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No Dark Matter' Prediction from Dynamic Universe Model Came True!

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Abstract

This paper discusses about the theoretical "non-requirement" of dark matter, or in other words, there is no missing mass in galaxies. A singularity free and collision free n-body problem solution called dynamic universe model was used to find out the theoretical star circular velocity curves in a galaxy. Here five cases are presented. In the first case a HUGE mass at the center of galaxy, sun like stars and external galaxies are assumed, when plotted, the graph of last iteration shows disk formation and velocities achieved. This circular velocities verses radius graph looks exactly similar to observations by astronomers. In all the other cases, either the central mass is missing or external galaxies are missing or both are missing where resulting graphs look different. It can be inferred that the theoretical requirement of dark matter is calculation error, that no dark matter (missing mass) is required according to dynamic universe model. This prediction was first presented in Tokyo University in 2005. Later the findings from LUX in 2013 the (Large Underground Xenon) experiment confirmed this prediction. This new Tensor math in dynamic universe model was used for solving a large variety of physical problems which are otherwise not possible with present day physics. This method solved many unsolved problems earlier like existence of blue shifted galaxies galaxy disk formations, missing mass in galaxies, pioneer anomaly, non-collapsing large scale mass structures and new horizons trajectory predictions etc.

AMS subject classifications: 70F10 (n-body problems), 70F15 (celestial mechanics), 70E55 (dynamics of multi body systems) 70-05 (experimental work) 70-08 (computational methods).

Keywords: Dark matter; Tensors; Quasars; stars; Rotation curves; Missing mass in galaxies; Galaxy structure; Galaxy; Kinematics and dynamics; Cosmology; Observations

Introduction

Rotation curve of galaxy: Missing mass/dark matter concept

Observationally a galaxy also looks like a star, but on the high telescope resolution, the constituent stars are visible, the more stars, therefore the more massive the galaxy. By the early 1960's, there were indications coming for doubting about the missing mass. The first indication that there is a significant fraction of missing matter in a galaxy is from the studies our own milky way. The quantum of mass inside sun's orbit around the milky way center is observationally less than the calculated one. A straight forward rotation curves from the rotating wheel can be seen in Figure 1, which is true according to Kepler's third law also as planet-like or differential rotation. Notice that the orbital speeds falls off as you go to greater radii within the galaxy. This is called a Keplerian rotation curve as shown in second part of Figure 1.

The 21 cm maps of neutral Hydrogen were used to find out rotation curves of the milkyway by astronomers. Typically stars are not used in these measurements because of interstellar extension. A typical star circular velocity vs radius curve is shown in Figure 2. The left side of Figure 2 shows the predictions from cosmologists, whereas the right side shows the observation curves from astronomers. Cosmologists inferred these flat curves are due to some invisible dark matter otherwise it should have been a curve falling off.

But, there is very little visible matter beyond the sun's orbital distance from the center of the milky way. The rotation curve of the galaxy indicates a great deal of mass, but there is no light out there. In other words, it is assumed, the halo of our galaxy is filled with a mysterious dark matter of unknown composition and type. Hence dark matter (missing mass) is proposed, to increase the matter density of galaxy with increasing radius. A general distribution plot of such speed vs. radius is depicted in Figure 2 showing the dark matter.

In order to provide more support to big bang based theories, cosmologists conducted tests for finding out dark matter. Richard Gaitskell of Brown University conducted the LUX (Large Underground Xenon) experiment in an abandoned gold mine in LEAD (South Dakota).Those detectors placed in the gold mine, nearly a mile underground, did not find any dark matter and a detector attached to the International Space Station has so far also failed to find any dark matter. These experiments did not find any dark matter from these LUX experiments or any other satellite experiments [1-3].

No dark matter in dynamic universe model

This theoritical paper was presented at OMEG05, Japan; PHYSTAT05, UK; and HELAS, 2005 Greece. These papers can be seen in Book 1in page 238. These forecasts came true now in Oct 2013! In this present work SITA (simulation of inter-intra-galaxy tautness and attraction forces) calculations of dynamic universe model were used to find out theoretical star circular velocity curves in a galaxy (star circular velocity verses star distance from the centre of galaxy).

