## **XPXP SHORTS** DERIVE LIGHT FORMULA

## M.D. Earl 2023

We see light moving at light speed relative to us. The H/L Law states that we are moving at light speed relative to a stationary universe. Figure 1. shows a proper observer displacing during some  $\Delta t$ , while light moves away at light speed in the same time interval. By comparing the distances traveled by the observer and and the light, an equation for light position may be calculated. By differentiation, the equations for light speed and light acceleration may be found. It is seen that the exponential constant for light is 2Ho, while the exponential constant for proper motion is Ho.

Figure 1.

