MLA Boresite Alignment Results, Rev A

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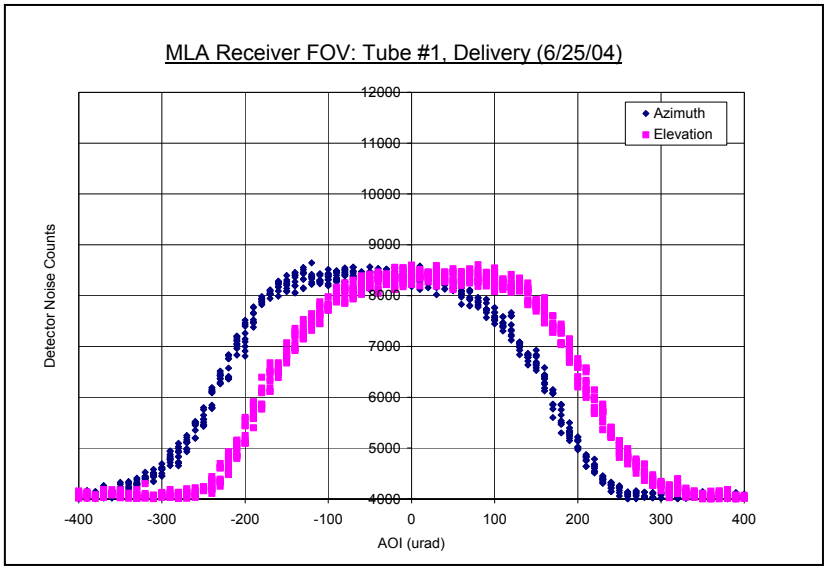
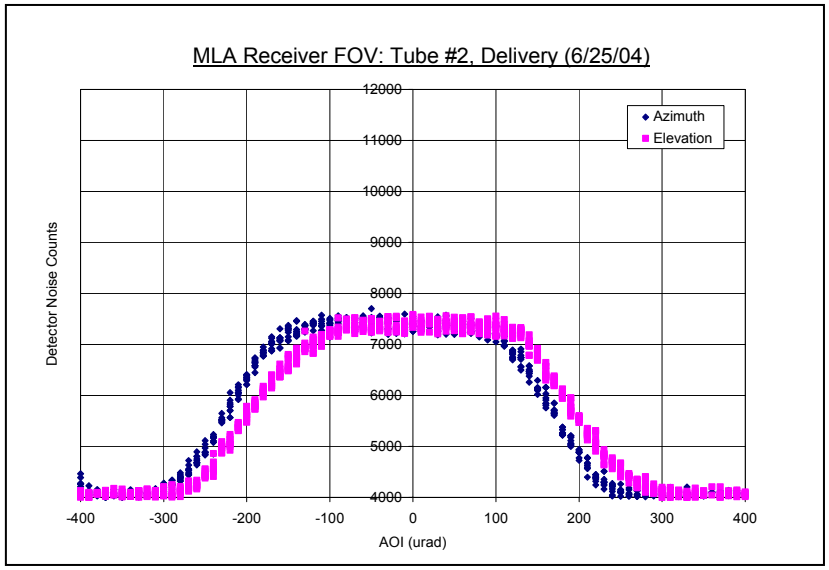
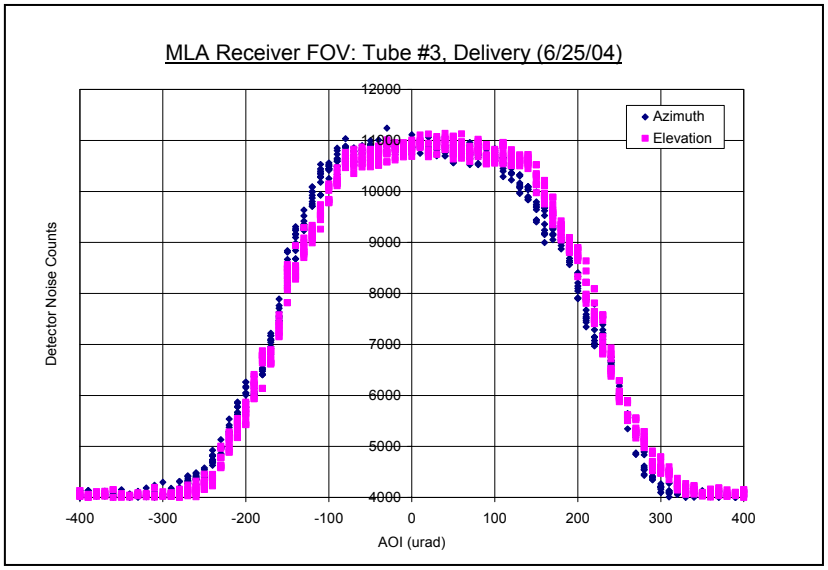
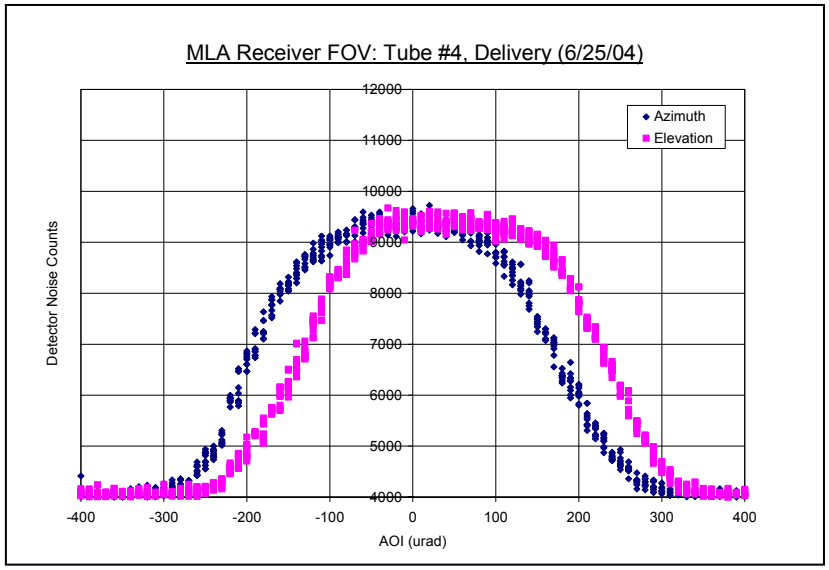
- This presentation summarizes the results of the following MLA boresite alignment tests:
  - Instrument Delivery Alignment, 6/25/03
    - RALPH Test System, NASA/GSFC/ Bldg. 33
  - S/C Post-Vibe Alignment, 1/2/04
    - Risley/LTR Target, NASA/GSFC/ Bldg. 7
  - S/C Post-TVAC Alignment, 3/15/04
    - Risley/LTR Target, Astrotech, FL
    - Results are suspect due to MLA laser vignetting
  - S/C Post-TVAC Alignment II, 5/20/04
    - Risley/LTR Target, Astrotech, FL