SITA of dynamic universe model was successful in the formation and prediction existence of blue shifted galaxies in the universe (Papers presented by SNP. Gupta, GR17, Dublin, 2004 and presented in ICR 2005 International Conference on Relativity, at Amravati University, India, Jan 11-14, 2005). These blue shifted galaxies which were about 20 that time. But Hubble space telescope started predicting in large

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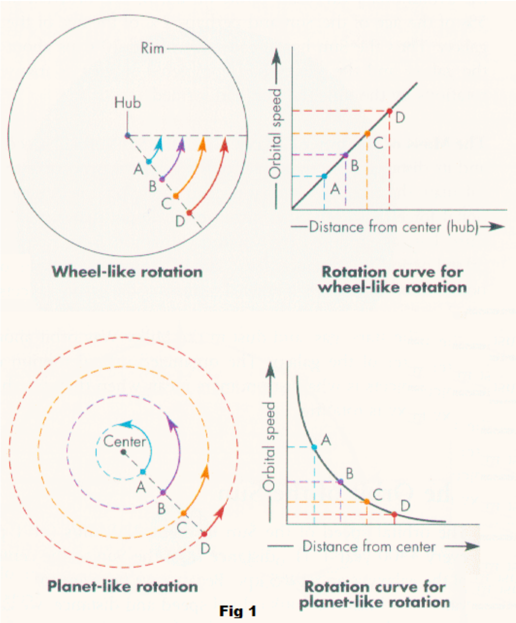

Figure 1: Keplerian rotation curve.

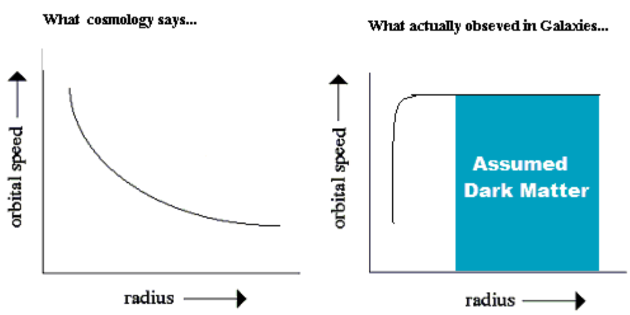

Figure 2: Rotation curve of the galaxy.

number of blue shifted galaxies in 2009. Now this number of blue shifted galaxies is about 32% including quasars, as quasars also blue shifted. Testing of dynamic universe model and its behaviour at micro sec, 1 sec, 1 month, I year, 10 year was done. The pictures show a non-collapsing mass distributions and formations of orbits due to mutual gravitational attraction forces.

How this is done in dynamic universe model? Five types of theoretical experiments were conducted using SITA simulations. In the first method a HUGE mass at the center of galaxy, sun like stars and external galaxies are assumed. The graph of last iteration shows disk formation and velocities achieved. This graph looks similar to observed graphs by astronomers. So we can safely conclude that all the three are required to predict galaxy circular velocity curves and no dark matter is required additionally For further details and for seeing about 20 graphs of this work see the COSPAR 12 poster presentation by the author [4-6]. The second type of calculations is done without a huge central mass at the center of galaxy, Sun like stars and external galaxies are present. Third type of calculations is done with a huge central mass at the centre of galaxy, Sun like stars and no external galaxies. The fourth type of calculations is done without a huge central mass at the center of galaxy, Sun like stars and no external galaxies. The fifth type of calculations is done to show a gravitationally stabilized system of masses. Here a galaxy disk is formed by the masses. For the so formed disk, the stability analysis was done by giving huge perturbations and conducted Jeans swindle test. It is found the formed disk is very stable.

In all these "graphs", x-axis: radial distance: distance from mass centre of galaxy masses to the mass under consideration, y- axis: orbital velocities: projection of velocities perpendicular to the line joining centre of mass to the mass under consideration to the central plane of the galaxy. The plane is further projected to be galaxy central plane. Mass center is the galaxy mass center pertaining to the set.

Mathematical Background

The mathematics of dynamic universe is available in many published papers. The following Equation (1) is the basis for many calculations. This basic equation is sufficient for almost all practical purposes.

$$\Phi_{ext}(\alpha) = -\sum_{\substack{\beta=1 \\ \alpha\neq\beta}}^{N^{\gamma}} \frac{Gm_{\beta}^{\gamma}}{\left|x^{\gamma\beta} - x^{\gamma\alpha}\right|} - \sum_{\substack{\beta=1 \\ \alpha\neq\beta}}^{N^{\delta\gamma}} \frac{Gm_{\beta}^{\delta\gamma}}{\left|x^{\delta\gamma\beta} - x^{\delta\gamma\alpha}\right|} \quad (1)$$

This concept can be extended to still higher levels in a similar way.

