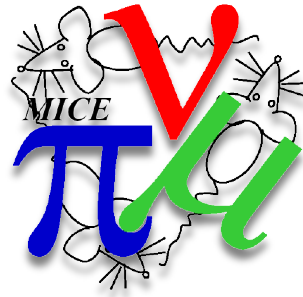


# MCS in LH2 (Field-off)

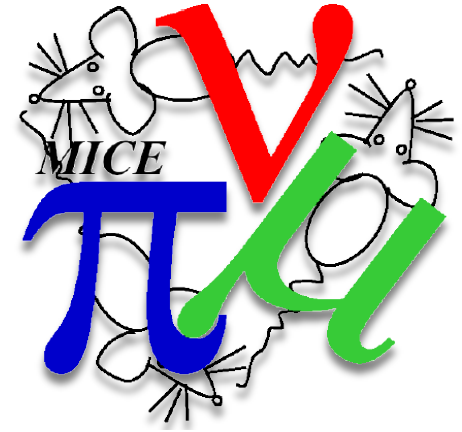


Gavriil Chatzitheodoridis  
PhD **Supervisors:** Dr. Kevin Ronald &  
Prof. Paul Soler

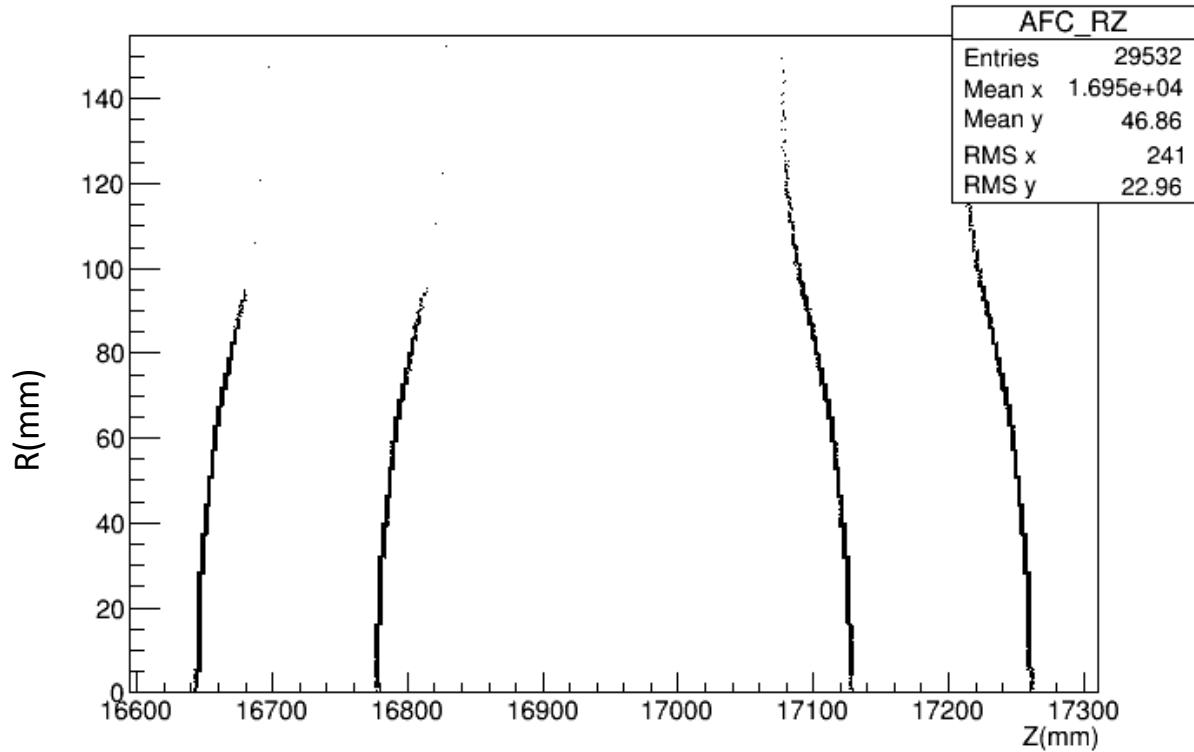
## Contents

- LH2 & Al. Path length through vessel: method revision
- Al. Window thickness measurements
  - For uncertainty calculation
- Mean positions at trackers as a function of TOF

