## Lithium Hydride Absorber Program Update

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## LiH Discs

We will Procure:

- An instrumented LiH disc ( 30 cm diameter, 4 cm thick) for measuring thermal properties
- Two small ( $1.25^{\prime \prime}$ diameter $\times 0.25^{\prime \prime}$ 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 IIII. 1



## Y12 National Security Complex

- Y12 is producing the LiH
- Produced by Hot Isostatic Pressing (150 $\left.{ }^{\circ} \mathrm{C}, 30,000 \mathrm{psi}\right)$
- 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



The Set Up of the Thermal Test

## Foam board \& gasket

1 " copper tube with heaters

High temp glass ceramic

High temp low k gasket

Machined LiH disc

12 " dia steel ring

Thermocouples X12

Flexible cooling tube

Stainless steel base structure


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# The Set Up Ready for the Thermal T 



The Hardware Ready to take the Disc


## 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


## Wedge $1-90^{\circ}$

## Wedge - 283



## Wedge - Procurement

- Asked for quote to produce $190^{\circ} \& 130^{\circ}$ 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

