# Re: 1c+1c Closing Velocity...,answer to Henri Wilson

***Source:*** http://sci.tech−archive.net/Archive/sci.physics.relativity/2005−02/5287.html

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***From:*** Henri Wilson (*H_at_..(Henri*)
***Date:*** 02/24/05

Date: Thu, 24 Feb 2005 03:31:24 GMT

On Wed, 23 Feb 2005 23:07:08 +0100, "Paul B. Andersen"
<paul.b.andersen@deletethishia.no> wrote:

*>Henri Wilson wrote:*
*>> On Tue, 22 Feb 2005 22:52:02 +0100, "Paul B. Andersen"*
*>> <paul.b.andersen@deletethishia.no> wrote:*
*>>*
*>>*
*>>>Henri Wilson wrote:*
*>>>*
*>>>>On Mon, 21 Feb 2005 15:57:04 +0100, "Paul B. Andersen"*
*>>>><paul.b.andersen@deletethishia.no> wrote:*
*>>>>*
*>>>>*
*>>>>*
*>>>>>Henri Wilson wrote:*
*>>>>>*
*>>>>>*
*>>>>>>On Fri, 18 Feb 2005 14:57:44 +0100, "Paul B. Andersen"*
*>>>>>><paul.b.andersen@deletethishia.no> wrote:*
*>>>>>>*
*>>>>>>*
*>>>>*
*>>>>*
*>>>>>>>This will give the average speed of the atoms 7060 m/s or ca. 7 km/s.*
*>>>>>>>Since this is an average speed for a specific temperature,*
*>>>>>>>let's say that for a typical star, the radial velocity of the atoms*
*>>>>>>>emitting the light will be within the range ca. ± 10 km/s.*
*>>>>>>*
*>>>>>>*
*>>>>>>This is where you are going wrong.*
*>>>>>>If the average speed is 10000m/s overall, then "in any direction" it will be*
*>>>>>>about one third of this.*
*>>>>>*
*>>>>>No, this is accounted for above.*
*>>>>*

>>>>
>>>>*Well, I have corrected that. The average radial speed of the molecules in any*
>>>>*direction is obviously zero (more precisely, it is the speed of the star wrt*
>>>>*the observer).*
>>>>
>>>>
>>>>
>>>>>>>*The implication of this is that the light emitted from one event*
>>>>>>>*at the star will be received during a time 2dv/c^2, where d is*
>>>>>>>*the distance to the star and v is the 10 km/s from above.*
>>>>>>>
>>>>>>>*First light arrives at the time: d/(c+v)*
>>>>>>>*Last light arrives at the time: d/(c−v)*
>>>>>>>*interval of reception = d/(c+v) − d/(c−v) = ca. 2dv/c^2*
>>>>>>
>>>>>>
>>>>>>*Paul, you are assuming that all sources have a speed of 10km/s towards the*
>>>>>>*observer. Don't you know anything about Maxwellian velocity distribution?*
>>>>>>
>>>>>>*The 'v' in your equations can theoretically range from −infinity to + infinity.*
>>>>>
>>>>>*Don't be daft.*
>>>>>*The average radial speed is 7 km/s, so the vast*
>>>>>*majority of speeds will be below ca. 10 km/s.*
>>>>
>>>>
>>>>*the average is zero.*
>>>>*You have made a stupid mistake.*
>>>
>>>*We are obviously talking about r.m.s. speed.*
>>>*Isn't that blatantly obvious?*
>>
>>
>> *It is the average radial speed you should be talking about.*
>> *That is zero.*
>> *You have made an extremely embarassing fundamental mistake.*
>>
>>
>>>>>>>*This time will be ca. 0.6 hour per light year distance.*
>>>>>>>*Note that this means that according to the ballistic theory,*
>>>>>>>*no star can show a periodicity shorter than this.*
>>>>>>>*It doesn't matter _why_ a star is a variable, according to*
>>>>>>>*the ballistic theory any variation − intrinsic or apparent −*
>>>>>>>*with period shorter than this will be impossible to observe*
>>>>>>>*because the periods will overlap.*
>>>>>>
>>>>>>
>>>>>>*This is plainly stupid. There is no sudden cutoff point.*
>>>>>
>>>>>*You may live forever, Henri.*
>>>>>*There is no sudden cut−off in the life expectancy.*