MLA Receiver FOV: Instrument Delivery (6/25/03)

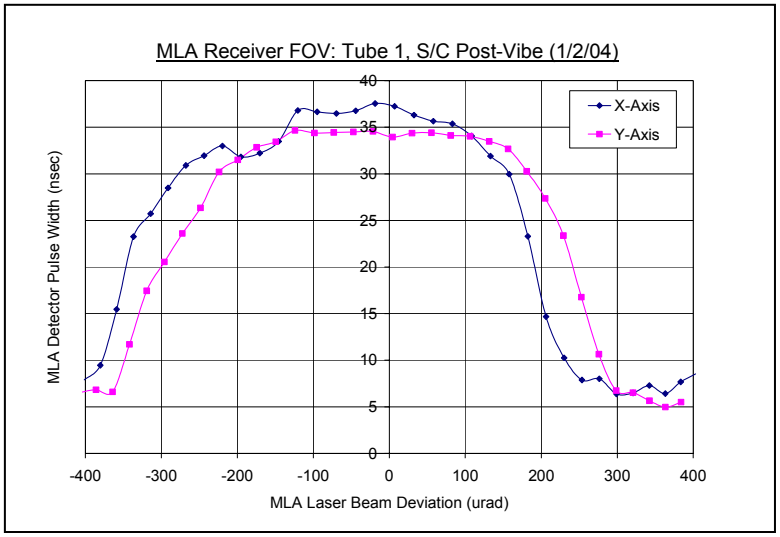


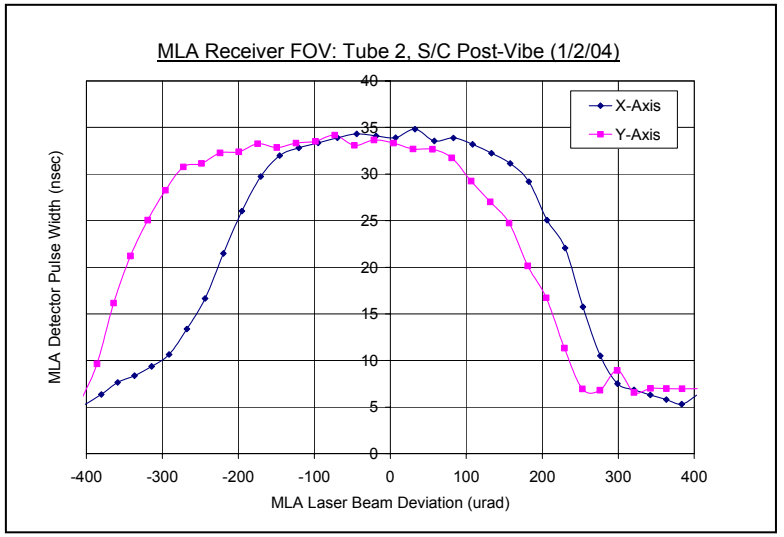


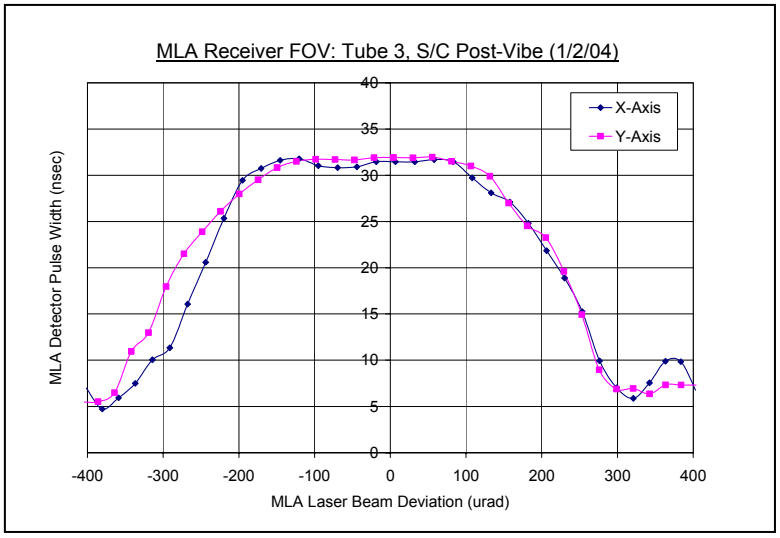


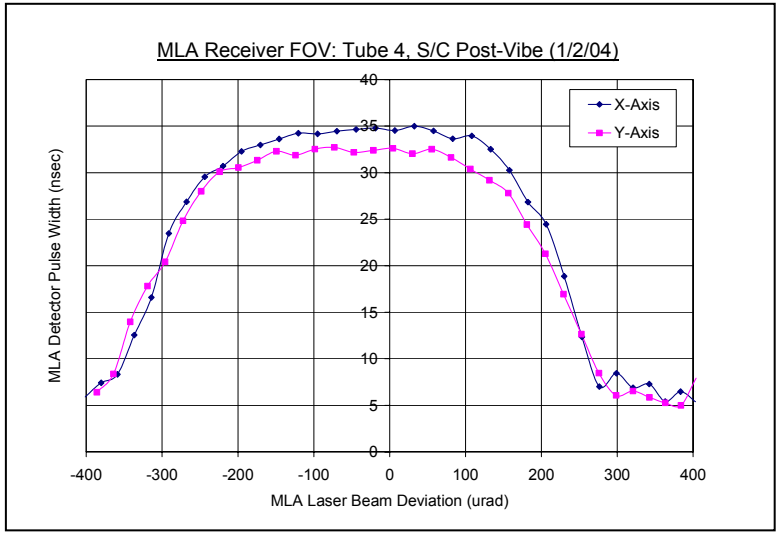


MLA Receiver FOV: S/C Post-Vibe (1/2/04)

