

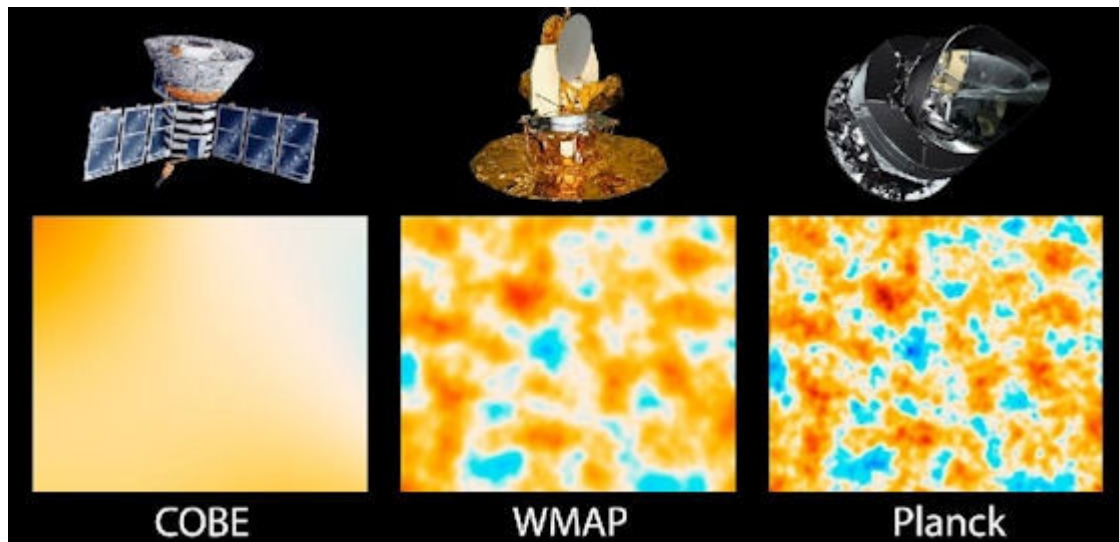
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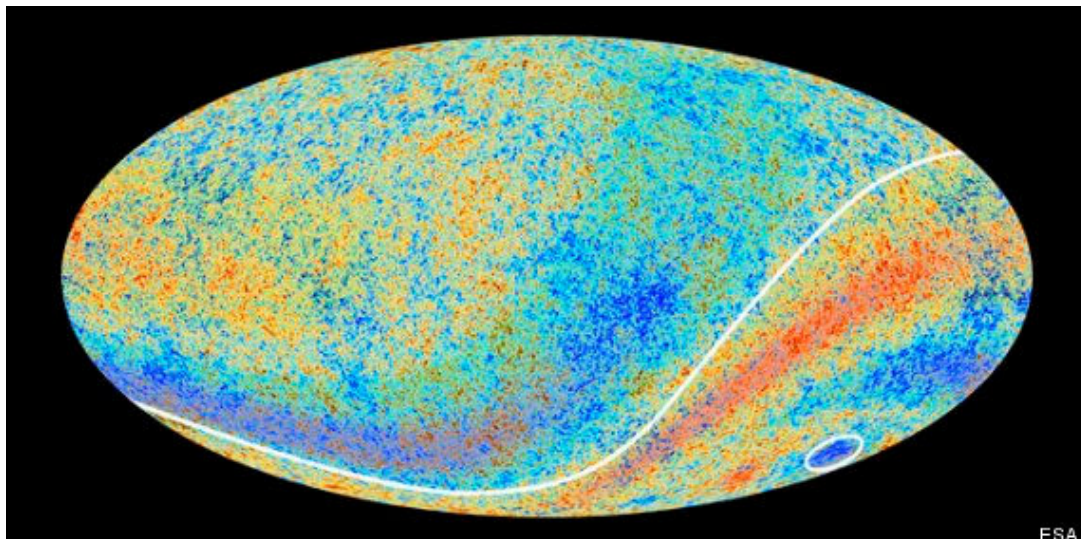
A Curved Universe

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On the 21 of March 2013 an article appeared in the **Huffington Post** of the United Kingdom (1). The heading of this article says: "**European Space Agency's Planck Satellite Reveals Most Precise Image Ever Made Of The Primordial Universe**". The Planck satellite was sent in order to record the Cosmic Microwave Background Radiation (CMBR) of the distant space. Below we see the three satellites and their recorded CMBR.