>>>>>
>>>>>
>>>>>
>>>>>
>>>>>>As you should know, the effect of thermal velocity distribution is to broaden
>>>>>>spectral emission lines. Absorption lines will also be broadened by the
>>>>>>movement of surrounding gas molecules.
>>>>>
>>>>>In the real world, the emission lines from the hot, dense gas
>>>>>are broadened to such an extent that the spectrum is a continuous
>>>>>black body spectrum and not a discrete spectrum at all.
>>>>
>>>>
>>>>But from a H and He star, the emission lines will normally still be present to
>>>>some extent.
>>>
>>>And what are "H and He stars"?
>>>How do they differ from "stars"?
>>>Where are the emission lines?
>>
>>
>> You might find a few in cool stars.
>>
>>
>>>>>>But the effect of the thermal velocity is according to
>>>>>>the ballistic theory that the light emitted at a specific
>>>>>>instant will be received during a long time.
>>>>>
>>>>>>Which you know.
>>>>
>>>>
>>>>Yes, the lightfront is broadened, causing brightness variations to be smaller
>>>>than if the source speeds were all the same.
>>>>
>>>>
>>>>
>>>>>>Now, consider that at a particular instant, lots of molecules on the star emit
>>>>>>a photon towards a particular observer. Those photons will have a range of
>>>>>>speeds.
>>>>>
>>>>>>And the bulk of speeds will be within c +/− 10 km/s.
>>>>
>>>>
>>>>They will be more or less normally distributed around c, but theoretically
>>>>ranging from c+/− much more than 10 km/s.
>>>>
>>>>
>>>>
>>>>>>The 'lightfront' made up of those photons will broaden as it travels away from
>>>>>>the star. You can see how this happens with my variable star program.
>>>>>

*>>>>>Broadened in time, yes.*
*>>>>*
*>>>>*
*>>>>Yes. Now it gets complicated.*
*>>>>*
*>>>>*
*>>>>*
*>>>>>>Thus the fronts emitted at successive intervals will overlap at a greater rate*
*>>>>>>than they would normally because of the broadening. ..but the fronts overlap*
*>>>>>>anyway beyond a certain distance, simply due to orbital movement.*
*>>>>>>*
*>>>>>>Thermal source speed effectively causes multiple imagery to occur at shorter*
*>>>>>>distances than it normally would. ..and billions more images.*
*>>>>>>*
*>>>>>>But the star orbit period will be observable right up until it disappears into*
*>>>>>>the noise.*
*>>>>>*
*>>>>>You are confirming my words with different words.*
*>>>>>*
*>>>>>The effect of the thermal speed will be that the otherwise*
*>>>>>predicted light curve will be diffused because any features*
*>>>>>will be broadened (in time).*
*>>>>*
*>>>>*
*>>>>It certainly will be diffused.*
*>>>>*
*>>>>*
*>>>>*
*>>>>>The net effect will be that any periodicity less than*
*>>>>>0.6 hours per light year distance will be masked out.*
*>>>>*
*>>>>*
*>>>>You cannot specify any particular point.*
*>>>*
*>>>Of course you cannot, and I didn't.*
*>>>Don't you know the Maxwellian velocity distribution function?*
*>>>*
*>>>http://my.unidata.ucar.edu/content/staff/blynds/maxw.html*
*>>>*
*>>>*
*>>>>The size of any variation will merely*
*>>>>tend to zero as either temperature or observer distance increases.*
*>>>*
*>>>You are babbling.*
*>>>The light from one event on the star will be spread*
*>>>out in in time, and received with a temporal distribution*
*>>>something like this:*
*>>>*
*>>>*
*>>> * *
*>>> * * * *

