

# What I am doing?

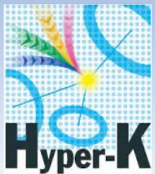


**Denis Carabadjac**

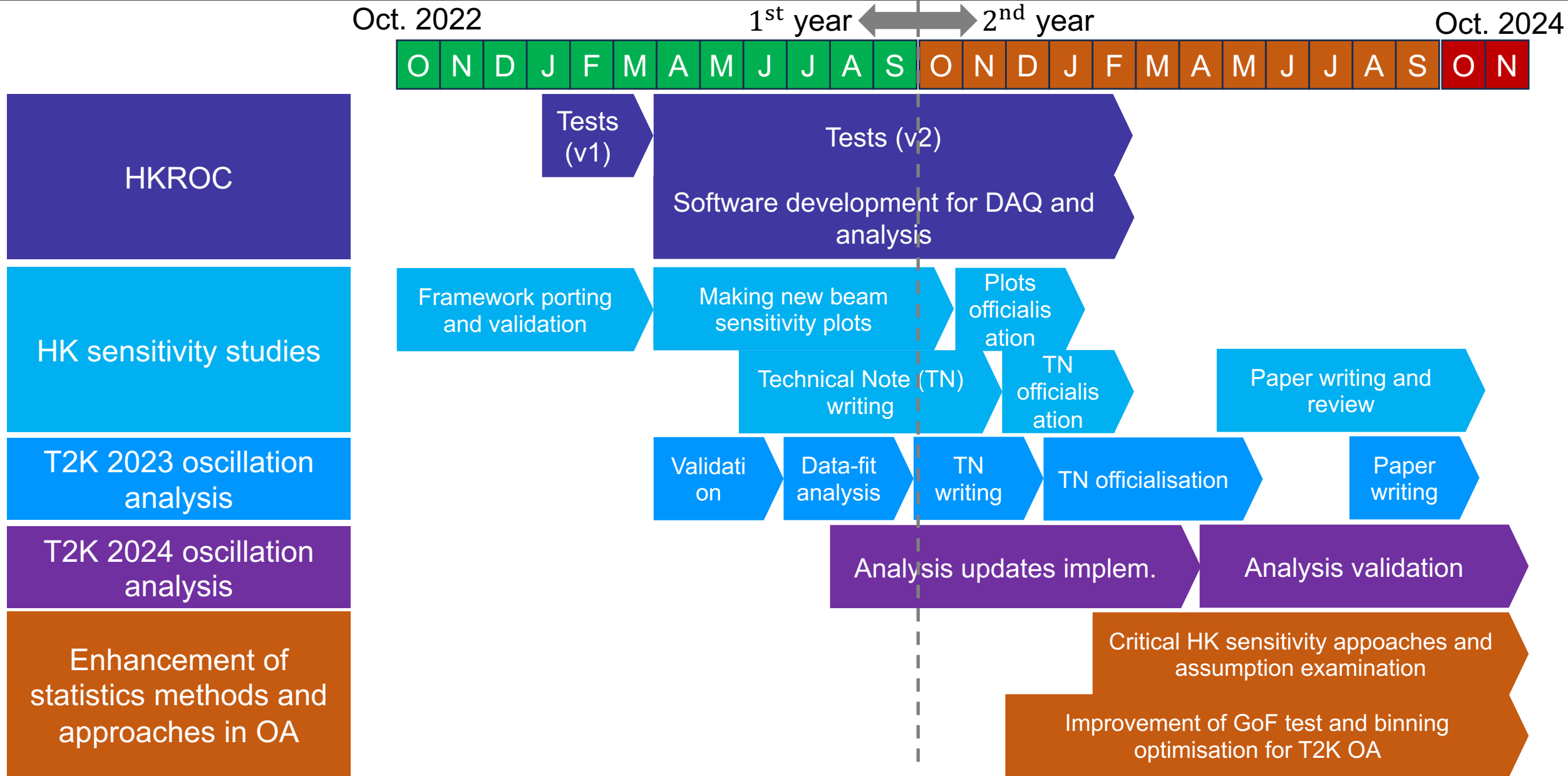
dcarabadjac@llr.in2p3.fr

**LLR group meeting**

18.12.2024

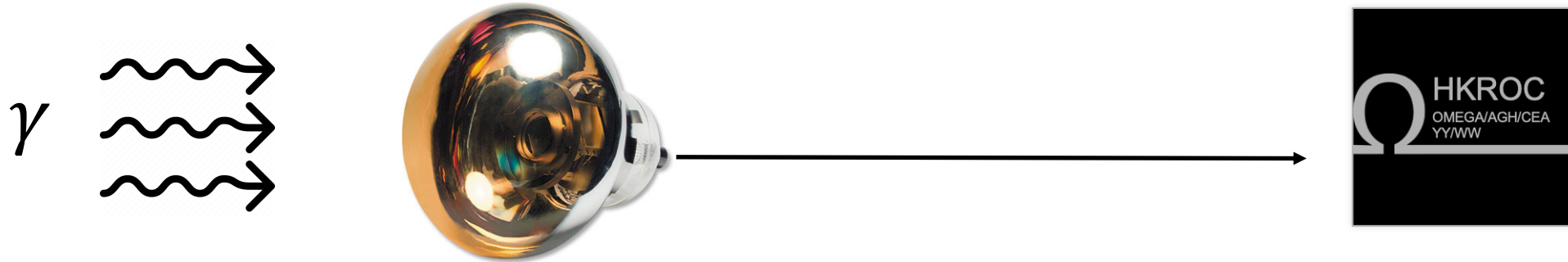


