

Summer-Fall 2004 Downtime

Anticipated Tasks for the
Alignment Engineering Group

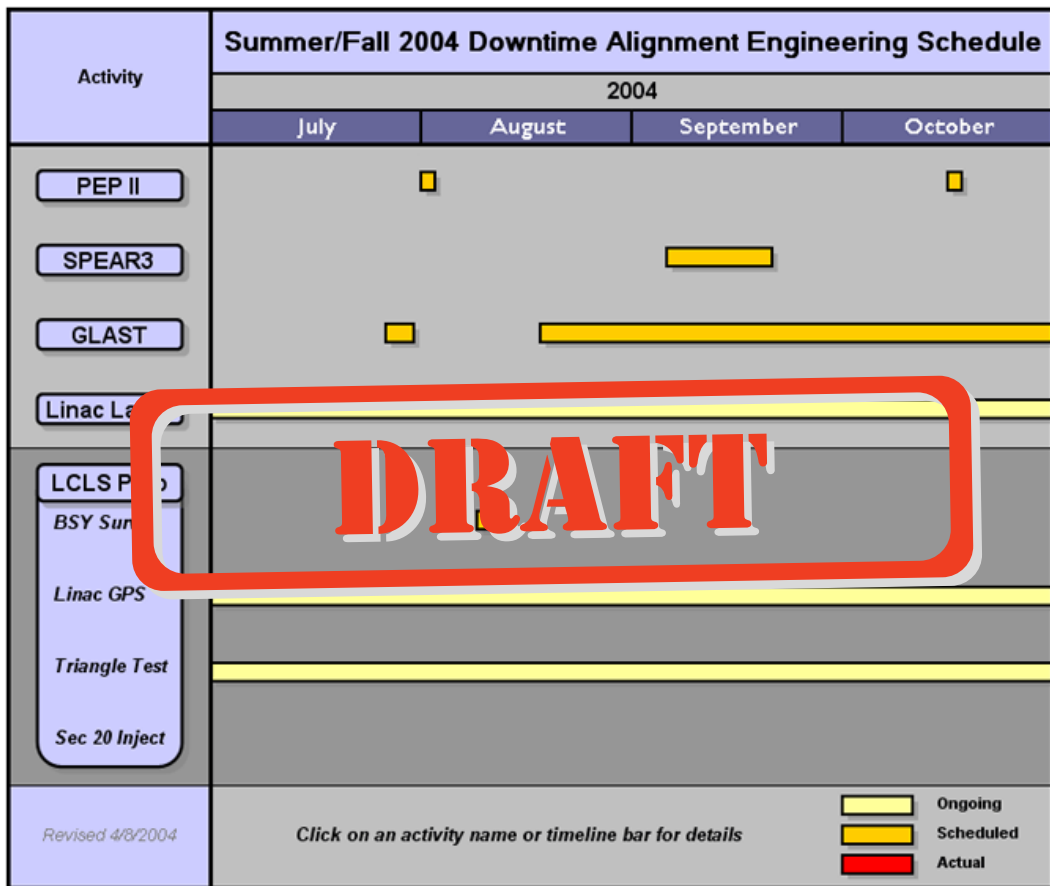
Comments on PEP II Plan

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

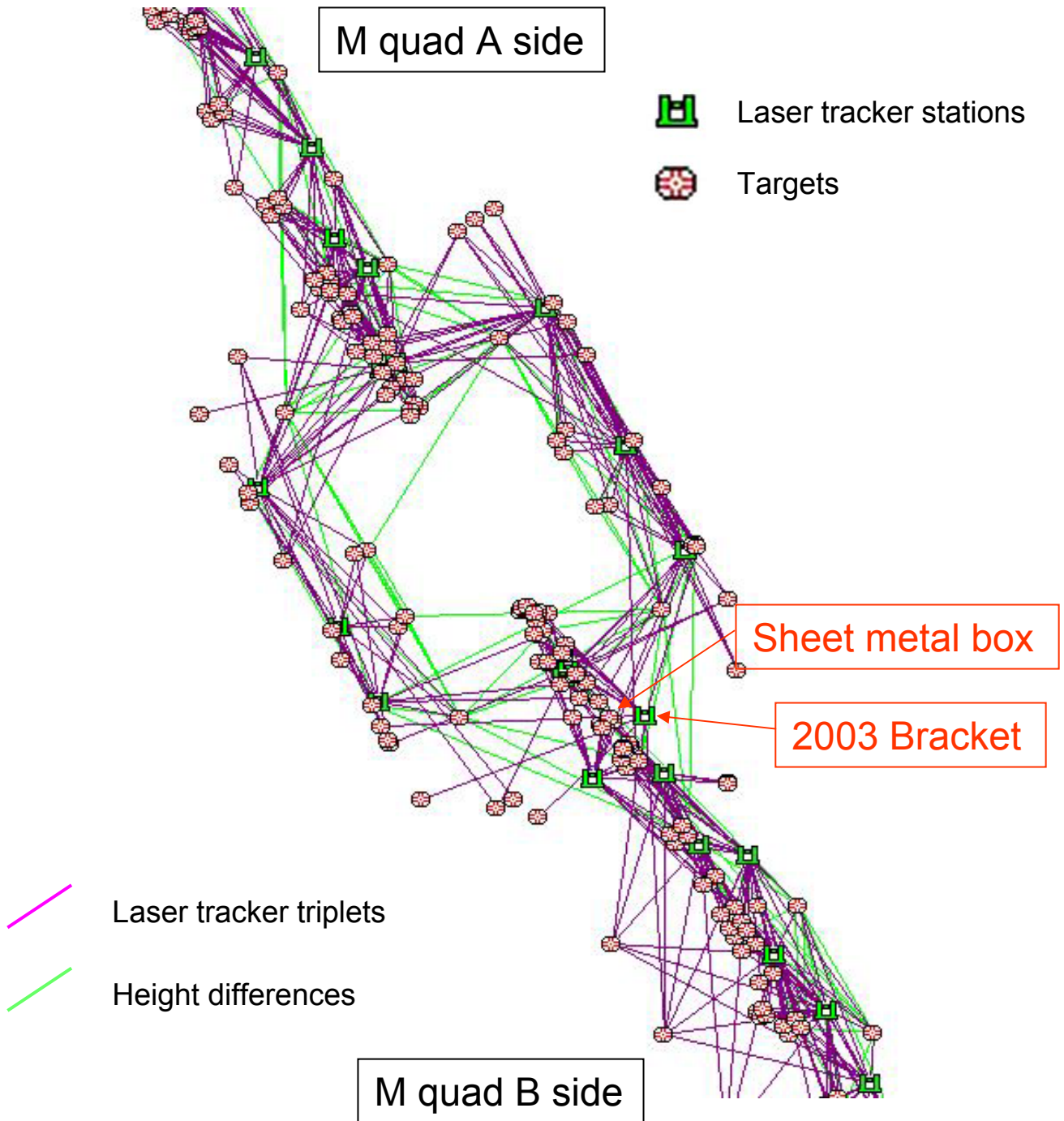
www-group.slac.stanford.edu/met/Align/AlignHome.html



