contributes of its rotatory to accelerate the motion of all the planets; so now let us treat the subject of Earth's Lunorbital gravitational precisely as we treated the subject of Earth's cosmorbital gravitation (Vol. 1, No. 1); and apply to it precisely the same reasoning and calculation.

As we multiplied cosmorbital distance (33,000,000 miles) by Earth's cosmorbital centrifugy 1 above 5.7 and thereby found Earth's demanded cosmorbital distance (16.4 million miles); so now, likewise let us multiply Earth's Lunorbital radius (240,000 miles) by her Lunorbital centrifugy (one 13th) and find Earth's demanded Lunorbit (258,000 miles); at which radius Lunorbital centrifugy would be least Luna's radius and speed, and it is counterbalanced by the centrifugal urge of Earth's rotating molecules toward the 3,000,000 mile Lunorbit.

As, at present cosmorbital radius (33,000,000 miles) 5.7 epicycles of 256,000 miles radius and 64 day period are required to enable cosmorbital centrifugy to equal Earth's centrifugy of rotation. So, likewise, at Earth's present lunorbital radius (240,000 miles) 13 epicycles of 8,500 mile radius and of 214 day period are required to make Earth's lunorbital centrifugy equal to Earth's centrifugy of rotation.

As Earth's 5.7 epicycles borne by Earth's cosmorbit around the cosmic center causes Earth to appear to trace a serpentine path along her cosmorbit, half the time inside thereof, and half the time outside thereof; so, likewise, Earth's 13 epicycles upon her lunorbit cause her to appear to trace a serpentine path along her lunorbit, half the time inside and half the time outside thereof.

The Moon's libration in longitude is caused, in part by the reaction of her unceasing contribution of her energy of rotation to the acceleration of Earth's lunorbital motion against the unceasing variation in length of Earth's lunorbital radius and speed, due to Earth's epicycles.

Of course, all the foregoing discussion raises the inevitable question: Does Earth revolve around her moon? If so, what evidence is there thereof? Abundant evidence and conclusive. The evidence of Earth's revolution around her moon divides itself temporally into (1) evidence already in hand, and (2) evidence readily obtainable. As to nature thereof, this evidence divides itself into (1) presumptive, (2) confirmatory, and (3) demonstrative.

Let us consider first presumptive evidence already in hand: (1) If Earth revolves around her moon with an orbital radius of about 240,000 miles, this revolution must make a difference of nearly half a million miles in her monthly distance from the Sun. This difference in distance should make an observable and measurable corresponding difference in the apparent diameter of the Sun. (2) The amount of this difference should be about 10 seconds of arc. (3) Sums apparent diameter should be greatest at new Earth (full moon). (4) Should be least at full Earth (new moon). (5) Nearly stationary at new Earth. (6) Ditto at full Earth. (7) Lengthening should be most rapid at Earth's third quarter. (8) Shortening most rapid at Earth's first quarter. (9) Changes in apparent diameter should be uniform, rhythmic, and regular. (10) All the above phenomena should be observable when attention first is called to the relation between the moon's phases, and variation in apparent solar diameter. (11) These phenomena should be uninterrupted from the time when first noticed down to present; thereby creating the presumption that they have been extant throughout geologic ages before rivers, winds and months became masculine.

For 25 years astronomers have known these 20-day changes in the apparent diameter of the Sun. For twenty years they have known that these changes in apparent diameter of the Sun keep perfect time with the phases of Earth's moon. Why, then, is this evidence presumptive instead of demonstrative and conclusive? Because there is a bare possibility that these changes in apparent diameter are caused by actual changes in the...
sun’s bulk. This possibility is slight to the vanishing point; because, by the law of chances, if the above 11 conditions are met and realized by the actual phenomena, the presumption that Earth revolves around her moon becomes about 40 million to one. How this presumption can be converted into demonstrable certainty will be stated a few paragraphs farther on.

Now we turn from presumptive evidence already ascertained to evidence readily obtainable.

(12) If Earth revolves around her moon, instead of her moon around Earth, Earth’s tides should be affected thereby; and an adequate, correct, and satisfactory tidal theory should be made possible. Of Newton’s tidal theory based upon gravitational attraction and the revolution of Earth’s moon around Earth, Young’s textbook of astronomy says that, as an explanation of actual tidal phenomena, it is “very unsatisfactory.” Of the theory itself he says that “it is certainly inadequate and in some respects incorrect.”

