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• Research in "Energy and Motion as a Function of Time"

Pascal as a Function of Time

- Energy as a Cartesian volume
- □Negative mass in mechanics
- □Virtual Distance
- Re-defined the Co-ordinate inertial system

Today's method of calculating expansion:

△D= red shift "R" where R= (67-74 km/sec)



Edwin Hubble's 1947 statement, denied previous calculation

- " It seems likely that red-shifts may not be due to expanding Universe, and much of the speculation on the structure of the universe may require re-examination" Edwin Hubble,1947
- ...Static Universe p:25

- how to apply inertial-system to Hubble results
- □ galaxies make an open non-inertial system
- □ Inertial systems are observer tools of study
- General Relativity is a tool of the function of position., where "Space-Time" term also argues a function of position, and not a function of time.
- To correctly apply inertial-system rules for an open system of nature & stars, we need to drop observer's co-ordinate acceleration

How, Galilean Co-ordinate Inertial system work

- 1. <u>we use a universal clock</u>, to eliminate acceleration differences, (which is the only tool that we can use to establish an inertial co-ordinate system of motion)
- 2. We **assign origin** (like a tree in a field) to allow observer to be part of the inertial co-ordinate system we built.
- 3. In systems-open to Time, we need to eliminate a second –acceleration (the observer's acceleration factor)

Motion that we can track with Galilean co-ordinates

measure a distance & direction from <u>receding objects</u>
correct observer's <u>position to origin</u>
determine <u>intrinsic metric expansion</u> of earth if existed.
Because, in example, if we know our speed and distance from origin, then we can easily determine if earth was expanding or not



How, Special Relativity Co-ordinates work

1- <u>We drop universal clock</u>: by treating positions in open space as position on a rigid body And that allows us to ignore various accelerations of a system, which means we can apply inertial co-ordinate mathematics, to non inertial open systems, like universe.(obviously results will be artistic and non-scientific)

(.....the scene of an event or of the position of an object in space is based on the specification of the point on a rigid body (body of reference) with which that event or object coincides.)..... in the description of position, it should be possible by means of numerical measures to make ourselves independent of the existence of marked positions (possessing names) on the rigid body of reference. In the physics of measurement this is attained by the application of the Cartesian system of co-ordinates. Einstein, Albert. Relativity: The Special and the General Theory (p. 3,4). GENERAL PRESS. Kindle Edition.

2-We drop origin, and replace it with Time-Space continuum : Using Gaussian co-ordinates, special Relativity dropped the Euclidean threedimensional origin X1,X2,X3 the universal clock for the fourth dimension X4:

In terms of Gaussian co-ordinates, every such statement is expressed by the agreement of their four co-ordinates x1, x2, x3, x4. Thus in reality, the description of the time-space continuum by means of Gauss co-ordinates completely replaces the description with the aid of a body of reference,

Einstein, Albert. Relativity: The Special and the General Theory (p. 67). GENERAL PRESS. Kindle Edition.

Conclusion:

- 1. We cannot determine the difference between inertial and non-inertial systems,
- 2. We cannot determine if observed objects are receding, or we suffer an internal-expansion.





A graphical representation of the expansion of the universe from the Big Bang to the present day, with the inflationary epoch represented as the dramatic expansion of the metric seen on the left. This visualization can be confusing because it appears as if the universe is expanding into a pre-existing empty space over time. Instead, the expansion created, and continues to create, all of known space and time. • <u>The calculation is based on the</u> <u>Big Bang model</u>,



al representation of the expansion of the universe fr sent day, with the inflationary epoch represented as a of the metric seen on the left. This visualization can t appears as if the universe is expanding into a pre-erer time. Instead, the expansion created, and continues ace and time. Big universe of the Big-Bang proposal serves a big measurable distances model, and at the same time, claims alliance with the nonmeasurable and infinite Universe model.

