Current work

Two analyses:

- *Testing CPT symmetry via high precision mass measurements of multi-strange baryons*

    (Iouri Belikov, David Chinellato, Antonin Maire, Kai Schweda, Georgijs Skorodumovs)

    → analysis done, results approved and presented at SQM + ICHEP

    → currently writing the paper draft

- *Strange hadron production in Pb-Pb at 5.36 TeV* (David Chinellato, Lucia Tarasicova)

    → Large efficiency fluctuations with centrality (~10% diff. between most central and peripheral coll.)

    → Studying the effect of occupancy: is there a region in occupancy to perform a reliable measurement?

    → Extension to very low mult. collisions and UPC, with Roman Nepeivoda (ALICE, Lund)

    → Adaptation of the data model to allow cascade analysis using ML, with Gianni Liveraro (ALICE, Campinas)

Current work

Service work:

- HY datasets management (dataset creation/deletion)

  → 0.25 FTEs

  → if you want to change the settings of a dataset (submission time, etc), don't hesitate to ask ;-)

- Implementing mass constraints in Millepede for the ITS alignment

  → no FTEs (yet), not necessary though

  → Still at stage 0 = understanding Ruben's implementation of Millepede in O2

Miscellaneous:

- Preparation of O2 Analysis Tutorial for the PWG-LF

  → Preparation of the exercises for the strangeness part

  → Still need to prepare the slides

Future work and goals

Analyses:

- *Testing CPT symmetry via high precision mass measurements of multi-strange baryons*

  → **Finish writing the draft and publish results asap**

- *Strange hadron production in Pb-Pb at 5.36 TeV*

  → **Have a preliminary for SQM2025**

- **Start a new analysis on hidden charm production using strange hadrons**

  η_C is relatively unexplored experimentally due to <u>challenging background</u>

  → could be reduced using (multi-)strange hadrons:

$\eta_C(1S) \to \Lambda\bar{\Lambda}$ (B.R. 1.02×10^{-3})		$\eta_C(1S) \to \Xi^-\bar{\Xi}^+$ (B.R. 9.0×10^{-4})
$J/\psi \to \Lambda\bar{\Lambda}$ (B.R. 1.89×10^{-3})		$J/\psi \to \Xi^-\bar{\Xi}^+$ (B.R. 9.7×10^{-4})
$\chi_{c0}(1P) \to \Lambda\bar{\Lambda}$ (B.R. 3.59×10^{-4})		$\chi_{c0}(1P) \to \Xi^-\bar{\Xi}^+$ (B.R. 4.45×10^{-4})

Service work:

- HY datasets management (dataset creation/deletion)

  → **continue this activity**

- Implementing mass constraints in Millepede for the ITS alignment

  → **need to find some time**

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Backup slides