$$\vec{\nabla} \times \vec{H} = \vec{J}_f + \frac{\partial \vec{D}}{\partial t} - g_{a\gamma\gamma} \sqrt{\frac{\epsilon_0}{\mu_0}} \left(\frac{\partial(a\vec{B})}{\partial t} + \vec{\nabla} \times (a\vec{E}) \right)$$