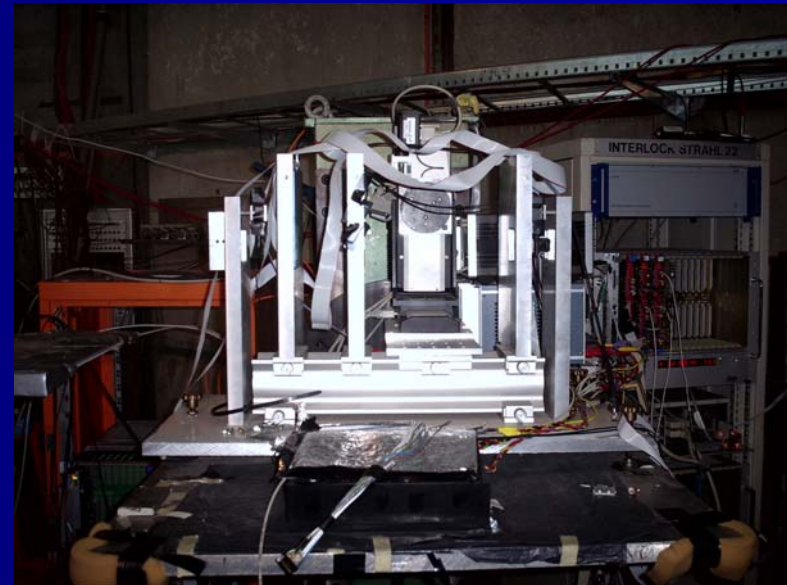


Tracking and Vertexing Testbeams Status and Plans

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(on behalf of Tracking and Vertexing
community)

Recent Testbeams

- DESY
 - DEPFETs, MAPS
 - 6 GeV electron beam
 - 3 plane silicon telescope
 - Data analysis just started
 - See talks from yesterday's session for nice details



Future testbeams

- No obvious requirements as yet... but...
 - Do we need to make a more structured plan for the future?
 - There are limited facilities worldwide which will come under pressure from other R&D groups in the near future
 - Most groups will want to put prototype ladders in testbeams in ~4years from now
 - Do we need to upgrade existing infrastructure?
 - E.g. EUDET @ DESY
 - European framework 6 bid for testbeam infrastructure and detector R&D

EMI Issues

- RF pickup
 - Small signals in vertex detectors
 - Need to readout ~ 20 times per train
- SLD experience
 - $\geq 10 \mu\text{s}$ delay needed before readout of SLD's VXD to avoid EMI problems
 - source of EMI unknown
 - from RF pickup impulse/response to direct beam generated noise?
 - related to other electronic signal activity?
 - other systems ok, but did not try reading out / digitizing within $1 \mu\text{s}$ of beamtime

Tools

- SLD VXD3 and R20 module still available
 - Have a system that we know suffered from beam related EMI
 - Use it as a test to attempt to understand origin of EMI that affected it
- Also need to understand effects such as bunch length/charge
 - Points to using SLAC testbeams

EMI Testbeam Plan

- Tentative plan as follows
 - First develop necessary sensors to categorise RF environment
 - Instrument FFTB area with pickup coils and capacitors
 - Non-intrusive, will operate in parallel with existing programme
 - Aim is to get this effort started by end 2005

EMI Testbeam Plan

- In parallel
 - Get VXD3/R20 up and running
 - Do engineering to get it into endstation A beamline
 - Will need to submit a formal testbeam request for this
 - Attempt to reproduce problems seen by SLD
 - Find out the cause and how to fix it!
- This will follow on from the FFTB work, hopefully towards the middle of next year
 - All depends on linac restart/schedule

Conclusions

- Do we need to get organised?
 - Facilities
 - Overall co-ordination?
- EMI
 - RF instrumentation
 - Testbeam proposal to SLAC