Glass-Body Design
Successes & Concerns

for the LAPPD Mechanical Group

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Hermetic Sealing Godparent Review

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Successes

- Two vacuum tight glass body “boxes”
  - Frit sealing technique tuned and reliable
  - Stacking and sealing technique to avoid breakage and provide hermetic seal
- Mock Tile with functional MCPs
- Grid Spacer scheme appears to work well
- Successful no leak seal with InSn foil on 1” windows
- Photocathode Lab is operational
- Tile Fabrication Facility design is advancing
- Advances at Univ. of Chicago in understanding of strip line readout requirements

Concerns

- Did Mock Tile MCPs survive firing in oven at 470˚C
- Pumping speed for Grid Spacers (captured regions within Grid Spacer panes
- Test setup for Mock Tile; HV/signal connections
- Vacuum connection scheme for multi-tile panels (Mock Tiles only)
- Electroding of 8”×8” MCPs (topic for Saturday)
- Do we need to metallize Grid Spacer top/bottom surfaces and how do we do that
- Avoiding shorting of getter to MCP or Grid Spacer
- Scaling up top seal from 1” squares to 8”×8” tile
- Turning Tile Fabrication Facility design into working reality
  - Securing funding for vacuum transfer system
  - Putting vacuum transfer system into operation in timely fashion
  - Producing working detectors in non-clean room facility
- Factory production of tile base assemblies

BACKUP SLIDES