

ILC(TA) Instrumentation: Status Update August 2006

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International Linear Collider at Fermilab

Only little progress since last status report July 2006:

GDE support activities:

- VLCW participation.
- Parametric spreadsheet lists M&S costs and manpower requirements for all the ILC instrumentation (~ 90 % complete).
- Review presentation of the Fermilab cold cavity BPM development. In general positive echo. Remarks on the EM-design from Zenghai Li (SLAC), concerning parasitic modes in the coupling slots, and on the slot window ceramics (their brazing and thermal issues) from Carlo Pagani (INFN).

ILCTA instrumentation activities:

- Recent progress only on the cold cavity BPM.
- Industry and SLAC consultations for the brazing of the ceramic slot windows. The metallized ceramics are already in house.
- In-house manufacturing of the test structure currently interrupted because of changes and hints to design details from industry and SLAC. Waiting for another (3rd) industry quote on the brazing.
- Consultants are basically positive on the BPM design, but believe we will need several models to fine tune and optimize the exact geometry of the ceramic slot window assembly.

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R&D instrumentation activities:

- R&D was focused on the HOM studies at the FLASH (former TESLA Test Facility TTF) at DESY/Hamburg.
- Collaboration activities with colleagues from DESY, SLAC, KEK and Fermilab (Nathan Eddy and Manfred Wendt, AD-Instrumentation).
- 8 dedicated, plus some parasitic HOM machine shifts.
- Nathan: Hardware FPGA based HOM calibration algorithm, based on the SVD orthogonalization results.
- Manfred: Some HOM hardware activities, many discussion and meetings on basic and advanced ILC beam instrumentations and possible collaborations.
- Tour through the FLASH/TTF accelerator.