SITA (Simulation of inter-intra-galaxy tautness and attraction forces)

SITA is a totally non-general relativistic algorithm. Here in NO way GR effects are taken into consideration. No space-time continuum. No λ factor to introduce repulsion between galaxies at any distance. In this SITA Simulation Universe is assumed to be dynamically moving and rotating. This is not a static model as assumed by Newton. Additionally on SITA, a inhomogeneous and anisotropic lumpy universe was assumed. Details of the structure formations are given in Table 1.

While choosing the values of point masses, systems, ensembles, aggregate, conglomerates, I kept their distances and directions different. Each of these point masses represent star, sun, globular cluster, galaxy, local group, cluster, or grou swindle test ps of clusters as indicated in the table. These masses and distances were simulated according to near real value.

SITA calculation algorithm was used to find the new positions and directions of the various point masses after each time step. The time step varied, and started with one- micro second time step. Later the time step was changed to, one second, one minute, one hour, one day, one week, one month, and one year. These variations in time step are useful for getting better resolution of positions and directions SNP. Gupta, (3) Longer time steps were given for seeing the long time effects of the model and were presented in GR17 at Dublin. SNP. Gupta (2) Ring formations were observed.

Resulting Graphs

All these Methods used SITA simulations for Multi-body dynamic systems, with same initial conditions. There are stars at star distances and external galaxies at Galactic distances. 100 iterations of calculation were performed uniformity.

Method 1. Last iteration shows disk formation and velocities achieved graph. This graph looks similar to observed graphs by astronomers. In this case a HUGE mass at the centre of galaxy, sun like stars and external galaxies are assumed. xy, zx position graphs.

No.	Type	Number	Mass for each (Kg)	Which type of mass	Distance (M)	Which type of distance
1	System	10	7.0e+29	Sun mass	1.0e+20	In Milkyway Galaxy
2	System*10^9	100	5.0e+39	Milky way Mass/100	1.0e+20	In Milkyway Galaxy
3	Ensemble	8	5.0e+41	Milky way Mass	5.0e+23	In a cluster
4	Aggregate	8	5.0e+43	Cluster Mass	2.0e+24	In a super cluster
5	Conglomeration	7	5.0e+45	Super Cluster	2.0e+25	In a Mega cluster
6	Total	133	2.5e+46	Less than Mega cluster	-	-

Table 1: Simulation: Various initial values of different masses and distances used in this simulation. The masses are in kilograms, and the distances are given in metre.

Method 2. This is without a huge central mass at the center of galaxy, sun like stars and external galaxies are present. xy, zx position graphs.

Method 3. This is with a huge central mass at the center of galaxy, sun like stars and no external galaxies xy, zx position graphs.

Method 4. This is without a huge central mass at the center of galaxy, sun like stars and no external galaxies xy, zx position graphs.

Method 5. A gravitationally stabilized system of masses is seen here after forming a galaxy disk. Its stability analysis was done by giving perturbations and Jeans swindle test (Table 2).

Cases 1,2,3 and4 show cases with and without central mass and/or external galaxies. We can see clearly ext galaxies and Central mass in galaxy is required as dist velocity curves are near to actual observational results. These N-body calculations and results are showing theoretical star circular velocity curves. Do the galaxies to be assumed to have some missing mass? Is that required?

Discussion

Introduction to dynamic universe model

Dynamic universe model of cosmology uses tensors without differential and integral equations, and gives unique solutions. SITA (simulation of inter-galaxy tautness and attraction forces, here after SITA) is the name of one method of programming used for calculation of tensor evaluations in dynamic universe model. Tensors are generally tough to understand interpret and appreciate. This is mainly because it is the number of equations that each tensor that will be subdivided into. The overall concept is difficult to comprehend. There is an additional problem, when tensors subdividing into differential and integral equations. Differential equations will not give unique solutions. Whereas dynamic universe model gives a unique solution of positions, velocities and accelerations for each point mass in the system for every instant of time as its tensors subdivide into linear set of equations. This new method of dynamic universe model is different from earlier mathematical methods. This can be used for solving general n-body problem. This method solved many unsolved problems earlier like galaxy disk formations, missing mass in galaxies, pioneer anomaly, non-collapsing large scale mass structures, new horizons trajectory predictions etc. We will start with Equation 1, which is a tensor equation, which will be divided into 21000 linear equations on which SITA calculations work. This is the main equation giving many results that are not possible otherwise today. Now it attempts to solve new problems like

a. Variable mass rocket trajectory problem

b. Explaining very long baseline interferometry (VLBI) observations

c. Astronomical jets observed from milky way center

To support dynamic universe model, we can find the following supporting observations

a. Mathematical prediction of existence of blue shifted galaxies

b. SN1987A-Neutrino emission

c. The first red shifted Quasar 3C273 is blue shifted. (supporting existence of blue shifted galaxies):

d. The most distant Quasar eso1122 found to have a blue shift of 0.110473 (supporting existence of blue shifted galaxies)

Solving new problems

Variable mass rocket trajectory problem: When the rocket is moving due to thrust of the fuel in it, its mass will continuously reduce. The positions and gravitation forces of moon, sun, earth and other planets will dynamically change. Dynamic universe model predicts such trajectory continuously. This will be very useful for optimizing the overall mission efficiency for reducing the thruster rocket sizes and increasing payload capacity of rocket.

