Optical Installation/Commissioning and M&O

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Outline

- Status of Opto-Board Production
- Fabrication of more Opto-Boards?
- Status of PQSP Optical Preparation/Plan
- Summary

Opto-Board Production Status

Type	Needed	OSU good	OSU rework	OSU bad	Siegen good	Siegen rework	Siegen in prog.	Siegen to fix	Siegen bad
D	224	174	21	14	50		9	15	1
B	48	36		5		1	1	15+1	

- OSU completed production in early October with 93% yield
- 224 good D boards with no rework
- several rework D boards now available for system tests
- 17 B boards shipped to OSU for rework
  - 1 board passed QA and available for system tests
  - repair of 3 boards in progress
- Maurice will provide more VDC to Siegen to fix D boards

Fabrication of More Opto-Boards?

Type	System	System (10%)	Spare slots	PQSP	Total	Good	Rework	in prog. (80% yield)	New boards (90% yield)
D	224	23	12	24	283	224	21	19	21
B	48	5	4		57	36	0	15	7

- if no rework board is allowed on B-layer
  - ⇨ populate 13 new B boards

Cost of New Board Production

- CPT offers 50% discount on remaining 36 B and 40 D boards
  - ⇨ $10,700
- M&S
  - ⇨ $400
- AA for passive components mounting
  - ⇨ $2,100
- 3 months of tech time
  - ⇨ $15,000
- ⇨ Total cost: $28,200

Status of Opto Preparation on PQSP

- opto-board tester
  - opto-board reception test:
    - optical power must be consistent with QA measurement
    - can operate with no bit errors at PIN current of 100 μA
    - ~30 boards have been tested at CERN
  - same test after mounting on PQSP
- fiber continuity tester
  - difficult to measure power lost in fiber
    - ⇨ fiber is deemed not damaged if there is no significant lost
  - tester is working at CERN
  - need MT16-MT8 fan-out without guide pins on MT16 ferrule
    - expect to have a fan-out fabricated today at OSU

OSU Personnel at CERN in FY06

- K.K. Gan is on sabbatical at CERN until end of ’06
  - hope to extend to March of ’07
- Waruna Fernando (grad. student) has moved to CERN
  - work on opto installation and commissioning
- Karina Loureiro (post-doc) will start in March at CERN
  - work on opto installation and commissioning
  - work on opto related readout?
- search in progress for another post-doc to be stationed at CERN
- Shane Smith (engineer) will spend ~ 9 weeks at CERN

M&O for Shane Smith

- FY06:
  - 3 trips to CERN
  - 2 months of salary
  - $30.6K including indirect cost
- FY07 proposal:
  - 1 trip to CERN
  - 1 month of salary
  - $13.2K including indirect cost

Summary

- 17 B-layer opto-boards are being repaired at OSU
- not enough boards for system, 10% system test, spare slots, PQSP
  - production of new boards highly desirable
- preparation well underway for opto installation/testing on PQSP
- adequate opto personnel at CERN for installation/commissioning