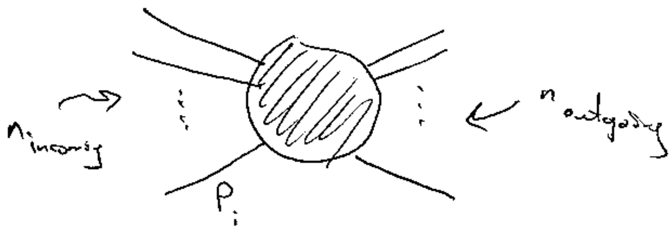
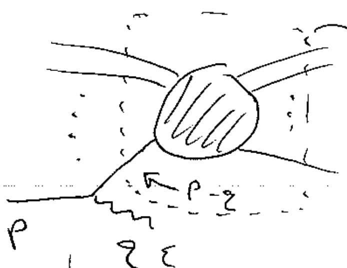
Lecture 18

<u>Now do the same thing to a more general interaction</u>



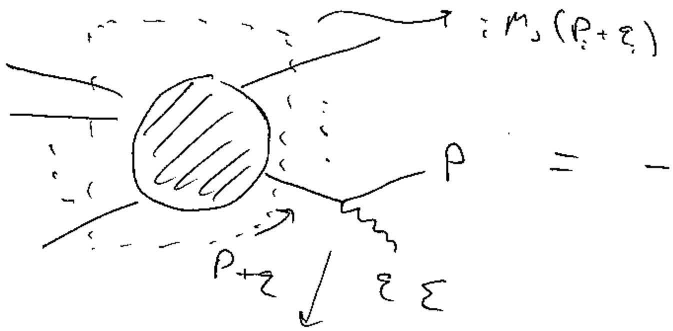
$$\equiv i\mathcal{M}_0(p_i)$$



$$\rightarrow i\mathcal{M}_0(p_i - q)$$

$$= Q\,\frac{(p\cdot\varepsilon)}{(p\cdot q)}\,i\mathcal{M}_0(p_i - q)$$

$$\rightarrow i(iQ)\frac{\left(\varepsilon_\mu\left(p_i^\mu + (p_i^\mu - q^\mu)\right)\right)}{(p_i - q)^2 - m^2}$$



$$= -Q \frac{(p\cdot\varepsilon)}{(p\cdot q)}\, i M(p_i+q)$$

$$(-Q)\,\frac{\varepsilon_\mu\left(p_i^\mu+(p_i^\mu+q^\mu)\right)}{(p+q)^2-m^2}$$