Comoving Distance- Light Travel Distance (Treatise)

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Abstract: *The discussion on the values of redshift, as well as blueshift, is based on a large increase in new evidence that in the whole volume of Universe there are gravitationally-bound objects (galaxies, clusters and super clusters of galaxies) „Using the Chandra and Hubble Space Telescopes we have now observed 72 collisions between galaxy clusters, including both 'major' and 'minor' mergers" (Harvey, 2015). That adds to a great diversity of galactic movement directions and their diverse appearances to an observer. The accent here is at the point of "clearing the early Universe" and asks questions about how these types of radiation could be measured if all galaxies were created in the early stages of Universe, which had started emitting these types of radiation. At the same time, some questions are asked about. With a redshift of 5.47, (Q0906 + 6930) light from this active galaxy is estimated to have taken around 12.3 billion light-years to reach us.. distance to this galaxy is estimated to be around 26 billion light-years (7961 Mpc). (NASA/IPAC, 2010) i.e., why the actual measured values of redshift are not applied.*
Keywords: *comoving distance; light travel distance*

I. Introduction

The article deals with the newest measured data for the most distant galaxies with a significant redshift, for which there are two values, co-moving distance - light travel distance.

A special attention is dedicated to the difference between a value of redshift and the transformation into a distance below 13, 8 Gly, distance 28.85 Gly (8.85 Gpc) (co-moving); 12.9 Gly (4.0 Gpc) (light travel distance ULAS J1120+0641).

As a starting point of this discussion I use the mainstream claims that the first types of radiation originated 320.000 – 380.000 years after a hypothetical beginning or creation of Universe and the spreading speed of Universe is always lower than the spreading speed of radiation (waves).

The method of verification is the usage of a sequence of relations with mainstream evidence in a single place to eliminate the possibility of manipulation with data and conclusions. To speed up the release of this article, I will use tables and photographies already published in my articles (Duckss, 2018), (Duckss, 2018), (Duckss, 2019), (Duckss, 2019) and used in discussing other topics.

II. Review of Literatures

Values of Blueshift and Redshift Presentation

For already some time science faces the problem of redshift value, which is determined very differently at the same distances; also, for the same value of redshift (z) there are very different distances and the speeds of withdrawal from (and approaching to) an observer, in the whole volume of Universe. Nowadays, as well as in the early stages of discovering new galaxies, the existence of blueshift has been ascribed and related only to the local group. There is a similar quantity of galaxies with redshift and blueshift in our local group.

Table 1. Our Local Galaxy Group (Part)

Galaxies, Local Groups	Redshift km/s	Blueshift km/s
Sextans B (4.44 ± 0.23 Mly)	300 ± 0	
Sextans A	324 ± 2	
NGC 3109	403 ± 1	
Tucana Dwarf	130 ± ?	
Leo I	285 ± 2	
NGC 6822		-57 ± 2
Andromeda Galaxy		-301 ± 1
Leo II (about 690,000 ly)	79 ± 1	
Phoenix Dwarf	60 ± 30	
SagDIG		-79 ± 1
Aquarius Dwarf		-141 ± 2
Wolf–Lundmark–Melotte		-122 ± 2
Pisces Dwarf		-287 ± 0
Antlia Dwarf	362 ± 0	
Leo A	0.000067	
Pegasus Dwarf Spheroidal		-354 ± 3
IC 10		-348 ± 1
NGC 185		-202 ± 3
Canes Venatici I	~ 31	
Andromeda III		-351 ± 9
Andromeda II		-188 ± 3
Triangulum Galaxy		-179 ± 3
Messier 110		-241 ± 3
NGC 147 (2.53 ± 0.11 Mly)		-193 ± 3
Small Magellanic Cloud	0.000527	
M32		-200 ± 6
NGC 205		-241 ± 3
IC 1613		-234 ± 1
Carina Dwarf	230 ± 60	
Sextans Dwarf	224 ± 2	
Ursa Minor Dwarf (200 ± 30 kly)		-247 ± 1
Draco Dwarf		-292 ± 21
Cassiopeia Dwarf		-307 ± 2
Ursa Major II Dwarf		- 116
Leo IV	130	
Leo V (585 kly)	173	
Leo T		-60
Bootes II		-120
Pegasus Dwarf		-183 ± 0
Sculptor Dwarf	110 ± 1	
Etc.		

