Distant Starlight in a “Young” Universe

Dr. Jason Lisle
I would like to personally thank you for watching the Origins television program. This show was special, near to the heart of my parents, Russ and Norma Bixler.

I trust that the information in this presentation will be helpful in your study of creation science. Thank you for your prayerful and financial support of Origins… you’re making the television production of this program possible!

Also available now a legacy website dedicated to my parents at russandnormabixler.com.

Paul R. Bixler
Producer/Editor
Now faith is confidence in what we hope for and assurance about what we do not see.

-Hebrews 11:1

Greetings and welcome to the Russ and Norma Bixler legacy website. Our family trusts that your visit today will provide strength, hope and encouragement to you.

RUSSANDNORMABIXLER.COM
Distant Starlight in a Young Universe

(1) Distant galaxies are billions of light-years away.

(2) It should take billions of years for the light to arrive.

(3) We do see these galaxies.

(4) Conclusion: billions of years have elapsed.
Attempted solutions that have problems

(1) The distances are not real.  
   Operational science confirms the vast distances.

(2) The speed of light was greater in the past.  
   There is compelling evidence to the contrary.

(3) The light was created in transit.  
   Implies that God creates fictional "movies."
According to the Light-in-transit model, this supernova remnant does not exist, and has never existed.

Likewise, over 99.9% of the universe (everything beyond 6000 LY, is fiction.)
Attempted solutions that do not work

If our senses are not reliable for the 99.9% of the universe beyond 6000 light-years, then is there any reason to trust our senses for the remaining 0.1%?

If God creates beams of light containing images of fictional events, then do we have any reason to trust that our senses correspond to reality?
Time Dilation Models

Such models allow millions of years to elapse in space while only thousands occur on earth.
Measuring the speed of light

\[ c = \frac{2L}{t} = 186,282 \text{ mi/s} \]

\[ L = 186,282 \text{ miles} \]

\[ T = 2s \]
Measuring 1-way speed of light

\[ c = \frac{L}{t} \]

Are the two clocks synchronized?

T = 5 min?
Synchronizing two clocks by radio

It takes time for the radio pulse to travel from one clock to the other. How much time?

Radio travels at the speed of light.
Synchronizing two clocks by radio

This method results in synchronized clocks *only* if the speed of light is the same in all directions.
Synchronizing two clocks by radio

Since radio travels at the speed of light, it is impossible to (exactly) synchronize two clocks by radio transmission without already knowing the 1-way speed of light.
It is impossible to exactly synchronize two distant clocks by radio transmission without already knowing the one-way speed of light.
Slow clock transport

However, motion affects the passage of time. (Moving clocks tick different than stationary ones.)

The very act of moving the clock has caused it to become desynchronized.
Synchrony Conventions

Apparently, it is fundamentally impossible to synchronize (exactly) two clocks that are separated by a distance without knowing the 1-way speed of light.

And, it is impossible to measure the 1-way speed of light without two exactly synchronized clocks separated by a distance.
Synchrony Conventions

Apparently, the one-way speed of light is a matter of convention!
[e.g. the metric system]

This is called “the conventionality of distant simultaneity” or simply the “conventionality thesis.”
Synchrony Conventions

You may choose the one-way speed of light (within certain constraints), and this will define a synchrony convention.

Whatever convention you choose, if you are consistent, any experiment will verify your choice.
“...if only I knew that the light by means of which the observer at M perceives the lightning flashes travels along the length A → M with the same velocity as along the length B → M.”
“But an examination would only be possible if we already had at our disposal the means of measuring time. It would thus appear as though we were moving here in a logical circle.”
“That light requires the same time to traverse the path $A \rightarrow M$ as the path $B \rightarrow M$ is in reality neither a supposition nor a hypothesis about the physical nature of light, but a stipulation which I can make of my own freewill in order to arrive at a definition of simultaneity.”

- Albert Einstein (Relativity pp. 22-23)
Synchrony Conventions

Einstein Synchrony Convention: the one-way speed of light is defined to be the same in all directions.

Anisotropic Synchrony Convention (ASC): the one-way speed of light is infinite when directly toward an observer, $\frac{1}{2}c$ when moving directly away. There is no distant starlight problem if the Bible uses ASC.
Synchrony Conventions

Einstein Synchrony Convention: used primarily in modern physics textbooks. Relativistic equations are less cumbersome in ESC.

Anisotropic Synchrony Convention: implicitly used by all ancient cultures, and is still in use today.
Then God said, “Let there be lights in the expanse of the heavens to separate the day from the night, and let them be for signs and for seasons and for days and years;”

Genesis 1:14
and let them be for lights in the expanse of the heavens to give light on the earth”; and it was so.

Genesis 1:14
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