Explaining large variation in the gravitational bending results of VLBI: In this, the effect of universal gravitational force is calculated on a radio photon by using a singularity free and collision free n-body problem solution called dynamic universe model. Here the capabilities of this dynamic universe model are extended into micro world i.e. to light photons and radio wavelength photons and neutrinos etc. By doing so a real world very long baseline interferometry (VLBI) observations are explained. The VLBI techniques give gravitational bending results in a wide range of values. Now dynamic universe model explains reason for such variation. The basic difference is that where present day physics considers gravitation effects of only sun or the main gravitating body only, the dynamic universe model considers gravitational effect of sun, planets, globular clusters, milky-way, local systems etc., and finds the universal gravitational force vector at that instant of time for that configuration of the universe.

Can the gravitational effect of sun and moon be neglected on me when I am standing on earth? No. For example, tide caused by sun and moon in oceans-- We observe high tide and low tide in the mornings and evenings, or on full-moon-day and no-moon-day. These tides are caused by gravitation of sun and moon only. So we cannot neglect gravitation effect of sun and moon on earth. For better accuracies we have to consider planets also. Large variation in the gravitational bending results of VLBI: Very long baseline interferometry (VLBI), in the field of Radio astronomical observations of quasars, galaxies etc. This variation is clearly visible when the solar gravitational bending/ deflection angle is plotted against solar elongation angle.

Astronomical jets observed from center of disk galaxies like milky way: Many galaxies show the formation of astronomical jets from its center including our milky way. These set of n-body simulations

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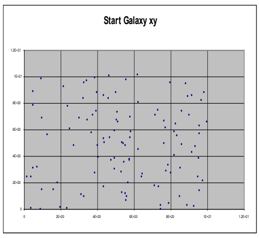
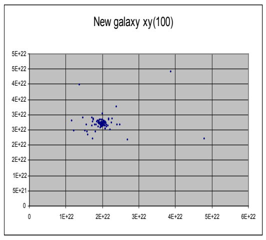
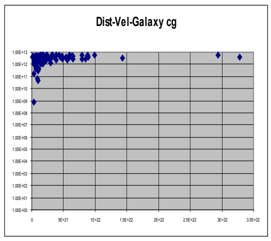
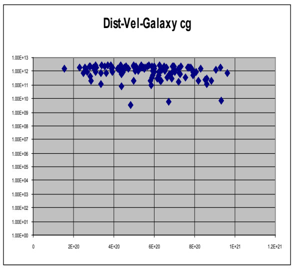
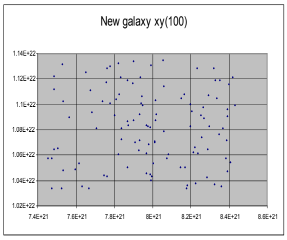
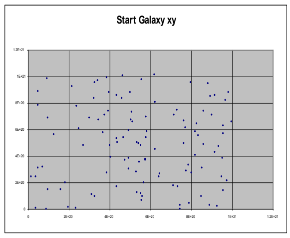
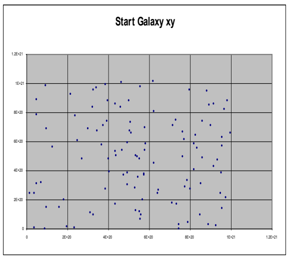
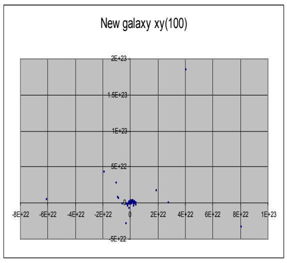
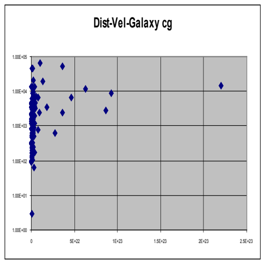
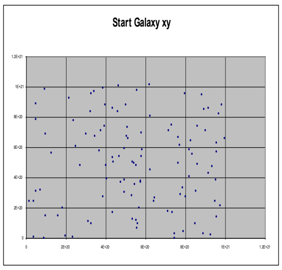
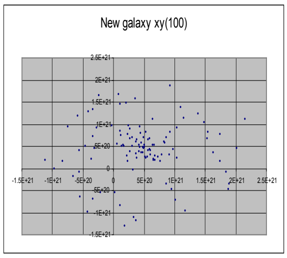
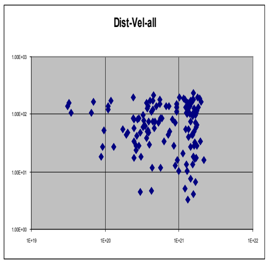
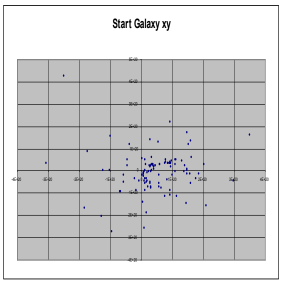
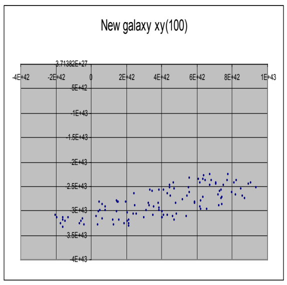
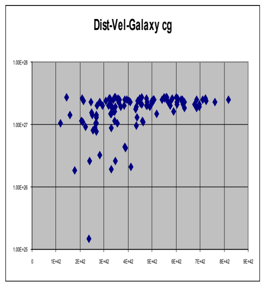
	Method and explanation	Starting positions	At the end of 100 iterations	Circular Velocity vs Radius at the end
1	Last iteration shows disk formation and velocities achieved graph. This graph looks similar to observed graphs by astronomers. In this case a HUGE mass at the center of galaxy, Sun like stars and external Galaxies are assumed. xy, zx position graphs.			
2	This is without a Huge central mass at the center of galaxy, sun like stars and external galaxies xy, zx position graphs.			
3	This is with a Huge central mass at the center of galaxy, sun like stars and no external galaxies xy, zx position graphs.			
4	This is without a Huge central mass at the center of galaxy, sun like stars and no external galaxies xy, zx position graphs.			
5	Theoretical star circular velocity curves in a Galaxy (star circular velocity verses star distance from the center of galaxy) in gravitationally stabilized system of masses Here a Galaxy disk is formed by the masses. For the so formed disk, the stability analysis was done by giving huge perturbations and conducted Jeans swindle test. It is found the formed disk is very stable.			