Table 1. Our Local Galaxy Group (Part) with redshift and blue shift km/s (Duckss, 2018).

As technology advances and the quantity of the observed galaxies increases, many galaxies with blueshift (i.e., those that approach to an observer) outside our local group were discovered. All those galaxies that are gravitationally-bound (large and small mergers, the collision of galaxies – interactive galaxies) are to be added to those galaxies having spectral blueshift. Although we, the observers, notice their more or less expressed redshift, all of these galaxies exclusively experience blueshift between each other, due to approaching or collision. Recent research have discovered 200.000,0 galaxies in the interaction. [7]

Table 2. A Part of Galaxies with Blueshift

Designation	VLG… blue shift	Designation	VLG… blue shift
IC3036	−126	NGC4419	−383
IC3044	−298	VCC997	−360
VCC087	−267	KDG132	−100
NGC4192	−246	NGC4438	−43
NGC4212	−199	SDSS	−0
VCC181	−267	VCC1129	−105
VCC200	−98	VCC1163	−564
A224385	−204	VCC1175	−118
IC3094	−275	VCC1198	−470
VCC237	−423	IC3416	−198
IC3105	−284	VCC1239	−672
VCC322	−323	VCC1264	−539
VCC334	−350	IC3435	−150
VCC501	−224	VCC1314	−37
IC3224	−100	IC3445	−470
VCC628	−540	IC3471	−235
VCC636	−113	IC3476	−280
IC3258	−593	IC3492	−604
IC3303	−427	IC3548	−37
VCC788	−3	VCC1682	−66
VCC802	−318	NGC4569	−345
IC3311	−287	UGC7795	−78
VCC810	−470	VCC1750	−258
VCC815	−866	VCC1761	−269
VCC846	−845	KDG172	−42
NGC4396	−215	VCC1812	−351
VCC877	−212	VCC1860	−124
NGC4406	−374	IC3658	−69
VCC892	−784	UGC7857	−7
NGC4413	−16	VCC1909	−16
VCC928	−395	IC0810	−188
IC3355	−126	VCC2028	−52
VCC953	−563		

Table 2. A part of galaxies with blueshift (and negative speeds) at the distance of about 53.8 ± 0.3 Mly (16.5 ± 0.1 Mpc). [8]

At the distances above 70 Mly the values of (mostly) blueshift or approaching (the galaxies seen from Earth) are annihilated, also due to the increase in distance, which is the

reason to decrease the intensity (force) of waves (radiation). Above 70 Mly our instruments read redshift, regardless of approaching or withdrawing of an object from an observer.

„The digital twin is used in association with the physical throughout the life cycle: during the testing, rework, operation and disposal phase. The physical object uses sensors that collectreal-time data about the state of the object, after which this information is sent to the digital"(Duckss, 2019)

However, at the distances above 70 Mly and below them

(„NGC 1.600 is 149, 3 Kly away and its speed is 4.681 km/s,

NGC 7320c is 35 Mly away and with the speed of (a red shift) 5.985 ± 9,

NGC 5010 that is 469 Mly away has the speed of distancing of 2.975 ± 27, and the galaxy NGC 280 that is 469 Mly away has the speed of distancing of 3.878!

At the distance of 52 ± 3 (M86) there is a blue shift (-244 ± 5 km/s) that is also present with the galaxy M90 at the distance of 58.7 ± 2.8 (−282 ± 4), while the other galaxies at the same distance (Messier 61, NGC 4216, Messier 60, NGC 4526, Messier 99 (except NGC 4419 -0, 0009 (-342)) are with a positive sign and completely different speeds." (Duckss, 2018)). Wecan read different values of redshift for the same distances or the same redshift value for the galaxies that have very different distances.

