THE IONIC GROWING SUN

Five Elements = 99.57% of Mass

By Eugene A. Ellis (Dec. 2017 revised Feb 2019)

The Ionic Growing Earth (IGE) paper indicates eight elements comprise 98.8% of Earth's matter are growing. Ninety-nine percent of the Ionic Growing Moon (IGM) consists of six growing elements. 99.57% of the Ionic Growing Sun (IGS) consists of five elements, two of which represents 98.1 percent of its matter. All three papers indicate the mixtures of the elements on each body are gaining mass exponentially. This implies the celestial bodies were less massive in the past and the orbital distances between them were closer.

Utilizing the same format and procedure outlined in the 8-element paper, tables and graphs are provided that indicates the sun is growing along with our growing Earth and moon, all at different rates. Comparative tables and graphs of both the moon and the Earth are presented in the Ionic Growing Moon paper. The same doubling technique was used to calculate the rates of decay for each. All the tables and figures used are keyed alike. The Figure 4R graphs identify the time when expansion started to accelerate on the Earth, on the moon, and on the sun.

SUN - TABLE 2R - MASS DOUBLING RATES (Energy = Mass) known factors

	Elemental			Total Earth			
	Atomic Mass	AMU/1.073544	Rate (MY)	Percentages	x (MY) % Rate	y (100 MY) Rate/≅ eV	x (MY) ln 2/ln y
H	1.0079	0.93885	7.7831	71.00%	5.52599	75.62419	
He	4.0026	3.72840	30.9084	27.10%	8.37618	7.26854	
C	12.0110	11.18818	92.7500	0.40%	0.37100	0.03575	
O	15.9994	14.90335	123.5488	0.97%	1.19842	0.06509	
Si	28.0855	26.16148	216.8787	0.10%	0.21471	0.00378	
Totals				99.57%	15.6863	82.99735	15.6863

SUN - TABLE 3R IONIZATION POTENTIALS of the 5 ELEMENTS

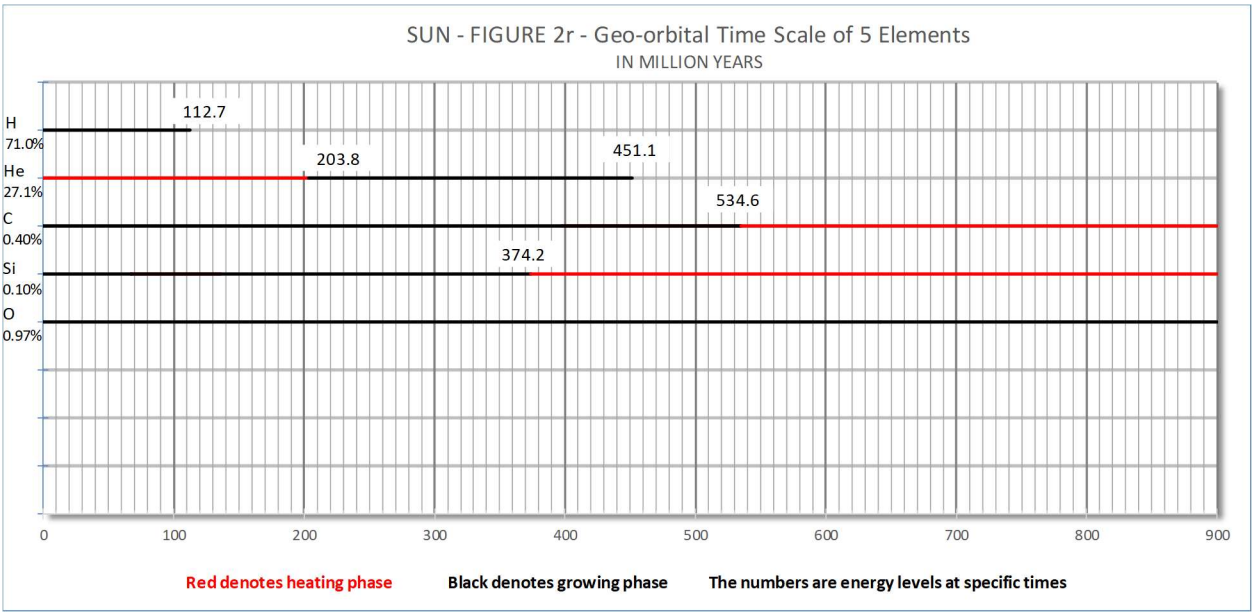
Energy in eV

	H	He	O	C	Si			
I	13.598	24.587	13.618	11.260	8.151			
II		54.416	35.116	24.383	16.345			
III			54.934	47.887	31.492			
IV			77.412	64.492	45.141			
V			113.896	392.077	166.770			
VI			138.116	489.891	205.050			
VII			739.315		246.520			

