

Brief TRT Software Overview

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TRT SW session during Inner Detector Week

Introduction

- This talk will cover a few key points but I will not attempt to fully summarize all current work on the TRT software.
- This talk and this session will concentrate much more on the offline software than the online software.

TRT Software Issues

- For 13.0.0
 - Updates for End-Cap geometry and material
 - Validation of TRT code (RTT will wait for 14.0.0...)
 - Validation of TRT misaligned geometry (done)
 - TRT ByteStream converter for new ROD (being debugged)
 - Calibration / Alignment for the Cosmics
 - Aligning individual straws (done)
 - TRT Monitoring (first version)
 - Tuning of TRT particle ID (continues in 14.0.0)
- For 14.0.0
 - Bad channel list in database and other database work
 - Optimization and tuning of TR model and digi. params.
 - Late conversions / conversion fitting in TRT

Personnel

- These people are doing the work (apologies if I missed any):
 - Ashfaq Ahmad: Misaligned Geometry
 - Tuan Vu Anh: CTB
 - Andrea Bocci: Alignment
 - Doug Benjamin: TRT Validation
 - Mogens Dam: TR Model & SW Coordination
 - Chafik Driouichi: TRT Calibration
 - Marc Goulette: TRT Material
 - Peter Hansen: Alignment
 - Alex Harvey: CTB
 - Esben Klinkby: Digitization, Conversions, anywhere help is needed
 - Thomas Koffas: Conversions
 - FL: Not much...
 - Victor Maelev: Reconstruction in the TRT, Particle ID
- Continues on next page...

Personnel

- Additional people:
 - Troels Petersen: Particle ID
 - Christian Schmitt: Recon in end-cap cosmics
 - Taeksu Shin: TRT Geometry
 - Serge Smirnov
 - Siva Subramania: TRT Monitoring
 - Denver Whittington: Reading DCS data into Athena
 - Vladimir Tikhomirov
- Notable recent alumni (who will be missed!):
 - Wouter Hulsbergen: Alignment
 - Permanent position at NIKHEF working on LHCb...
 - Thomas Kittelmann: Many areas
 - Thesis defense was last Thursday - I haven't heard but I bet he passed!

Personnel

- Even though the list of people seems long, the list of jobs is longer. Anyone who is interested in working on the TRT-related software should contact myself or Mogens. I see two main areas:
 - Software for calibration, alignment, and reconstruction of the TRT.
 - This would be ideal for a post-doc or grad student to work on. There are already a number of people working in this area but the job is big.
 - Software for monitoring and commissioning the TRT.
 - In addition to younger people, there is a need for people with experience in building the TRT to work on this. These experienced people could both help design what is being monitored and then use the monitoring data to fix problems.

Today's Session

- Most (but not all!) talks are about work related to commissioning the TRT.
 - Two hours is far too short to do justice to the large number of people contributing to the work...
- Here are some issues to think about:
 - Do we have the correct organization of the TRT software effort for commissioning?
 - Are there areas where we are missing effort (in addition to the areas that I flagged on the previous slide)?
 - We still could use some more planning and organization of our work. In particular, I would like to see the on and offline software being done in a more coordinated way. Feel free to raise these issues during the session.