Table 3. Red Shift /Distance

	Galaxy, Cluster galaxy, Supercluster	Red shift (z)	Distance M ly
1	Leo_Cluster	0,022	368,6
2	ARP 87	0,023726	330
3	Abell 2152	0,041	551
4	Hydra_Cluster	0,0548	190,1
1	Abell 671	0,0502	600
2	Abell 1060	0,0548	190,1
3	Abell_1991	0,0587	812
4	Corona Borealis Supercluster	0,07	946
5	Laniakea Supercluster	0,0708	250
6	Abell 2029	0,0767	1 063
1	Abell 383	0,1871	2 485
2	Abell 520	0,2	2 645
3	Abell_222(3)	0,211	2 400
1	Saraswati Supercluster	0,28	4 000
2	Bullet Cluster	0,296	3 700
3	Abell 2744	0,308	3 982
4	CID-42	0,359	3 900
1	Abell_370	0,375	4 775
2	3C_295	0,464	4 600
3	Musket Ball Cluster	0,53	700
4	Abell 754	0,542	760
1	MACS J0025.4-1222	0,586	6 070
2	Phoenix Cluster	0,597	5 700
3	RX J1131-1231	0,658	6 050
4	ACT-CL J0102-4915	0,87	4 000
1	Lynx Supercluster	1,26, 1,27	12 000
2	Twin Quasar	1,413	8 700
3	XMMXCS_2215-1738	1,45	10 000

4	Einstein Cross	1,695	8 000
5	TON 618	2,219	10 400
6	EQ J100054+023435	4,547	12 200
7	Q0906 + 6930	5,47	12 300
1	z8 GND 5296	7,5078 ± 0,0004	13 100
2	A2744 YD4	8,38	13 200
3	UDFy-38135539	8,6	13 100
4	GRB 090429B	9,4	13 140
5	Abell 1835 IR1916	10,0	13 200

Table 3. As redshift increases, the distance of the objects decreases, increases (faster or slower than "expected") or remains similar. (Duckss, 2019) It is very well known in science that the intensity of radiation decreases due to the increase of distance (which is obvious when at night we look at the stars with bare eyes).

„The pressure of the electromagnetic radiation, measured in µPa (µN/m² and N/km²), is as follows: 915, on the distance of 0.10 AU (astronomical units) away from Sun; 43.3 on Mercury; 9.15 on Earth; 0.34 on Jupiter. Or, measured in pound-force per square miles (lbf/mi²): 526, 0.10 AU away from Sun; 24.9 on Mercury: 5.26 on Earth; 0.19 on Jupiter.

The average intensity of the solar radiation, in W/ m², is as follows: 9 116.4 on Mercury; 1 366.1 on Earth; 50.5 on Jupiter; 0.878 on Pluto. Wikipedia „The interaction of space and radiation directly influences the temperature of an object. On the following objects' surfaces it is as follows: 440°K on Mercury; 288°K on Earth; 152 on Jupiter16. The space around the objects has the same decreasing curve starting from the Sun towards the end of the system. The same goes for the dark side of the objects. The lowest temperature on Mercury is 100°K, on Uranus 49°K, on Pluto 28°K, in the Oort cloud 4°K. During observation, a compensation for the atmospheric influence and the interior temperature of an object needs to be taken into consideration, as these are the factors of interference when comparative data are being acquired"(Duckss, 2016).

Although this is common knowledge, astronomers do not apply it in determining the real distance of objects that are more or less distant in the volume of Universe and the increase of redshift is related only to the increase of distance (so-called speed of galaxies' withdrawal from an observer). The evidence mentioned above, which encompass the whole – reachable with modern instruments – volume of Universe, point out that the increase of redshift is directly related to the decrease of the measured intensity of incoming waves and its value is corrected, depending on whether an object withdraws or approaches an observer. If these two values are applied, then the confusion that was created when applying only the increase of speed with the objects withdrawing further from us disappears.

„The probability density functions of the minimum and maximum order statistics of the transmuted logistic distribution are established and the relationships between the probability density functions of the minimum and maximum order statistics of the parent model and the probability density function of the transmuted logistic distribution are considered. The parameter estimation is done by the method of maximum likelihood estimation.

The digital twin allows reproduce all other indicators of the object by minimum key parameters. With this technology it is possible to solve various classes of tasks of diagnostics of object state, forecasting, optimization of operation, control." (Samuel, 2019)

It has to be stated clearly that, due to this concept, we have neither realistic values of positioning the distances of objects nor the observed volume of Universe. The further the distance, the weaker are the radiation, while redshift increases and is not limited to predetermined fixed constructions that do not allow a realistic overview of Universe.

III. Discussion

Comoving Distance- Light Travel Distance

We are going to check the reality of these parameters, which are strictly imposed to scientists, from the angle of very limiting factors, presented nowadays by the scientific mainstream, and convince ourselves in credibility of their application and the validity of results.