(13) If Earth revolves around her moon once a month, during the half month from full Earth and new Earth, she is advancing to meet cosmic radiation. This should cause a higher temperature from cosmic radiation during this half of the month than during the half month from new Earth to full Earth, when Earth is retreating from the cosmic center. This difference in temperature has a double cause: (1) During the half month from full Earth to new Earth, Earth absorbs more cosmic radiation than in the other half month; and (2) the energy of arrestation is greater, increasing temperature proportionally to square of energy of arrestation. This phenomenon corresponds as to immediate cause with the higher temperature of Earth’s autumn months, when, owing to eccentricity of Earth’s cosmosorbit, Earth is advancing to meet cosmic radiation; and with the lower temperature of Earth’s vernal months, when Earth is retreating in her cosmosorbit from the cosmic center, and must be overtaken by cosmic radiation.

That the heat received from the Sun at Earth’s surface actually does vary by so many as 10 degrees every few days, is an already ascertained truth. If an examination of U. S. daily weather statistics for the past 50 years shall show that during the week of Earth’s third quarter (moon’s first quarter) more heat is received from the Sun than during the week of Earth’s first quarter (moon’s third quarter), another presumptive proof that Earth revolves around her moon will have been added.

(14) When Earth is about 93 million miles from Venus and Earth is at its third quarter, the elongation of the cosmosorbit of Venus, measured from Earth half a day after quadrature, should be 1.5 minutes of arc longer than when measured half a day before quadrature.

(15) At Earth’s first quarter, 1.5 minutes of arc longer than etc.

The semi-revolution of the major axis of Earth’s lunorbit should make a 9-year, 20-seconds-of-arc variation in the length of the sun’s apparent diameter.

Now, from presumptive evidence, we turn to confirmatory evidence that Earth revolves around her moon. Of this there are many important items; we shall adduce but one.

(16) Great Sirius revolves in an epicycle around his comparatively tiny companion star: as Earth revolves in an epicycle around her little moon. Astronomers are put to their wits to reconcile with the Newtonian theory of gravitational attraction this behavior of Sirius and his companion star. To reconcile observed truth with this preconceived idea, some ingenious hypothesis is needed.

TERRESTRIAL GRAVITATION

At Earth’s surface, each kind of atom resists this tendency as the square of its atomic radius, speed and centrifugy are in proportion to atomic radius. Hence the atom has a tendency axis-ward and Earth-equatorial planeward. The resultant is a tendency Earth centerward. The solid Earth resists this tendency. Consequently the atom employs its surplus rotative centrifugy in transverting part of its terorbital motion into a series of atomic epicycles superposed upon the atomic orbit. In this way, total orbital centrifugy, (terorbital and epicyclic) equals the atoms rotative centrifugy.

Rotorbital speed is measured in terms of the atom’s rotative speed. Thus, terorbital speed of oxygen is relatively one sixtieth of the hydrogen. Rotorbital speed of oxygen is relatively one 256th of hydrogen. Radius of an epicycle equals terorbital speed times atomic radius. Thus, radius of the epicycle of oxygen is one-sixtieth times 16 equals 1; of radium one 256th times 16 equals 1.

Hence Avagadro’s law for the hydrogen half of the atomic scale, and radioactivity for the radium half. Avagadro’s law should be restated and amplified thus: At Earth’s surface, under standard conditions of temperature and pressure, epicycles of all atoms are co-equal in radius. If epicyclic radius be less than atomic radius, such atom is a gaseous; if two radii be co-equal they form solids. If the epicyclic radius be greater they form liquids. In gases, co-equal epicycles cause co-equal volumes to contain co-equal numbers of atoms. In solids, co-equal epicycles cause radioactivity proportional to atomic radius. In the very large atom, the atomic epicycle has retreated so near to the atomic center that epicyclic revolution of the atom concurs with atomic rotation and thus multiplies atomic rate of rotation, and increases atomic rotative centrifugy as the square of the rate. The atom cannot enlarge to accommodate the multiplied atomic centrifugy; therefore, must radiate it. Thus, the radium atom transverts Earth’s rotation into radium’s epicycle; and everts Earth’s rotation into radium radiation.

Heat is a function of the atomic epicycle; not of the atom. If the epicycle be circular great heat may co-exist with absence of either temperature or light. For heat is amount of epicycle temperature is epicyclic ellipticity times epicyclic rate. Light is an octave of temperature.

Gasses emit little light, because the epicycle is larger than the atom that travels it. Dense solids emit much light because larger than their epicycles. Volumes of gases are congregations of atoms. Volume of solid is radius to the 3rd power. Volume of gas is radius to the 5th power.
must be overtaken by cosmic radiation.

That the heat received from the Sun at Earth's surface actually does vary by so many as 10 degrees every few days, is an already ascertained truth. If an examination of U. S. daily weather statistics for the past 50 years shall show that during the week of Earth's third quarter (moon's first quarter) more heat is received from the sun than during the week of Earth's first quarter (moon's third quarter), another presumptive proof that Earth revolves around her moon will have been added.

