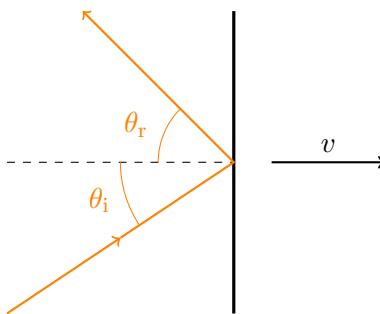


Relativistic Moving Mirror

A beam of light (consisting of noninteracting photons) approaches a perfectly reflecting mirror at an angle θ_i . The mirror is moving at a relativistic speed v normal to its surface, as shown in the diagram.



- (a) Find θ_r , the angle the reflected beam makes with respect to the normal of the mirror.
- (b) Repeat the problem if the mirror is moving parallel to its surface.