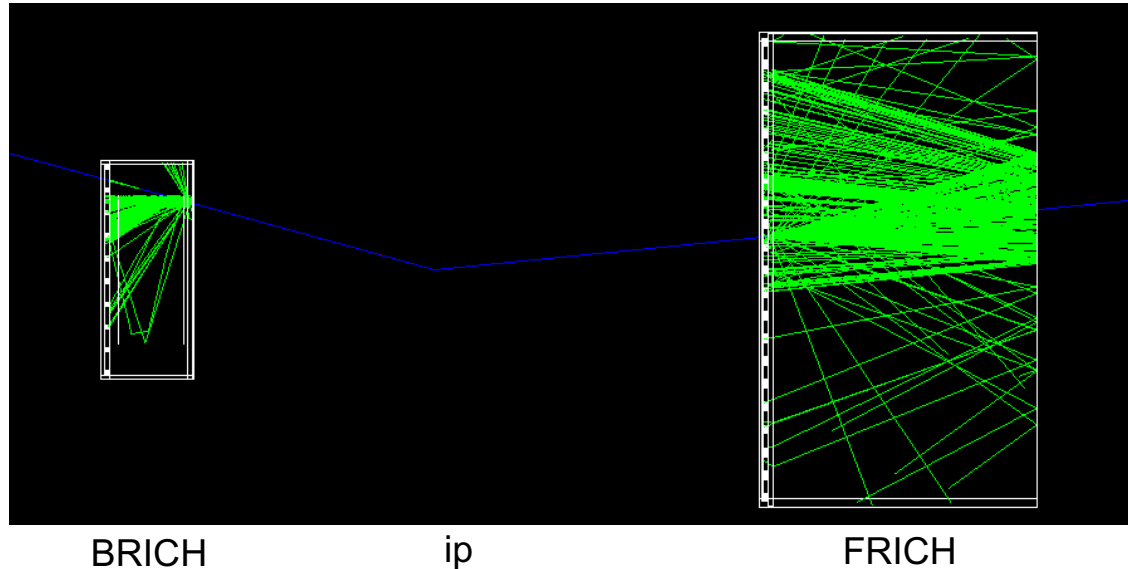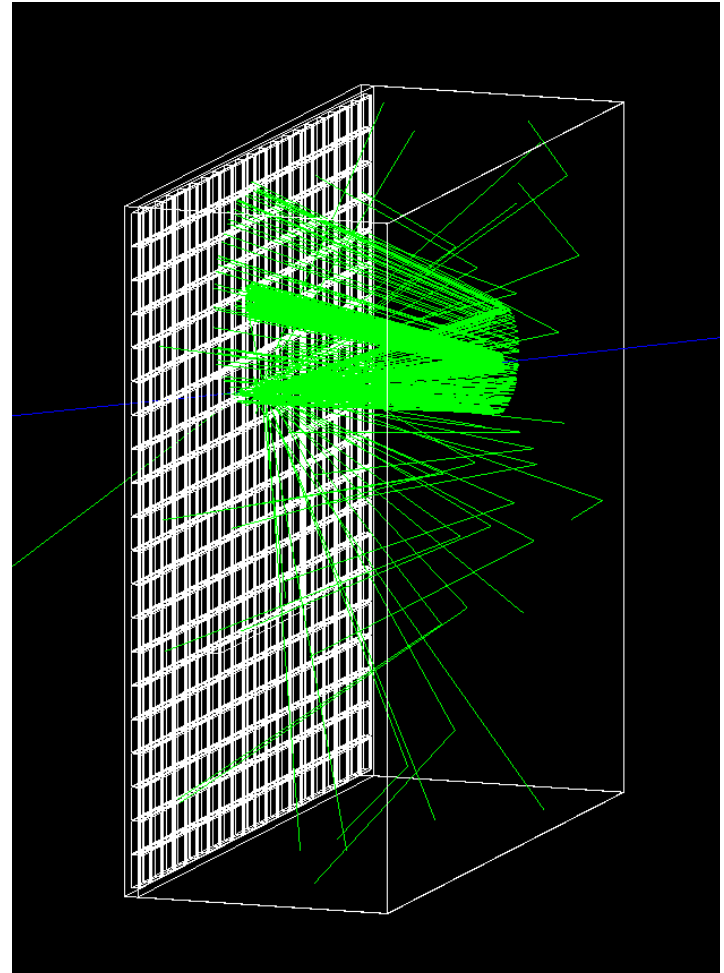# QRICH -> BRICH & FRICH