If all theories are excluded, picture 1 should approximately present real values of measurement of objects in Universe (as well as those objects that are going to be discovered in near future, due to the ongoing progress of technology).
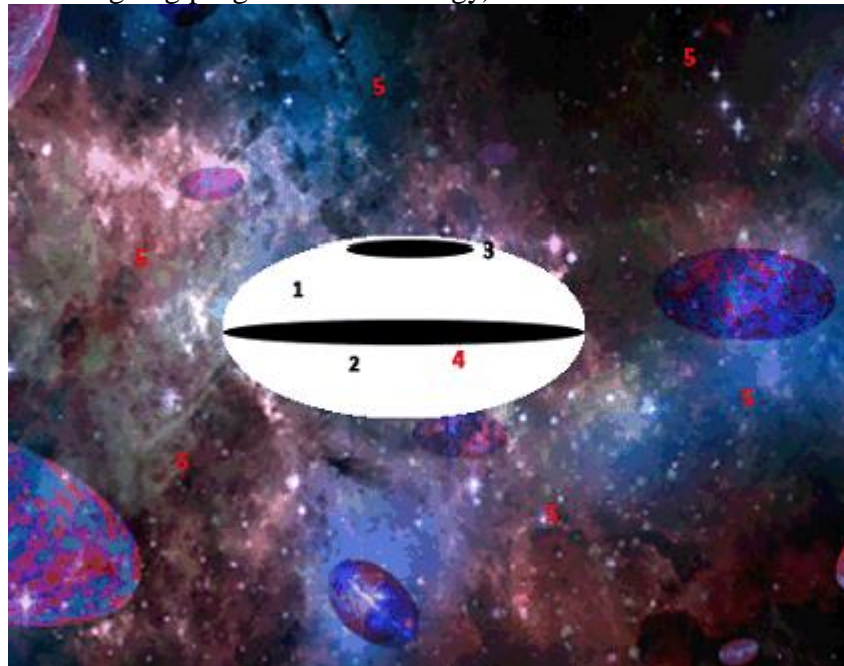
Figure 1. *Universe with the points from 1-4 and its maximum possible diameter of 13,8 Gly*

Mainstream science claims that 13,8 Gly is a total value of Universe, regardless of simultaneous evidence (claims).

„The proper distance for a redshift of 8.2 would be about 9.2 Gpc, or about 30 billion light years."

„With a redshift of 5.47,(Harvey, 2015)(NASA/IPAC , 2010) light from this active galaxy is estimated to have taken around 12.3 billion light-years to reach us.. distance to this galaxy is estimated to be around 26 billion light-years (7961 Mpc) and data from published measurements: (Attila, 2009)

RD1

With a redshift of 5.34, light from this galaxy is estimated to have taken around 12.5 billion years to reach us. But since this galaxy is receding from Earth, the present comoving distance is estimated to be around 26 billion light-years.

ULAS J1120+0641

(at a comoving distance of 28.85 billion light-years) was the first quasar discovered beyond a redshift of 7.)

UDFj-39546284

Subsequently it was reported (December 2012) to possibly be at a record-breaking redshift z = 11.9 using Hubble and Spitzer telescope data, including Hubble Ultra-Deep Field (HUDF).

UDFy-38135539

The light travel distance of the light that we observe from UDFy-38135539 (HUF.YD3) is more than 4 billion parsecs (13.1 billion light years), and it has a luminosity distance of 86.9 billion parsecs (about 283 billion light years).

There are a number of different distance measures in cosmology, and both "light travel distance" and "luminosity distance" are different from the comoving distance or "proper distance" generally used in defining the size of the observable universe[16][17] (comoving distance and proper distance are defined to be equal at the present cosmological time, so they can be used interchangeably when talking about the distance to an object at present, but proper distance increases with time due to the expansion of the universe, and is the distance used in Hubble's law.

EGS-zs8-1

The galaxy has a comoving distance (light travel distance multiplied by the Hubble constant, caused by the metric expansion of space) of about 30 billion light years from Earth.

Z8 GND 5296

Due to the expansion of the universe, this position is now at about 30 billion light-years (9.2 Gpc) (comoving distance) from Earth.

Q0906 + 6930

But since this galaxy is receding from Earth at an estimated rate of 285,803 km/s (Harvey, 2015) (the speed of light is 299,792 km/s), the present (co-moving) distance to this galaxy is estimated to be around 26 billion light-years (7961 Mpc).

