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Projected ATLAS Electron and Photon Trigger Performance in Run 3

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ATLAS electron and photon triggers covering transverse energies from 5 GeV to several TeV are essential to record signals for a wide variety of physics: from Standard Model processes to searches for new phenomena. During Run 3 (2021-2024) main triggers used for those physics studies will be a single-electron trigger with ET threshold around 25 GeV and a diphoton trigger with thresholds at 25 and 35 GeV. Relying on those simple, general-purpose triggers is a robust trigger strategy, tested already in Run 2 (2015-2018), at a cost of slightly higher trigger output rates, than to use a large number of analysis-specific triggers. In preparation for Run 3 data-taking, the ATLAS detector is undergoing an upgrade of the first, hardware, level of the calorimeter trigger and trigger software is being migrated to the multi-threaded framework AthenaMT. Impact from these modifications on the electron and photon triggers as well as their projected performance in Run 3 is presented.

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