# My PhD

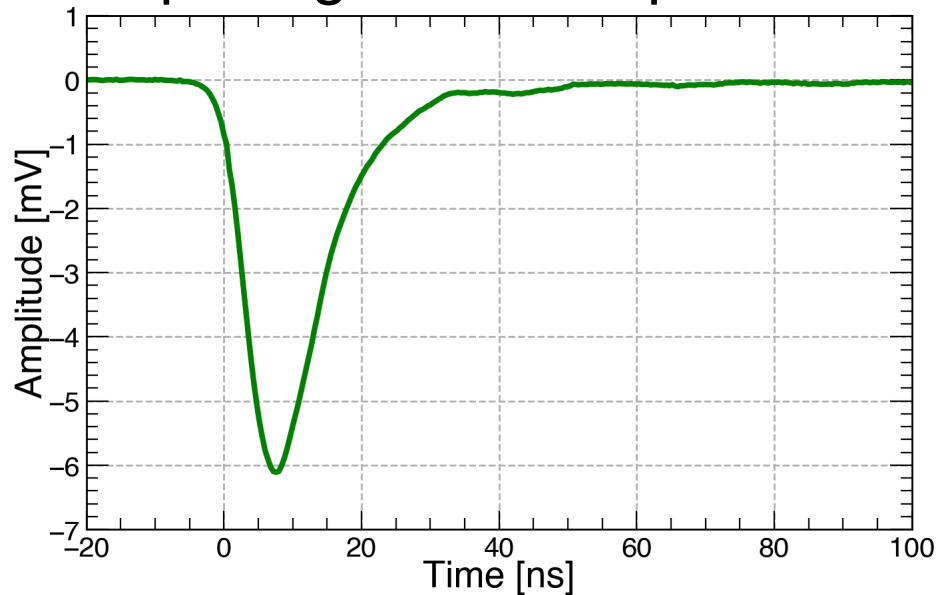


# HKROC

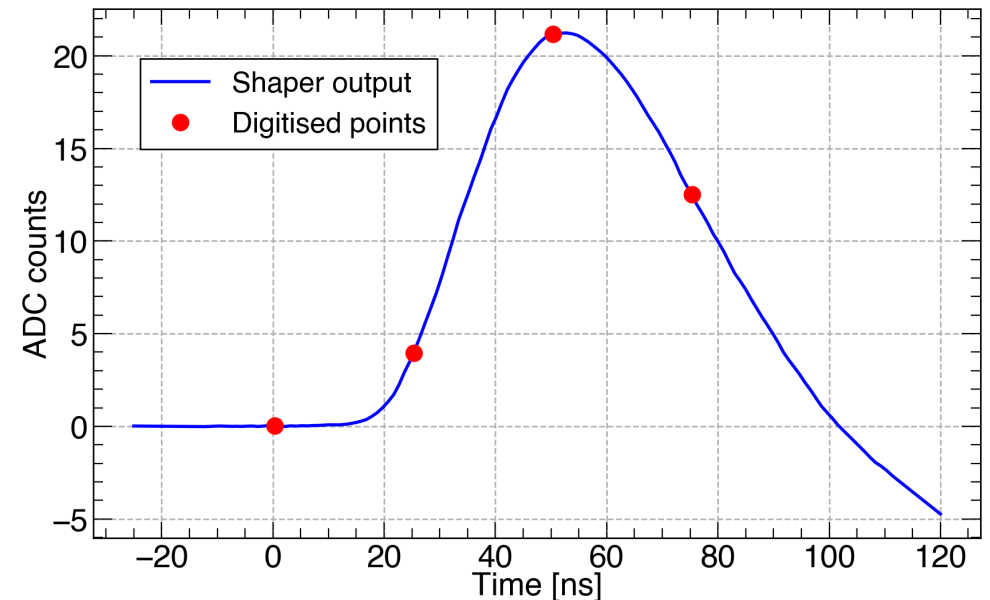
- HKROC is a waveform digitizer: reconstructs the full shape of the charge-signal waveform and provides extremely precise timing measurement.



