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## Invited talk by Reijo Keskitalo (LBNL) on "Integrated data analysis and end-to-end simulations"

*Thursday, 26 May 2022 09:00 (40 minutes)*

All data analysis for an experiment is, at least implicitly, integrated. It all aims to distill scientific knowledge from a common data set. Whether the architects of the data reduction pipelines make the integration explicit is influenced by external constraints (processing power, availability of accurate models) and design strategy (highly modular or tightly coupled). Regardless of the case, need for faithful simulations of the deliverable data set often lead to end-to-end simulations that end up integrating all of the analysis modules together. In my talk I will review the data reduction and end-to-end simulation strategies employed in the production of Planck public data releases, discuss the importance of integrating simulations into early development work and make connections with the next generation CMB experiments that are right now designing their data analysis pipelines.

**Session Classification:** Data Analysis Interdependencies