Time in MY

8.29xeV	H	He	O	C	Si			
I	112.7	203.8	112.9	93.3	67.6			
II		451.1	291.1	202.1	135.5			
III			455.4	397.0	261.1			
IV			641.7	534.6	374.2			
V			944.2	3250.3	1382.5			
VI			1145.0	4061.2	1699.9			
VII			6128.9		2043.7			

The shaded numbers above indicate when the elements are not growing as shown in RED in Figure 2r below:



This chart indicates all the elements are presently growing except helium. Helium (27.1%) grew between 203.8 MYA and 451.1 MYA. Hydrogen (71.0%) has been growing for the past 112.7 MY.

SUN - TABLE 4R - VARIABLE EARTH MASS GROWTH RATES FROM IONIZATIONS of the 5 ELEMENTS										
MY	Duration *t* (CMY)	% total sun	Element	Rate/≈eV	*y*	Mass/y^t (kg)	% of Current	*x* (ln 2/ln *y*) MY	% growing	% heating
0	0	99.57%	0	0	82.99735	1.98900E+30	100.00000%	15.6863		
0.0	1.127	-27.10%	-He	-7.26854	75.72882	1.98900E+30	100.00000%	16.0185	72.47%	27.10%
112.7	0.911	-71.00%	-H	-75.62419	0.10462	1.51603E+28	0.76221%	696.6063	1.47%	27.10%
203.8	1.704	27.10%	He	7.26854	7.37316	1.38465E+28	0.69615%	34.6947	28.57%	0.00%
374.2	0.769	-0.10%	-Si	-0.00378	7.36937	4.60106E+26	0.02313%	34.7036	28.47%	0.00%
451.1	0.835	-27.10%	-He	-7.26854	0.10084	9.90385E+25	0.00498%	721.4889	1.37%	0.10%
534.6	6.108	-0.40%	-C	-0.03575	0.06509	9.14039E+25	0.00460%	1099.2637	0.97%	0.5%
1145.4	0.000	-0.97%	-O	-0.06509	0.00000	6.21869E+25	0.00313%		0.00%	

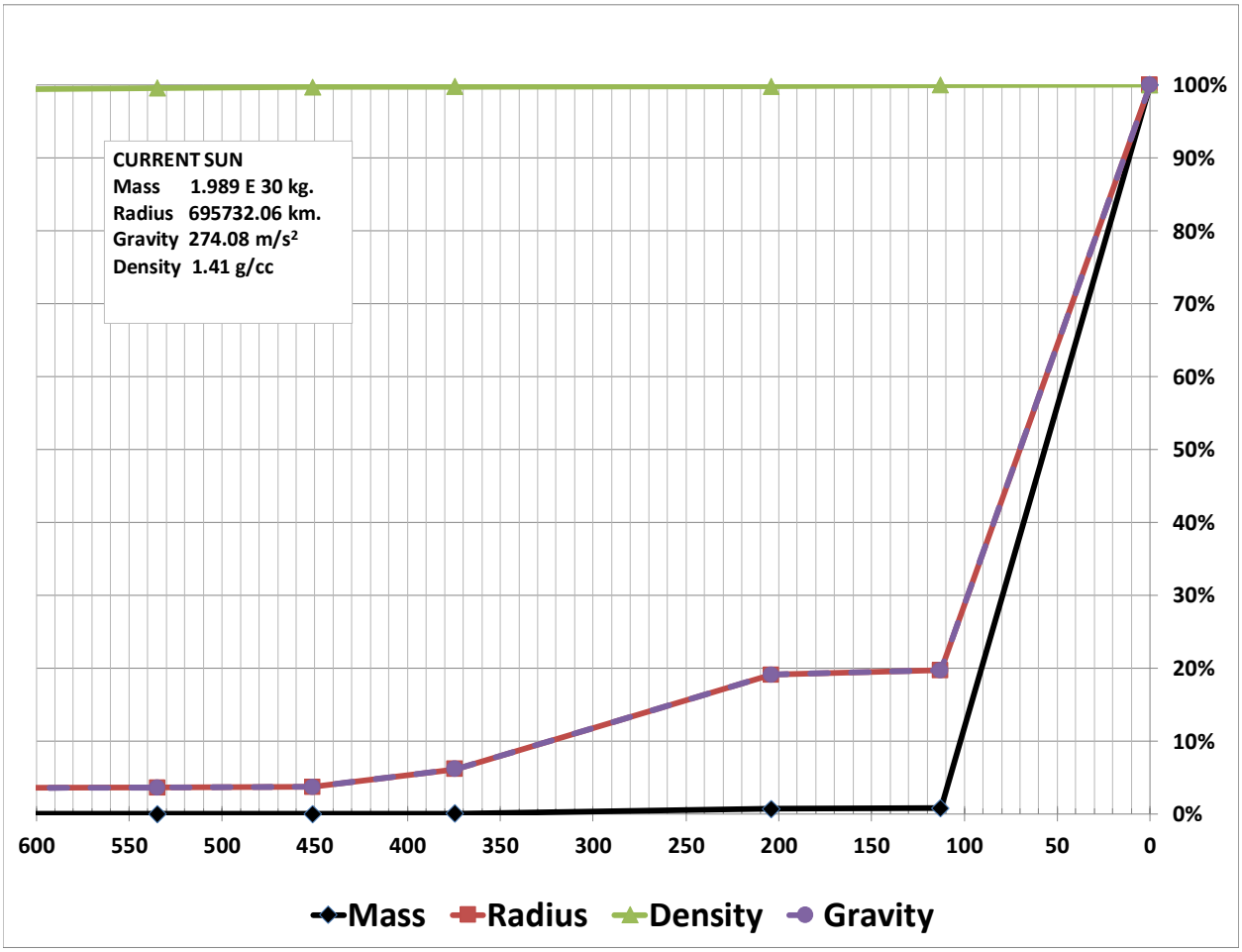
The exponential growth equation is of the order y^X, and for doubling is $y^X = 2$. Therefore, "y" must be greater than one ($1^x = 1$). In column 6 above, 1 is added to "Y" values less than one (lightly shaded) for calculating column 7 and column 9.