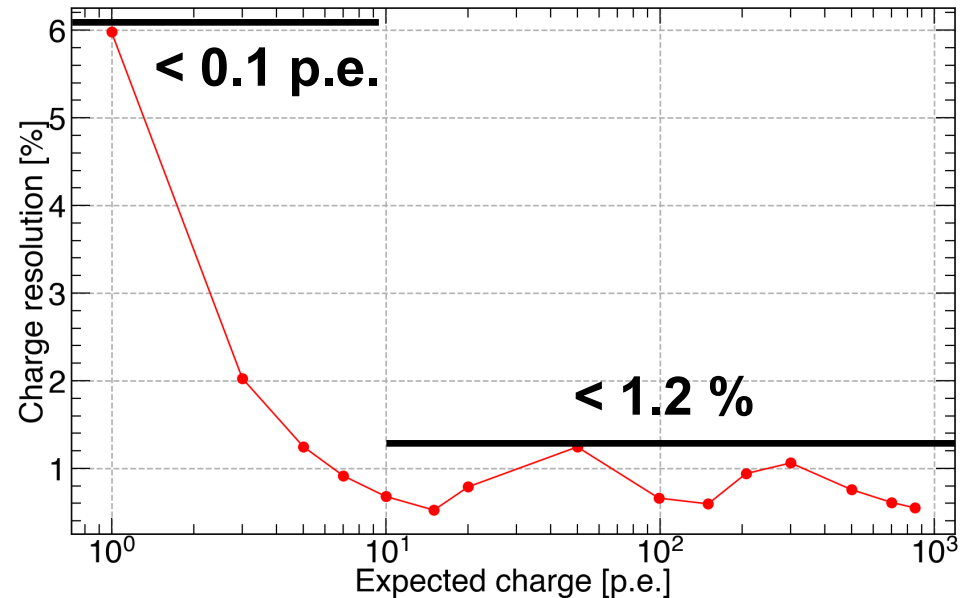
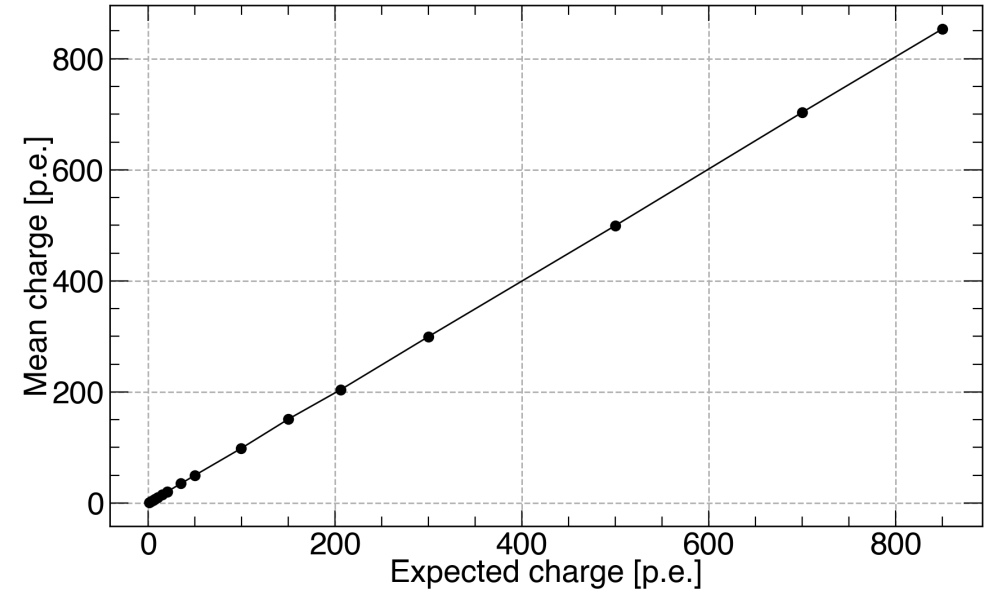
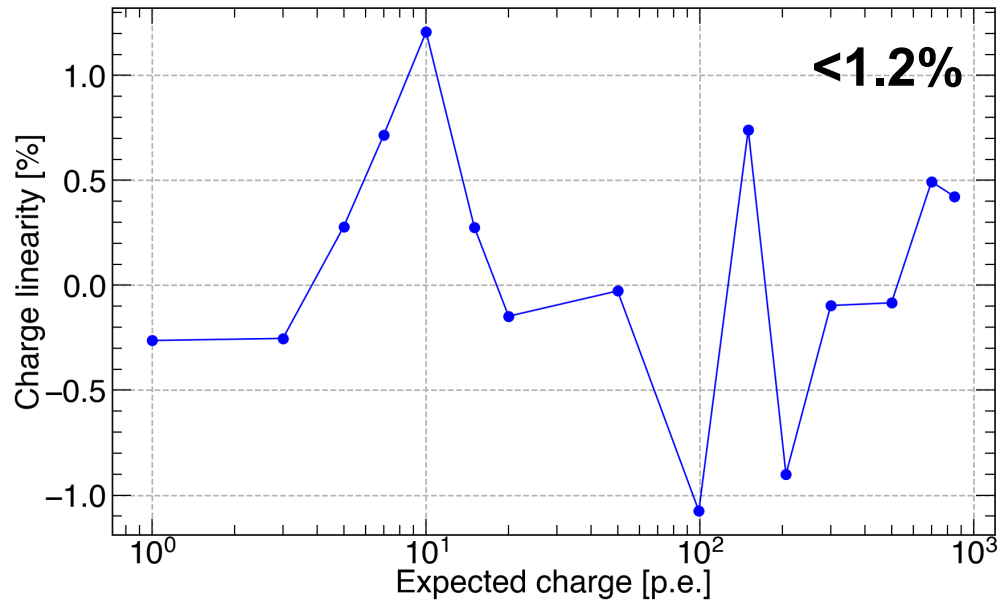
PMT input signal of one photoelectron (p.e.)



