

# DAQ

- TPC software update
  - What has been accomplished since last meeting
  - Plans for the next 2 months (before beam)
- Online software release/control
  - Why, who, how

# TPC software since June

- In June, trigger cards were installed, since then...
  - found/fix a number of bugs
  - TPC stable, cards work well
- Memory leak was a limiting factor, fixed
- 2 packets per event tested
- Pedestals added to the data stream (2 packet)
- 10% loss of data discovered and fixed (difficult)
- DSP boot time shortened significantly
- Online monitoring put in place (John)

# TPC in the next 2 months

- Verify stable operation after SRT port
- Finish testing compressed/pedestal output
- Write beamppc TPC module
- Speed up TPC from 18Hz to 60Hz
  - Move some messages to debug
  - 160 time buckets
  - overlap events
  - optimize sleeps
  - optimize NOPs (DSP)
  - remove debug moves from DSP

# DAQ software control

- During the last run, online software changes
  - were not recored in a meaningful way
  - were not announced
  - were not documented
  - could not be rolled back without extreme difficulty
- This is not acceptable for future running. It has be agreed to in the software meeting that online software will transition to a strictly controlled system.

# The System

- During the discussion we decided the following:
  - We will write down a policy for online code changes
    - ( see cvs e907/mipp/document/notes/online/OnlineReleasePolicy.tex )
  - SRT will be the new online build system
  - A group of 3 was formed to act as the system control: Andre, Holger, me

# Policy Highlights

- The DAQ start script will allow a shifter to select a production version or a new version to be tested, pre-production.
- All changes are tested. The group of 3 looks at the change and the test results to decide if the change is to be incorporated.
- All changes are logged in the logbook.
- A release will have the software tag in the source code, and that is written to the data stream.

# Shifters

- What does this mean for shifters?
  - You will have 2 options when you start a run
    - run production mode
    - run pre-production mode as requested by experts. This will be a multi-day request so shift to shift communication will be needed.
  - Sometimes DAQ developers may run in other configurations for testing, but shifters should not have to do this unaided.