Doppler and the End of Expansion 6/4

Paul Schroeder

This is an analysis of Doppler that revels that a redshift of their light beams occurs for the stars rotating relative to an observer (such as us on earth) which idea probably applies rather than redshift from moving away.

What I write here is in green. The rest is Wiki

The proper view should be on that of the destination/detector as that is where the frequency is of concern, ie where we see it. The solution for ending expansion lies with Doppler's logical option. This.comes from Wikipedia. See under Doppler of light - Relativistic Doppler effect - Wikipedia. I have copied here the three situations that lead to red shift.

1. Moving away gives redshift

Relativistic Doppler shift for the longitudinal case, with source and receiver moving directly towards or away from each other, is often derived as if it were the classical phenomenon, but modified by the addition of a time dilation term

2. **Transverse, but not directly away**

Receiver *sees* the source as being at its closest point[edit]

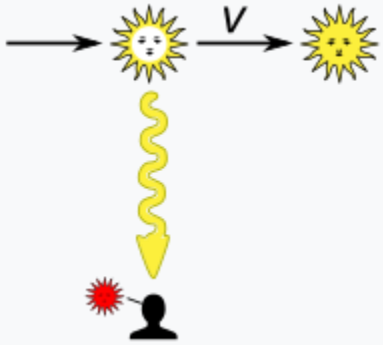

Figure 3. Transverse Doppler shift for the scenario where the receiver *sees* the source as being at its closest point.

This scenario is equivalent to the receiver looking at a direct right angle to the path of the source. The analysis of this scenario is best conducted from the frame of the receiver. Figure 3 shows the receiver being illuminated by light from when the source was closest to the receiver, even though the source has moved on.[4] Because the source's clock is time dilated as measured in the frame of the receiver, and because there is no longitudinal component of its motion, the light from the source, emitted from this closest point, is redshifted with frequency

Eq. 4:

In the literature, most reports of transverse Doppler shift analyze the effect in terms of the receiver pointed at direct right angles to the path of the source, thus *seeing* the source as being at its closest point and observing a redshift.

3. Circular picture A is not relevant, B is the key. Note the red dots.

One object in circular motion around the other[edit]

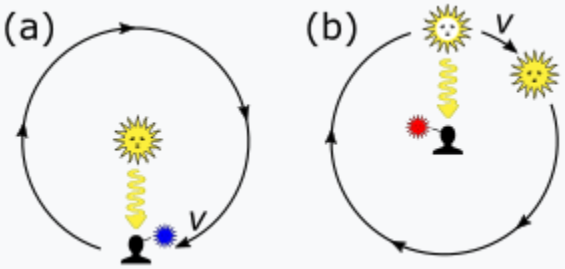

Figure 5. Transverse Doppler effect for two scenarios: (a) receiver moving in a circle around the source; (b) source moving in a circle around the receiver.

Fig. 5 illustrates two variants of this scenario. Both variants can be analyzed using simple time dilation arguments.[4] Figure 5a is essentially equivalent to the scenario described in Figure 2b, and

the receiver observes light from the source as being blueshifted by a factor of .

Figure B here is the one that matters as it is what we see. Figure 5b is essentially equivalent to the scenario described in Figure 3, and the light is redshifted.

Important conclusion!

Astronomers know of three sources of redshift/blueshift: Doppler shifts; gravitational redshifts (due to light exiting a gravitational field); and cosmological expansion (where space itself stretches). This article concerns itself only with Doppler shifts.

Note that the third source here is 'cosmological expansion' which is the fantasy with no conformation beyond the early Doppler. Once the transfer in figure 5 B is understood, the redshift is much more likely to come from the rotation of the sky relative to us as observers. The picture in figure 3 is also redshift that denies motion away. The idea of motion away becomes 'circular' reasoning and may have never existed.

The second source here is the always ignored gravitational redshift which overrides the idea of a constant speed c. The exit from a gravitational field results in a slowing of the speed, thus red shift.

The first source here is Doppler shifts. As shown Doppler gives various impressions of the motion of the source that must be resolved. A Doppler redshift can arrive from various relative motions of stars. So we can choose to accept that 'the sky of all-stars' is in circular motion around earth. (or any other central body one chooses). That circular motion adds some redshift to the light sent by all stars.