Table 2: Calculated circular velocity vs radius of galaxies: Graphs obtained in various methods from beginning to end 100 its positions.

show the root cause of these formations.

- Observations that support dynamic universe model
- Mathematical prediction of existence of blue shifted galaxies

The forecasts of dynamic universe model in 2004 came true observationally in 2009. Dynamic universe model calculated to anticipate the existence of a large number of blue shifted galaxies which are much higher than the 40 numbers known from the time of astronomer Hubble in 1930s. It was confirmed by Hubble Space Telescope (HST) observations in the year 2009. Today the HST observed more than 10000 directly. In addition one can safely assume and prove various other types of galaxies such as Quasars, UV galaxies, X-ray, γ-ray sources and other blue galaxies etc. are also blue shifted galaxies. That means about 31.7% of galaxy count are blue shifted. One should not neglect such large number of blue shifted galaxies. It appears it is a godly devotion to bigbang cosmologies! The author submitted a paper to PRD in 2004.

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SN1987A- Neutrino emission: Many flavours of neutrinos are generated from sun and stars. One will find other flavours are generated from SN1987A. This covers the whole spectrum of neutrinos. There are no unknown additional Big Bang generated flavours now.

The First Redshifted Quasar 3c273 by Schmidt in 1963 is Blue Shifted

The first red shifted Quasar 3C273 (supporting existence of blue shifted galaxies)

The author Schmidt in 1963 said in his first paper on a quasar and declared it as red shifted. His 200" Telescope measurements on the first quasi-stellar object (quasar) were given as a table below. He said these wave length are in a rather blue continuum!!!! and left it there (as there was no theoretical support). If one checks these frequencies (wavelengths) he can realize it is blue shifted galaxy.

The first red shifted Quasar 3C273 is that blue shifted?

In the Table 1 shown below, the first 4 columns are the table of Dr. Schmidt where he has shown the red shift. The remaining columns added here show how the quasar is blue shifted for the same wavelengths of his paper. This same quasar 3C273 is blue shifted. The checking of the first red shifted Quasar 3C273 for a possibility of blue shift was tried mainly because of the observation of Dr. Schmidt saying this Quasars 3C273's spectrum is in the "blue continuum. The Quasars are known for some of the irregularities in the spectrum like some spectral lines match exactly with the some elemental lines with some blue/redshift ratio while some other prominent lines don't match for the same ratio (Table 3).

