

# Tracking/Vertexing software developments for the pre-TDR

Ernst Sichtermann

Barak Schmookler

# Recent implementations

- Update to MPGD inner barrel geometry. **ePIC PR #732**.
- Implementation of hit-based track to MC particle matching. **EICRecon PRs #1535 and #1564**.
- Update primary vertex finder/fitter to use real-seeded tracks. Add relation between primary vertex and associated tracks. **EICRecon PR #1576**.
- Add hits from first layer of the Barrel Imaging Calorimeter into track reconstruction. **EICRecon PR #1570**.
- Updates to seed-finder parameters. **In progress**.
- Implementation of pixel noise and dead area in SVT detector. **In progress**.

# Benchmarking / analysis work

➤ We have 3 benchmarks implemented / under development:

1. Benchmark for single-particle tracking performance.
2. Benchmark for tracking in DIS / min-bias events
3. Benchmark for primary vertexing performance