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## Evolution of the ATLAS analysis model for Run-3 and prospects for HL-LHC

*Tuesday, November 5, 2019 11:15 AM (15 minutes)*

With an increased dataset obtained during CERN LHC Run-2, the even larger forthcoming Run-3 data and more than an order of magnitude expected increase for HL-LHC, the ATLAS experiment is reaching the limits of the current data production model in terms of disk storage resources. The anticipated availability of an improved fast simulation will enable ATLAS to produce significantly larger Monte Carlo samples with the available CPU, which will then be limited by insufficient disk resources.

The ATLAS Analysis Model Study Group for Run-3 was setup at the end of Run-2. Its tasks have been to analyse the efficiency and suitability of the current analysis model and to propose significant improvements to it. The group has considered options allowing ATLAS to save, for the same data/MC sample, at least 30% disk space overall, and has given directions how significantly larger savings could be realised for the HL-LHC. Furthermore, recommendations have been suggested to harmonise the current stage of analysis across the collaboration. The group has now completed its work: key recommendations will be the new small sized analysis formats DAOD\_PHYS and DAOD\_PHYSLITE and the increased usage of a tape carousel mode in the centralized production of these formats. This talk will review the recommended ATLAS analysis model for Run-3 and its status of the implementation. It will also provide an outlook to the HL-LHC analysis.

### Consider for promotion

Yes

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