

Lumi GEMs status update

J. Diefenbach

November 1, 2010

Outline

GEM lab at Hampton

Monte Carlo

DESY Testbeam

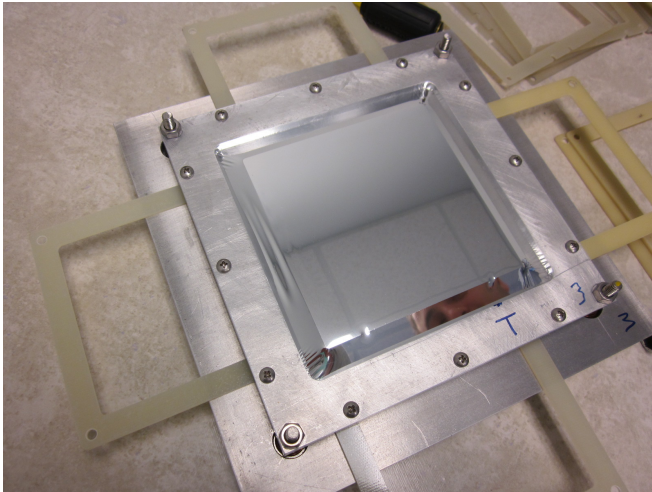
Outline

GEM lab at Hampton

Monte Carlo

DESY Testbeam

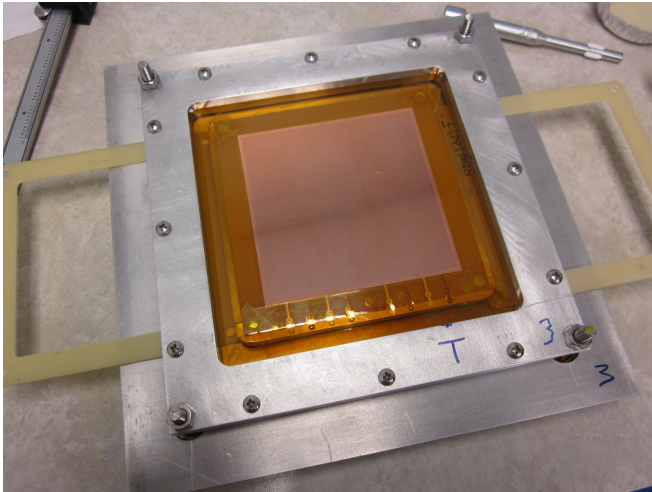
Gluing of detector components



HAMPTON
UNIVERSITY

The Standard of Excellence, An Education for Life

Gluing of detector components



400 μm readout

- ▶ Agreed upon testing procedure (company + MIT)
- ▶ Need ≥ 6 boards, try to ask to get 10 “perfect” ones and maybe 5 more within specs
- ▶ Order should be placed soon

Testing of GEM foils

- ▶ All foils have already been HV tested *before gluing* them at MIT during the summer (leakage current).
- ▶ Repeat HV testing of foils *after* gluing. Test a few foils again *before* gluing for cross-check.
- ▶ Use GEM2D box to look at cosmics
- ▶ Store all foils in dry nitrogen atmosphere (nitrogen should arrive next week)
- ▶ Ship detectors parts in sealed plastic bags (nitrogen flushed)



HAMPTON
UNIVERSITY

The Standard of Excellence, An Education for Life

Outline

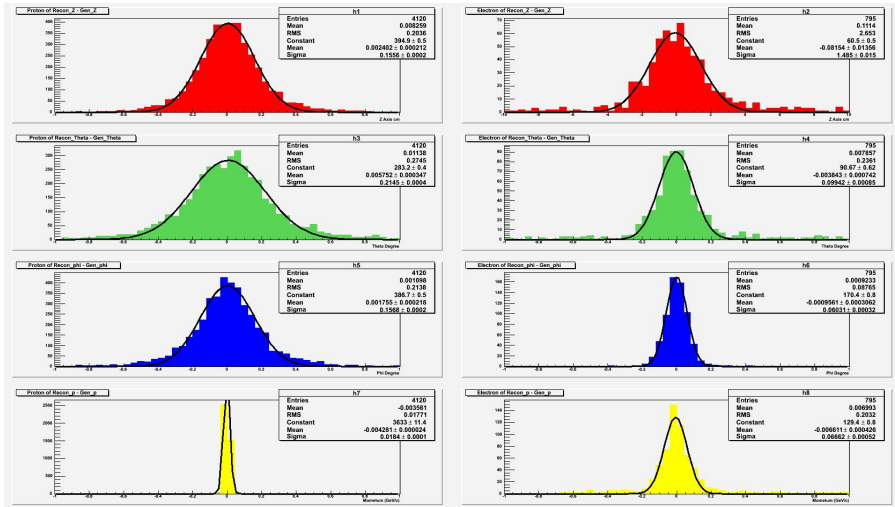
GEM lab at Hampton

Monte Carlo

DESY Testbeam

Resolution studies (Ozgur)

