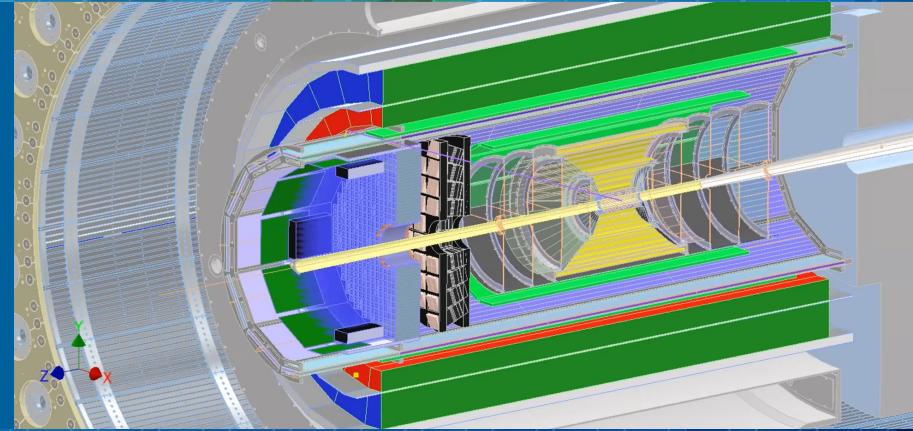


ePIC Calorimetry Meeting

Barrel Imaging Calorimeter ePIC TDR Planning (Draft)



02/07/2024



TDR Structure

- ✓ ready to write
- ⚠ partially ready to write
- ✗ lots of to do

Design

- Overview ✓
- Detector Requirements ✓

Performance

- Performance with *most up to date geometry/envelopes* ⚠
 - Energy resolution, Position resolution,
 - e/pi separation, gamma/pi0 separation
- Beam test benchmarking (e resolution) ⚠
- Literature benchmarking (pion response) ⚠
- Backgrounds ✗

Sector Design, Mechanics and Integration

- Sector design and construction ⚠
- Tracker mechanics ✗
- End-of-sector box mechanics ⚠
- Deflection studies ✗
- Barrel assembly and integration tooling ⚠

AstroPix Wafers & Modules

- AstroPix characteristics and readiness ✓/⚠
- Automated wafer testing ⚠
- Module & stave design ⚠
- Stave bus design ✗
- Module assembly and scalability ✗

End-of-sector Box and Readout

- SiPMs characteristics ✓/⚠
- SiPM boards and FEB ⚠/✗
- LED system ⚠
- Tracker End-of-tray card (RDO) ✗
- Slow controls (temperature, humidity) ⚠

Cooling

- Cooling system design ⚠
- Global heat load simulations ✗

System Testing

- System Calibration ✗
- System QC ✗
- System Demonstration ⚠/✗