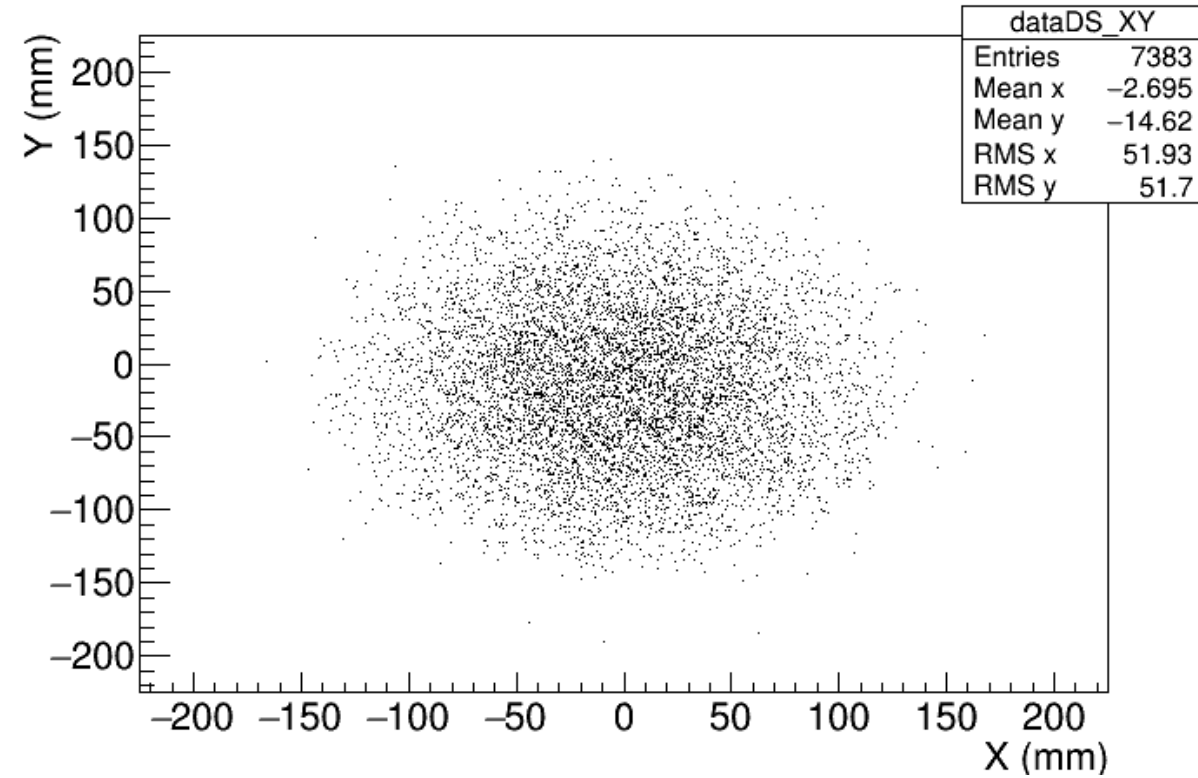
# LH2 Vessel



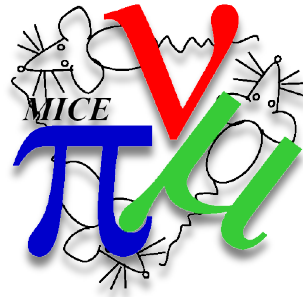
AFC R / Z



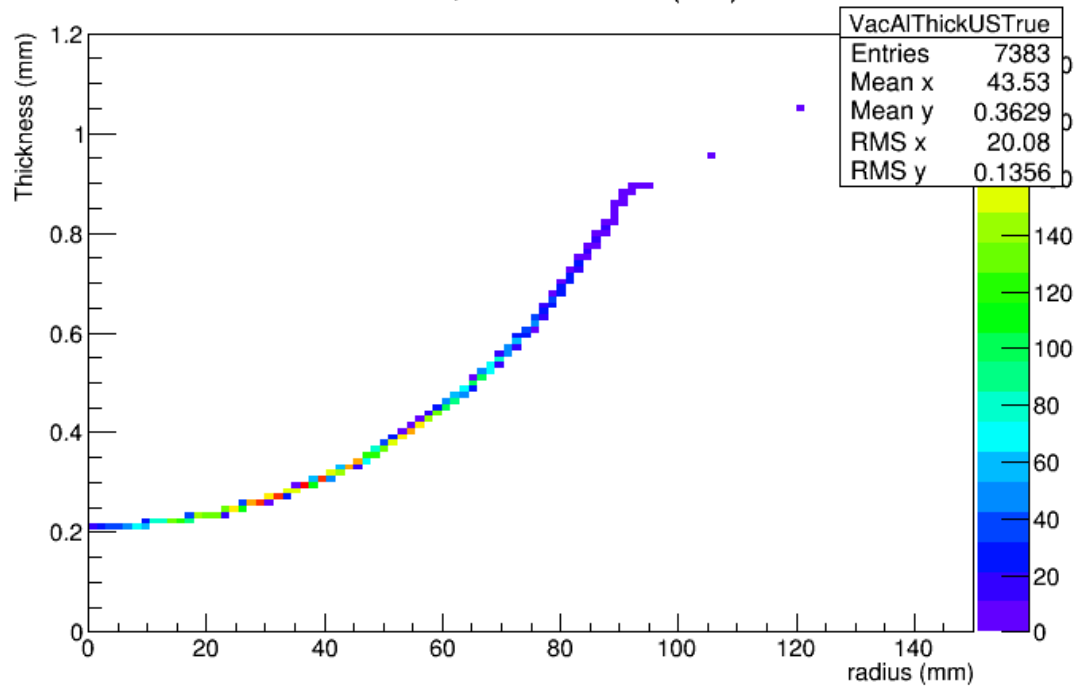
