



Lithium Hydride Absorber Program Update

Alan Bross

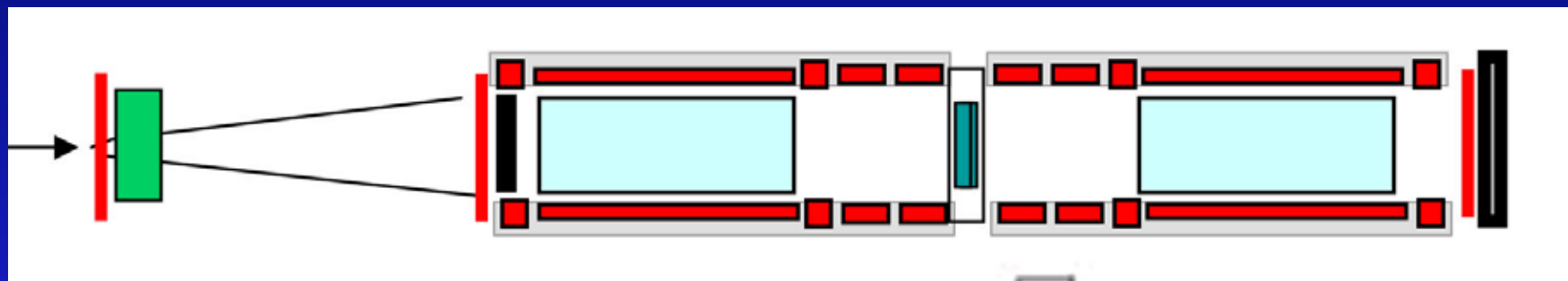
MICE CM

Sofia – October 5th , 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)
 - u For use in MICE Step III.1 - IV
- u Two LiH wedges
 - u For use in MICE Step IV?

