# TRACKING PATTERN RECOGNITION STATUS
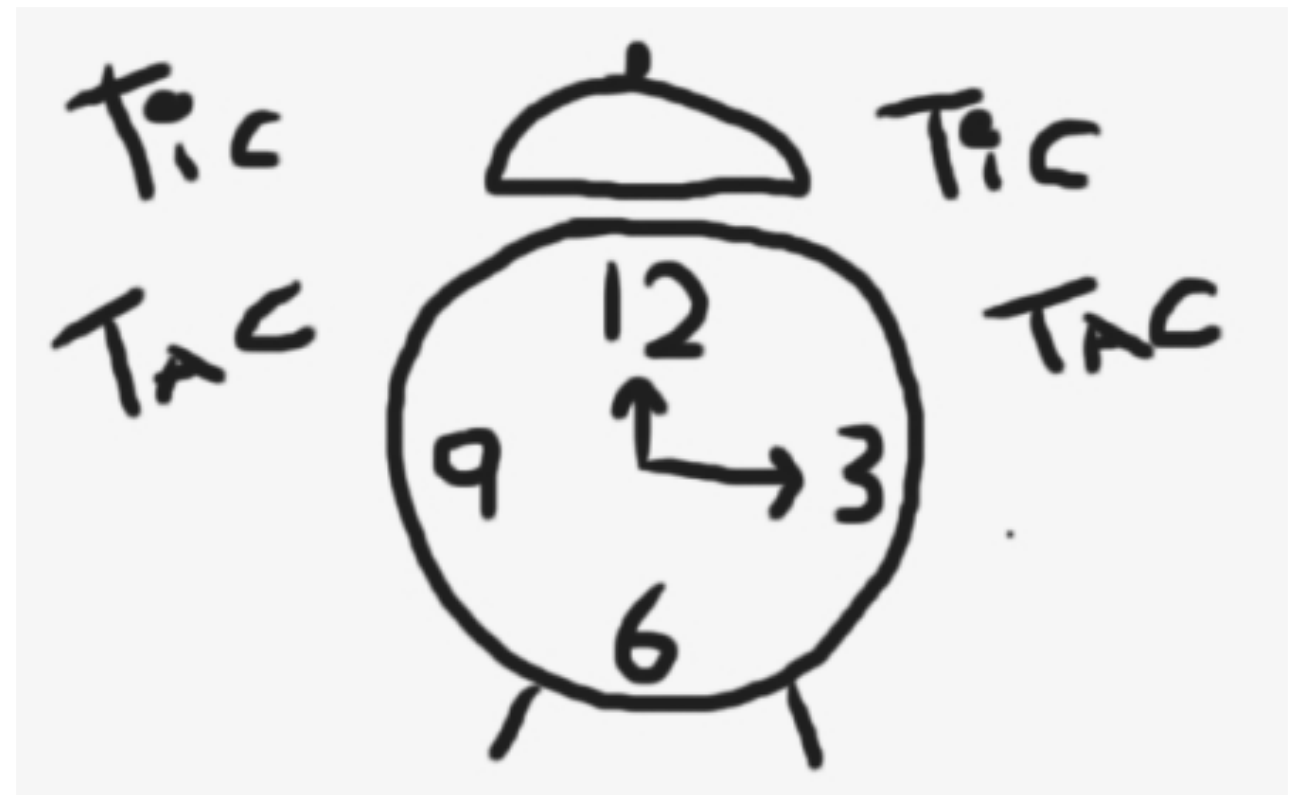
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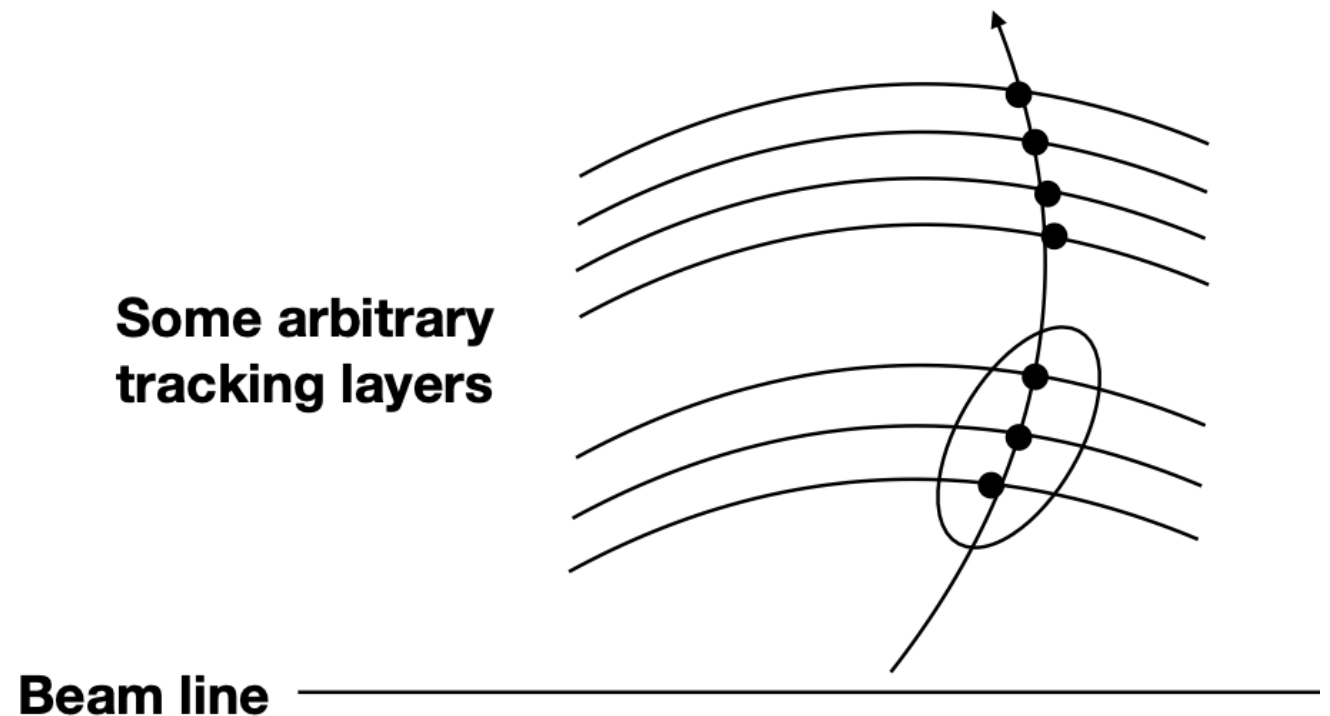- The plan, what can we do in ~4-5 weeks?
- Status