Downstream, Data



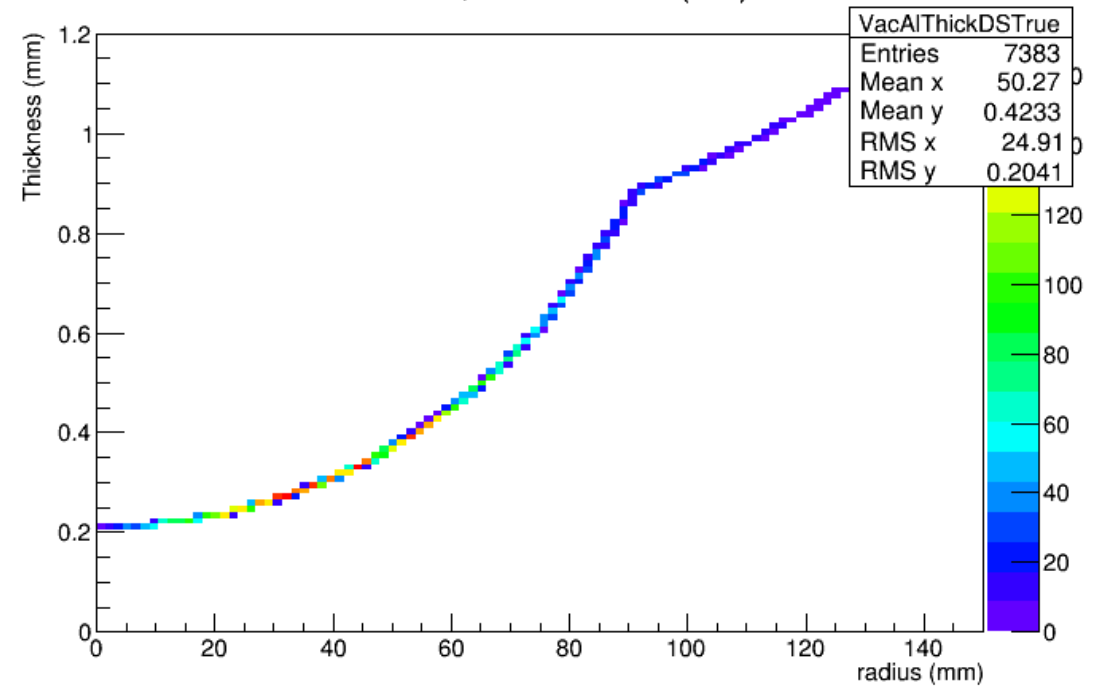
# Encountered Al. thickness