The Most Distant Quasar eso1122 Found to Have a Blue Shift of 0.110473 (Supporting Existence of Blue Shifted galaxies)

Introduction

Quasar eso1122 (ULAS J112001.48+064124.3) is the most far-away quasar, with redshift of 7 is blue shifted. That means it in a distance of 28.85 billion light-years. See below how this Quasar is Blueshifted by 0.110473.

Calculations

The UKIRT Infrared Deep Sky Survey (UKIDSS), located in Hawaii, revealed this Quasar eso1122. Chris Willott, in Nature, gave a good technical paper in 2011 see the frequency spectrum and additional news can be seen from gemini observatory. The absence of significant emission blue ward of a sharp break at λ 0.98 μm confirmed ULAS J1120+0641 as a quasar with a preliminary redshift of z 7:08 by the mainstream physics. In the following table on Quasar eso1122, there are two parts. In the first part, the first column shows the observed wavelengths in the published spectrum of the quasar. The second (Middle) column shows the calculated wavelengths after a ratio 8.052. The nearest of atomic spectra lines that can be identified are given in the third column for the wavelengths in the second column.

In the second part of the table, the calculated blue shifts are shown. These lines are taken from NIST database. We can see from the table that these lines give a better fitment, than the published redshift of the quasar. The forth column gives the wave length after a ratio 1.124193 in angstrom units. Ion wavelength names and their actual Ritz wavelengths are shown in the next two columns. The last three columns are given here for reference purposes only. They show the upper and lower confidence level of spdf atomic distribution (Table 4).

In the last two rows in the table the value of inverse is shown which is (1/1.124192747=0.889527176) [Note: incidentally 1/0.124192747=8.052] and the value of Blue shift for the quasar is (1-0.889527176 0.110472824). Hence, we can say the Quasar eso1122 is Blue shifted by 0.110473. Here I tried with the concept that all the frequencies are Blue shifted in the observed spectrum compared with any part of full electromagnetic spectrum instead of just some particular wavelength lines.

Other Cosmologies–Comparison

Newton's static universe model requires fine balancing of bodies in all directions, so that all bodies stay in static equilibrium of attraction forces. This was described as such equilibrium as though a set of needles is finely balancing on their noses, any small disturbance will cause all to fall. Here in our dynamic universe model, gravitational attraction forces are balanced, by centrifugal forces not by balancing attraction forces. SITA proves that bodies will not collapse but revolve about each other. Dynamic universe model will not have Big-bang singularity, as we are proposing a nonexpanding anisotropic and heterogeneous universe model without considering the general relativity. This is a dynamic universe model without space-time continuum. No Big Bang singularity. Hence singularity theorem is not applicable here. Hawking and Penrose in their singularity theorem said that Isotropic and homogeneous expanding universe, there must be a Big Bang singularity sometime in the past according to general theory of relativity. PCP was not considered true here as in steady state universe we need not assume any homogeneity and isotropy here at any point of time. This is a non-expanding universe and matter need not be created to keep the density constant. The steady state cosmological model was presented by Hoyle The perfect cosmological principle (PCP) stated by Hoyle is that, Isotropy and homogeneity and other statistical properties of the universe are time independent. Universe has no beginning. No starting point for time scale. Matter is required to be created to keep the density

Wave-lengths and Identifications as given by Dr. M. Schmidt				Observations in this paper			
λ	λ/1.158	λ_0		λ / 0.856878		λ_0 from SDSS	
3239	2797	2798	Mg II	3780.00	H_theta+19	3799	
4595	3968	3970	Hg	5362.49	Mg+186	5177	Note 1
4753	4104	4102	H	5546.88	Mg+370	5177	Note 1
5032	4345	4340	H	5872.48	Na-23	5895	
5200–5415	4490–4675			6068-6319	Na-OI		
5632	4864	4861	H	6572.70	H_alpha+8	6565	
5792	5002	5007	(O III)	6759.42	SII+27	6732	
6005–6190	5186–5345			7008-7223	blue continuum		
6400–6510	5527–5622			7468-7597	blue continuum		

Table 3: Wave-lengths and identifications as given by Dr. M. Schmidt.