MICE Step III.x or IV





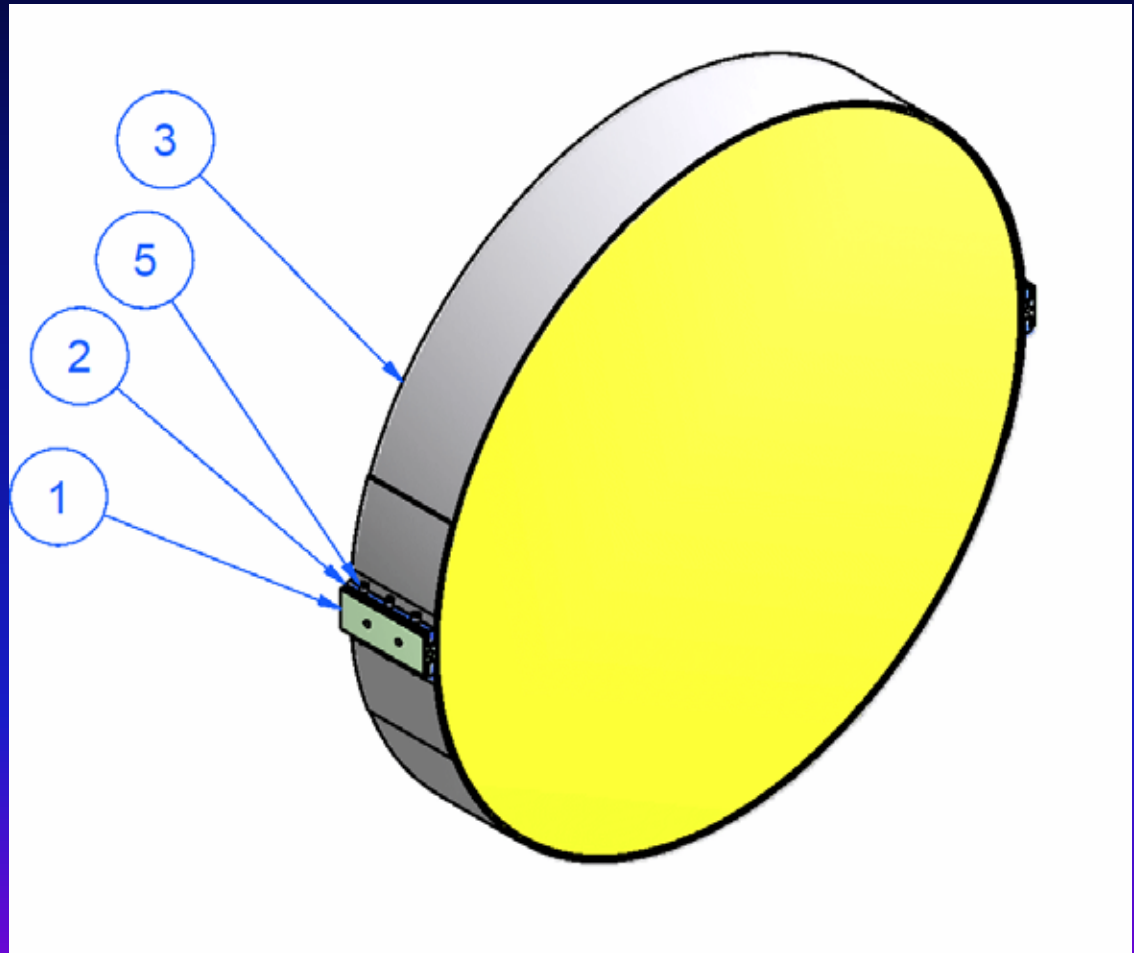
Y12 National Security Complex



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

The MICE Energy Absorber

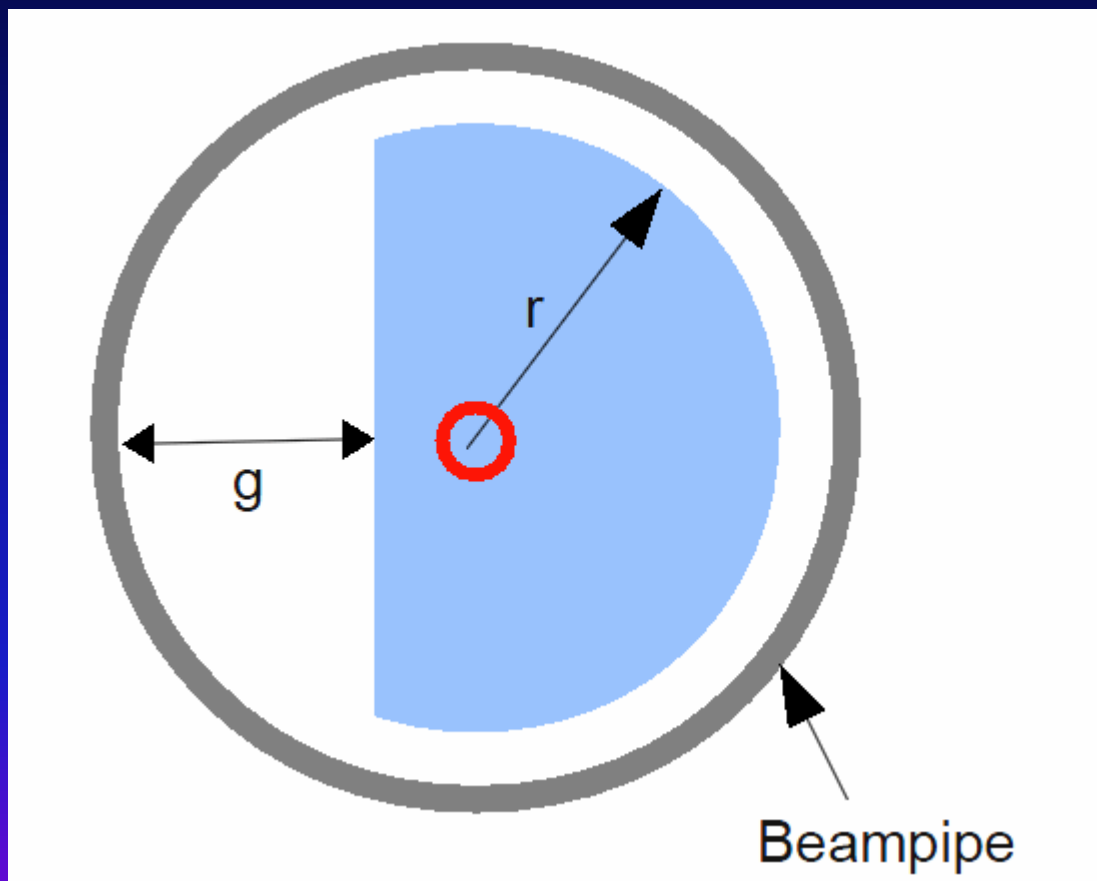
- **New Hanger Arrangement**
 - 3 SS straps
 - 1 Machined SS clamp
 - 45 cm diameter & 65 mm thick



