

# XXVI International Workshop on Deep Inelastic Scattering and Related Subjects



Contribution ID: 80

Type: **not specified**

## Measurements of $t\bar{t}+X$ using the ATLAS detector

*Tuesday 17 April 2018 12:10 (20 minutes)*

The large centre-of-mass energy available at the proton-proton collider LHC allows for the copious production of top quark pairs in association with other final state particles at high transverse momenta. The ATLAS experiment has measured several final state observables that are sensitive to additional radiation in top anti-top quark final states. Results on the top production in association with W and Z bosons are presented as well as top pair production with a photon. Analyses probing top pair production with additional QCD radiation are also presented, including top pair production in association with additional heavy flavour jets. These measurements are compared to predictions of modern Monte Carlo generators based on NLO QCD matrix element or LO multi-leg matrix elements.

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**Session Classification:** WG5: Physics with Heavy Flavours

**Track Classification:** WG5: Physics with Heavy Flavours