Quasar eso1122 (ULAS J112001.48+064124.3)								
Published Red shift			Calculated blue shift in this paper					
Observed wavelength (Å)	Wavelength at ratio=8.052 (Å)	Nearest line name	Wavelength at ratio=1.124193 (Å)	Ion	Ritz Wavelength Air (Å)	Lower Level Conf., Term, J	Upper Level Conf., Term, J	TP Ref.
9788.57484	1215.67	Ly alpha	11004.24484	O IV	11 002.9	2s2p(3P°)4p	2s2p(3P°)4d	T5109LS
9991.00212	1240.81	N V	11231.81212	O III	11 235.44	2s22p(2P°)4p	2s22p(2P°)4d	T5376LS
11271.1896	1399.8	Si IV+O IV]	12670.9896	Si III	12 667.67	3s6g	3s7f	T6298c4
12476.41296	1549.48	C IV	14025.89296	Si I	14 026.476	3s23p3d	3s23p5p	T6066LS
14955.7848	1857.4	Al III	16813.1848	N I	16 813.815	2s22p2(3P)4p	2s22p2(3P)5d	u18,LS
15368.8524	1908.7	Si III]+C III]	17277.5524	Mg XI	17 359	1s5s	1s5p	T5231c4, LS
22535.1324	2798.7	Mg II	25333.8324	Si II	25 299	3s26p	3s27s	T6527c4, LS
		Inverse	0.889527176					
		Blue shift	0.110472824					

Table 4: Quasar eso1122 (ULAS J112001.48+064124.3).

ρ constant in the expanding universe. In a recent paper Aguirre and Gratton time like geodesic are not complete in Hoyle's Steady-state model. They proposed a geodesically complete steady-state model, in which two universes are simultaneously present. In one of them, the universe is expanding and time is moving forwards, and in the other, it is contracting and time is moving backwards. Friedmann-Robertson-Walker models are popular. These are standard Big Bang models. Naturally all the problems inherent in the Big Bang models are present here also. In the absence of other working cosmological models, many workers choose these next. Missing mass, lesser age of the universe, anisotropy of cosmic microwave background, Big Bang singularity etc., are some of the problems present in these models. Bowen and Ferreira said, in models by de Sitter or any other matter filled models, there will be mass loss by scalar charges in these types of expanding universe models. That means a point like particle carrying charge q, acts like a source for mass less scalar field φ. It losses its mass in time. There is one more popular line of thought, which is being seen now a day. They are cyclic universe models presented by many workers. We will see some the recent work done by Steinhardt and Turok, in which the universe starts from Big Bang to end up in Big-crunch only to start again in Big Bang to start the cycle. They attempted to say a little about, what happened before Big Bang. Hawking and Penrose for detailed work see Hawking and Ellis in their singularity theorem, showed that Big-crunch heads towards a cosmic singularity, where general relativity fails. After big crunch what happens, nobody knows. There is a basic problem in all these models, including String theory and M-theory; the matter density is significantly low, which makes these models impractical. In these models the universe is flat but not closed. So the question comes what happens to all these radiation? Steinhardt and Turok presented another model of cyclic universe, to overcome the problem of failure of general relativity after Big-Crunch. They pushed the Big-crunch singularity into 5th dimension, so that other three spatial and one time coordinates will be intact. It may be Steady state model or cyclic universe model; one thing is there in common. Both types of models ask for the creation of matter from vacuum. Earlier on this point the Big Bang people were criticizing the Steady state people. Now let's see about rotation models presented various authors from Gödel to Korotky and Obukhov. There were many authors. Gödel metric described the solution of general relativity with homogeneous space-time and with casualty condition violated. All these people gave mainly a line element as a solution to Einstein's general relativity and tested that solution. Nobody talked about revolution. Mainly they argued about the rotation of universe, saying "when everything rotating, why not universe also?" But they have not considered the revolution of parts of the universe. Another difficulty faced by Korotky and Obukhov is that it is impossible to combine pure rotation with expansion of universe in a solution of General relativity for a pure simple source. There were many authors who faced problems like closed time like curves (CTCs) (Obukhov and Saulo Carneiro). The problems like non linearity of coordinate axes and interdependency between coordinate axes is still present inherently in all these models.

There is a fundamental difference between galaxies/systems of galaxies and systems that normally use statistical mechanics, such as molecules in a box. The molecules repel each other. But in gravitation we have not yet experienced any repulsive forces. Binny and Tremaine only attraction forces were seen. Einstein introduced cosmological constant λ to introduce repulsive forces at large scales like inter galactic distances in his general relativity based cosmological considerations in for expanding universe. This was not liked by many, and created turbulence in the scientific world. One of the reasons for his cosmological constant λ is that he disliked the picture at infinity given by Newtonian gravitation. Though his ideas about infinity were good, the cosmological constant λand repulsive forces created havoc in the scientific community for at least last hundred years! Almost every worker/scientist in this field faced problems either conceptually or mathematically. Singularities were big hurdles for many of us.

