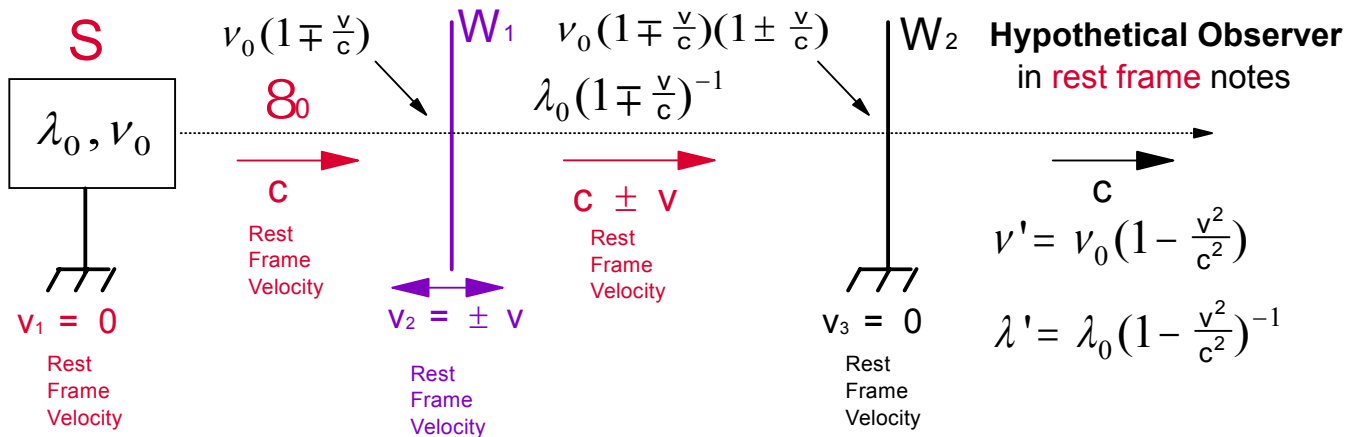


Extinction Shift Principle

Examples of AXIOM 5



Extinction Shift Rules:

- A) This is essentially **AXIOM 4** applied to the moving window W_1 which acts as a moving secondary source. Firstly, determine the *frequency of interference* that would be perceived at W_1 for the approach and recede cases (velocity $v_2 = \pm v$) due to the incident wave of wavelength λ_0 . Hint: Assume you are an observer in the frame of reference of W_1 .
- B) Using this *frequency of interference* along with the assumption that any wave re-emitted at the back face of W_1 will have exactly the same frequency as the incident wave, noted by any observer in the same frame, and would be emitted from W_1 at the velocity c , now determine the *undisturbed wavelength* that would be transmitted and then re-emitted at the back face of W_1 .
- C) Using this *undisturbed wavelength* re-emitted at the back face of W_1 , now determine the output frequency ν' of the wave re-emitted by W_2 . Show that this wave is actually the **redshift** of ν_0 and that this frequency is a second order function of $\frac{v}{c}$ which is independent of the direction of motion of W_1 , i.e., it does not matter whether the velocity $v_2 = +v$ or $v_2 = -v$.

THIS IS AN IMPORTANT FUNDAMENTAL PRINCIPLE OF THE EMISSION THEORY!

- D) Now determine the output wavelength λ' emitted from W_2 . {Hint: use same method as in B).}
- E) Show, without doing any further calculations, that by repeating the above experiment and by feeding the output of this experiment into an identical second experiment containing an additional moving window W_3 and a fixed window W_4 , an accumulative **redshift** would result in doubling the above calculated second order effect!

IMPORTANT NOTE: This is essentially the very same **PRINCIPAL AXIOM** applied to gravitation, whereby, instead the *Galilean Transformations of velocities* are this time applied to the exchange of gravitons, resulting in an accumulative effect in the second order term and a cancellation of the first order terms, the pure classical mathematical physics reason for the observed perihelion rotation effects.