

# MOMENTUM RECONSTRUCTION

- Currently we have a **track fitter algorithm** which is able to perform momentum reconstruction over particles travelling through **ND Gas TPC**
- One important role of HpgTPC will be to act as a **spectrometer for particles produced in neutrino interactions inside ND LAr**
- Two main valid approaches in the momentum reconstruction for  $LAr \rightarrow GAr$  particle seem to exist:
  1. Use the track fitter algorithm so that it **propagates back to the interaction point in LAr**
  2. Propagate the track fitter algorithm only to some stage in the detector hall and perform the **rest of the reconstruction using ND LAr information**
- Which of the two approaches should we consider going forward? Are there further options