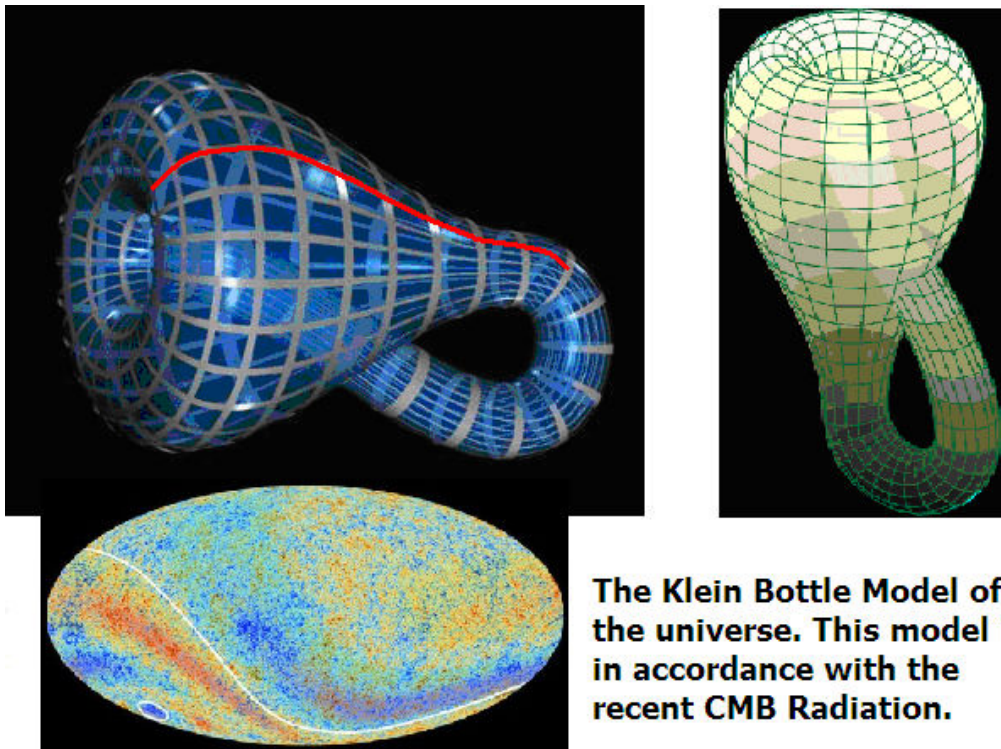


Planck recorded the CMBR over 15 months and a revised map of the universe could be produced after stripping out dust emissions and radio frequencies from the Milky Way galaxy and more distant objects to leave just the afterglow of the Big Bang. Here is the result:



The map released on Thursday shows the temperature differences of the CMB in different directions of the sky. There is a cold spot on the lower right portion of the map and the red region is hotter than the blue region. It seems as if preferred direction of energy fluctuations in the universe - the so-called '**Axis of Evil**' (2). This is because the present picture is contradicting modern Cosmology which is built on the assumption that the universe is essentially the same in whichever direction we look. If the cosmic radiation has a preferred direction, **that assumption may have to go** - along with our best theories about cosmic history.

My own understanding of the universe is that it has the shape of a Klein Bottle. See article **3-A Different Universe**. In the picture below we see how the curves of the Klein Bottle fit the observed CMBR of the universe. The dark spot is the *turning region* of the universe where there is almost no matter.



Arthur Liddle, a cosmologist at the University of Edinburgh in Scotland and his colleague Marina Cortês detail their findings in the Sept. 13 issue of the journal **Physical Review Letters**, a leading journal in science. Liddle says:

“The light rays in a curved universe appear to follow curved paths. They are following lines that are the shortest distance in curved space, just as airplanes follow great circles when flying around the Earth”.

This statement is in agreement with the **Klein Bottle Model** of the universe.

- (1) http://www.huffingtonpost.co.uk/2013/03/21/european-space-agencys-planck-map_n_2922026.html?utm_hp_ref=uk-tech
- (2) <http://www.newscientist.com/article/mg20327245.900-13-more-things-the-axis-of-evil.html#.Uj6TUNK8Cuk>