Re: If the Earth weren't moving during the Venus transit

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From: Cousin Ricky (*rickyusvi_at_yahoo.com*)
Date: 06/10/04

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Date: 10 Jun 2004 12:13:30 −0700
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Insanely Ranted:
> >The earth is the center of the solat system so it doesn't move...everything
> >else does...

bettrel@aol.com (Bettrel) wrote in message news:<20040610011656.16349.00000780@mb−m29.aol.com>...
>
> Well, technically speaking, wouldn't it be true that the frame of reference
> consisting of a fixed Earth with everything else moving is as valid as any
> other reference frame?

I don't think so. The Earth is spinning, which is a form of acceleration. This means that the Earth's reference frame is not inertial, and cannot be considered "fixed" under relativity.

Why is the difference important? Here are a couple of illustrations that don't require math or anything:

1. Galileo gave this simple illustration of relativity: If one is in a boat with no windows, it is impossible to tell whether the boat is stationary or moving in a straight line. However, if the boat is turning, you can feel it, or even see the chandelier tilting, even though you can't see outside.

2. Spin around 360 degrees. That should take about 2 seconds. Does that mean that, relative to you, the Sun has moved up to 940,000,000 km in two seconds? That's more than 3000 times the speed of light! Although the Earth spins much more slowly than that, i think the concept can be generalized.

(Someone *please* correct me if i'm wrong or off−base.)

Clear skies!

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−−−−−−−−−−−−−−−−−− Richard Callwood III −−−−−−−−−−−−−−−−−−−
~  U.S. Virgin Islands    ~  USDA zone 11  ~  18.3N, 64.9W  ~
~  eastern Massachusetts  ~  USDA zone 6 (1992−95)          ~
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