

Re: Superluminal Quasar Jets : The Beaming "Explanation" Appears Inadequate

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2005-02/6049.html>

From: George Dishman (george_at_briar.demon.co.uk)

Date: 02/27/05

Date: Sun, 27 Feb 2005 10:56:06 -0000

<jgreen@seol.net.au> wrote in message
news:1109461004.939277.271580@f14g2000cwb.googlegroups.com...

>

> *N:dlzc D:aol T:com (dlzc) wrote:*

>>

>> *Maxwell provides the conundrum I describe, since light travels at c for*

>> *all*

>> *observers, yet light leaves "forward" from an object travelling at c. He*

>> *seems to be running towards Fizeau next...*

>

> *Then wasn't Maxwell saying $c'=c+v$*

David said "light travels at c for all observers"

hence $c'=c$.

http://www.fnal.gov/pub/inquiring/more/light/light_page9.html

> , and thus in direct conflict with AE?

See section 6 of Einstein's original paper:

http://www.fnal.gov/pub/inquiring/more/light/light_page9.html

> *How is the increasing length per time (velocity) of these jets measured?*

Length isn't too meaningful as the jets are a continuous flow so there is no clear end to the jet. Measuring the speed depends on non-uniformity in the flow by following the progress of 'knots' of matter. For example:

<http://www.stsci.edu/ftp/science/m87/m87.html>

and in particular this set of frames:

sci.physics.relativity: Re: Superluminal Quasar Jets : The Beaming "Explanation" Appears Inadequate

<http://www.stsci.edu/ftp/science/m87/bw3.gif>

Or look at the attached radio map here:

<http://www.phy.duke.edu/~kolena/superluminalmotion.html>

You might also practice your maths by trying to answer the questions on that page ;-)

> *SR believers might claim that the only legitimate measurement would be that of a traveller on the jet!*

SR provides a set of rules for converting measurements in one frame into another frame. Both measurements are "legitimate" in their respective frames.

> *Otherwise, SR is decapitated right here, with the obvious and trivial observation that velocity has NOT shrunk the moving body!*

It has. Someone riding on the jet would measure a greater distance between the same knots than an observer at rest wrt the source and viewing the jet perpendicular to its motion.

George