Contribution ID: **7** Type: **not specified**

# Exclusive analysis of the pp -> ppKK reaction with HADES detector

*Friday, 20 September 2024 15:05 (25 minutes)*

In this study, we present an exclusive analysis of the \textit{pp} $\rightarrow$ \textit{ppKK} reaction with data collected by the HADES detector during February 2022. In the course of this analysis, we developed a neural network-based particle identification procedure (PID), which compensates for the differences between simulation and experiment via a domain adversarial technique. We efficiently suppress background by means of kinematic refit with a 4C constraint, corresponding to the conservation of 4-momentum.

We observed clear signals from $\phi(1020) \rightarrow KK$ and $\Lambda(1520) \rightarrow pK$ with their parameters consistent with PDG data within one standard deviation. However, the formation of $p\phi$ intermediate state doesn't seem to happen. This talk will present the details of our event selection procedures, efficiency corrections and prospects for further understanding of the reaction mechanism

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**Session Classification:** Plenary session 7