Does the JWST disprove the Big Bang?

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Abstract

I claim that the JWST findings disprove **part** of the Big Bang theory (BB). It is to be noted, that this finding follows additional measurements that raise questions on the validity of the BB. For example, accurate measurements of the Hubble's constant by separate teams result in two separate constants. Therefore, the BB must be modified. I agree with BB that there was an explosion that created our universe. But it was not an explosion of a singularity point, but rather of a primeval neutron star. After the explosion, the major part of the neutron star remained at its position (I designate this part: the Pivot). The other part created our matter universe. This matter universe has not flown radially in all directions, as claimed by the BB, but rather started to orbit the Pivot.

It will be shown how the Pivot structure can explain recent JWST observations that the maximum redshift of a galaxy in the universe is ~12.5.

Current research

The JWST has provided detailed images of the universe, that Hubble cannot provide.

The top differences between the two telescopes, as per NASA:

- Webb primarily looks at the universe in the infrared, while Hubble mostly studies it at optical and ultraviolet wavelengths. This makes a big difference, as infrared views can peer through cosmic dust and unveil hidden objects or formations.
- Webb also has a 6 times bigger mirror than Hubble. This larger light-collecting area means that it can peer farther back into time than Hubble is capable of doing.

The images of JWST provided several first-ever glances into the furthest regions of our cosmos. However, these images have prompted more questions than they have provided answers. The current Big Bang theory predicts that the earliest galaxies in the universe, born near the BB were small, slightly chaotic, and irregular in shape. However, the images show these galaxies to

be stunningly huge, in addition to being balanced and well-formed – a result that defies the BB. **In other words, the entire universe consists of approximately the same size galaxies and stars, independent of the time of their creation after the BB.**

The standard cosmological model has been successful in predicting the properties and evolution of galaxies on a wide range of redshifts. The highest redshifted galaxy observed by the Hubble telescope is the GN-z11 with a red shift of Z=11.09. Studies with Hubble have shown that the rate of star formation has been relatively constant as far back as about 600 million years after the big bang.

The BB asserts that the further we look in time the lesser developed galaxies will be seen because it takes time for a galaxy to reach its size. With the JWST it is possible to look closer. Recently the teams working on JWST observed a galaxy designated GLASS_z12 that was created 300 to 400 million light years after the BB. According to the BB, it is unlikely that in such a short time galaxies can be fully developed.

The Pivot universe.

I claim that the suggested Pivot model can explain JWST findings and Hubble's constant crisis. The structure of the Pivot universe is described in detail in The structure of the Pivot Universe

In a nutshell, our matter universe is composed of two parts: a massive spinning neutron star I designate the Pivot and a ring-shaped visible Universe that orbits this Pivot.

In this paper, I relate to the z-shift measurements of galaxies. Z shift relates to JWST findings and also to Hubble's constant. The Pivot theory postulates that the main contributor to the z shift of galaxies is the gravitational z shift caused by the Pivot, rather than the Doppler shift (as postulated by the BB). I do not claim that there is no Doppler shift, but it is small in comparison to the gravitational red shift. It can be shown that it is no more than 0.3% of the total redshift. (Note: this is similar to the Global Positioning System (GPS) where both shifts are taken into account). In another paper, I use the Pivot model for the Explanation of Hubble's constant crisis

Fig. 1 describes the current structure of the Pivot universe. At the center of our matter universe resides the Pivot. All matter i.e., galaxies, stars, and dust orbit the Pivot. Each galaxy has its radius from the Pivot. An observer of the Milky Way $R_{mw} = 123.4 \cdot Gly$ sees all galaxies that orbit at a bigger radius than the Milky Way, redshifted. On the other hand, galaxies that orbit at a smaller radius than the Milky Way are blue-shifted. The disk of the matter universe has the following dimensions: $R_{in} = 122.88 \cdot Gly$, $R_{out} = 175.57 \cdot Gly$ and width $W = 1 \cdot Gly$.

