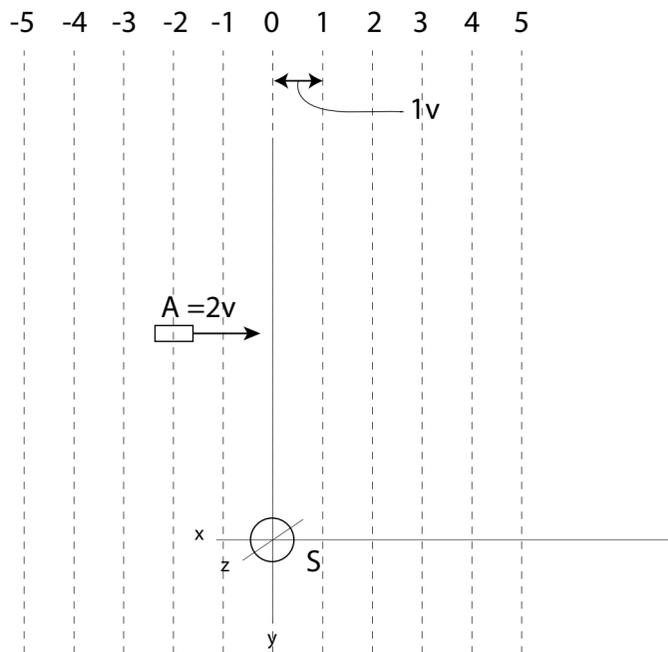


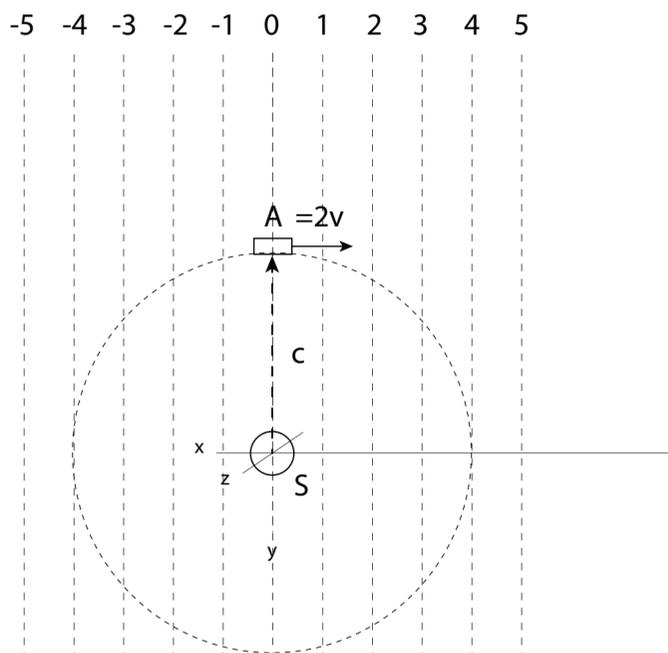
## Observations at rest with S (OS)

A is at  $-2x$  in uniform motion at  $2v$  parallel to  $x$ , in the  $+x$  direction. S is at  $0x$ . A light pulse is emitted from S



$t=0$

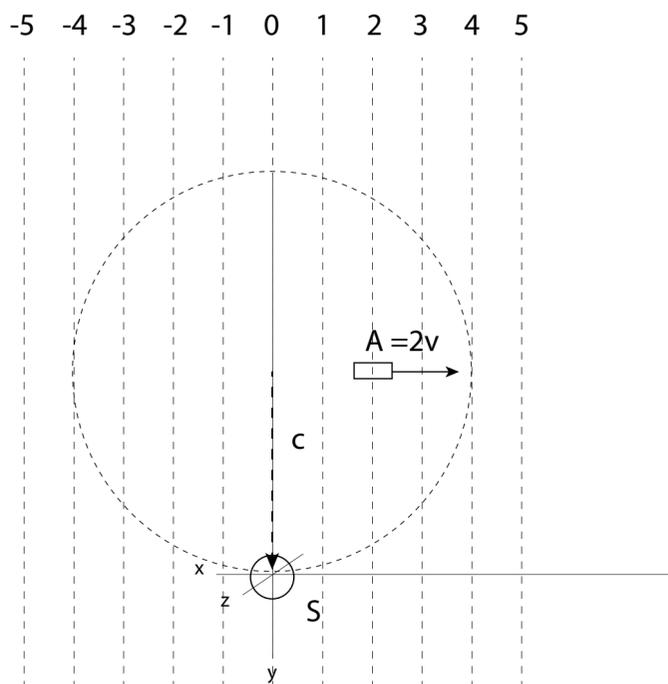
The light pulse strikes A where A and S coincide at  $0x$



$t=1$

A is at  $2x$  and the reflected light pulse returns to S

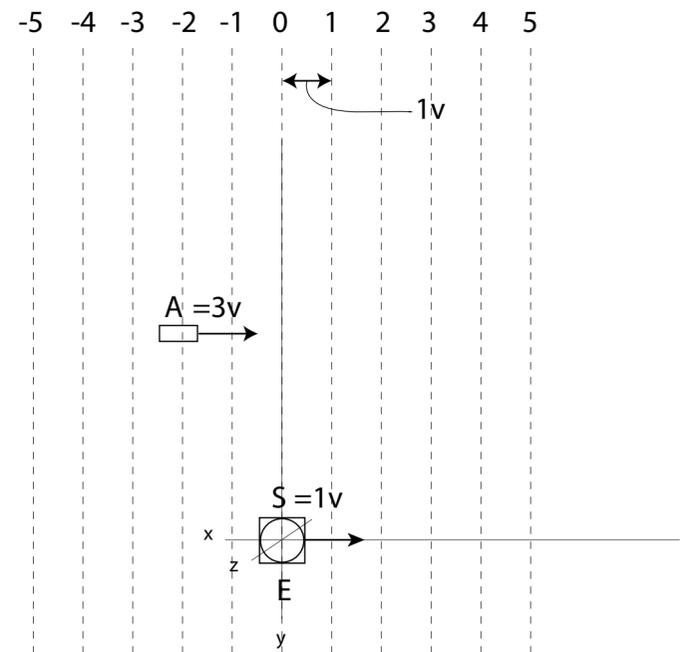
The symmetry of the motion of the light pulse across  $y$  relative to A observed at rest with S, is assumed from the symmetry of the relative motion of A and S observed at rest with S and the constancy of  $c$ .



