

Re: Galactic pancake mystery solved

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- *From:* Tim Killian <TJK@xxxxxxxxxxxxxxxxxxxx>
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I have nothing against theoretical physicists who ply their trade and work every day to expand our understanding. And there have been numerous triumphs in the past century where mathematical models were key contributors to legitimate advances in science. Behind every one of these models was an extraordinary intellect, not just a fast computer.

That said, I'm bothered by the increasing use of computer of simulations that are visually appealing (I liken them to video games), but lack any depth in their underlying structure. I recently did some work at a small university wind tunnel and had a chance to talk to its director. Even though it was a modern, well instrumented facility, he was concerned that the tunnel would eventually be closed because students and most faculty preferred simulations and computer models to the relative drudgery associated with actual physical measurements. There is no doubt that the computer modeling is less expensive than making physical measurements, but are the students learning as much? Do they have a true understanding of the code running on the super computer, or are they simply awed by the machine? When they go out in the world are they going to have the depth of understanding to make meaningful contributions?

> Llanzlan Klazmon wrote:

Tim Killian <TJK@xxxxxxxxxxxxxxxxxxxx> wrote in
No, but building your castle on a foundation of
sand is never a good idea. Science should be about
observation, repeatable experiments and fact, not
video-game computer models, wishful thinking, or
arm-waving explanations using untenable
assumptions.

Well the obvious counter example to this argument is the

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neutrino. It was required to balance the books in certain nuclear reactions. The dark matter hypothesis is comparable. Sure it could be wrong but you have to start from somewhere. Your comments about video game computer models are absurd. Try telling Boeing they aren't allowed to use computer simulations in their aircraft design program.

Klazmon.