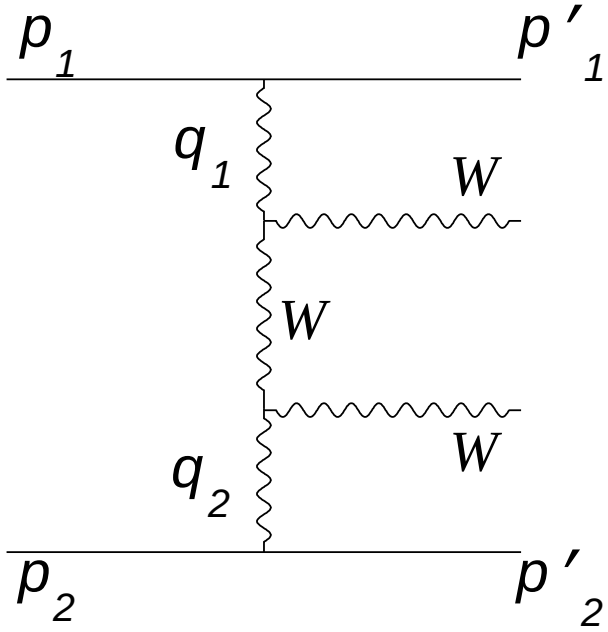
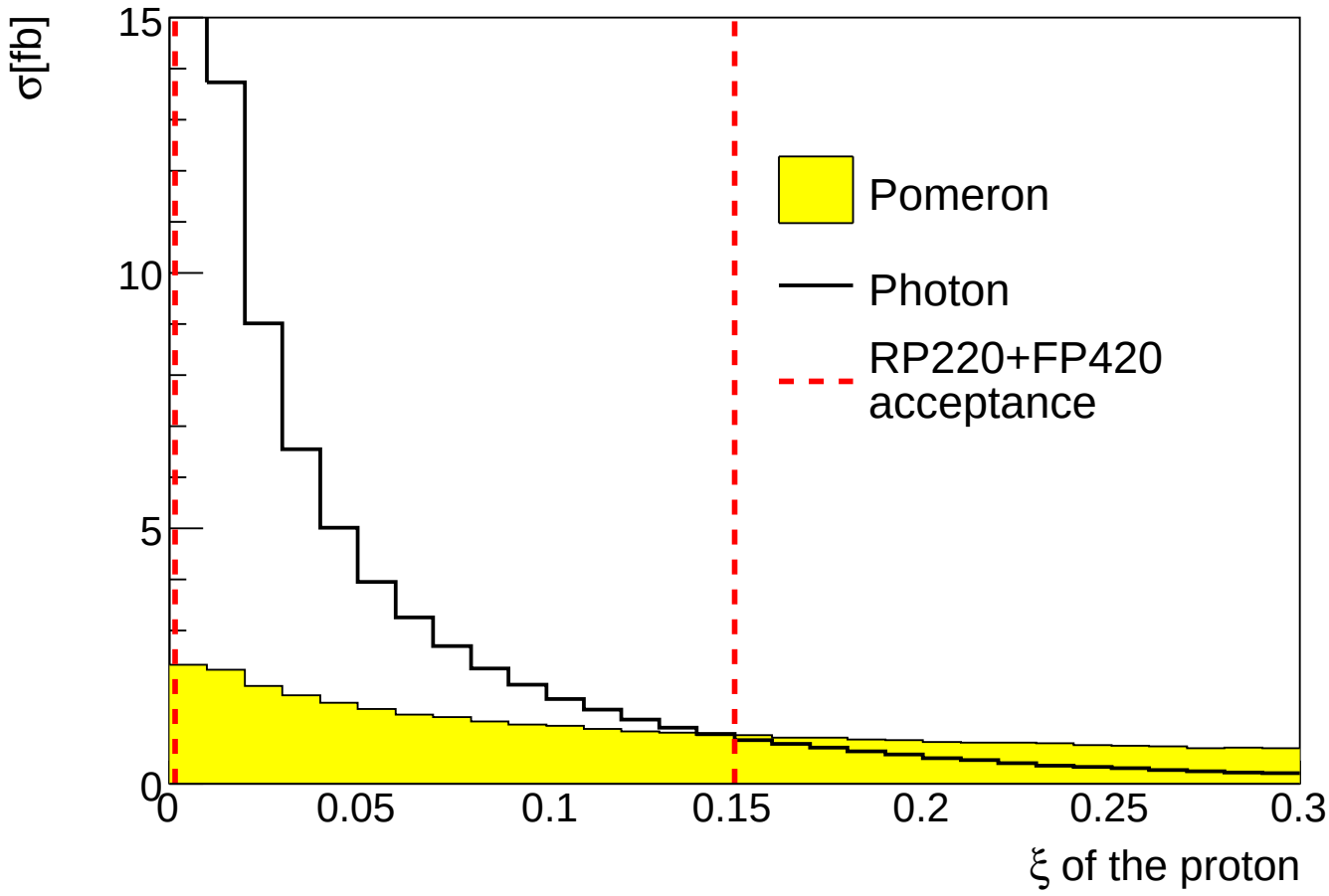
Photon anomalous coupling