IR2 Survey Facts

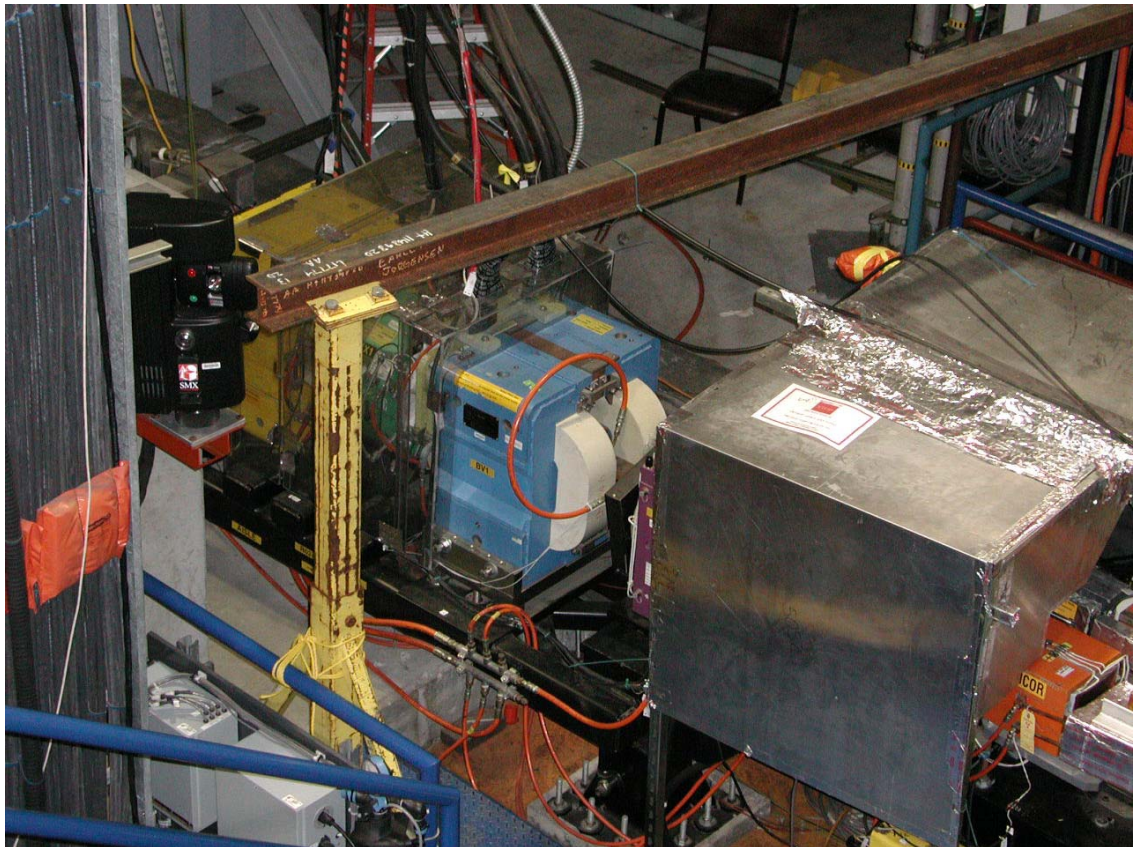
- BaBar doors must be closed in order to survey detector fiducials. They must be opened for the Q2 survey.
- IR2 has been surveyed in the past with BaBar solenoid on or off. When comparing two surveys, the solenoid must be in the same state.
- The detector area requires 2 days at 2 shifts without any other activities going on.

IR2 2002 Network



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