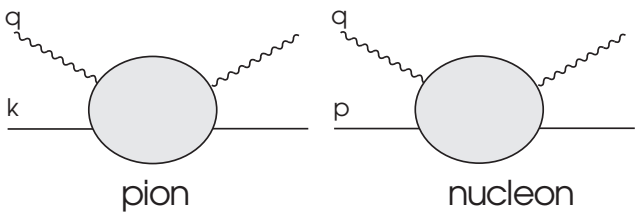
$$n_N \Pi^N_{\mu\nu}(q) = \int \frac{d^3p}{(2\pi)^3} \frac{m_N}{E_p} \frac{n(E_p)}{2\omega_k} C^N_{\mu\nu}(q,p)$$



'virtual Compton tensor' of the pion:

$$C^\pi_{\mu\nu}(q,k) = -i \int d^4x\, e^{iqx} \langle \pi(\vec{k}) | \mathcal{T}(J^{\rm em}_\mu(x), J^{\rm em}_\nu(0)) | \pi(\vec{k}) \rangle$$

similar expression for the nucleon

- 'chiral reduction formalism':

J.V. Steele et al. PRL (1996), PRD (1997)

$$g^{\mu\nu} C^\pi_{\mu\nu}(q,k) = -\frac{\rm Im}{F_\pi^2} (2\Pi^\circ_V(q^2) + \Pi^\circ_A((q+k)^2) \cdots)$$

$a_1 \to \pi e^+ e^-$

vector and avialvector correlators !