INTT Software Development and Λ_c Analysis

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Goals for the workshop: Finish hot-dead channel classification scheme, and make initial progress in Λ_c physics analysis

My To-Do List:

- Hot/Dead channel analysis:
  - Design an algorithm to classify channel status based on hitrate
  - Current strategy is to model fit hitrate distribution as sum of Gaussians,
  - Then use Bayes' Theorem to classify channels based on hitrate
  - Implement it in software workflow and test for consistency
- Analyze Λ_c production in Monte-Carlo and prepare for pp
  - Via the $\Lambda_c^{\pm} \to pK\pi$ decay chain
  - First measurements of Λ_c production at $\sqrt{s} = 200\text{GeV}$ by STAR show Λ_C/D_0 production is higher than PYTHIA predicts [1]
  - Goal for workshop is to parse existing files for physics analysis
- Help and contribute to other INTT software as needed

References

[1] J. Adam *et. al.* (STAR), (2020), arXiv:1910.14628 [nucl-ex]