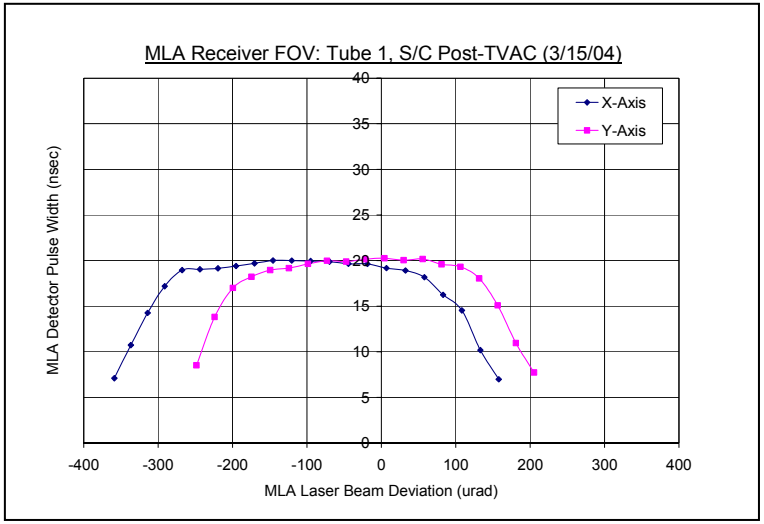


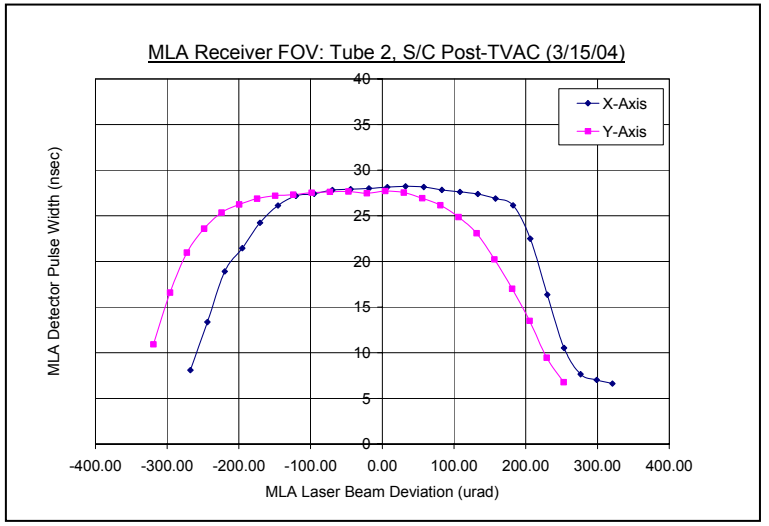


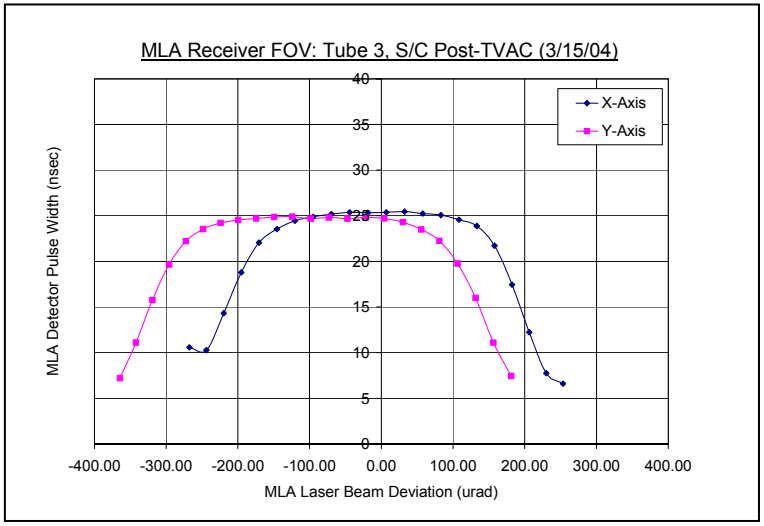


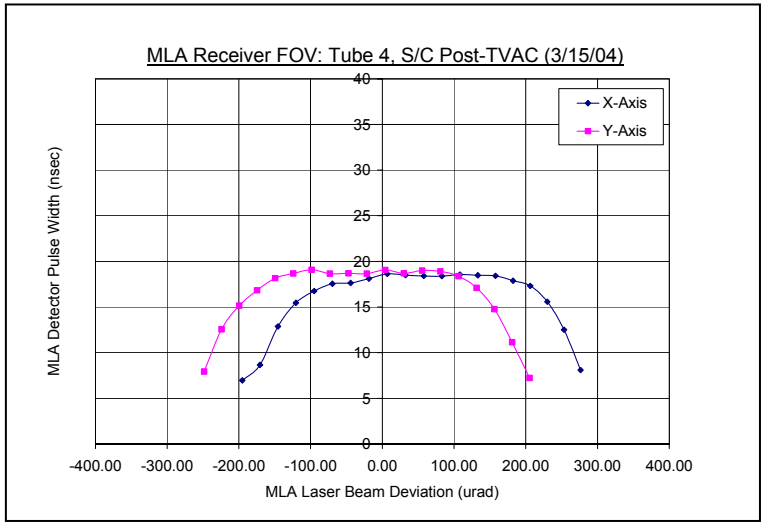


MLA Receiver FOV: S/C Post-TVAC (3/15/04)

