



Contribution ID: 427

Type: **Experimental poster**

## Hyperloop – The ALICE analysis train system for Run 3

*Thursday, June 10, 2021 6:45 PM (1 hour)*

ALICE analysis mostly deals with large datasets using the distributed Grid infrastructure. In Run 1 and 2, ALICE developed a system of analysis trains (so-called “LEGO trains”) that allowed the user to configure analysis tasks (or wagons) that are expected to be run on the same data. The LEGO train system builds upon existing tools: the ALICE analysis framework as well as the Grid submission and monitoring infrastructure. This centralized system improved the resource utilization and provided a friendly user interface (UI), in addition to bookkeeping functionalities. Currently, 90% of ALICE analyses use the train system. The ongoing major upgrade for LHC Run 3 will enable the experiment to cope with an increase of lead-lead collision data of two orders of magnitude compared to the Run 1 and 2 data-taking periods. In order to process this unprecedented data sample, a new computing model has been implemented, the Online-Offline Computing System (O<sup>2</sup>). Analysis trains will also be the main workhorse for analysis in Run 3: a new infrastructure, Hyperloop, is being developed based on the successful concept of the LEGO trains. The Hyperloop train system includes a different and improved UI using modern responsive web tools, bookkeeping, instantaneous automatic testing, and the production of derived skimmed data. So far, about 600 Hyperloop trains have been successfully submitted to the Grid and ALICE analysis facilities using converted Run 2 data. An overview of ALICE train system concept will be exposed in this poster, highlighting the improvements of the new Hyperloop framework for analysis in Run 3.

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**Session Classification:** Poster Session

**Track Classification:** Upgrade & Future