Summer-Fall 2004 Downtime

Anticipated Tasks for the Alignment Engineering Group

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Comments on PEP II Plan
Alignment Engineering Group Anticipated Tasks

• PEP II
  – IR2/BaBar Survey
  – Roll measurements for LER & HER quads
• GLAST
  – Survey of the flight grid
  – Installation of the trackers
• SPEAR3
  – Ring and beamline monumentation
  – Component mapping
• LCLS Preparation
  – Q50,51,52 & B50
  – Injector housing
• AEG Internal Studies
  – GPS on Linac Penetration
  – Transfer to accelerator plates & jack points
• Other
  – Linac Laser system
AEG Web Link

www-group.slac.stanford.edu/met/Align/AlignHome.html

Click on an activity name or timeline bar for details.
IR2 Survey Facts

• BaBar doors must be closed in order to survey detector fiducials. They must be opened for the Q2 survey.

• IR2 has been surveyed in the past with BaBar solenoid on or off. When comparing two surveys, the solenoid must be in the same state.

• The detector area requires 2 days at 2 shifts without any other activities going on.
B Side Changes

Positive Changes: new wall bracket, additional fiducials on Q4, Q5 and BV1 raft, additional wall monuments

Negative Change: non removable metal sheet box
PEP II Quad Facts

• LER:
  – 317 total
  – No fiducials in the arcs, “retro-fiducials” in the straights
  – Fixture on front face for mapping
  – Fixture on top for tilt sensor

• HER:
  – 284 total
  – 6 fiducials (4 on top, 2 on front face)
  – Possible fixture on top (to be designed and made)
Quadrupole Roll Measurement Options

- Simple output from a full map of both rings:
  - Laser tracker & precise level
  - Total station
- Height measurement only:
  - Precise level
- Specific measurement producing only roll information:
  - Tilt sensor