# Tracking plan
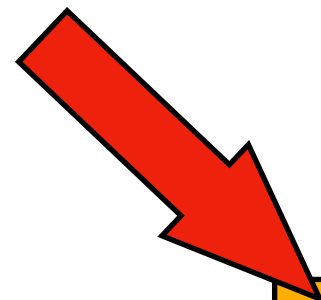
**What we have:**

Track reconstruction from truth
- Get hits from truth tracks
- Smeared the hits
- Track fits with GenFits

Some arbitrary tracking layers

Beam line

**What we want:**

Track reconstruction with Acts
- Import geometry from ROOT to Acts
- Build track seeds with Acts (from 3 measurements)
- Run Acts::CKF

Not possible with the time constraint

# Tracking plan

**What we want:**

Track reconstruction with Acts
- Import geometry from ROOT to Acts
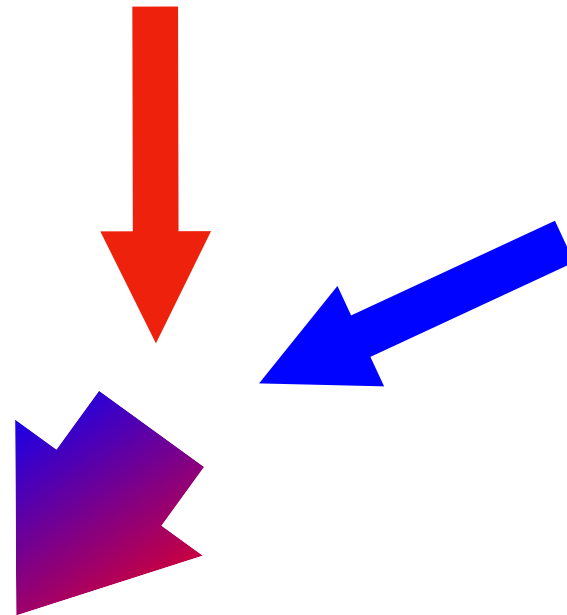- Build track seeds with Acts (from 3 measurements)
- Run Acts::CKF include

**What we have:**

Track reconstruction from truth
- Get hits from truth tracks
- Smeared the hits
- Track fits with GenFits

**What we can do!:**

Acts::seed + GenFit
- Smeared the hits
- Build track seeds with Acts (from 3 measurements)
- Track fits with GenFits

# Status

## Acts::seed + GenFit

○ ~~Smear the hits~~ —> Done (same as truth tracking)
○ Build track seeds with Acts (from 3 measurements)

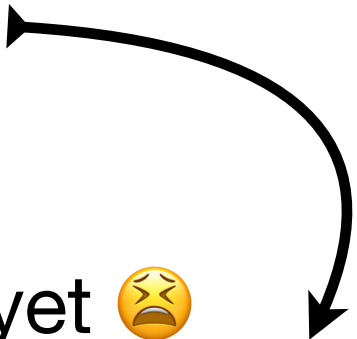- Code implementation
  - ~~Barrel (svtx, barr 1 layer)~~ —> Done
    - Tuning configuration —> work in progress
  - Endcap (fst)

○ Track fits with GenFits
  ○ Barrel (svtx, barr, rwell, ttl)
  ○ Endcap (fst,gem,ttl)

Not working yet 😫

```
TRUTH TRACKS
track pt,eta,phi 4.59007, -0.715548, -1.83185
track pt,eta,phi 4.16907, -0.898497, 0.729724
track pt,eta,phi 4.30585, -0.982383, -1.20489
track pt,eta,phi 4.66189, -0.187201, -0.888161
track pt,eta,phi 4.9154, 0.0956256, -2.15063
SEED TRACKS
track pt,eta,phi 0.0753894, 0.129414, -2.82956
track pt,eta,phi 0.0448923, 0.235905, -0.0992434
track pt,eta,phi 0.0384499, 0.0049958, -2.64312
track pt,eta,phi 0.0384497, 0.00493135, -2.64275
```