➢ QRICH sandbox geometry description split into BRICH and FRICH source files

  ➢ Became impractical to keep pfRICH-like and dRICH-like geometry in one code

➢ Started modifying FRICH geometry to a dRICH-like one (added a reflection)

➢ Made sure BRICH & FRICH can be served by a unified RICH-IRT plugin at once

  ➢ Appeared to be a bit trickier than expected, but eventually works fine
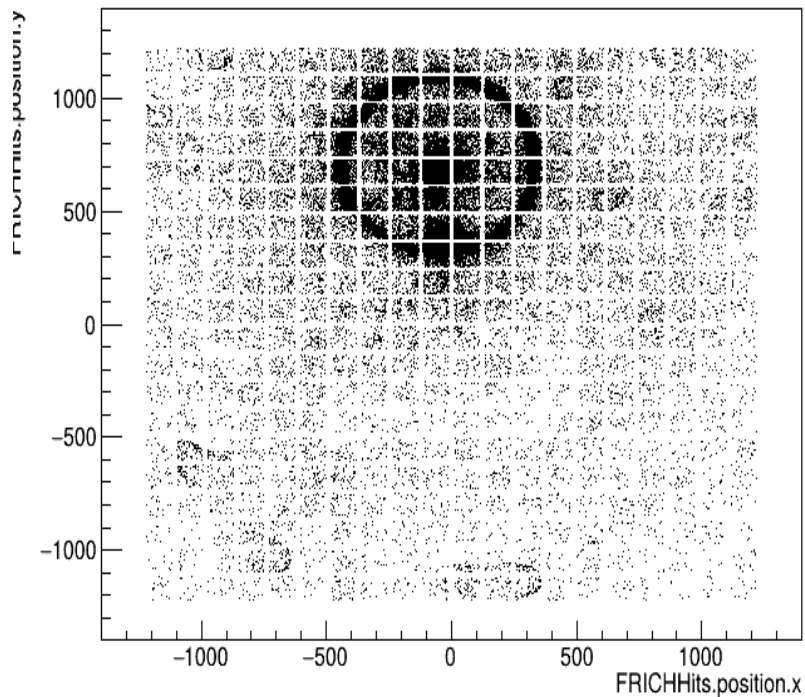
BRICH   ip   FRICH

FRICH sandbox status

- ➢ Started adjusting FRICH geometry to a dRICH-like one

    - ➢ Added a reflection (flat mirror)

    - ➢ SiPM QE (yet HRPPD geometry)

    - ➢ Aerogel with <n> ~ 1.019

    - ➢ C_2F_6, dRICH acrylic

- ➢ Optics description is functional

- ➢ Have EICrecon hit maps and standalone IRT 2.0 script working *for aerogel radiator*

Exchanging flat mirror for a spherical one should be straightforward (for aerogel)
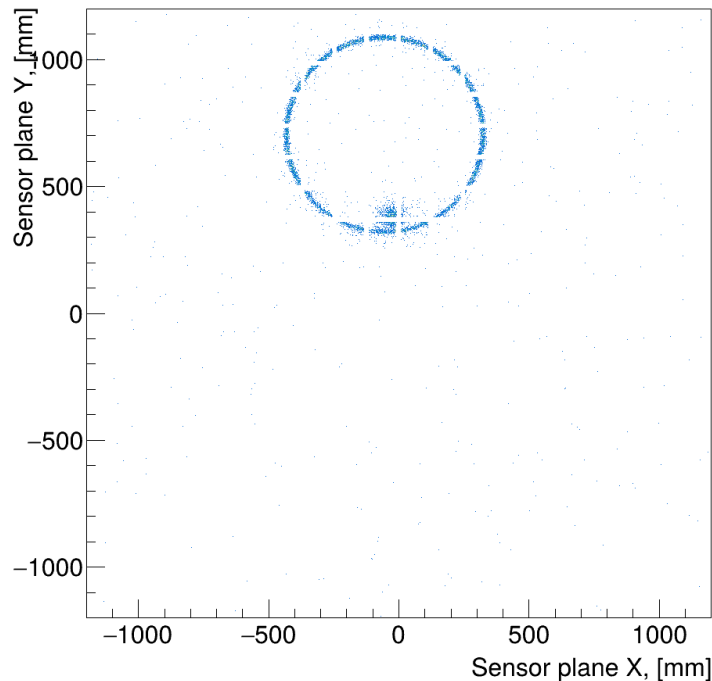

