

# 31st International Symposium on Lepton Photon Interactions at High Energies



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## Rare electroweak production measurements

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During run 2 of the LHC the ATLAS and CMS experiments each collected nearly 140 inverse fb of pp collisions at  $\sqrt{s} = 13$  TeV. This data sample, in combination with advanced experimental techniques, enables searches for rare production processes that were so far inaccessible at previous experiments. Results will be presented of the searches for rare processes predicted by the Standard Model involving the heaviest known elementary particles. In the last year ATLAS and CMS have observed several new tri-boson production processes, completed the list of associated top-quark production processes with gauge bosons and observed four-top-quark production with a statistical significance well over 5 sigma. The measurements of production rates and differential distributions for these rare processes provide direct bounds on several Standard Model couplings.

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