The "y" values in column 6 compensates for the elemental differences in Atomic Weight whereas the calculated growing percentages in column 10 do not and should not be used as a replacement for the "y" values. The heating percentages in column 11 are from Sun Figure 2r.

If all five elements on the sun are presently growing as all eight are growing on the Earth and all six on the moon, then the sun's mass would double in 15,686,300 years as indicated in the x = (ln 2/ln y) column. Since helium presently is not growing, the current doubling rate is every 16,018,500 years. The Earth's current doubling rate is 49,522,800 years while the moon's rate is 40,780,600 years. The sun is doubling its large mass three times faster than the Earth while the smaller moon is growing faster than the Earth.

SUN - TABLE 5R - MASS FROM TABLE 4R													
MY	X	Element	Rate/eV	Rate of Growth	Mass (kg)	Current Mass	Rate of Growth	Radius (km)	Current Radius	Density (g/cc)	Current Density	Gravity (m/sec^2)	Current Gravity
0	0	0	0	**82.99735**	1.989E+30	100.000%	**82.99501**	695732.06	100.00%	1.4100	100.00%	274.08	100.00%
0	1.127	-He	-7.26853605	75.72882	1.989E+30	100.000%	75.72648	695732.06	100.00%	1.4100	100.00%	274.08	100.00%
112.7	0.911	-H	-75.62419	0.10462	1.51603E+28	0.762%	0.10228	136921.38	19.68%	1.4100	100.00%	53.94	19.68%
203.8	1.704	He	7.26854	7.37316	1.38465E+28	0.696%	7.37082	132931.56	19.11%	1.4072	99.80%	52.26	19.07%
374.2	0.769	-Si	-0.00378	7.36937	4.60106E+26	0.023%	7.36704	42744.39	6.14%	1.4065	99.75%	16.80	6.13%
451.1	0.835	-He	-7.26854	0.10084	9.90385E+25	0.005%	0.09850	25619.05	3.68%	1.4061	99.73%	10.06	3.67%
534.6	6.108	-C	-0.03575	0.06509	9.14039E+25	0.005%	0.06275	24957.84	3.59%	1.4036	99.55%	9.79	3.57%
1145.4	0.000	-O	-0.06509	0.00000	6.21869E+25	0.003%	-0.00234	22049.30	3.17%	1.3849	98.22%	8.53	3.11%

SUN FIGURE 4R - GRAPH OF TABLE 5R



This graph indicates accelerating expansion started ~110 MYA when hydrogen began to grow. During that 110 MY period, the sun's radius (and surface gravity) doubled twice, once at 25% ~105 MYA and again at 50% ~70 MYA. The sun's radius also doubled at 12.5% ~300 MYA and at 6.25% ~370 MY when helium was growing between 203 and 451 MYA. The three minority elements are responsible for all growth between 112 and 203 MYA and prior to 451 MYA.