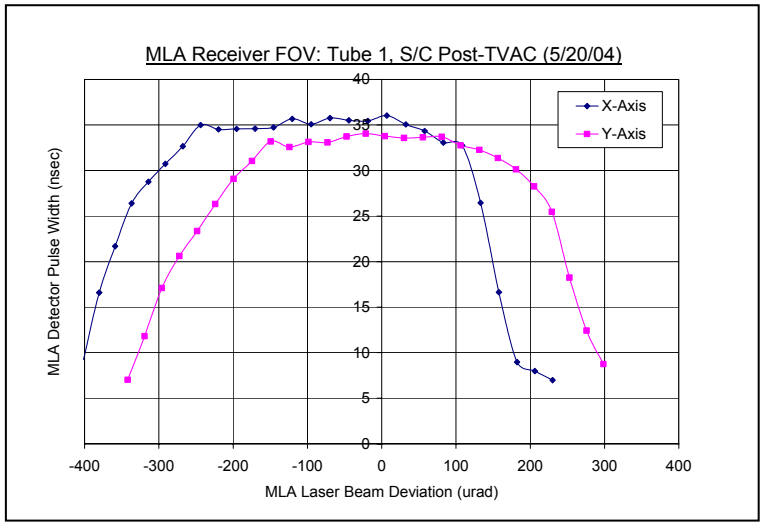


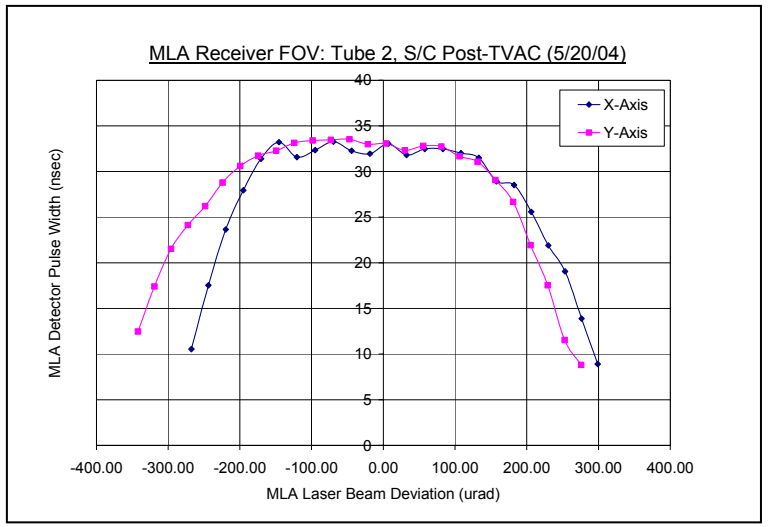


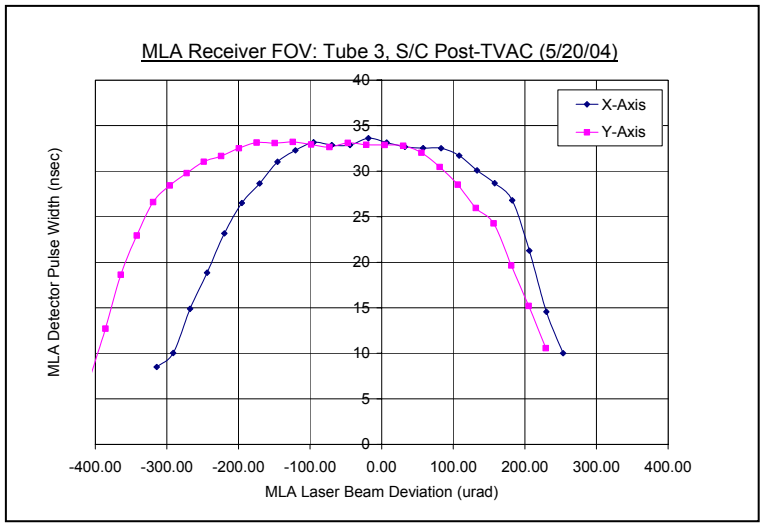


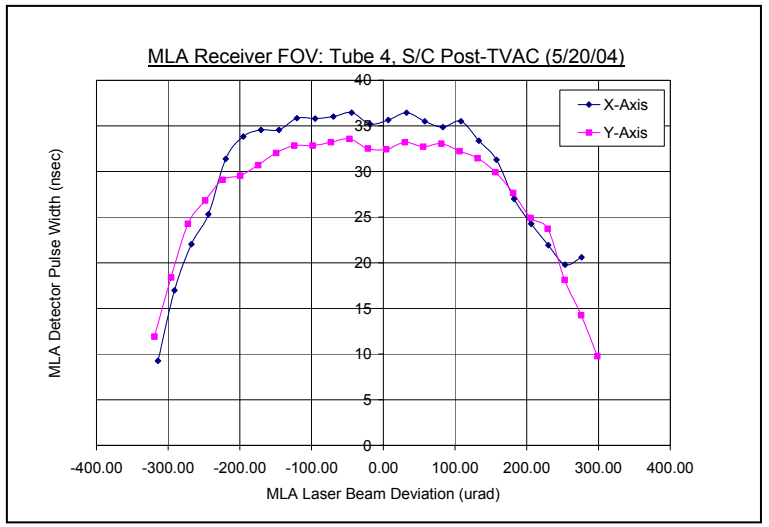


MLA Receiver FOV: S/C Post-TVAC (5/20/04)