Here blue and red shifted galaxies will be present simultaneously. We need not introduce large correction factors to convert Blue shifted galaxies into red shifted galaxies.

Dynamic universe model evidences

Presence of Blue shifted galaxies in the universe, is the main evidence. Hubble deep space houses thousands of Blue shifted galaxies which is one of the greatest mysteries for expanding universe models could not explain.

Our galaxy the milky way is moving with a speed 454 ± 125 km/sec towards l=63° ± 15° and b=-11° ± 14°relative to distant part of samples and 474 ± 164 km/sec towards l=167° ± 20° and b=5° ± 20°relative to nearer part of samples. JV.Narlikar, The local group comprising of Milkyway, NGC6822, Andromida galaxy and other dwarf elliptical galaxies, Magellanic clouds rotate about their centers and revolve around a common center. S.M.Faber and David Burstain in their paper "Motions of galaxies in the neighborhood of local group described the streeming motions towards the great attractor (located at l =309°and b=+18°) by the local group, virgo cluster, Ursa major, Centaurus, Camelopardalis, Perseus-Piscesetc., clusters with speeds ranging up to 1000km/sec. Please note the difference in directions of movement as well as speeds. All these clusters form a super cluster which also rotate and revolve about each other. Groups of super clusters form Filament structures and to grate walls and so on. This is how our universe is lumpy and anisotropic even at large scale.

Another piece of supporting evidence for the dynamic universe model was there. There is a considerable discussion was as to whether GA: the Great attractor exists at all. For example D.A. Mathewson, V.L. Ford, M. Buckhorn have measured the peculiar velocities 1355 spiral galaxies. They find no backside in fall into GA region, rather a bulk flow of about 400 km/sec on the scales of 100 h_o^{-1} MPC. Thus there is a considerable doubt about the existing of an attracting mass there. Both the parties find streeming motions or bulk Flow. If there is no attracting mass, then why they are moving? This super cluster must be in revolution motion.

Birch has discovered the asymmetric distribution of the angles of rotation of polarization vectors of 132 radio sources and tried to explain this via the global rotation. We think that the asymmetric distribution of the angles of rotation of polarization vectors is due to the galaxies or parts of clusters revolving in different directions [7-16].

Conclusion

This paper shows the prediction "on existence of dark matter" of dynamic universe model came true. The 'dark matter' could not be found by the LUX: large underground xenon experiment and the detector attached to the International Space Station did not detect any 'dark matter' till the end of OCT 2013 after a year of searching.

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References

1. Toi (2012) Search for Dark Matter Comes Up Empty So Far.
2. Akerib DS (2013) First results from the LUX dark matter experiment at the Sanford Underground Research Facility.
3. Gupta SNP (2010) Dynamic Universe Model: A singularity-free N-body problem solution.
4. Gupta SNP (2011) Dynamic Universe Model: SITA singularity free software.
5. Gupta SNP (2011) Dynamic Universe Model: SITA software simplified.
6. Gupta SNP (2012) Dynamic Universe Model: Blue Shifted Galaxies Prediction: 320.
7. Gupta SNP (2013) Introduction to Dynamic Universe Model. International Journal of Scientific Research and Reviews 2: 203-226.
8. Gupta SNP (2012) Singularity free N-body simulations DUMOC No-dark matter.
9. Dennis O (2013) Dark-matter-experiment-has-found-nothing-scientists-say-proudly.
10. Large Underground Xenon at UC Davis
11. Daniel J (2011) A luminous quasar at a redshift of z = 7:085.
12. Shapiro SS, Davis JL, Lebach DE, Gregory JS (2004) Measurement of the Solar Gravitational Deflection of Radio Waves using Geodetic Very-Long-Baseline Interferometry Data 1979-1999. Phys Rev Lett: 92.
13. Schmidt M (1963) A Star-like Object with Large Red-shift 197: 1040.
14. Ojars JS, John LF, Christopher JS (1997) Astrometry and geodesy with radio interferometry: experiments, models, Results. Rev Mod Phys 70: 1393-1454.
15. Fomalont E , Kopeikin S, Lanyi G, Benson J (2009) Progress in Measurements of the Gravitational Bending of Radio Waves Using the VLBA. Astrophys J 699: 1395-1402.
16. Gupta SNP (2012) A paper titled 'No big bang and general relativity: Proves DUMAS (dynamic universe model of cosmology a computer simulation)'.