

Physics Analysis: topics

LNF Alice Weekly Meeting
March 14th, 2017.

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Analysis topics in the Light-Flavor PWG



- SPECTRA-PAG
 1. $\pi/K/p$ versus multiplicity at 13 TeV (together with Pranjal Sarma), mainly ITS-SA and TPC part [very urgent topic!]
 2. $\pi/K/p$ analysis of the new p-Pb data at 8.16 TeV or in very high multiplicity p-Pb at 5.02 TeV
- RESONANCE-PAG
 1. Resonance production (except ϕ and K^*) in the new p-Pb data at 8.16 TeV or in very HM p-Pb at 5.02 TeV
- NUCLEI-PAG
 1. Production of (anti-) ^3He nuclei with the increased statistics in pPb collisions at 5.02 TeV deuterons at pp 5TeV
 2. Searches for Exotica (several topics)



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Analysis of the spectra on the new data



$\pi/K/p$ analysis of the new $p - Pb$ data at 8.16 TeV (or in very high multiplicity p-Pb at 5.02 TeV)

Advantages in the **LNF perspective**:

1. it is a measurement on the new data (good in the perspective of publication)
2. light-flavor spectra represent an essential reference for any other measurement
3. given the extended range in the momentum covered with the new data, different subdetectors will play a role



Analysis of the spectra on the new data - 2



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1. usually, different people/groups perform separated analysis in a given momentum range involving specific subdetectors
2. analysis have then to be globally combined in the whole range
3. it is not easy and often time consuming



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The analysis team in LNF can analyse the whole range (one people/one detector) and then take care of the combination on the whole spectrum



Strangeness



Together with the involvement in the SPECTRA PAG, Francesca supports our interest in joining the STRANGENESS PAG (more interesting from a physics point of view)

Spectra analysis is a good starting point → all the (final) hadrons, main detectors and PID techniques involved

Livio Bianchi (STRANGENESS-PAG coordinator) agreed as well on the plan and he is thinking on possible analysis in his PAG



Schedule



- On March 21st: meeting with Francesca Bellini and A. Kalweit to officially define the first analysis task of LNF
- March/April: meeting with Francesca Bellini, A. Kalweit and L. Bianchi to explore the analysis possibility in the STRANGENESS PAG
- results can be attended for the next fall
- internal review of the analysis note by the end of the year
- paper submission to the journal: one year from now

expected timeline from
Francesca experience

