



DARK SECTOR SEARCHES ON ATLAS

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February 1, 2021

Zoom Link: <https://laurentian.zoom.us/j/95374305990?pwd=cmdMU1pYdGVzallPa3ZCK3VZUmtkUT09>

Meeting ID:
953 7430 5990

1:00pm ET

While the LHC is busy fulfilling its mission of finding and studying the Higgs boson, many of us were hoping to find signs of physics beyond the standard model in LHC data. Sadly nature hasn't revealed any of its secrets to us yet. But there are still many stones to be turned over. One of these stones is exploring non-standard ways of finding particles, using non-standard reconstruction of objects. Much of the commonly used reconstruction algorithms rely on promptly produced particles, at the collision vertex. But a whole class of models predicts long-lived particles of varying lifetimes from mm to well beyond the reach of ATLAS. Some recent searches for such displaced searches on ATLAS, many of them targeting dark sector searches will be presented, with a focus on the new level of understanding of our detector that is needed to obtain such results.