(14) When Earth is about 93 million miles from Venus and Earth is at her third quarter, the elongation of the cosmoorbit of Venus, measured from Earth half a day after quadrature, should be 1.6 minutes of arc longer than when measured half a day before quadrature.

(15) At Earth's first quarter, 1.5 minutes of arc longer than etc.

The semi-revolution of the major axis of Earth's lunorbit should make a 4-year, 20-seCONDS-OF-ARC variation in the length of the sun's apparent diameter.

Now, from presumptive evidence, we turn to confirmatory evidence that Earth revolves around her moon. If there are many important items; we shall adduce but one.

(16) Great Sirius revolves in an epicycle around its comparatively tiny companion star; as Earth revolves in an epicycle around her little moon. Astronomers are put to their wits end to reconcile with the Newtonian theory of gravitational attraction this behavior of Sirius and his companion star. To reconcile observed truth with imperfect theory, some astronomers tell us that the tiny moon of Sirius is composed of matter two or three million times the volumetric gravity of water! Other astronomers choose the other horn of the dilemma and tell us that Sirius is composed of matter so tenuous that, compared therewith, the vacuum of a Crooke's tube is a bar of solid lead!

From evidence presumptive, and from evidence corroborative, we turn now to evidence demonstrative and conclusive.

(17) At Earth's third quarter (moon's first quarter) a two-hour (60 minutes before quadrature and 60 minutes after) solar parallax should work out about 93,000,000 miles.

(18) A similar two-hour parallax at new Earth (full moon), when similarly translated, should make said radius about 96,000,000 miles.

(19) At Earth's first quarter (moon's third quarter) cosmoorbitical radius should work out about 93,000,000 miles.

(20) At full Earth (new moon), radius should work out about 90,000,000 miles.

(21) A seven-day parallax between Earth's third quarter and new Earth should work out about 85,000,000 miles.

(22) Between new Earth and Earth's first quarter, about 95,000,000 miles.

(23) Between Earth's third quarter and full Earth, about 91,000,000 miles.

(24) Between full Earth and Earth's third quarter, about 91,000,000 miles.

(25) A fourteen-day parallax between Earth's third quarter and Earth's first quarter should work out about 55,000,000 miles.

(26) A 14-day parallax between Earth's first quarter and third quarter should work out 91 million miles.

Hence Avogadro's law for the hydrogen half of the atomic scale, and radio activity for the radium half. Avogadro's law should be restated and amplified thus: At Earth's surface, under standard conditions of temperature and pressure, epicycles of all atoms are co-equal in radius. If epicyclic radius is less than atomic radius, such atoms form solids, if the two radii are co-equal they form liquids. If the epicyclic radius be greater they form gases. In gases, co-equal epicycles cause co-equal volumes to contain co-equal numbers of atoms. In solids, co-equal epicycles cause radio activity proportional to atomic radius. In the very large atom, the atomic epicycle has retreated so near to the atomic center that epicyclic revolution of the atom concurs with atomic rotation and thus multiplies atomic rate of rotation, and increases atomic rotative centrifugy as the square of the rate. The atom cannot enlarge to accommodate the multiplied atomic centrifugy; therefore, must radiate it. Thus, the radium atom transverts Earth's rotation into radium's epicycle; and ever's Earth's rotation into radium radiation.

Heat is a function of the atomic epicycle: not of the atom. If the epicycle be circular great heat may co-exist with absence of either temperature or light. For heat is amount of epicyclic motion, temperature is epicyclic ellipticity times epicyclic rate. Light is an octave of temperature.

Gases emit little light, because the epicycle is larger than the atom that travels it. Dense solids emit much light because larger than their epicycles.

Because atomic heat is a function of the atom's epicyclic speed, which equals atomic rotative speed which equals atomic weight: The product of atomic heat-capacity by atomic weight is the same for all kinds of atoms.

Thus, O's atomic speed (one-sixth of H's) times O's weight (16) equals 1 same as H's.

Because Earth is the solidified core of a bi-polar vortex changing vortical motion into vortical tendency, we have terrestrial electricity, which is rotative axifugy, and terrestreal magnetism, which is Earth's circulage polity altered by Earth's solidity from motion into tendency.

You have received these two numbers of A Candlestick free as God's air and sunshine. If you believe that they have enlightened your path to God's truth, upon you rests the obligation to pass A Candlestick on to others so freely as it was passed on to you. In the interest of the widest possible illumination, 200 candles (60 of No. 1 and 60 of No. 2) will be sent you by parcel post, prepaid, for $1.25.

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