Digitisation output (red points)

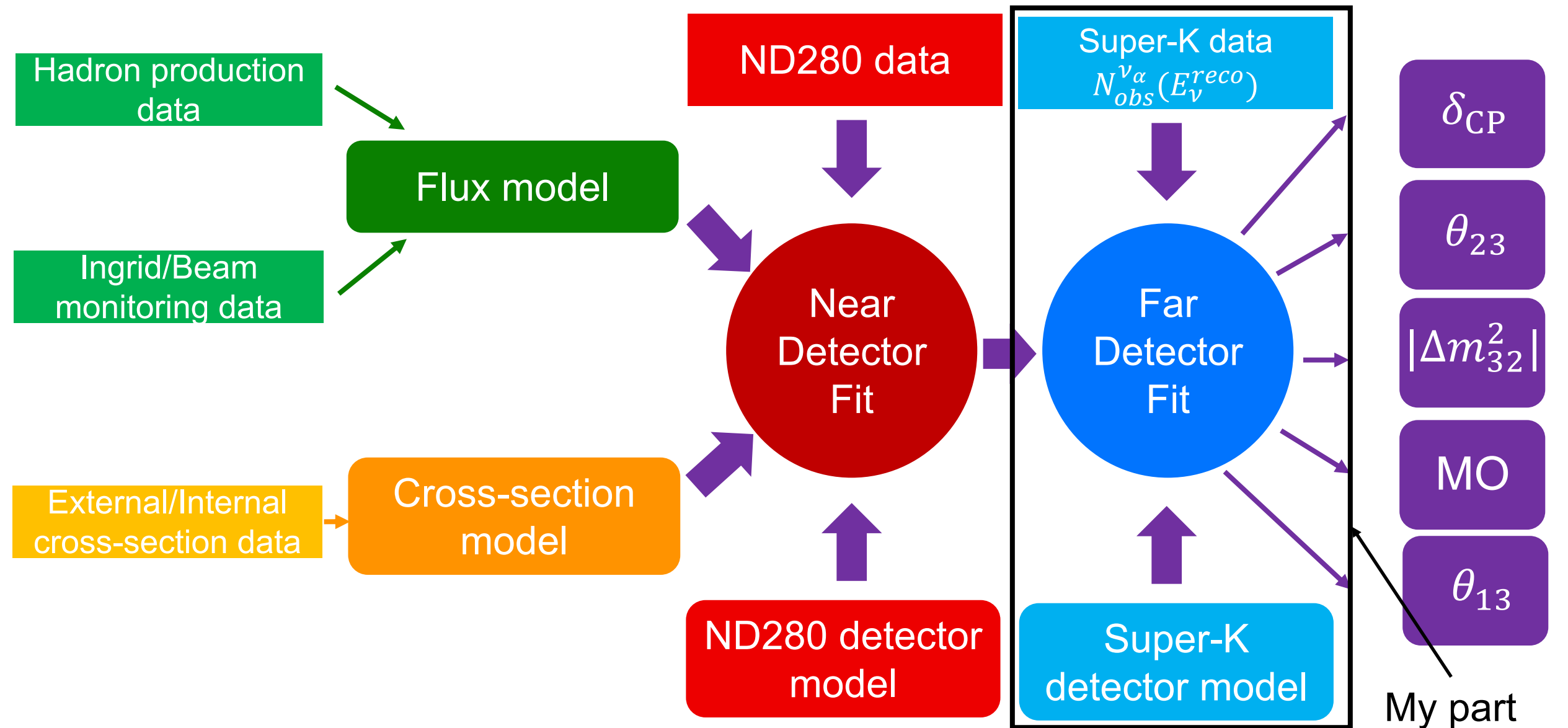


# HKROC: Charge reconstruction



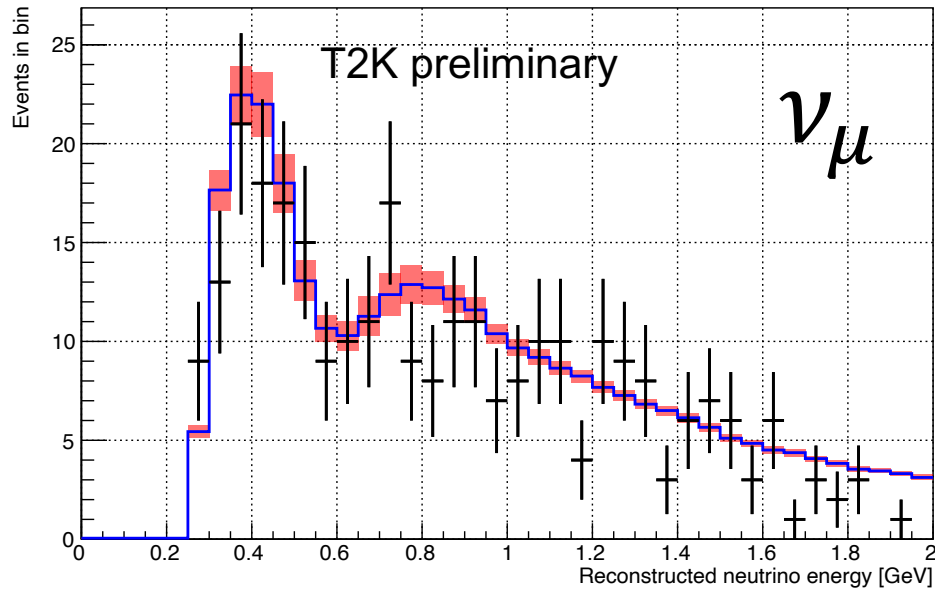
**Charge linearity:**  
**< 1.2 % in all charge range**