GN-108036

The redshift was z = 7.2, meaning the light of the galaxy took 12.9 billion years to reach Earth and therefore its formation dates back to 750 million years after the Big Bang . Redshift z=7.213.

The existence of redshift above the value (z) 5 pointed out that if (z) continues to grow, the concept of mainstream – 13,8 Gly (Big Bang) – is going to fall apart. Nowadays, the instruments register the value (z) of 11,9. When there is an overwhelming resistence from reactionary institutions and scientists, despite the newest measurements, then there appear unbelievable new ideas that do not belong to physics nor they represent science. The theme that is discussed here is one of them.

Figure 2. *The Expanding Universe – history (my compilation)*

If there was a Big Bang, all the waves from that time should be approaching from a single direction, as shown in the figure 2. If radiation started for the first time 320 000 – 380 000 years after the explosion, during the so-called period of clearing the compact thick mass, then that radiation is impossible to measure today, no matter what mathemathical method may be used in the process. The reason to it is that all galaxies are created inside that mass that started emitting radiation. Since mainstram science also disagrees with the idea that the expansion of Universe or matter movement was faster than the spreading speed of waves in the space (which is still dubbed vacuum by the same mainstream), it can be seen that so-called measurements from that time are impossible to have been done.
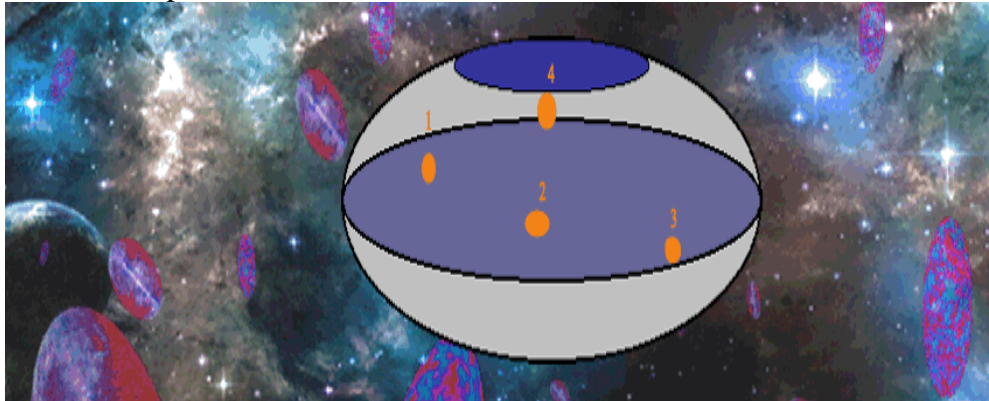
Figure 3. *The Early Universe 320,000-380,000 years after the Big Bang, points 1-4 of Milky Way*

We measure the objects, the age of which is estimated by mainstream to be withdrawn into past approximately as far as to the so-called early Universe, when the emission of radiation started. Points 1-4 in the so-called early Universe are some of the positions where our galaxy originated (Milky Way: 13.8 ± 4 billion years is age for BD $+17°$ 3248; about 13.5 billion-years-old, 2MASS J18082002-5104378 B..).

Within the most distant galaxies must be objects of similar age. Milky Way has a redshift (z) 0, the outermost galaxies have a redshift (z) 11.

Early Universe is also related to a small diameter, because the expansion has been taking place during all 13,8 Gly, due to which a contemporary volume of Universe should be created. If it was true that this small diameter of Universe started emitting radiation, besides the need for it to arrive from a single direction, it would have been obvious that this radiation left so-called early Universe with a diameter of only four times the diameter of our galaxy (under the condition that the expansion had been taking place at the speed of light). The universe has about 100 billion galaxies.

The deepest radiation of the early Universe needed to travel through only 200.000 ly in order to leave our Universe. The other problem is that the mainstream claims that Universe spreads ever faster, because the most distant galaxies show the most important redshift.

However, it is forgotten here that the mainstream also claims the most distant galaxies are the oldest galaxies.

GN-108036 The redshift was $z = 7.2$, meaning the light of the galaxy took 12.9 billion years to reach Earth and therefore its formation dates back to 750 million years after the Big Bang Redshift $z=7.213$.

GN-z11 $\approx$32 billion ly (9.8 billion pc) (present proper distance); $\approx$13.4 billion ly (4.1 billion pc) (light-travel distance); Helio radial velocity 295.050 ± 119.917 km/s.

