# Lumi Detector Modifications

Brian Hahn

The College of William and Mary

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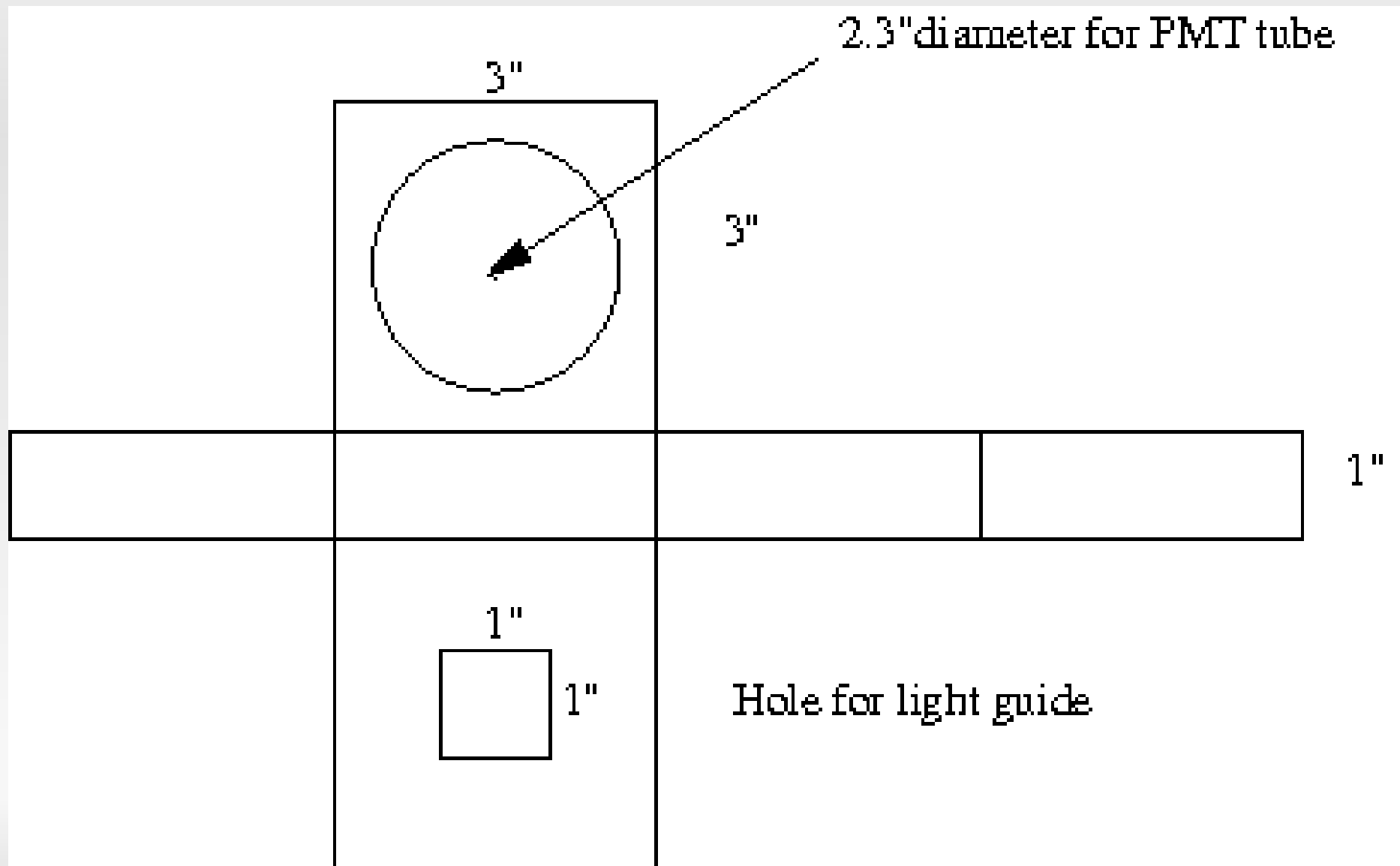
# Problems

- PMT High Voltage set so that the signal was ¾ the range of the 16 bit ADC (~300V)

- PMTs highly non-linear in this high voltage regime

  - => too much light from Quartz

- Need to somehow insert a Neutral Density Filter

- Don't really know what ND Filter is needed

# Goals for Modifications

- Create a box to go between light guide and PMT

- Be able to accomadate changes in Neutral Density Filters

- Try to do get rid of the structural electric tape

- EVERYTHING must be radiation hard

- Had to create new light guides

# The Design

3"

3"

2.3"diameter for PMT tube

1"

1"

1"

1"

Hole for light guide

# The Inside

PMT Tube

Holds PMT Tube

Holder for ND Filter

Light Guide

# The timeline

- Should have one full assembly before Christmas.

- Will be installed during the Christmas down.

- The rest before the PREx test time.