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Let us not forget General Relativity has changed

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As pointed out by article on discovery of radiation of the Big Bang says:

"Penzias and Wilson's discovery was the watershed providing the critical evidence for a theory first developed by George Henri Lemaitre and Edwin Hubble in the 20s and the 30s. Basing his study upon well-established mathematical principles, Lemaitre proved that Einstein's theory of general relativity was incorrect in asserting that the universe was static and that a better model could be constructed based upon the theory of an expanding universe. Observational data was provided by Hubble, who in 1929 announced that galaxies could be measured moving away from our own. Lemaitre thus speculated that the universe must have been created by the explosion of some original atom, in a "big bang." " [1]

I am emphasising the quote: "…….Einstein's theory of general relativity was incorrect……."

What really happened is that Einstein did not originally believe in an expanding universe, and had adjusted his math model when faced with evidence to the contrary.

This is the method of math modelling, of course.

But what is of interest to note: the "theory" is still called General Relativity (GR) no matter how the math model is adjusted to give different results.

There are people who believe a "theory" should give a definite result and be tested against a theory giving a different definite result – well their belief is false, because the example above shows this did not happen in the case of General Relativity. One moment Einstein is claiming from his theory General Relativity that the universe is static, then when faced with evidence from Hubble of expansion, he amends his theory.

As this example illustrates – the method is math modelling and the "theory" stays the same whatever different result the math model is adjusted to give.

As to discovery of radiation from Big Bang – well that's just interpretation from the math model and theory. As Einstein pointed out – theory gives us the way that we interpret experimental and observation. So if we adjusted the math et al presumably we could interpret differently. So physics is then to a certain extent subjective; there being different interpretation of experiments and observations from different viewpoints/theories.

In the case of Einstein's General Relativity (and to extent Special Relativity) the mainstream has decided to stick rigidly to the viewpoint of Einstein's relativity and amend the theory (theories) accordingly.

Einstein introduced the cosmological constant to his theory, when he thought the universe was expanding he discarded that constant. Now, cosmologists think the cosmological constant should not have been discarded and reintroduce it. So there are three theories:

1. Einstein's GR with cosmological constant
2. Einstein's GR when he discarded cosmological constant
3. Einstein's GR with cosmological constant reintroduced.

Einstein is proclaimed correct whether the cosmological constant is discarded or kept by the mainstream. A clear example that Einstein gives no definite answer, he is portrayed as correct whether a statement X is true or false.

We could imagine a different universe where physics was done differently to our universe i.e where physicists tested one theory A against another theory B. But in our universe we just amend the "theory" and still call it Einstein's theory.

Conflict occurs between physicists as they forget what universe they are in. Some think it's a universe where we change theories, others think it's a universe where we amend theories. This of course can make mess.

Reference

[1] The Nobel prize
http://www.bell-labs.com/user/apenzias/nobel.html

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