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Physics Beyond the Standard Model at a High-Luminosity LHC with the ATLAS Detector CHRIS POLLARD, Duke University, ATLAS COLLABORATION — The Phase 2 upgrade of the ATLAS detector will greatly increase its ability to probe physics beyond the Standard Model. Using parameterizations of detector performance, we present the expected gain in sensitivity to an extended electroweak symmetry-breaking sector and to new high-mass resonances with dilepton and ditop final states for the improved ATLAS detector and for the LHC delivering between $1~\rm{ab^{-1}}$ and $3~\rm{ab^{-1}}$ of data at a center-of-mass energy of 14 TeV.

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