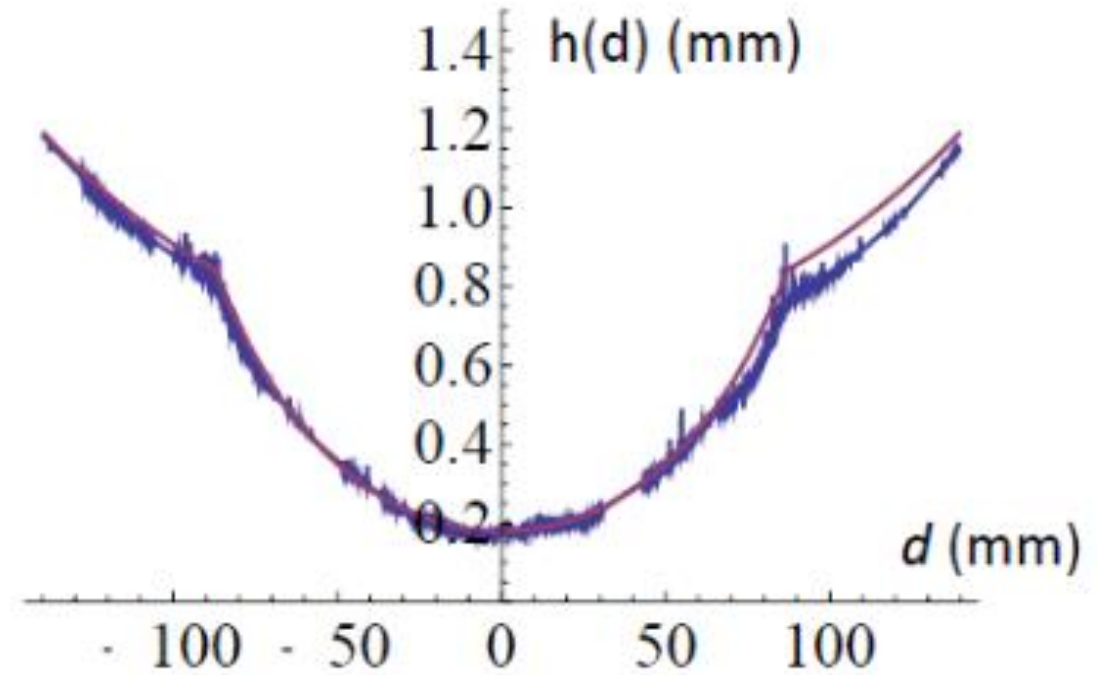
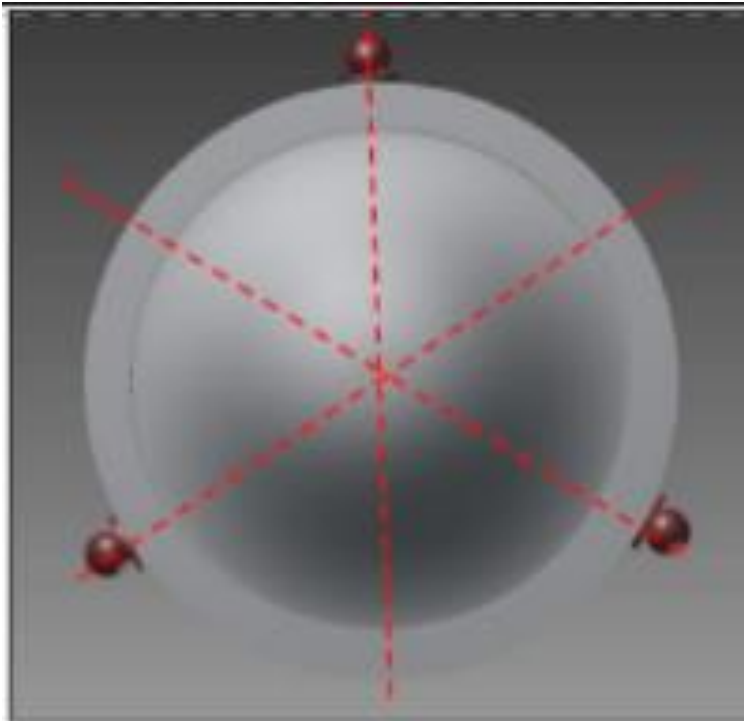
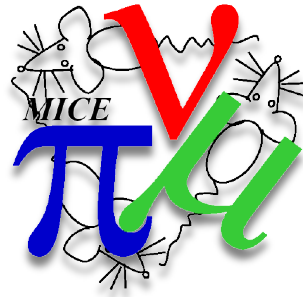
PL in Al, US-Vacuum (cor)



