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Prospects for ttZ measurements at ATLAS with the full 140 fb-¹ Run 2 dataset

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We review the recent measurement of the inclusive ttZ cross-section with 36 fb-1 of data at 13 TeV at the ATLAS experiment, using EFT considerations and background modelling for generic SUSY/DM searches as motivation for continuing to improve the precision of this result. We then present plans for a differential ttZ measurement in the 3 and 4 lepton channels with the full 140 fb-1 Run 2 dataset, and highlight a number of promising research directions, such as a re-interpretation in terms of ttZ spin correlation observables, or the possibility to unfold SUSY/DM validation regions (or even null-result signal regions) to constrain the ttZ(vv) process. Particular attention is also given to the topic of semi-leptonic top reconstruction, necessary to match the performance of the dileptonic decay channels.

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