Einstein's Assumption Fails A Simple Test

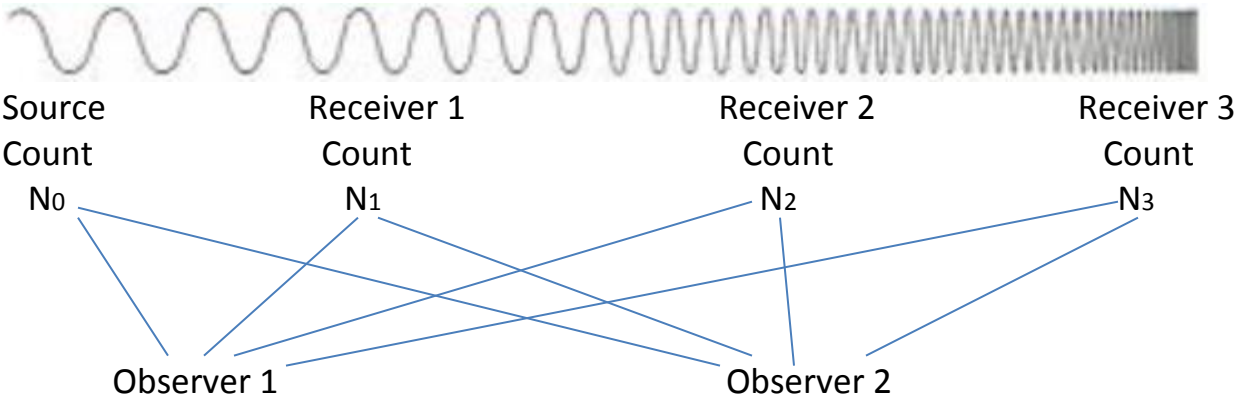
In Wikipedia, the gravitational redshift http://en.wikipedia.org/wiki/Gravitational_redshift describes Einstein's thought process in developing the general relativity theory.

Factual: "Once it became accepted that light is an electromagnetic wave, it was clear that the frequency of light should not change from place to place, since waves from a source with a fixed frequency keep the same frequency everywhere. One way around this conclusion would be if time itself were altered—if clocks at different points had different rates. This was precisely Einstein's conclusion in 1911."

Assumption: "The changing rates of clocks allowed Einstein to conclude that light waves change frequency as they move, and the frequency/energy relationship for photons allowed him to see that this was best interpreted as the effect of the gravitational field on the mass-energy of the photon. To calculate the changes in frequency in a nearly static gravitational field, only the time component of the metric tensor is important."

Wavefront Conservation Experiment Proves Photons Have Constant Frequency:

The experiment below covers a large enough amount of vacuum space in which a constant carrier EM wave leaves a source in an area of one gravity potential and travels to another area of different gravity potential. Along the route are receivers that count waves passing by and digitally retransmit their total count numerical values so observers can see the digital counts from anywhere in space. Note that there are no clocks used in this experiment.



The observers see the streaming of wavefront counts data *N0 N1 N2 and N3* are all synchronized with constant differences. This is true as long as the receivers and observers are stationary relative to each other.

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This experiment is in direct conflict with Einstein's assumption that the photons change frequency while in flight. If the photons changed frequency while in flight then the rate of counts from each receiver would not be synchronized. This non synchronization would be easily observed. Any differences in the rate of counts would cause the number of wavefronts between receivers to change with time until there is either an impossibly large number between receivers or a negative number of wavefronts, which is nonsense.

The correct interpretation is realizing that the gravity potential only affects the observer's clocks. This new interpretation means that the frequency observed is the frequency that left the source. Time flows more slowly at that red shifted source than for us, thus creating the red shift. There is no additional frequency shifting once the red shifted wave leaves the source. What we see in our telescope is actually the color as it was radiated from that source, i.e. a measure of the source gravity potential compared to our gravity potential, assuming there is no motion creating an additional Doppler red shifting.

In the new interpretation, the photon does not lose or gain energy when traveling through space. This is a very important difference compared to Einstein's model. Momentum and energy conservation will need reworking in this interpretation.

This interpretation can have important consequences when considering that very distant gravity red shifted objects may have had slower rates of time flow in the past (lower gravity potentials for a more compact universe), further shifting them into the red in the distant past. This effect could account for the so called dark energy acceleration observed for distant and old objects. It might explain the additional red shifting now being observed for objects billions of years old.

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Proof of conservation of wavefronts: Every 1 second tic from WWV propagates through space and no tics are gained or lost; this is by observation and by conservation of information and conservation of energy. Every 1 second tic is comprised of N number of oscillations of a high frequency laser. GR says that if the time between tics varies then the frequency of laser oscillations varies inversely. This results in a constant number of N waves between tics, as predicted by GR itself, i.e. wavefronts are conserved.