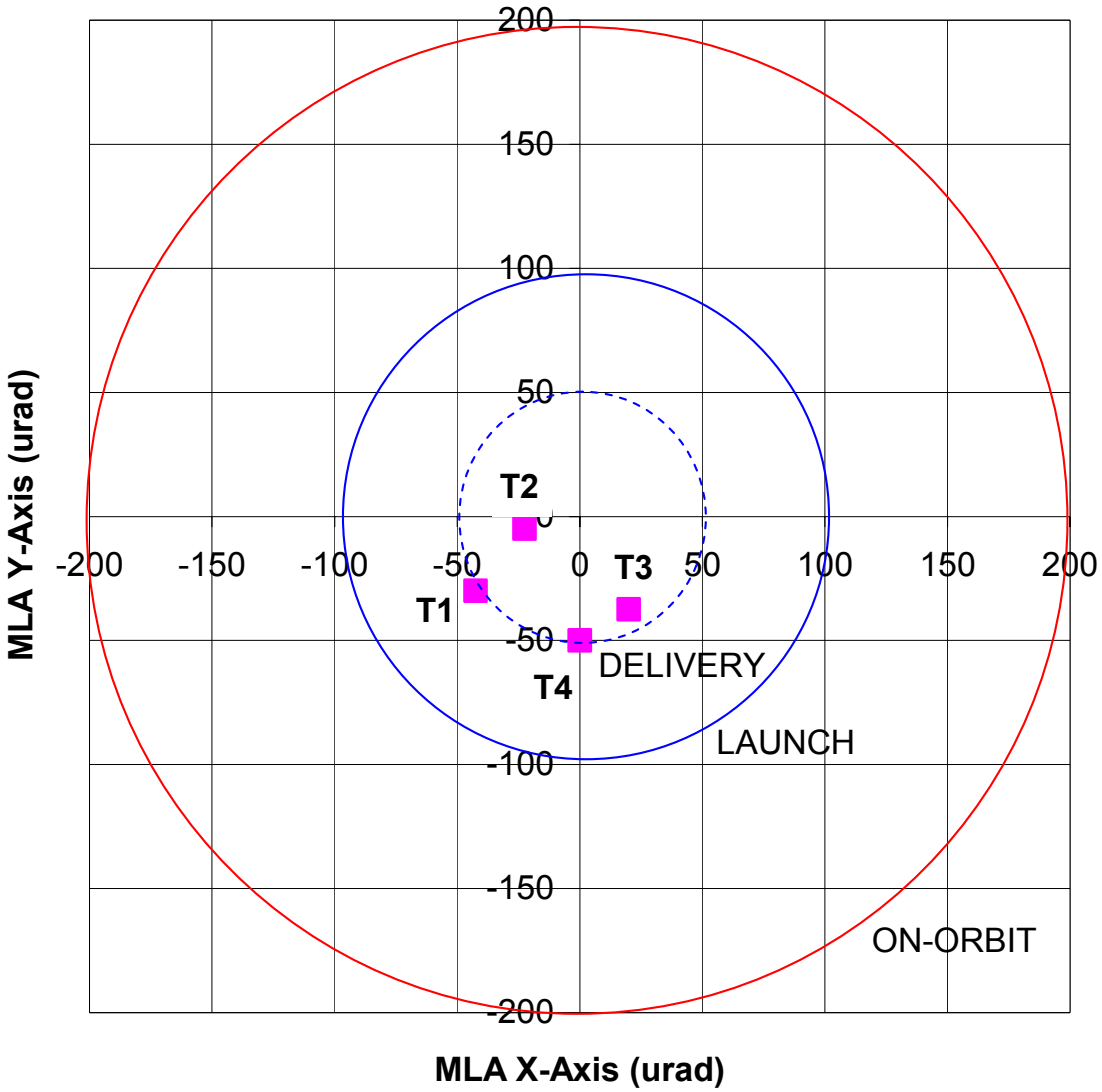




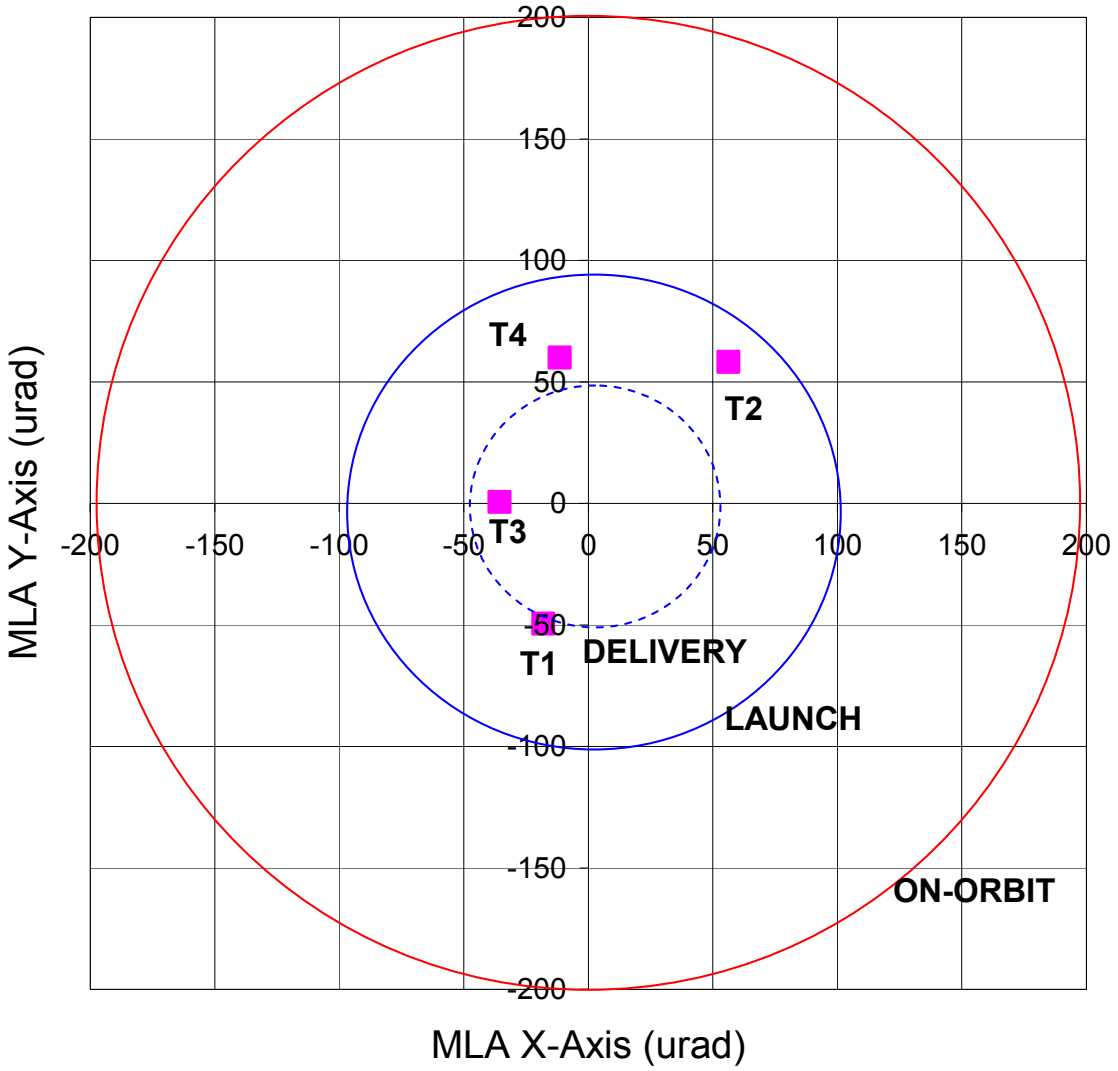