**Charge resolution:**  
**< 0.1 p.e. for charge < 10 p.e**  
**< 1.2 % for charges > 10 p.e.**

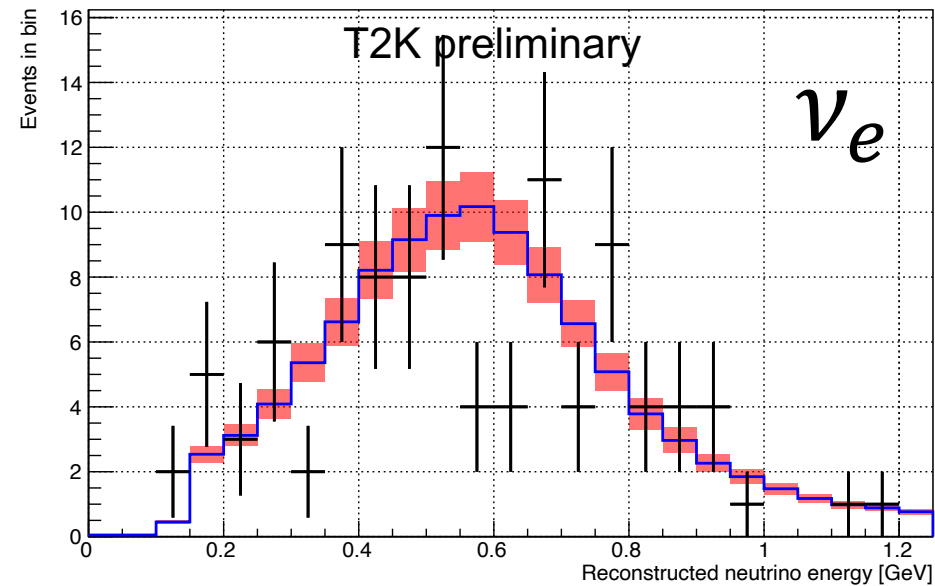
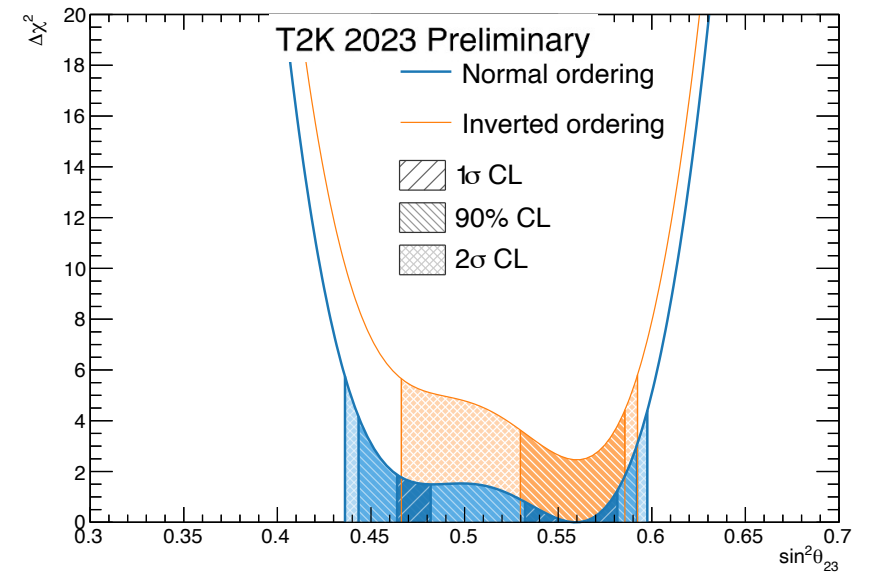


