

# Discovery Potential for Di-lepton and Lepton+ETmiss Resonances at High Mass with ATLAS

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The discovery potential for a heavy new resonance decaying into di-lepton pairs, or into a high pT lepton and missing ET, using the ATLAS detector at the LHC is presented. Due to the simplicity and robustness of the di-lepton (or lepton+ETmiss) final states, they are ideal channels in which to search for new physics. The unprecedented center-of-mass energy available at the LHC allows for the exploration of mass regions that are inaccessible to present-day colliders. The prospects for discovering physics beyond the Standard Model with an integrated luminosity in the range between 100 pb<sup>-1</sup> and 10 fb<sup>-1</sup> are discussed.

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