- Process to be studied: $pp \to WW$
- QED process: cross section perfectly known
- Strategy: tag both protons in forward detectors in ATLAS, measure WW in central detector
- Measure cross section, comparison with SM, anomalous coupling analysis

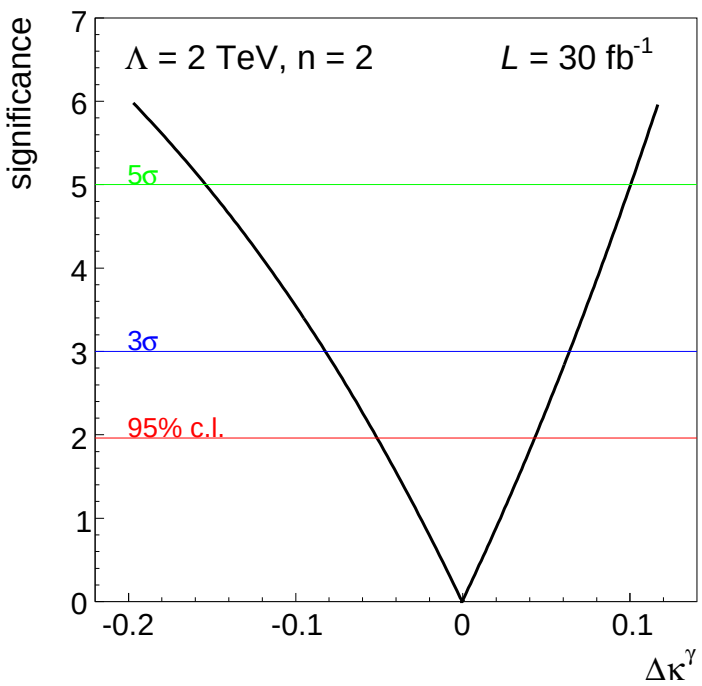
SM WW production

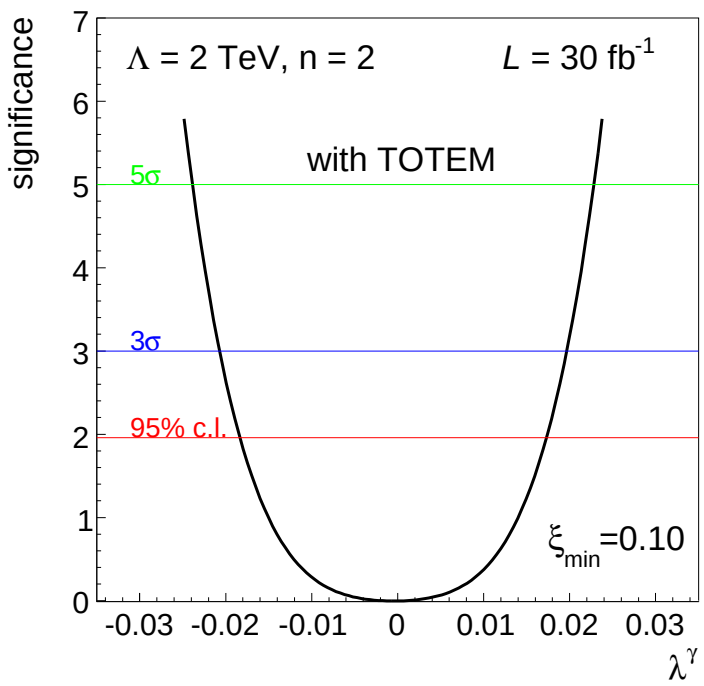


- SM cross section for $\gamma\gamma$ exchanges: 96 fb
- Main background: DPE WW production: Different ξ dependence
- 6 events expected for 200 pb^{-1} with 0.5 background, $S/\sqrt{B} \sim 9$

Anomalous coupling

$$\mathcal{L}/ig_{WW\gamma} = (W^{\dagger}_{\mu\nu}W^{\mu}A^{\nu} - W_{\mu\nu}W^{\dagger\mu}A^{\nu}) + (1+\Delta\kappa^{\gamma})W^{\dagger}_{\mu}W_{\nu}A^{\mu\nu} + \frac{\lambda^{\gamma}}{M_W^2}W^{\dagger}_{\rho\mu}W^{\mu}{}_{\nu}A^{\nu\rho}$$





- Present limits: $-0.51 < \Delta\kappa^{\gamma} < 0.52$, $-0.12 < \lambda^{\gamma} < 0.13$
- Reach in ATLAS and TOTEM: $-0.051 < \Delta\kappa^{\gamma} < 0.043$, $-0.018 < \lambda^{\gamma} < 0.017$