The coincidence $(e,e'p)$ cross section, in the most general situation, where all the particles can be polarized, in one-photon exchange approximation, is given by

$$\frac{d\sigma}{d\vec{p}_0' \, d\vec{p}_1'} = K \overline{\sum_{if}} \sum_{\substack{\alpha\alpha' \\ \beta\beta' \\ \delta\delta'}} \langle \alpha\beta | J^a | \delta \rangle \langle \alpha'\beta' | J^b | \delta' \rangle^* \rho^{\gamma}_{ab} \, \rho^{p_1'}_{\alpha\alpha'}$$

$$\rho^{R}_{\beta\beta'} \, \rho^{T}_{\delta\delta'} \, \delta(E_i - E_f) = K \, \rho^{\gamma}_{ab} \, W^{ab}$$

$$K = \frac{e^4}{8\pi^2} \frac{1}{q_\nu^2 \, p_0 \, p_0' \, (\epsilon - 1)}$$ kinematical factor

$q_\nu^2 = \omega^2 - q^2$, $\omega = p_0 - p_0'$ $\vec{q} = \vec{p}_0 - \vec{p}_0'$ momentum transfer

$\epsilon = \left(1 - 2 \frac{q^2}{q_\nu^2} \tan^2 \vartheta/2\right)$ polarization of the virtual photon

$\vartheta = \widehat{p_0 \, p_0'}$

ρ's are polarization density matrices:

ρ^{γ}_{ab} virtual photon , $\rho^{p_1'}_{\alpha\alpha'}$ ejectile,

$\rho^{R}_{\beta\beta'}$ residual nucleus , $\rho^{T}_{\delta\delta'}$ Target

$\alpha, \beta, \delta \ldots$ magnetic quantum numbers of the intrinsic spin of the particles

In the centre of mass frame of each particle and in the helicity basis, the matrix elements of the elm. current operator $\langle \alpha\beta | J^a | \delta \rangle$ become HELICITY AMPLITUDES