PL in Al, DS-Vacuum (cor)

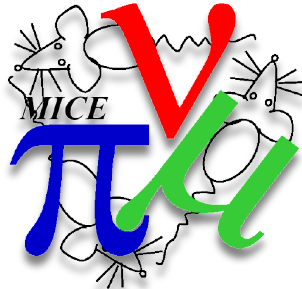


# CMM AI. Thickness measurements

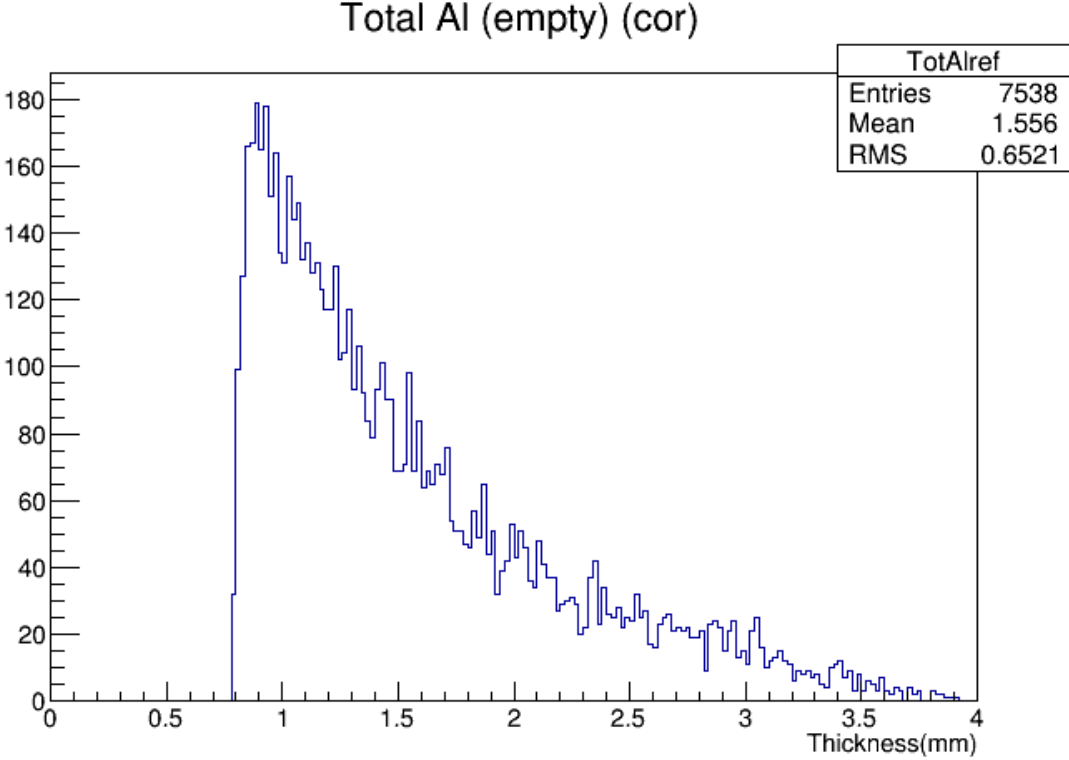
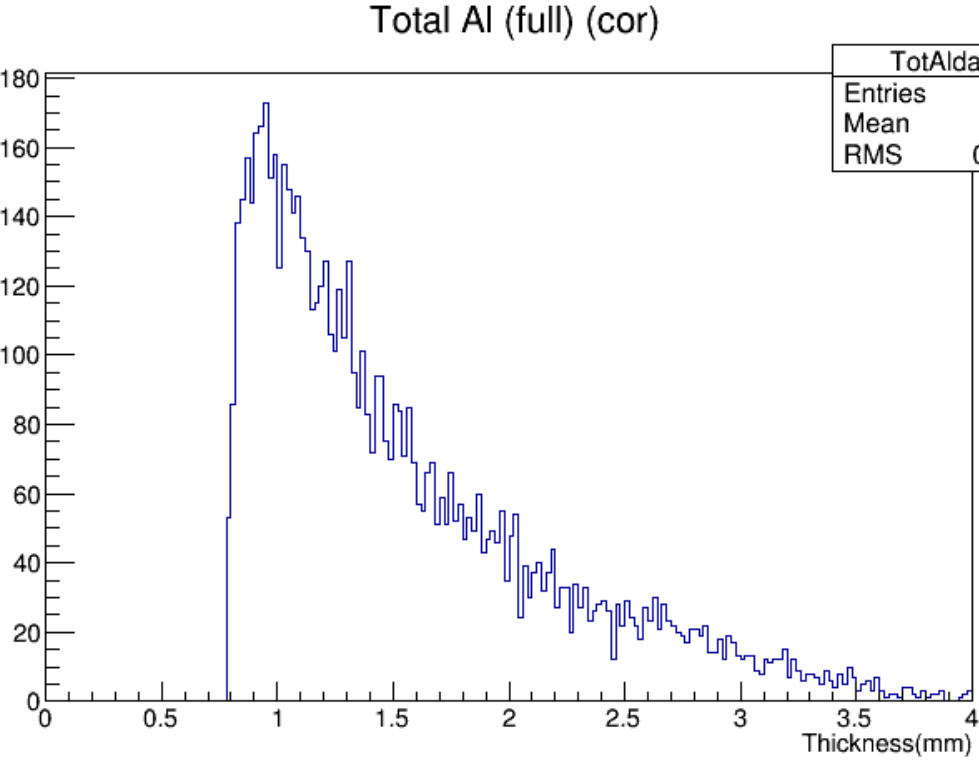