M33	-0,000607 (z)	2,38-3,07 Mly distance	-179± 3 km/s
M64	0,001361 (z)	24± 7 Mly	408±4 km/s
CID-42	0,359 (z)	3,9 Gly	89.302 km/s
MS 1054-03	0,8321 (z)	6,757 Gly	246.759 km/s

So, what is correct here: that the most distant galaxies withdraw at the fastest speed, or that the oldest galaxies had been withdrawing at the fastest speed?

If the most distant galaxies are at the same time the oldest, then the fastest were the galaxies in the far past, so-called protogalaxies – and that is opposite to the claim that Universe spreads ever faster.

The next table shows that radiation incoming from the distances of more than 12 Gly from all directions of the volume of Universe are measured.

Table 4. The Direction of the Farthest Galaxies within the Universe

	Galaxy	Right ascension	Declination	Red shift	Distance G ly
1	HCM-6A	02^h 39^m 54.7^s	−01° 33′ 32″	6,56	12,8
2	SXDF-NB1006-2	02^h 18^m 56.5^s	−05° 19′ 58.9″	7,215	13,07
3	TN J0924-2201	09 ^{h} 24 ^{m} 19,92 ^{s}	-22 ° 01 ′41,5 ″	5,19	12,523
4	UDFy-38135539	03^h 32^m 38.13^s	−27° 45′ 53.9″	8,6	13,1
5	A2744 YD4	00^h 14^m 24.927^s	−30° 22′ 56.15″	8,38	13,2
6	BDF-3299	22^h 28^m 12.26^s	−35° 09′ 59.4″	7,109	13,05
7	SSA22−HCM1	22^h 17^m 39.69^s	+00° 13′ 48.6″	5,47	12,7
8	EQ J100054+023435	10^h 00^m 54.52^s	+2° 34′ 35.17″	4,547	12,2
9	ULAS J1120+0641	11^h 20^m 01.48^s	+06° 41′ 24.3″	7,085	13,05
10	ULAS J1342 + 0928	13^h 42^m 08.10^s	+13^h 42^m 08.10^s	7,54	13,1
11	GRB 090423	09^h 55^m 33.08^s	+18° 08′ 58.9″	8,2	13
12	IOK-1	13^h 23^m 59.8^s	+27° 24′ 56″	6,96	12,88
13	A1703 zD6	13 ^{h} 15 ^{m} 01.0 ^{s}	+51° 50′ 04′	7,054	13,04
14	Q0906 + 6930	09^h 06^m 30.75^s	+69° 30′ 30.8″	5,47	12,3
15	MACS0647-JD	06^h 47^m 55.73^s	+70° 14′ 35.8″	10,7	13,3

Table 4. The direction of the farthest galaxies within the Universe distance 12,2 -13,3 G ly
(Duckss, 2019)

The table shows galaxies from 00h 14m 24.927s to 22h 28m 12.26 s equatorial and −35° 09′ 59.4″ to +70° 14′ 35.8″ to the north/south from the celestial equator. Namely the measurements of galactic distances, advocated by the mainstream, indicate that similar distances are measured in all directions. These measurements represent the volume of Universe as being opposite to their claims of total maximum age of Universe of 13,8 Gly. The forms of radiation (measured recently) above 12 Gly approach from all parts of the volume.

Now, from the table that recalculates real distances above 5 (z) and less into Big Bang constructs, it is again obvious that the diameter of Universe is twice as big as 13,8 Gly. When "real" values of correct interpretation of redshift are included

(With a redshift of 5.47,(Harvey, 2015)(NASA/IPAC , 2010) (Q0906 + 6930) light from this active galaxy is estimated to have taken around 12.3 billion light-years to reach us.. distance to this galaxy is estimated to be around 26 billion light-years (7961 Mpc). (Wikipedia) there is another problem. 12,3 billion light-years multiplied with 2 makes 24,6 billion light-years, which is by 1,4 Gly less, if a limiting condition that radiation and expansion have been moving at the same speed is taken into consideration. The same difference continues to grow when (z) grows:
ULAS J1120+0641 Redshift 7.085± 0.003(Harvey, 2015); distance 28.85 Gly (8.85 Gpc)

(co-moving) (NASA/IPAC, 2010); 12.9 Gly (4.0 Gpc) (light travel distance), the difference is 3,05,

UDFy-38135539 (z) 8,6; The light travel distance of the light that we observe from UDFy-38135539 (HUF.YD3) is more than 4 billion parsecs(Duckss, 2013) (13.1 billion light years), and it has a luminosity distance of 86.9 billion parsecs (about 283 billion light years), the difference is 270 Gly.