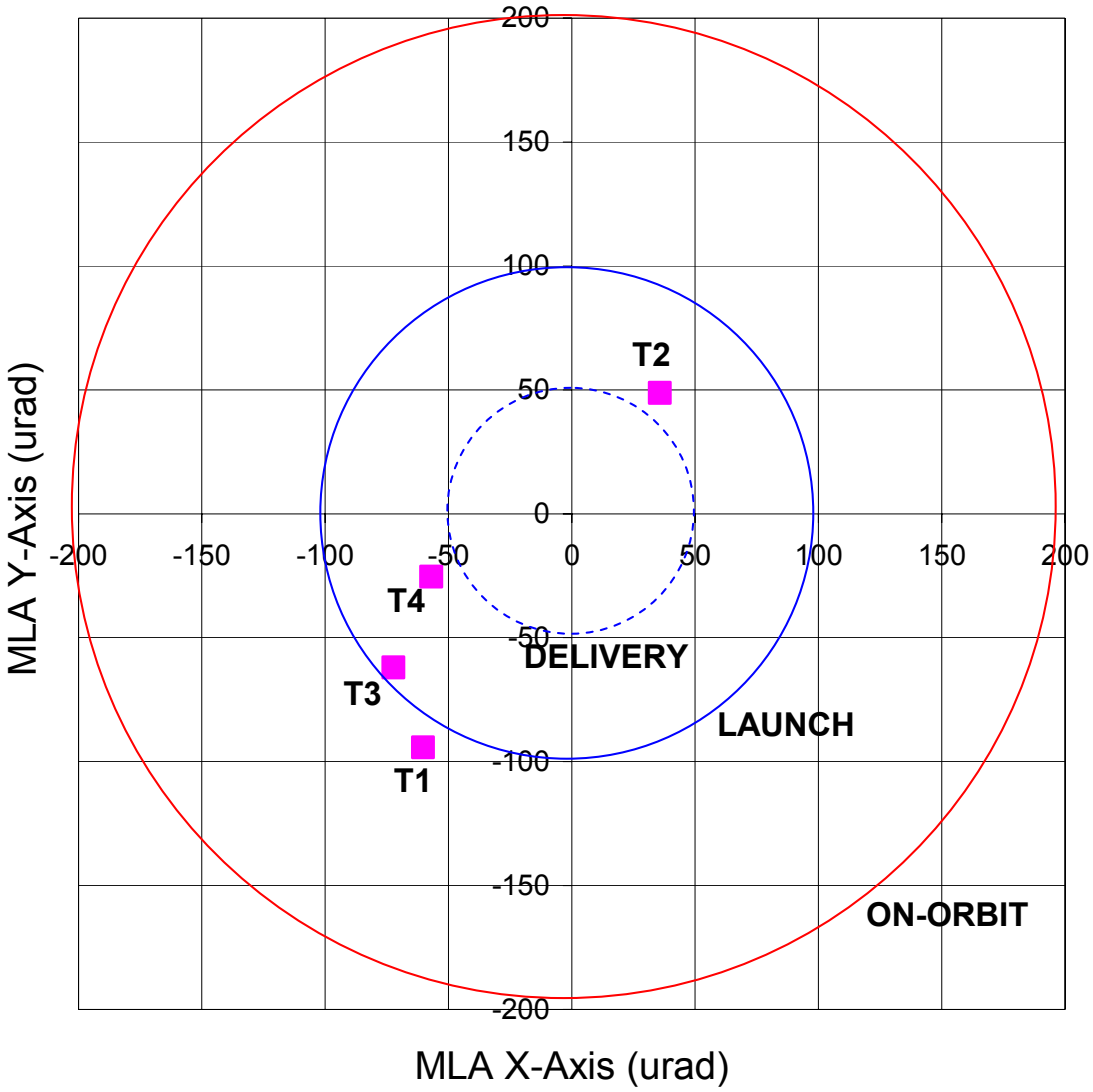
MLA Boresite Alignment: Instrument Delivery (6/25/03)



