

MVD Status

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**Detector Council Meeting
March 6, 1997
Costa Mesa, CA**

**Questions
Progress
Milestones
Short-term goals
Issues and Concerns**

Questions

1) Results of pre-prototype MCM?

8channel (beam test die)

NIS liason identified

More delays- dependent on other MCM design (cost)

Recently submitted, Apr return

2) Status of MCM Design?

Good progress

Pre-production design started January 1997

IC contacts, schematic (awaiting info from TGV32)

Roy VanderMollen, ORNL.....NIS

3) Fiber Optic or Copper Wire Data Link?

Proceed on Wire Data Link Design

UCR (Fiber) and Wire (ORNL)

Eliminates complicated Nose cone design (right angle conn)

Significant cost reductions (80K vs 10K)

4) Known Good Die

Longstanding concern - Jan 97 - Tony Moore (ORNL)
Conceptual - 300K upper limit (about 30% in WBS)
Careful evaluation of steps
Sharing costs
Sandia, NMT
Alternate funding sources
Probe card designed, tested at ORNL - works!

5) Performance of 32 channel FEE

TGV32 - 8 channel simulations complete and acceptable
32 channel simulations ongoing - 2w
Review at ORNL before submission - 3/97
TGAMUADC- 32 channel submitted, arrival 3/97
Known DAQ problem, must resubmit
Review at ORNL before submission (32 R2)
Expected next round- submit May 97

6) Current plan for beam testing?

Discussed at length - MVD CM - Unanimous - postpone - 98?
Pre-production MCM - 3/98 - testing complete
Requires all interface boards
Pre-prototype (8ch) - similar die as in beamtest - redundant
1997 schedule and resources tight

Recent Progress

- MVD Collaboration Meeting - Jan 97
- Manpower -
 - UCR (1+), LANL(3), Yonsei (2+), UA (2+), ORNL(3+)
- Full Scale Cooling Tests started
- Pad Detector test nearly complete
 - AC operation, laser - finished
 - source, crosstalk (similar to strip)
- Continue testing production strip detectors
- Tested TGV5 tiny
- Functionality of Motherboard, Pow/Comm cable (sim)
- Definition of Data Collection Interface
- Rohacell Factory at UCR
- Physics simulations - LANL & Yonsei
- Database generation
- Conceptual Design of monitor- UCR
- MCM liason replaced at LANL/NIS
- MCM design started
- Sector Test Decision
- Conceptual KGD strategy
- Fiber Optic vs Wire data link



Milestones

Mechanical

Strip Detector Design	Jun-96	
<i>Pad Detector Design</i>	<i>Oct-96</i>	<i>Double vs Single - 2/97</i>
MVD chain test	Apr-96	Loose ends on analysis
Preliminary Design Review	Aug-96	
MCM Cooling Design Review	Aug-96	
All detectors received	Apr-97	
<i>*Final Design Review</i>	<i>Dec-96</i>	<i>Probably Jan-Feb</i>
Subassemblies complete	Mar-98	
Assembly complete	Oct-98	

FEE

Review AMU/ADC r1	Mar-96	
Review TGV r2	Nov-95	
Review AMU/ADC "r2"	Jan-97	Design started Oct96, submit Nov
<i>Review TGV5 tiny</i>	<i>Nov-96</i>	<i>Submitted Oct96</i>
*Review TGV "r3"	Feb-97	Submit Feb97
<i>*Test preprototype MCM</i>	<i>Nov-96</i>	<i>Probably in Jan97</i>
Prot. MCM vendor rev.	Mar-97	Could slip by several months
<i>FEE PDR</i>	<i>Oct-96</i>	<i>Dec 3 via video conference</i>
MCM design complete	Oct-97	
Chip fab complete	Oct-97	
MCMs complete	Apr-98	

Issues and Concerns

Cost and Schedule

500K over budget
MVD operational 4/99
Tight, aggressive, many tasks in parallel
Multiple prototypes removed, pre-production only
Beam Test?

Manpower

Much improved
Timing & Control @ ORNL

MCM

Known Good Die Strategy
Firm vendor quote

Short-term goals (2-3 months)

Mechanical

Final Mechanical Design Review - April 9

Safety Review - April 4

Pad detector technology choice

Full system cooling tests

FEE

Electronics Test Strategy - (LANL,NIS,ORNL)

Test pre-prototype MCM - (LANL)

Review, submit TGV32 - (ORNL)

Test TGAMUADC32 - (ORNL)

Investigate options for testing die - (ORNL,LANL)

Design of interface boards - (ORNL)

Layout Pow/Com & motherboard - (LANL, NIS)