

## Re: 1971 Time dilation plane experiment looks flawed

**Source:** <http://sci.tech-archive.net/Archive/sci.physics.relativity/2005-02/2155.html>

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**Date:** 02/09/05

Date: 9 Feb 2005 07:42:42 -0800

Bill Hobba wrote:

> <[guskz@hotmail.com](mailto:guskz@hotmail.com)> wrote in message  
> [news:1107904956.253482.70110@z14g2000cwz.googlegroups.com...](mailto:news:1107904956.253482.70110@z14g2000cwz.googlegroups.com)  
>>  
>> <http://hyperphysics.phy-astr.gsu.edu/hbase/relativ/airtim.html>  
>>  
>> 1. Two planes left at the same speed off the surface of Earth but  
their  
>> time dilation is not calculated from the surface of Earth because  
Earth  
>> is also moving(spinning) but instead the calculations are based on  
the  
>> CENTER of Earth as the Inertial Reference Frame. (They called it  
>> kinematic time dilation)  
>>  
>> 2. It seems that if they left off the surface of Earth, therefore  
the  
>> Time dilation should be measured from the location of separation  
>> (Surface) and not the center of Earth.  
>>  
>> 3. As well who says the center of Earth is not also moving  
(opposite to  
>> Inertial)  
>  
> ??????? - Opposite to inertial? All inertial frames are equivalent.  
>  
>> like the surface of Earth since the Earth is spinning about  
>> the Sun and both may be moving quite fast within the Universe and  
even  
>> the Universe may be moving....  
>  
> The assumption is the center of the earth is stationary in some  
inertial  
> frame - the fact the earth rotates etc makes no difference to the  
fact that

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- > *the center of the earth is stationary in an inertial frame if you*
  - > *specifically consider a coordinate system where it is.*
  - >
  - > >
  - > > *Even the clock on the surface of the Earth exhibited a time dilation*
- by  
g