My part

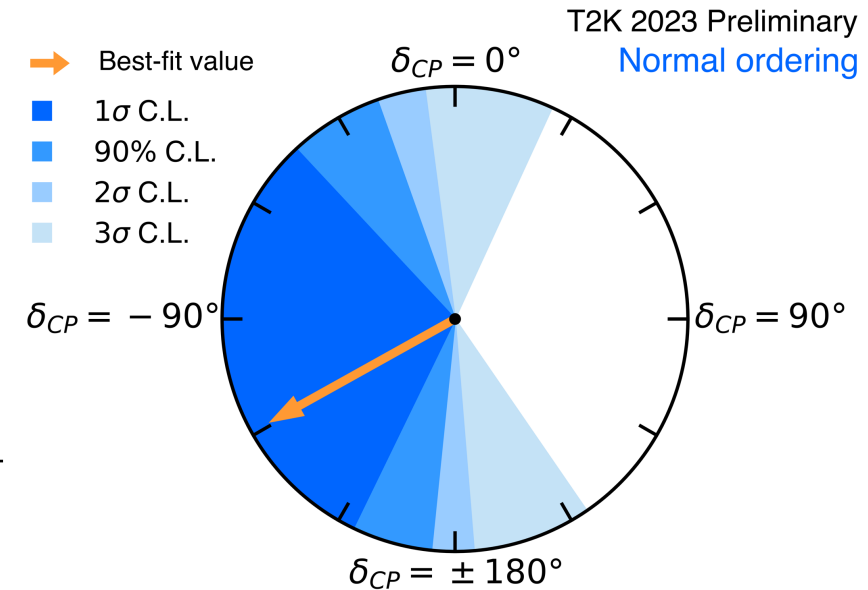
# T2K Oscillation Analysis



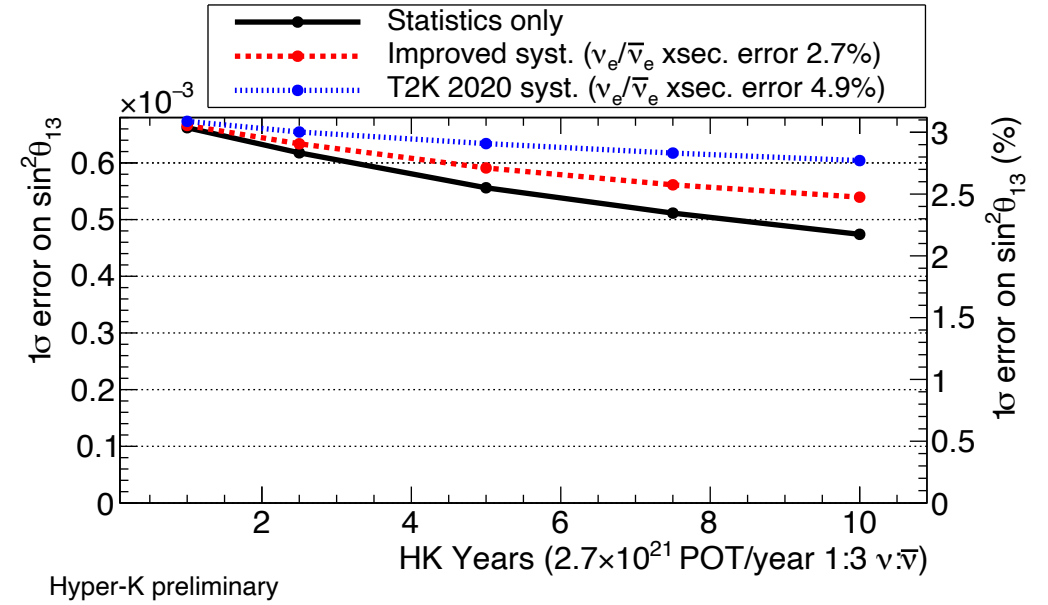
