

# Re: Approximating the Universe

---

*Source:* <http://sci.tech-archive.net/Archive/sci.physics.relativity/2005-11/msg01941.html>

---

- *From:* Tom Roberts <[tjroberts@xxxxxxxxxxx](mailto:tjroberts@xxxxxxxxxxx)>
  - *Date:* Wed, 30 Nov 2005 05:23:46 GMT
- 

G=EMC<sup>2</sup> Glazier wrote:

Science is a search for the truth.

No. "Truth" is not possible in science. All we can possibly hope for is improved models and understanding of the models. "Truth" is for theologians and mathematicians.

There are no facts.

This is blatantly false. We have LOTS of experiments, and they establish facts.

We can only approximate.

Of course the facts established by experiments have errorbars. But your statement implies a much deeper lack that is not applicable.

Thus physics is the science  
of "approximations"

Not really. See above.

Don't get me wrong we can make very good approximation. Good example is the "three body problem" has never been solved. In QM approximate calculations is the best we can hope for. Go get the best math nuclear physicist working

## Re: Approximating the Universe

with  
particles to preform an exact calculation on any one of the  
actions  
taking place, and he will tell you it can't be done. He will  
add the best  
hope is to get an approximation that will give a result that  
fits well  
with the experiment. To sum my thoughts up "Scientific  
Theories  
are Approximations"

It is not the theories themselves that are the approximations you  
mention, it is merely our ability to compute using them.

But we will never know if our theories and models are really what Nature  
does. All we will ever have is knowledge of how broad the domains of  
applicability are for our theories, and how accurate they are within  
those realms. But that is, in truth, what science is actually about --  
science is neither math nor theology.

Tom Roberts      tjroberts@xxxxxxxxxxx

.