• The Number effect,

falsifies the proposal of expanding Universe, as the apparent luminosity, of the nebulae is not decreasing upon time. the Non-Order theory of the Big-Bang, not only violates the principle of energy conservation but also suggests that our orderly and highly arranged universe, was

conceived from a non-order status.

The nonorder theory of the big bang

• An appreciation of better understanding of an orderly creation of universe, can be advanced to Nicholas Scott and Jesse van de Sande, from Australia's ARC Centre of Excellence for All Sky Astrophysics in 3 Dimensions (ASTRO 3D) and the University of Sydney saying: <u>"It was thought</u> that the Milky Way's thin and thick discs formed after a rare violent merger, and so probably wouldn't be found in other spiral galaxies," said Dr. Scott.

• <u>"Our research shows that's probably wrong,</u> and it evolved 'naturally' without catastrophic interventions". The static universe \ by Hilton Ratcliffe P:40 "the Hubble law shows up in a non-expanding space, and would therefore manifest in a static Universe



The Virgin wave of light

- We know waves interacts with other waves, and fades and integrates.
- Light is no exception, and for that reason we shall not accept that there is any virgin light wave came to us, more than seconds, or minutes away.
- The Big-Bang model is like promising virginity of light waves traveled for billions of years.

universe expansion /Wikipedia A magic number of 73.24 Km/second metric expansion was recorded by Red Shift.

Understanding the expansion of the universe [edit]

Measurement of expansion and change of rate of expansion [edit]



When an object is receding, its light gets stretched (redshifted). When the object is approaching, its light gets compressed (blueshifted).

Wikipedia

In principle, the expansion of the universe could be measured by taking a standard ruler and measuring the distance between two cosmologically distant points, waiting a certain time, and then measuring the distance again, but in practice, standard rulers are not easy to find on cosmological scales and the timescales over which a measurable expansion would be visible are too great to be observable even by multiple generations of humans. The expansion of space is measured indirectly. The theory of relativity predicts phenomena associated with the expansion, notably the redshift-versus-distance relationship known as Hubble's Law; functional forms for cosmological distance measurements that differ from what would be expected if space were not expanding; and an observable change in the matter and energy density of the universe seen at different lookback times.

The first measurement of the expansion of space came with Hubble's realization of the velocity vs. redshift relation. Most recently, by comparing the apparent brightness of distant standard candles to the redshift of their host galaxies, the expansion rate of the universe has been measured to be $H_0 = 73.24 \pm 1.74$ (km/s)/Mpc.^[10] This means that for every million parsecs of distance from the observer, the light received from that distance is cosmologically redshifted by about 73 kilometres per second (160,000 mph). On the other hand, by assuming a cosmological model, e.g. Lambda-CDM model, one can infer the Hubble constant from the size of the largest fluctuations seen in the Cosmic

Microwave Background. A higher Hubble constant would imply a smaller characteristic size of CMB fluctuations, and vice versa. The Planck collaboration measure the expansion rate this way and determine $H_0 = 67.4 \pm 0.5$ (km/s)/Mpc.^[11] There is a disagreement between the two measurements, the distance ladder being model-independent and the CMB measurement depending on the fitted model, which hints at new physics beyond our standard cosmological models.

• Red Shift can happen when we move away from the subject, in the **non-inertial** system of nature.

- a Coriolis way to correct our <u>Milky-way position to</u> <u>inertial Galilean co-ordinate system</u>, is by dividing the Sun's speed <u>230 km/sec</u>, by (<u>3.14159*sec</u>) relative to the Milky way, and the result would then be <u>73.24 Km</u>
- This balances the value we measure as a red shift

Corrected Parallax distance of a star = Measured Distance "D" + red shift-change "R" + inertial system correction "I"

Where R= (67-74 Km/sec) I= speed of sun / 3.14159 = (-) 73.24 Km/sec

Distance of stars is not increasing



Contribution of our "Relativity as a Function of Time"

• We can obtain an inertial system of the open Universe, by dividing observer's speed by ($\pi * \sec$)