 Here, the data should also be included, that for dist. 2.4 Gly we measure red shift (z) 0,211 (Abell_222(3); za dist. 12,0 Gly we measure (z) 1,26, 1,27 (Lynx Supercluster) and other data from Table 3.

The galaxy GN-z11 dist. 13,39 Gly has (z) 11,09 and it has a more significant redshift by 10,63 (4) than Lynx Supercluster (1,26(7) 12.9 billion light years) but the distance is larger only by 0,49 Gly.

For the distance of 0,7 Gly Musket Ball Cluster there is a value of 0,53 (z), while the difference here is 10,63 Gly. The difference of (z) 10,63 matches Abell 1835 IR1916 which has (z) 10 and recommended age (distance) of 13,2 Gly.

Let us repeat that:

„The proper distance for a redshift of 8.2 would be about 9.2 Gpc, or about 30 billion light years." „With a redshift of 5.47, (Q0906 + 6930) light from this active galaxy is estimated to have taken around 12.3 billion light-years to reach us.. distance to this galaxy is estimated to be around 26 billion light-years (7961 Mpc). (Attila, 2009)

The rotation of Universe (instead of expansion) that is based on the similar principles as the rotation of clusters of galaxies or stars, is also unable to accept such confused data, because there are no very significant deviations by the volume of cluster. The internal galaxies move slower than the external ones, but make a single orbital cycle approximately at the same time. Under these conditions the measured value of redshift (z) and current distance between the measured objects are approximately the same. In the case Universe would be rotating, its diameter is presented in the table 4 and if the definition of redshift value, according to the mainstream, is used, the diameter goes above 25 Gly.

When including the decrease of wave intensity (with the increase of speed, currently used by the mainstream) as a dominant value in determining distances of objects in Universe, it would completely remove the existence of two values of interpreting distance or Comoving distance- light travel distance. Also, the obstacles to calculate real values of redshift would be gone. Very large quantity of objects (measured recently) will be the part of the volume of our Universe, a part of them will be waves incoming from the neighboring universes (our local group of universes).

„By applying the analogy of the ascending sequence of events, the more we are distanced from the source of radiation, the lower are the temperatures. Between the multi-universes, they are a bit closer to the absolute zero. The temperatures decrease as the wholes grow. An endlessly large volumetric belt of energy is expanding after the last ascending whole and the temperature there is absolute zero.

By the analogy, inside this belt there is an endless quantity of the wholes, similar to that one, but it is very likely that the whole with the absolute zero temperature in it could be the outer and the last whole in the hierarchy that goes further into the 3-D infinity (at least the infinity as humankind understands it).„ (Duckss, 2013)

IV. Conclusion

With the transited distance, waves lose their intensity that is registered by the increasing redshift (Mean Solar Irradiance (W/m2) on Mercury is 9.116,4, Earth 1.366,1, Jupiter 50,5, na Pluto 0,878 (Duckss, 2018)).

Confronting the evidence, that in recent time there are 200 000 of merging or colliding galaxies and have blueshift among themselves, some people are persistent in continuing that the increase of the galactic speed exclusively affects the value of redshift. A significant sum of evidence states there is also a redshift in those galaxies that are approaching to an observer (but only those that are further than 70 Mly away, while those that are closer than that register a blueshift).

By continuing to use such a platform, unbelievable fabrications occur, which have no place in physics. They distort real measurements and instead of science they try to incorporate into physics some "values" that do not belong to it.

Measurements should be presented exclusively within realistic values and there is no need for subsequent embellishments to preserve such structures that exceed the limits of physics.

It is necessary to determine real values of the influence of the radiation intensity weakening (with a constant and slow increase of speed of the distant galaxies in their orbits inside Universe) within the redshift value. The clusters of galaxies have rotations that are different from zero and due to their constant orbital rotation it seems to an observer that galaxies have very different directions of movement. Generally, they travel in the orbit of their cluster, as a dot on a planet, a star that rotates together with its planet inside their galaxy, which rotates further in its cluster and that cluster within its supercluster and finally all together rotate in Universe.

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