Doubling the mass three times (2^3) will double the radius once, resulting from an eight fold mass increase. Doubling the mass six times (2^6) will double the radius twice, resulting from a sixty-four fold mass increase. Doubling the mass nine times (2^9) will double the radius a third time, resulting from a 512 fold mass increase. Doubling the mass twelve times (2^{12}) will double the radius a fourth time, resulting from a 4096 fold increase. The above graph indicates the sun's radius doubled four times in less than 375 MY.

As mentioned in the modified 2017 Ionic Growing Moon paper, the overall mass curves are exponential in nature, but the doubling rates between the points do not change and therefore are linear as shown. The oddity of the sun graph when compared to the moon and Earth graphs is due to the break between the helium growing time and the hydrogen growing time when very little expansion occurs (112.7 to 203.8 MYA). This break punctuates and changes the continuity of a curve that employs the identical exponential doubling technique used for the moon and Earth. Similar punctuated expansions would occur on stars and other celestial bodies predominately composed of hydrogen and helium.

Radioactive decay converting mass into radiant heat-energy is not included. If the rate of mass loss can be calculated, then appropriate adjustments can be incorporated. The changing of the sun's size is likely involved; the larger radii providing more radiating surface area.

Discussion

The universe, in its simplest form, consists of space, matter, and time. Space is the flexible container of heat and matter which includes waves and other secondary results from aging. Time measures the aging process. All matter, before ionization, was dark elemental matter. Each elemental atom, at its Ionization Limit, becomes spectra-visible by obtaining electrons (or becomes electro-magnetic). At the time of this first ionization, the element gains the potential to join other elements, but also acquires the ability to grow or heat at specific times thereafter.

The 2011 **Nobel Prize** in Physics was awarded to Saul Perlmutter, Brian Schmidt and Adam Riess "for the discovery of the **accelerating expansion** of the **Universe** through observations of distant supernovae". The Ionic Growing Sun with five elements constituting 99.57% of its mass is another confirmation that growing matter is expanding the universe. Accelerating expansion of the sun began around 110 MYA when the sun was about 20% of its present size. Accelerating expansion on Earth with eight elements and on the moon with six elements began around 200 MYA and 250 MYA, respectively. Every celestial body is expanding at different rates. The mass gains of the stars seemingly outweigh the total mass gain of all their orbiting planets.

Try this thought experiment:

Imagine looking at a twin sister of our sun (an exact duplicate) that is located 100 million light years away. Would we see an equally sized twin or would we see that sister star as our sun existed 100 million years ago?

If the universe were not expanding, the twins would be the same size. If the universe is expanding, then everything within would be getting larger and we would see a younger, smaller star at that distance. Sun Figure 4R above indicates a size that is around 30% of the sun's present radius and about 10% of its present mass at that past time.

As usual, dark matter is attributed to the missing 90% gravitational mass. However, such logic ignores the 100 million years of Growing Matter when viewing the smaller, dimmer star in an earlier time frame where the speed of light measures both time and distance.

Conclusion

A change in thinking about matter is long overdue.

Everything in the observable universe changes with time. What causes the sun, Earth and moon to grow at accelerating rates? Accelerating expansion is comprehensible, yet unexplainable with unchanging matter.

The problem of Growing Matter stems from a thirteenth century premise that… *the essence of matter is unchanging.* Today, that assumption in the scientific world has become a certainty, meaning…*atoms cannot change in size or numbers.* That certainty leads to confused thinking when considering the exchangeability of energy and matter. If one truly believes that atoms of matter cannot change size, then what is energy converting to in Einstein's famous equation?

Undoubtedly, the mechanism for expansion is the same mechanism that effects energy converting to mass in the equation $E = mc^2$, where Einstein indicates energy and mass are interchangeable. Aging causes inherent elemental energy to decay and decay involves a conversion process. Finding the rate of decay (which is dependent upon the elemental composition amounts present on a celestial body) allows knowing the time *when* the elemental atoms of such celestial body ionize and *when* they are growing/expanding and *when* they are not. Growing old is the reason elemental atoms, at certain times, are growing larger and ionization is an integral part of such mechanism. When Standard Model physicist and others change their thinking about unchanging matter, they may find the "mechanism" of $E = mc^2$ involves Growing Matter *when matter is defined as energetic elemental masses.* With the speed of light (c) in the micro-world equaling one (c = 1), intrinsic elemental energy converts to equivalent elemental mass (1 eV= 1.073544 AMU) or to equivalent elemental heat (1 eV= 11,604.5 K).

A growing public connected to the internet, is becoming aware that something is missing in the physics that tells us what the universe is made of…or how it works.