without Mylar super-isolation

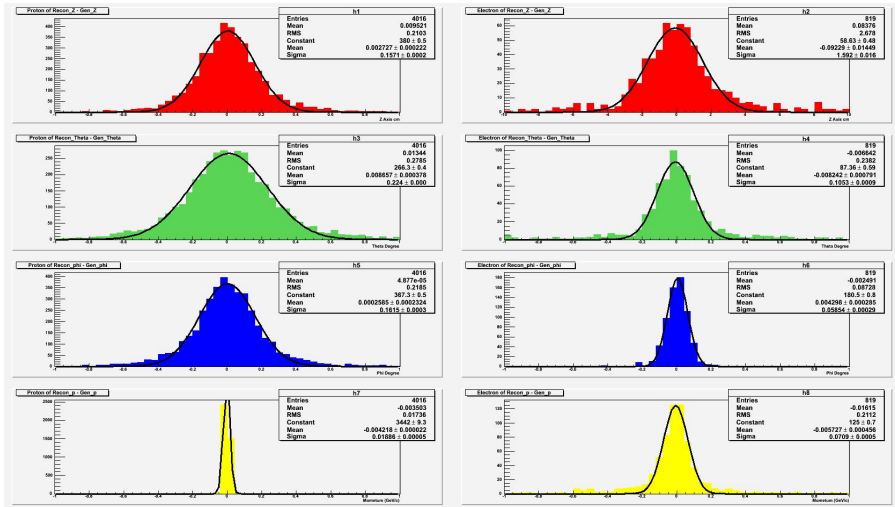


HAMPTON
UNIVERSITY

The Standard of Excellence, An Education for Life

Resolution studies (Ozgur)

with Mylar super-isolation



HAMPTON
UNIVERSITY

The Standard of Excellence, An Education for Life

RunInfo class for MC

Both, for MC ROOT files as well as for real data:
Provide information about...

- ▶ svn revision of MC or DAQ
- ▶ build date and machine/system
- ▶ optional (to be discussed):
 - ▶ runtype, e.g. pedestal, calibration, production, ...
 - ▶ status information (flags, detectors on/off, ...)
 - ▶ ...

Outline

GEM lab at Hampton

Monte Carlo

DESY Testbeam

Testbeam at DESY

Testbeam site 22 provides...


- ▶ 24/7 operation – dep. on DESY II schedule (short breaks for filling of DORIS and PETRA)
- ▶ electron beam of up to 8..10 kHz at a few GeV (user selectable)
- ▶ remote controlled platforms for detectors (1000 kg)
- ▶ high resolution silicon telescope
- ▶ ready-to-use gas systems for drift chambers, GEMs, ...
- ▶ counting house with NIM crates, space for own equipment
- ▶ user support (lemon cables, gas, help for mounting detectors)
- ▶ *need to bring in oscilloscopes, DAQ, computers, ...*

Testbeam at DESY

not yet official!

08.10.2010

Testbeam at DESY in 2011 1. Half																													
Beam	Responsible	January					February				March				April					May					June				
	Collaboration/Subdetector	03	10	17	24	31	07	14	21	28	07	14	21	28	04	11	18	25	02	09	16	23	30	06	13	20	27		
ALL	NO BEAM																												
	To be confirmed																												
21	Garutti																												
	CALICE																												
21																													
21																													
21																													
21																													
21																													
21																													
22	Gregor/ Kötz																												
	MVD Telescope																												
22	Gregor																												
	EUDET Telescope																												
22	Pernegger																												
	ATLAS IBL																												
22	Winter																												
	FIRST																												
22	Diefenbach																												
	Olympus																												
24	Ghazaryan																												
	PCMAG																												
24	Saclay-Carleton																												
	LCTPC																												
24	KEK/Lund																												
	LCTPC																												



HAMBURG
UNIVERSITY
The Standard of Excellence, An Education

OLYMPUS detector tests at Testbeam 22?

Coordinators: Ingrid Gregor, Norbert Meyners
2011 schedule not yet fixed – we need to make clear
what we need and when we need it!

We would like to test the lumi GEMs
(efficiencies, resolution) – might get tight...
Maybe shift testbeam or have e.g. 2 times 2 weeks?

OLYMPUS detector tests at Testbeam 22?

Coordinators: Ingrid Gregor, Norbert Meyners
2011 schedule not yet fixed – we need to make clear
what we need and when we need it!

We would like to test the lumi GEMs
(efficiencies, resolution) – might get tight...
Maybe shift testbeam or have e.g. 2 times 2 weeks?

Is anybody else interested in Testbeam?

Please, give me some feedback! Without knowledge about who needs it, for what purpose, how long – we will not take more than maybe two weeks in total! Otherwise up to six week are possible.