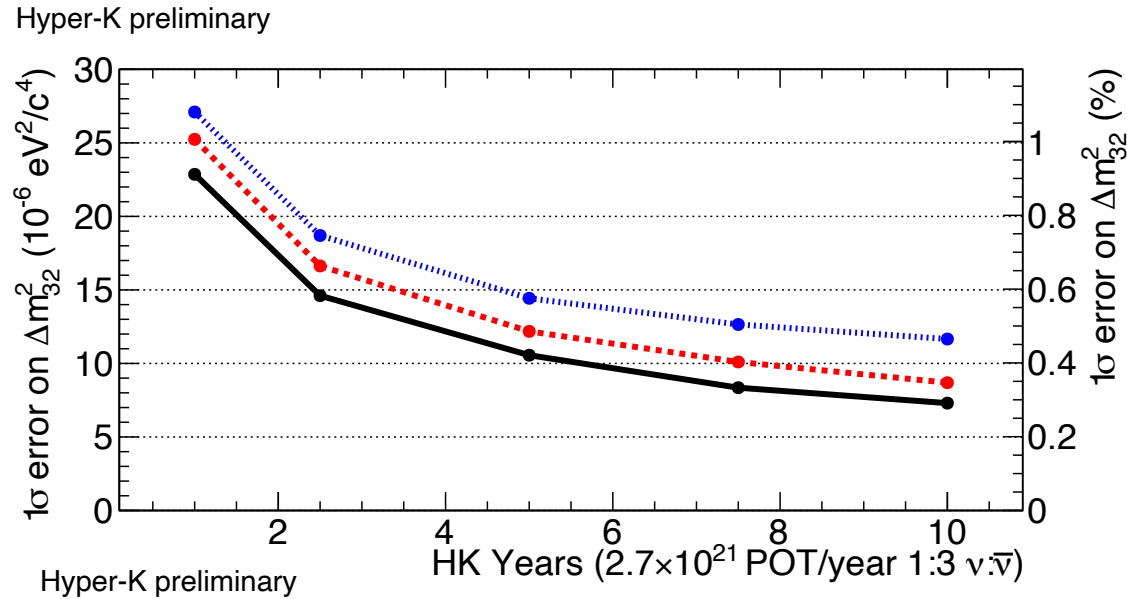
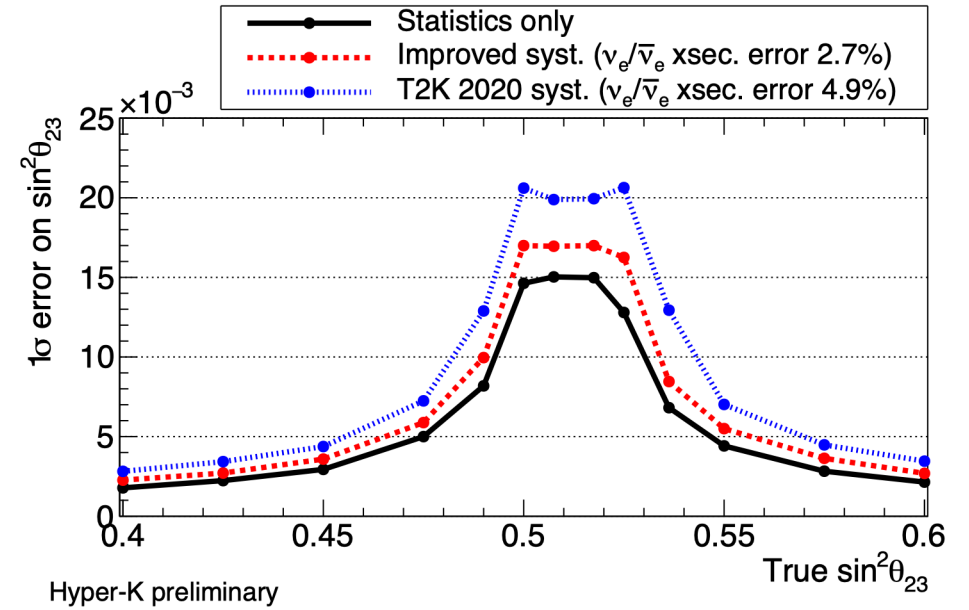
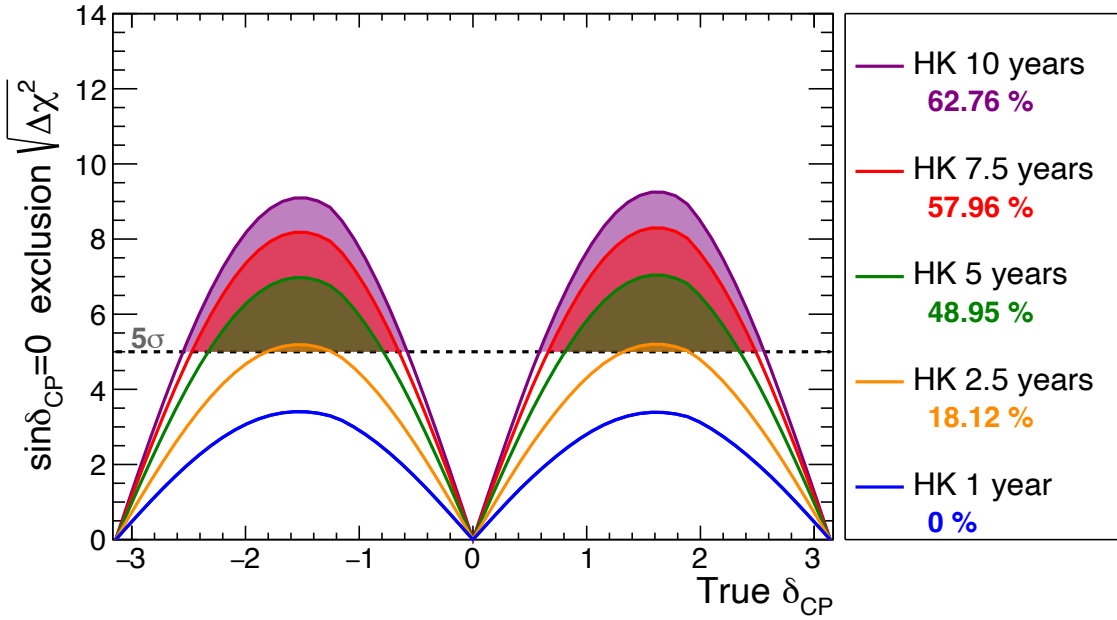
I was analyser for OA2023



And I am the main analyser  
for OA2024  
Validation is ongoing



# Hyper-K sensitivity studies



# My PhD