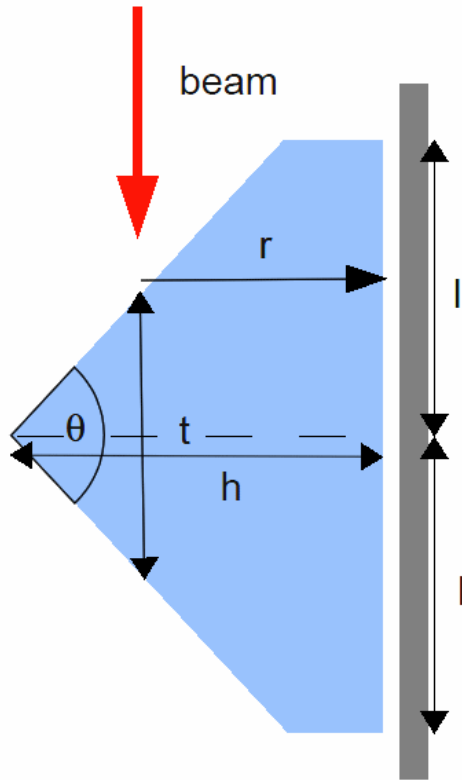
Current Schedule

- u All disks are complete except for some final machining on the 12" disk that is to be instrumented.
 - s Problem with a few of the holes
- u Other disks are in inspection
- u All machining should be done in 1 week
- u Then 1 week to do the paralene coating
- u Ship by November 1

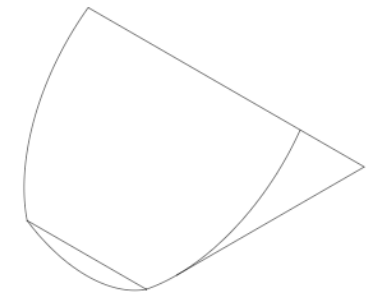
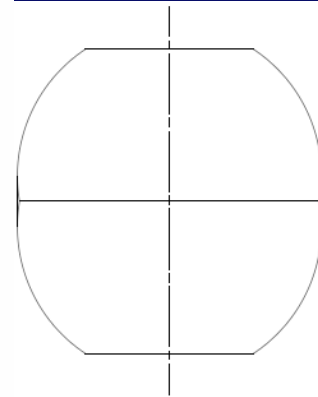
Procurement - Wedges



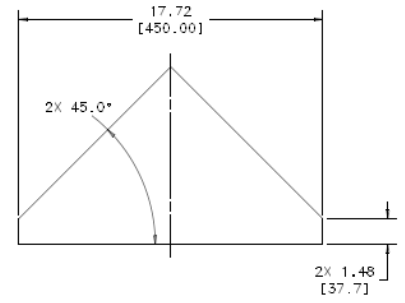
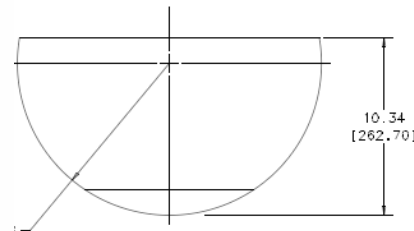
Wedge 1 - 90°



Wedge 1
 $l=225$ mm
 $r=225$ mm
 $t=75.4$ mm
 $h=262.7$ mm
 $\theta=90^\circ$



ISOMETRIC VIEW





Wedge - Procurement



- We have ordered a 90 wedge, but it will come in two pieces
- Need to develop hanger
 - Run with full or $\frac{1}{2}$ wedge
- Wedge machining has not yet started
- I do not have a delivery date yet.

Final 1/2 Wedge