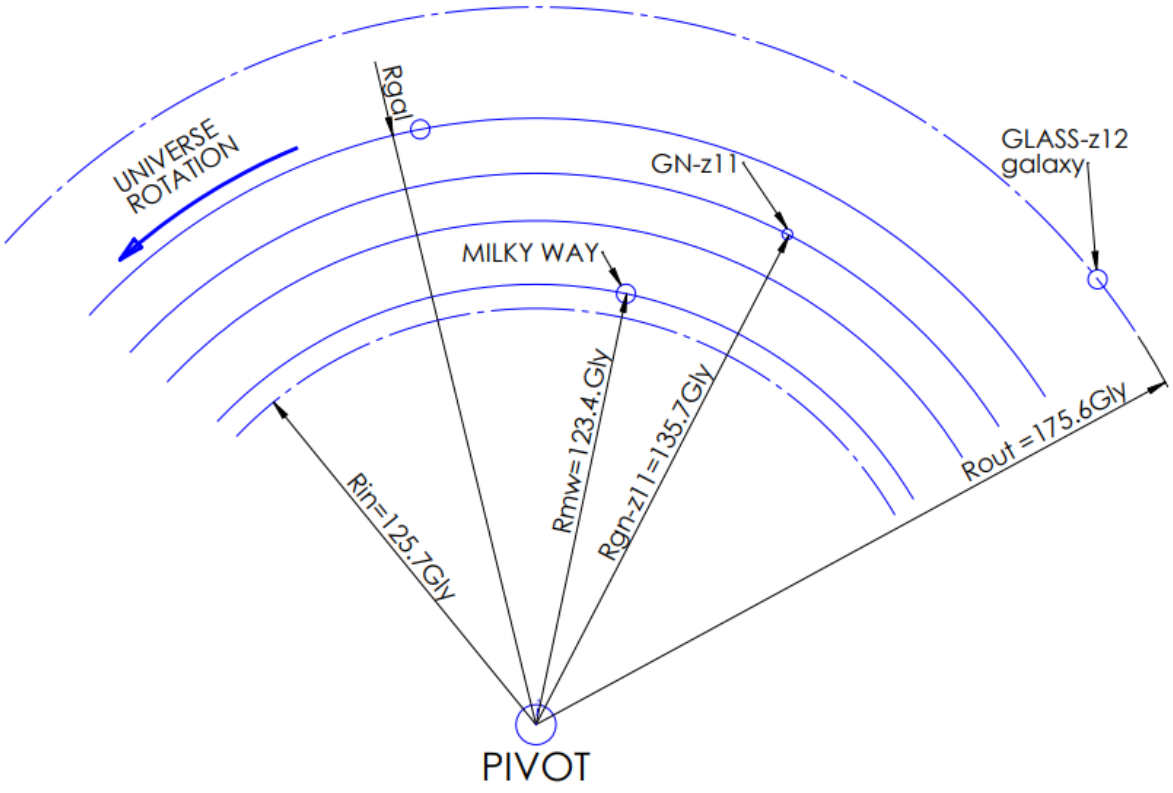

Fig. 1 -Structure of the Pivot universe

According to general relativity, the gravitational z shift Z_{gal} of a galaxy orbiting the Pivot at radius R_{gal} is: See [Gravitational Redshift]

$$Z_{gal}(R_{gal}) = \frac{1}{\left(1-\frac{2\cdot G\cdot M_{pivot}}{R_{gal}\cdot C^2}\right)^{0.5}} - 1 \quad (1)$$

From Eq. (1) the orbiting radius R_{gal} of any galaxy can be found by measuring the z shift as seen in the Milky Way z_{gal}.

$$R_{gal}(z_{gal}) = \frac{2\cdot G\cdot M_{pivot}}{\left(1-\frac{1}{(z_{mw}-z_{gal}+1)^2}\right)C^2} \quad (1.1)$$

Where:

M_{pivot} - Mass of the Pivot

z_{mw} - Redshift of Milky Way.

Note: I assume that $z_{mw} = 12.75$. This number is based on the estimated rotation of the universe determined by P. Birch. Is the universe rotating?

Two examples based on Eq. 1.1 are given:

1) GN-z11, the furthest galaxy found by the Hubble telescope has a redshift of 11.09 and has therefore an orbiting radius of 135.66Gly

2) According to the Pivot model the universe $R_{out} = 175.57 \cdot Gly$. Assuming that galaxy GLASS -z12 is located on R_{out} therefore its redshift according to Eq. (1) is z=12.50.

A quote relating to Galaxies in early universe - JWST

"There has been some back and forth among researchers about the accuracy of early data from JWST as calibrations are refined. Some of the very early results publicized galaxies with redshifts as high as 13, but this number has now been refined down to 12.5 with more accurate calibrations. This was because the earliest data was based on calibrations performed on the ground, while the more recent data reflects calibrations done while the telescope was in space in October. Calibrating JWST's instruments is a lengthy process, and readings will get more accurate as time goes on".

A speculative hypothesis

It was noted that from the JWST finding it can be assumed that all galaxies in the universe were created approximately at the same time. On the other hand, the Pivot universe model shows that the universe extends over a $\Delta R = R_{out} - R_{in} = 175.57 \cdot Gly - 122.88 \cdot Gly = 52.7 Gly$

If the creation of the galaxies was done at the velocity of light it would take 52.7G years. To reduce the time of the creation of the visible universe to say 1 million years, I make a speculative assumption: The maximum velocity of matter at the explosion was sustainably higher than C. There is an observation of V838 Monocerotis supernova. The outburst was done at a rate far exceeding the speed of light as it grew from an apparent visual size of 4 to 7 light years in a matter of months. The current explanation is that is an artifact due to Light echo. My speculative hypothesis is that matter can move in space faster than light (FTL) if electrical and magnetic fields are removed from it. In this case, there is no creation of virtual particles and space becomes a total void, that cannot create any dragging force on anything moving in it - matter and

light. This is what happened at the BB. Matter velocity could reach 50,000 times or more than the speed of light in a vacuum.

The total void of space was temporary and vanished as electrical and magnetic fields came back and the virtual particles reappeared. I used this speculative hypothesis to suggest an FTL spacecraft. See Is faster than Light travel possible?

Conclusion:

The JWST images are not of the early galaxies that were created near the BB, but rather images of the most distant galaxies from the Milky Way.

The Pivot structure of the universe can explain JWST findings as well as Hubble's constant crisis.