

## Adrian Fabich

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**From:** Spampinato, Philip Thomas [spampinatop@ornl.gov]  
**Sent:** Mittwoch, 20. Oktober 2004 22:04  
**To:** hkirk@bnl.gov  
**Cc:** kahn1@bnl.gov; palmer@bnl.gov; rosamu@bnl.gov; simos@bnl.gov; ludewig@bnl.gov; thieberger@bnl.gov; Luca Bruno; Helmut Haseroth; Jacques Lettry; Adrian Fabich; Friedrich Haug; Simone Gilardoni; Rob Edgecock; roger.bennett@rl.ac.uk; y.ivanyushenkov@rl.ac.uk; t.w.bradshaw@rl.ac.uk; paul.drumm@rl.ac.uk; densham@rl.ac.uk; kirkmcd@princeton.edu; changguo@princeton.edu; hainesjr@ornl.gov; gabrielta@ornl.gov; gravesvb@ornl.gov; rennichmj@ornl.gov; koji.yoshimura@kek.jp; yoshinari.hayato@kek.jp; titus@psfc.mit.edu  
**Subject:** RE: hi-power target experiment- 631-344-6261  
**Attachments:** Containment Boundaries.pdf



Containment  
Boundaries.pdf (22..

Gentlemen,

In response to Harold's email, I have attached a simple sketch that will be useful for tomorrow's discussion on beam windows and primary/secondary containment vessels, for the mercury target system.

As a prelude to the discussions, the following comments are made:

- 1) The baseline design has "single" windows for the primary and secondary containments; the primary containment windows could be Ti6-4, or equivalent; the secondary containment windows could be made from the same material, or quartz, or possibly lexan. (Based on results from the E951 tests extrapolated to the parameters of this experiment, double windows appear unnecessary; furthermore, evacuating and monitoring double windows requires breaching the secondary containment.)
- 2) The primary containment, i.e. the Hg-wetted surfaces, will be designed to withstand 50 atmospheres.
- 3) The secondary containment provides a boundary for monitoring Hg vapor.

Section A-A in the sketch is drawn to scale; we are presently showing two supply lines that merge into a single nozzle. Note that these lines are also part of the primary containment.

I hope this information is helpful. - Phil

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-----Original Message-----

From: Harold Kirk [mailto:hkirk@bnl.gov]  
Sent: Wednesday, October 20, 2004 10:50 AM  
To: Harold Kirk  
Cc: kahn1@BNL.gov; palmer@bnl.gov; rosamu@bnl.gov; simos@bnl.gov; ludewig@bnl.gov; thieberger@bnl.gov; luca.bruno@cern.ch; helmut.haseroth@cern.ch; jacques.lettry@cern.ch; adrian.fabich@cern.ch; friedrich.haug@cern.ch; Simone.Gilardoni@cern.ch; rob.edgecock@cern.ch; roger.bennett@rl.ac.uk; Y.Ivanyushenkov@rl.ac.uk; T.W.Bradshaw@rl.ac.uk; paul.drumm@rl.ac.uk; densham@rl.ac.uk; kirkmcd@princeton.edu;

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Philip Thomas; Graves, Van B.; Rennich, Mark J.; koji.yoshimura@kek.jp;  
yoshinari.hayato@kek.jp; titus@psfc.mit.edu  
Subject: hi-power target experiment- 631-344-6261

We will have our bi-weekly hi-power target experiment phone meeting  
tomorrow morning (Oct 21) at 8am EDT (5am SLAC, 1pm RAL, 2pm CERN, 9pm

KEK).

The Phone in number is 631-344-6261.

Agenda items will include:

PS compatability in Japan	K. Yoshimura
Beam windows in primary/secondary containment vessels	P. Spaminatio
Hg/Materials compatability	H. Kirk
Other business	

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