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【307】 Search for direct top squark pair production in events with a Higgs or Z boson, and missing transverse momentum with the ATLAS detector

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Limits on the top squark mass from the LHC experiments have reached the TeV scale in the most favourable scenarios. More experimentally challenging models are now being investigated, such as scenarios predicting complex decay chains and compressed mass spectra.

In this context, the prospects for an ATLAS search for top squark pair production in events with either a Z or a Higgs boson, with the full run 2 dataset will be presented.

Two final states are investigated, both containing high transverse momentum and either a high multiplicity of jets originating from b-quarks, to target events with a Higgs boson in the final state, or a large lepton multiplicity, two of which have an invariant mass compatible with the Z boson.

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