R. Connors et. al (2014)

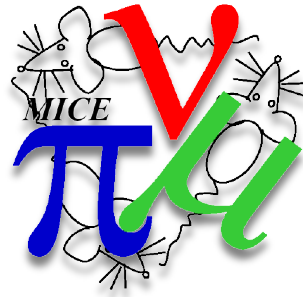
# Al. Thickness results



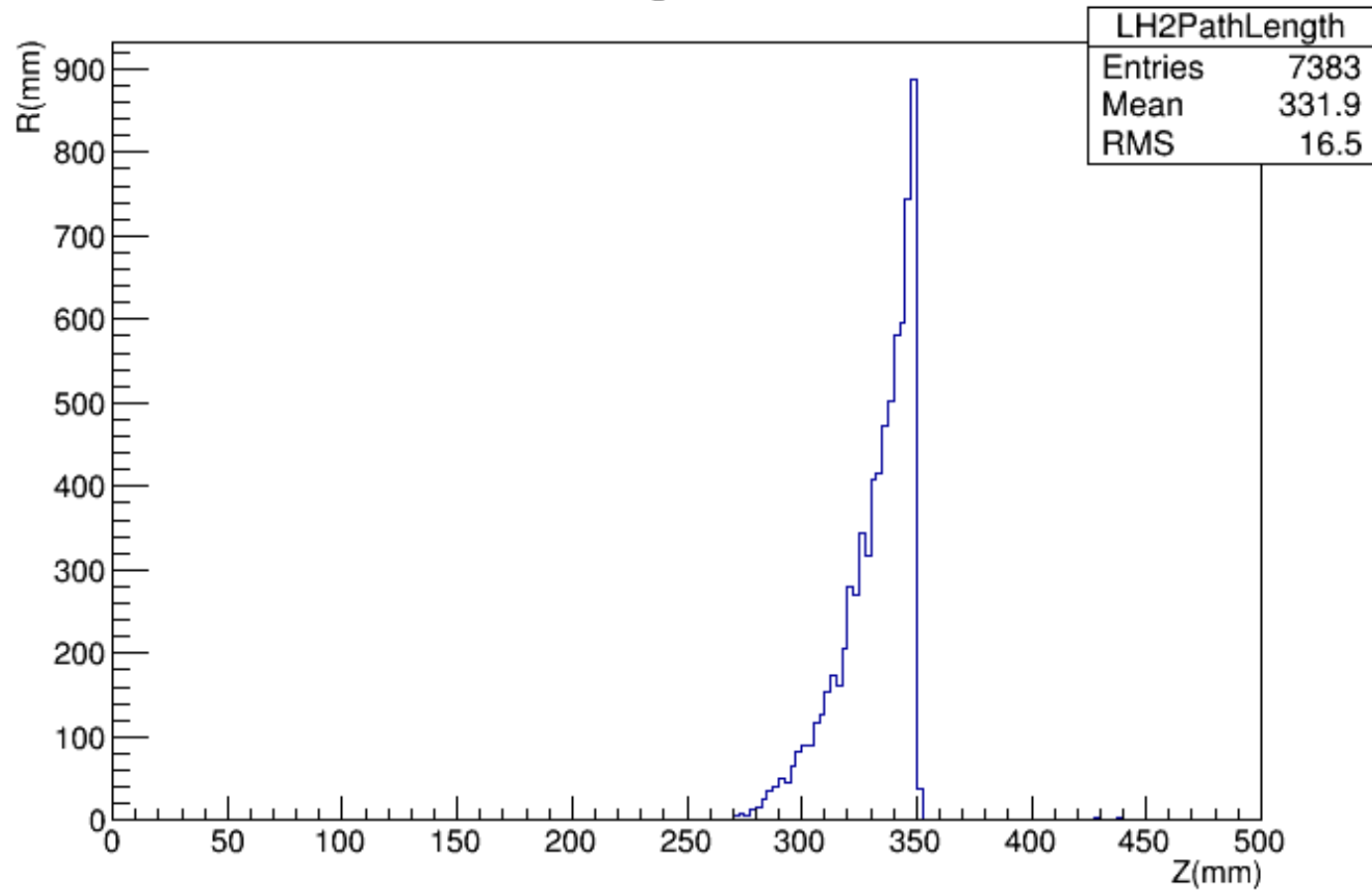
Total Al. encountered by particles in full and empty absorber runs



