



Lithium Hydride Absorber Program Update

Alan Bross MICE CM RAL - July 8, 2010







We will Procure:

- An instrumented LiH disc (30 cm diameter, 4 cm thick) for measuring thermal properties
- Two small (1.25" diameter X 0.25" thick) samples for radiation stability tests
- One LiH disc (50 cm diameter, 6.5 cm thick)
 - For use in MICE Step III.1





MICE Step III.1











- Y12 is producing the LiH
- Produced by Hot Isostatic Pressing (150 °C, 30,000 psi)
 - Will use existing mold
- Final parts will be
 - Tested for Chemical composition and purity
 - Radio-graphed to ensure no voids
 - Machined to size
 - Dimensional inspection
 - Coated with epoxy completely





Instrumented Disc







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The Set Up of the Thermal Test







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The Set Up Ready for the Thermal Te









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The Hardware Ready to take the Disc







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The MICE Energy Absorber



- New Hanger Arrangement
 - 3 SS straps
 - 1 Machined SS clamp







Procurement - Disks



• Current Schedule

- Week of 7/19 will "Press a Log"
- Machine parts 8/2-16
- Apply Parylene coating (8/23)
- Final QC 9/6-20
- Ship to Fermilab by 10/4





Procurement - Wedges







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- Asked for quote to produce 1 90° & 1 30° wedge
- Finalized engineering drawings in May
- Finally got a quote "estimate" via email last Thursday
 - About \$90k each!
- Large cost driven by machining costs
 - Need to build a lot of fixturing
 - Trying to setup a phone meeting with Y12 engineering and procurement to see exactly what is driving the cost and what we might be able to do reduce the cost
 - Something in our specification that can be relaxed?
- NOTE: These wedges will come in two parts. Single part wedges were even more expensive, X2