$t=2$

## Observations at rest with E (OE)

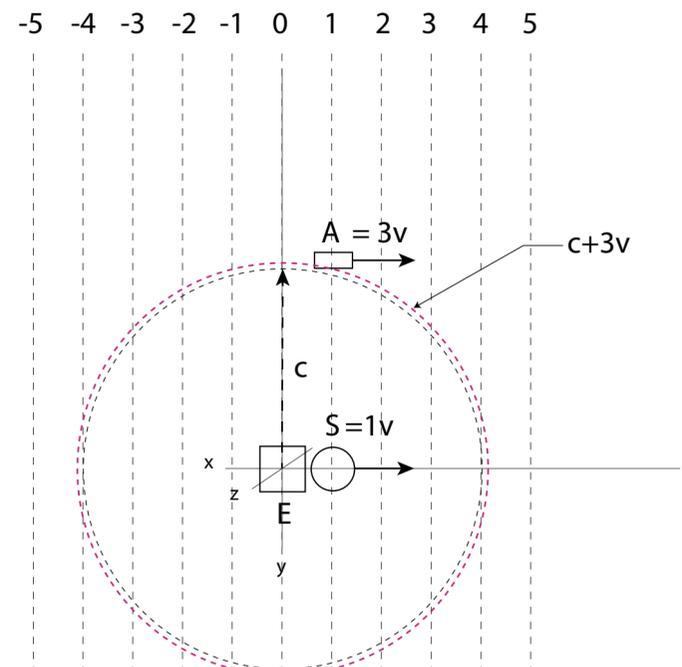
A is at  $-2x$ , in uniform motion at  $3v$  in the  $+x$  direction. S is at  $0x$ , in uniform motion at  $1v$  in the  $+x$  direction. A light pulse is emitted from S at E where they coincide at  $0x$



$t=0$

At  $t=1$  the light pulse misses A where A and S coincide at  $1x$ .

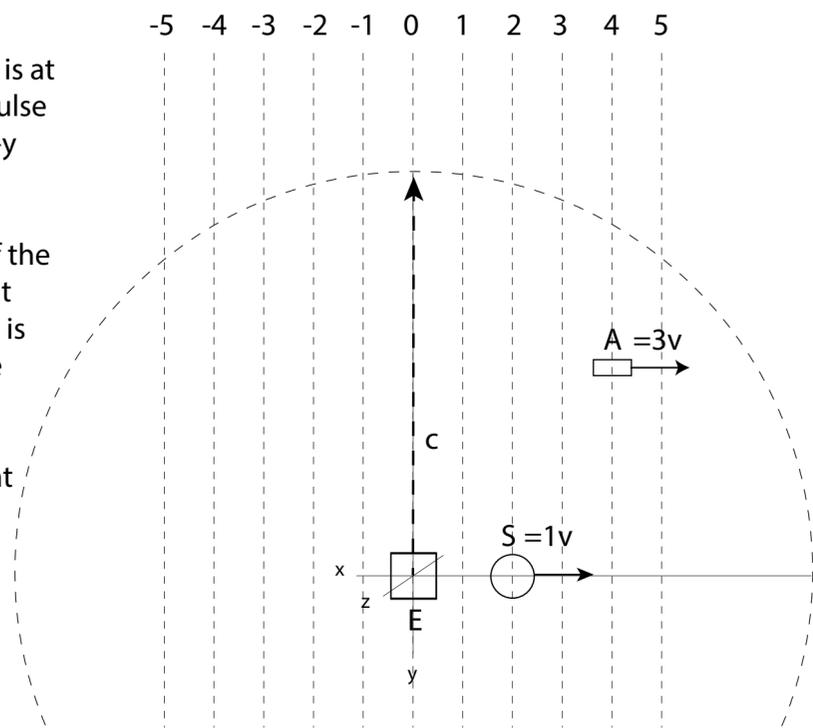
When the light pulse is considered to strike A where the speed of A and  $c$  converge, the length of the light pulse path relative to E is greater than the length relative to S.



$t=1$

At  $t=2$  A is at  $4x$ , S is at  $2x$  and the light pulse continues in the  $+y$  direction.

The asymmetry of the motion of the light pulse relative to A is assumed from the asymmetry of the motion of A and S relative to the light pulse emission at E observed at rest in E.



$t=2$

Whether the motion of the light is considered a pulse, a particle, or a wave, Galilean relativity shows the event of striking A changes between OS and OE even though both observe identical motion of A relative to S. When time dilation in S accounts for the constancy of  $c$  in S and E, the longer light pulse path - greater light time of such a path - ( $c+3v$  in OE  $t=1$ ) where the light **does** strike A observed at rest with E, will reconcile the identical, relative motion of A and S observed by both S and E (and every inertial frame) resulting in the same event for all.