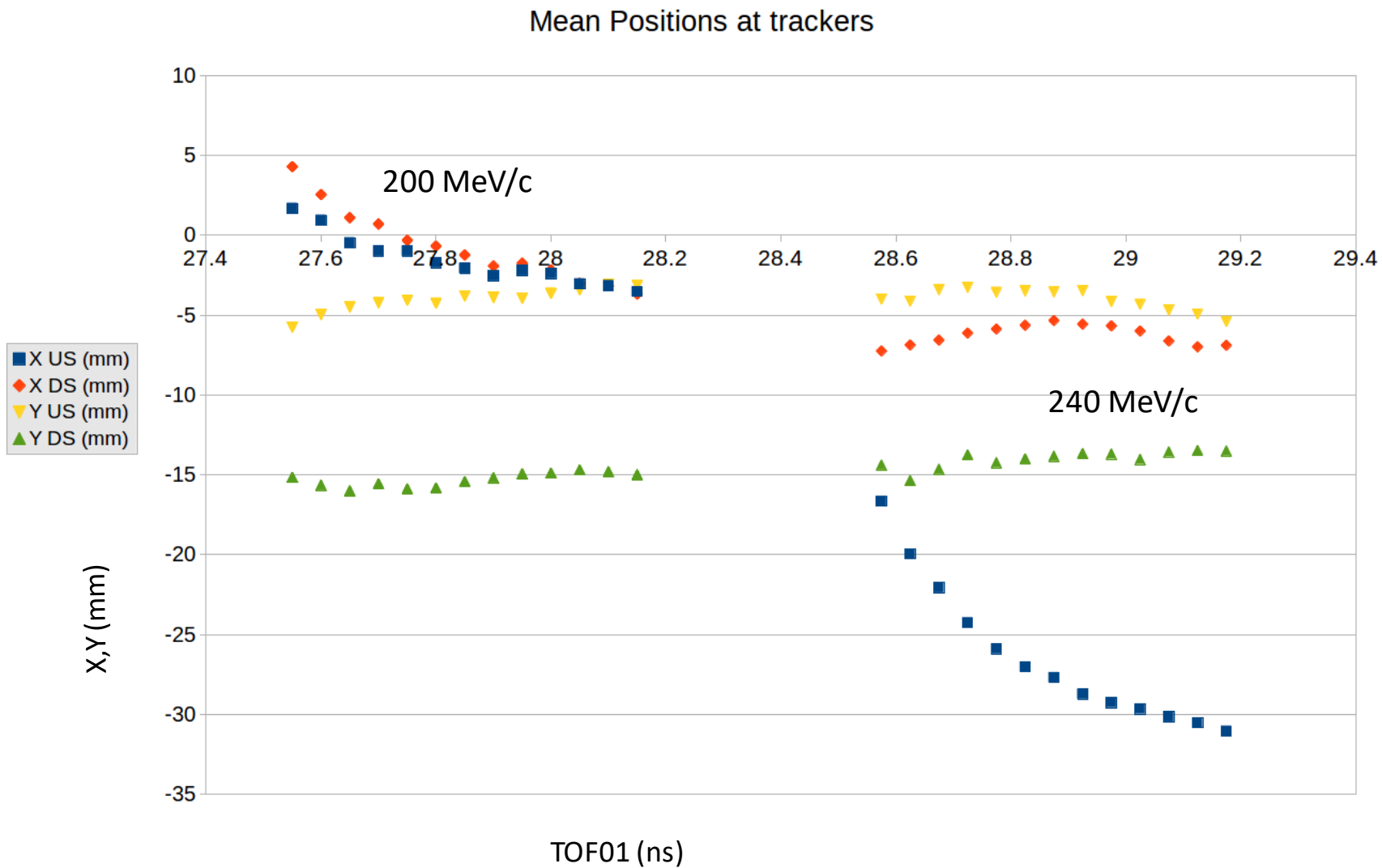
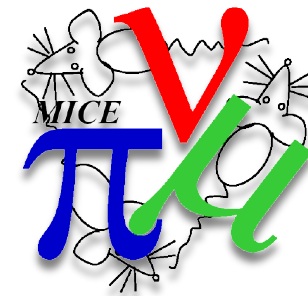
# LH2 Path Length



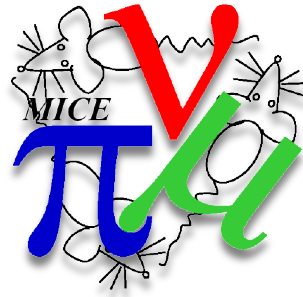
Path Length in Vessel



# Mean positions at trackers



# Future work



## Uncertainty calculation for:

- AI. as a function of radius, based on measurements
- LH2 path length due to scattering, based on MC

## Use TOF iteration to determine:

- TOF range with sufficient entries
- Significant differences between absorber empty and full data
- Tracker alignment

## PID method