>>> * * * *
>>> * * * *
>>> * *
>>> * *
>>>----------|---------->
>>> |<----------|
>>> 0.6 hour per light year
>>
>>
>> Absolute nonsense.
>>
>>
>>>Any periodicity shorter than 0.6 hours per light year distance
>>>will be pretty well masked out.
>>>Periodicity a little longer than this will be made less distinct.
>>>Periodicity much longer than this will be little affected.
>>
>>
>> No it wont.
>>
>> The spread wil be normally distributed.
>>
>> You are completely wrong for the reasons I have already given.
>> You have assumed that molecules emit photons only in the specific direction in
>> which they are traveling at that instant.
>>
>>
>>>HD80715 has a period which is about twice this,
>>>which means that the predicted periodicity will
>>>not be completely masked out.
>>>That means that the ballistic theory predicts that
>>>it should be a variable, which it is not.
>>>The ballistic theory fails.
>>>
>>>There are a vast number of variables with periodicity
>>>shorter and much shorter than this.
>>>According to the ballistic theory, they should be
>>>impossible to observe.
>>>The ballistic theory fails.
>>
>>
>> You are completely wrong.
>> I just hope Androcles is reading all of this.
>>
>> Paul, you will probably have to change your name after making such an
>> embarrasing mistake. Maybe another long holiday...
>
>Well, well, Henri.
>You haven't pointed out a single error yet.
>You are only repeating "you are wrong"
>over and over.

*>*
*>But I am not wrong, as I am sure you realize.*
*>*
*>Here are my calculations are again.*
*>Please point out exactly what is wrong.*
*>Please be specific.*
*>"This is wrong", "absolute nonsense"*
*>or "I hope Androcles reads this"*
*>won't do.*
*>*
*>The kinetic energy for each degree of freedom is kT/2.*
*>That means that along the line of sight, we have:*
*>mv^2/2 = kT/2*
*>v^2 = kT/m*
*>where v^2 is the average square of the velocity*
*>component along the line of sight.*
*>If we assume that T = 6000K and that the atom is H,*
*>we get v = 7 km/s.*
*>The speed is distributed according to the Maxwellian*
*>distribution:*
*>http://my.unidata.ucar.edu/content/staff/blynds/maxw.html*
*>Note that this is the speed in any direction, and we*
*>are interested only in the radial speed component*
*>because that is what matters for the photons that*
*>will reach us. We have accounted for this above.*
*>The distribution of the speed towards us will be*
*>qualitatively the same, and the average is ca. 7 km/s.*

Oh jesus, this is funny!!! :)

Paul, the average molecular speed is zero in any direction.

Have you ever seen a box of hot air flying off at 7km/sec without any rocket?

You have invented the perfect Maxwell's demon. Perpetual motion... to hell with the second law of thermodynamics!!! Paul Andersen's hot air engine has it all. All the molecules have a speed in one direction.

Hahahahahahaa!!!!!!

*>*
*>So the distribution of the radial velocity component*
*>will be something like this:*
*>*
*>*
*> * *
> * * * *
> * * * *
> * * * *
> * *
> * *

```
>---------|---|------|------|----|----------->
> -10 -7 0 7 10
>
```

*>(Pointing out the that the average is zero*
*>is of course a ridiculous remark! :-) )*

Paul, you are going to be so embarrassed by this you will have to at least change your name. You are really making an absolute fool of yourself.

*>*
*>Now the the light from the atoms with zero*
*>velocity will reach as after a time d/c, while*
*>the light from an atom with the speed v will*
*>reach us after a time d/(c+v).*
*>The difference is ca. dv/c^2.*
*>If d = 1 LY, the light from an atom moving at 10km/s*
*>towards us will reach us 0.6 hours before the light*
*>from an atom moving at 10km/s away from us.*
*>This time is proportional to the distance.*
*>*
*>So the light emitted from the star at a specific*
*>instant will be received with a temporal didtribution*
*>something like this:*
*>*
*>*

```
> * *
> * * * *
> * * * *
> * * * *
> * *
> * *
>--------------------|--------------------->
> |<------------------>|
```

*> 0.6 hour per light year*
*>*
*>*
*>Of course the time will vary with the temperature of*
*>the star, but not very much, it will be of this order*
*>of magnitude for all stars.*
*>*
*>The rather obvious consequence of this is that according*
*>to the ballistic theory, any periodicity shorter than*
*>0.6 hours per light year distance should be be pretty well*
*>masked out.*

Paul, the light will reach any point like this:

```
> *
> * *
> * *
> * *
> * *
```

> * *
> * *
>−−−−−−−−−−−−−−−−−−|−−−−−−−−−−−−−−−−−−−−>
> *c+v−x (c+v) c+v+x*
>

>
>*But it isn't.*

You really are very funny this time.

>
>
>
>*Paul*

HW.
www.users.bigpond.com/hewn/index.htm