28. We imagine the bullets (of mass m and speed v each) which will strike a surface of area A of the plane within time t to $t + \Delta t$ to be contained in a cylindrical volume at time t. Since the number of bullets contained in the cylinder is $N = n(Av\Delta t)$ and each bullet changes its momentum by $\Delta p_b = mv$, the rate of change of the total momentum for the bullets that strike the area is

$$F = \frac{\Delta P_{\text{total}}}{\Delta t} = N\frac{p_b}{\Delta t} = \frac{(Av\Delta t)nmv}{\Delta t} = Anmv^2$$

where n is the number density of the bullets (bullets per unit volume). The pressure is then

$$p_r = \frac{F}{A} = nmv^2 = 2nK \ ,$$

where $K = \frac{1}{2}mv^2$. Note that nK is the kinetic energy density. Also note that the relation between energy and momentum for a bullet is quite different from the relation between those quantities for an electromagnetic wave.