in the s -channel: if a given Regge pole R is not coupled to the state $3\bar{1}$ (or $\bar{4}2$) for special values $\overset{\circ}{\tau}_3\overset{\circ}{\tau}_1$ (or $\overset{\circ}{\tau}_4\overset{\circ}{\tau}_2$) of the transversities, then $\gamma_{\overset{\circ}{\tau}_3\overset{\circ}{\tau}_1}^R = 0$ (or $\gamma_{\overset{\circ}{\tau}_4\overset{\circ}{\tau}_2}^R = 0$).

vi) Parity conservation implies that $T_{\{\tau\}}^s$ vanishes if $(-1)^{\tau_1+\tau_2-\tau_3-\tau_4} = -\eta$, where η is the product of the four intrinsic parities. Then the phase

$$\exp\left[i\frac{\pi}{2}(\tau_1 + \tau_2 - \tau_3 - \tau_4)\right]$$

in eq. (3) is either $\pm i$ or ± 1 simultaneously in all nonvanishing amplitudes. In particular, all these amplitudes, in the forward direction, have the same phase, up to a sign, independent of the couplings.

Photoproduction of Vector Mesons as Virtual Vector Meson-Proton Scattering: Addendum.

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The Compton scattering cross-section using our result (9) now becomes

$$(12) \quad \frac{d\sigma_{\gamma p \rightarrow \gamma p}}{dt} \approx (X_\rho^2 + X_\omega^2 + X_\varphi^2)^2 \frac{d\sigma_{\pi N}}{dt} \approx X_\rho^4 \frac{d\sigma_{\pi N}}{dt} \approx \frac{1}{9 \cdot 10^4} \frac{d\sigma_{\pi N}}{dt},$$

because X_ω^2 and X_φ^2 are $\ll X_\rho^2$. This is in agreement with our earlier result, P. G. O. FREUND: *Nuovo Cimento*, **44 A**, 411 (1966), eq. (3.8) (as it appears in this reference eq. (3.8) contains a misprint: the factor $(X_\rho^4 + X_\omega^4 + X_\varphi^4)$ should read $(X_\rho^2 + X_\omega^2 + X_\varphi^2)$). For total cross-sections the equivalent of eq. (12) is

$$\sigma_{\text{tot } \gamma p} \approx X_\rho^2 \sigma_{\text{tot } \pi N} \approx \frac{1}{300} \sigma_{\text{tot } \pi N} \approx 70 \text{ } \mu\text{b}.$$