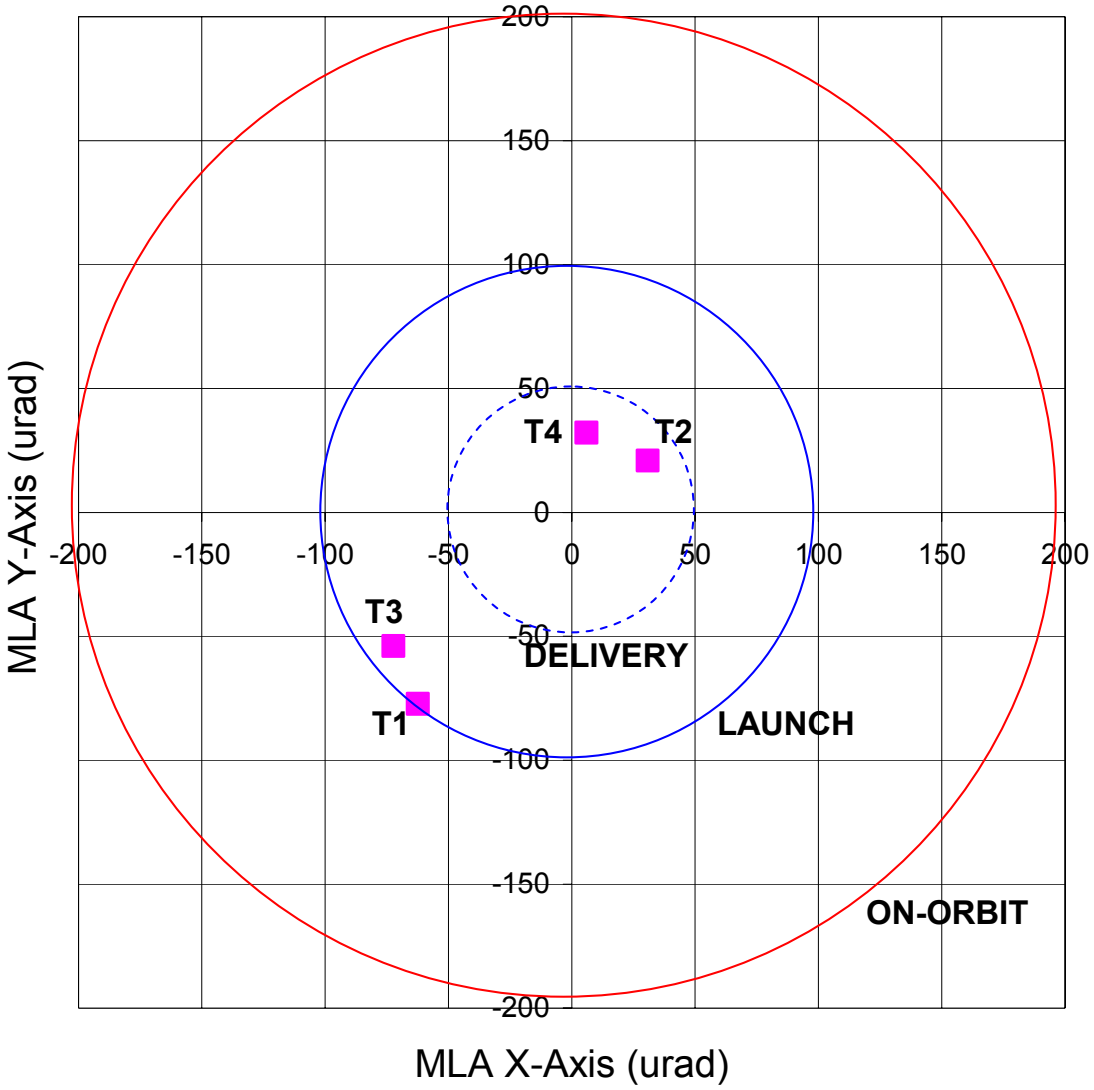
MLA Boresight Alignment: Post S/C Vibe & Acoustics (1/2/04)



MLA Boresight Alignment: Post S/C TVAC and Ship (3/15/04)



MLA Boresight Alignment: Post S/C TVAC and Ship (5/20/04)



MLA Boresite Summary

- Instrument was delivered with all receivers within +/-50μrad instrument alignment allocation
- S/C Vibe test led to boresite changes of up to 100μrad but alignment still met +/-100 μrad launch allocation
- Initial S/C Post-TVAC test results are suspect due to low amplitude of FOV plots (p.4)
  - MLA laser was vignetting on target extended tube
- Repeat of S/C Post-TVAC test shows all receivers within +/-100 μrad launch allocation
  - Tube #4 saw the most dramatic improvement
  - Some common receiver motion apparent (p.7 v. p.9)
    - Could indicate some laser beam motion (ΔY' ~ -30 μrad)