2

FRICH sandbox status
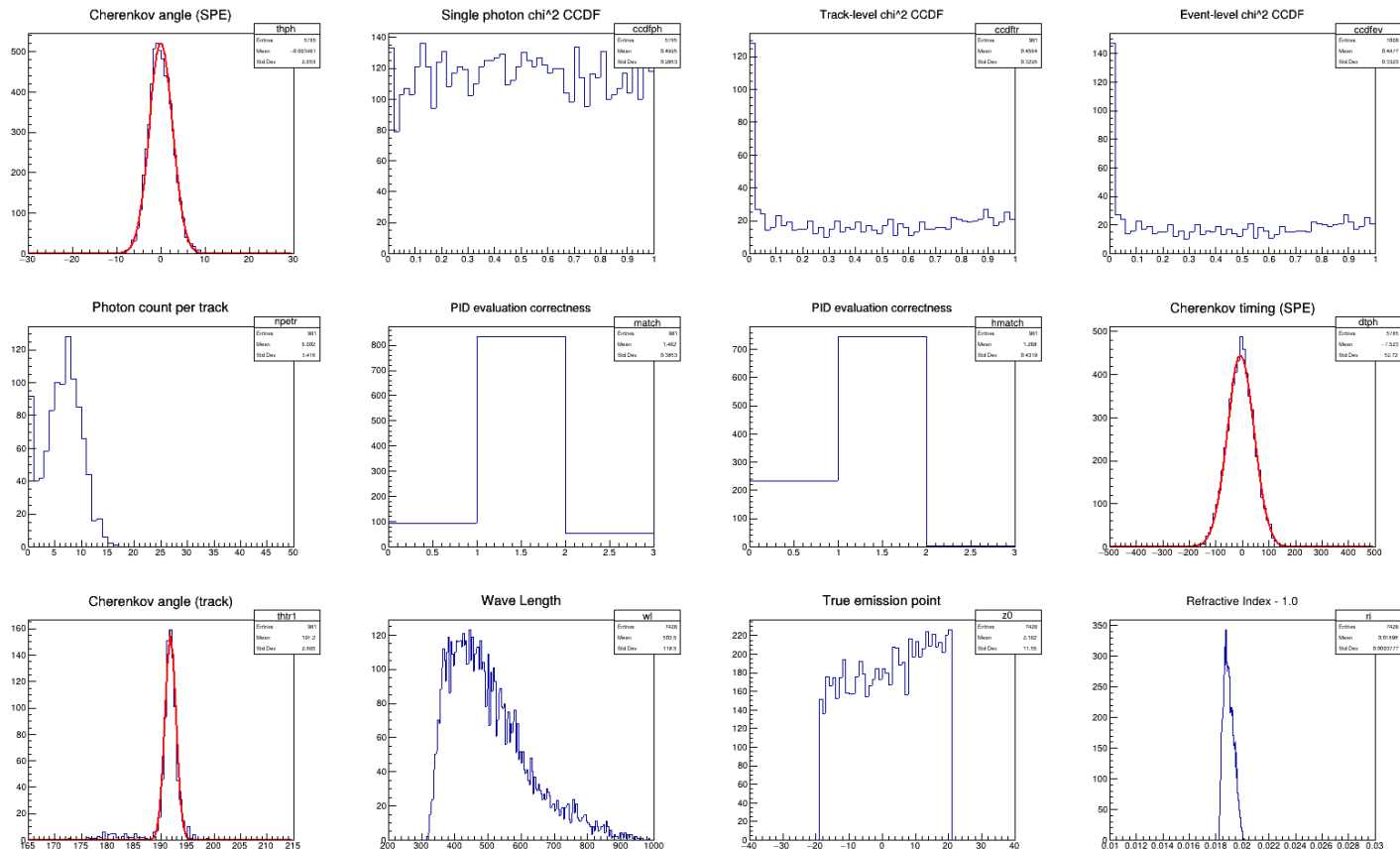
FRICHHits.position.y:FRICHHits.position.x

Hits after npsim pass
(no QE cut; gas hits present)

Hits after EICrecon pass
(QE accounted; no gas hits yet)

FRICH IRT 2.0 standalone script QA panel

$<N_e>$ is perhaps too low, and several tracks with 0 hits

SiPM QE effect

$<n> \sim 1.019$