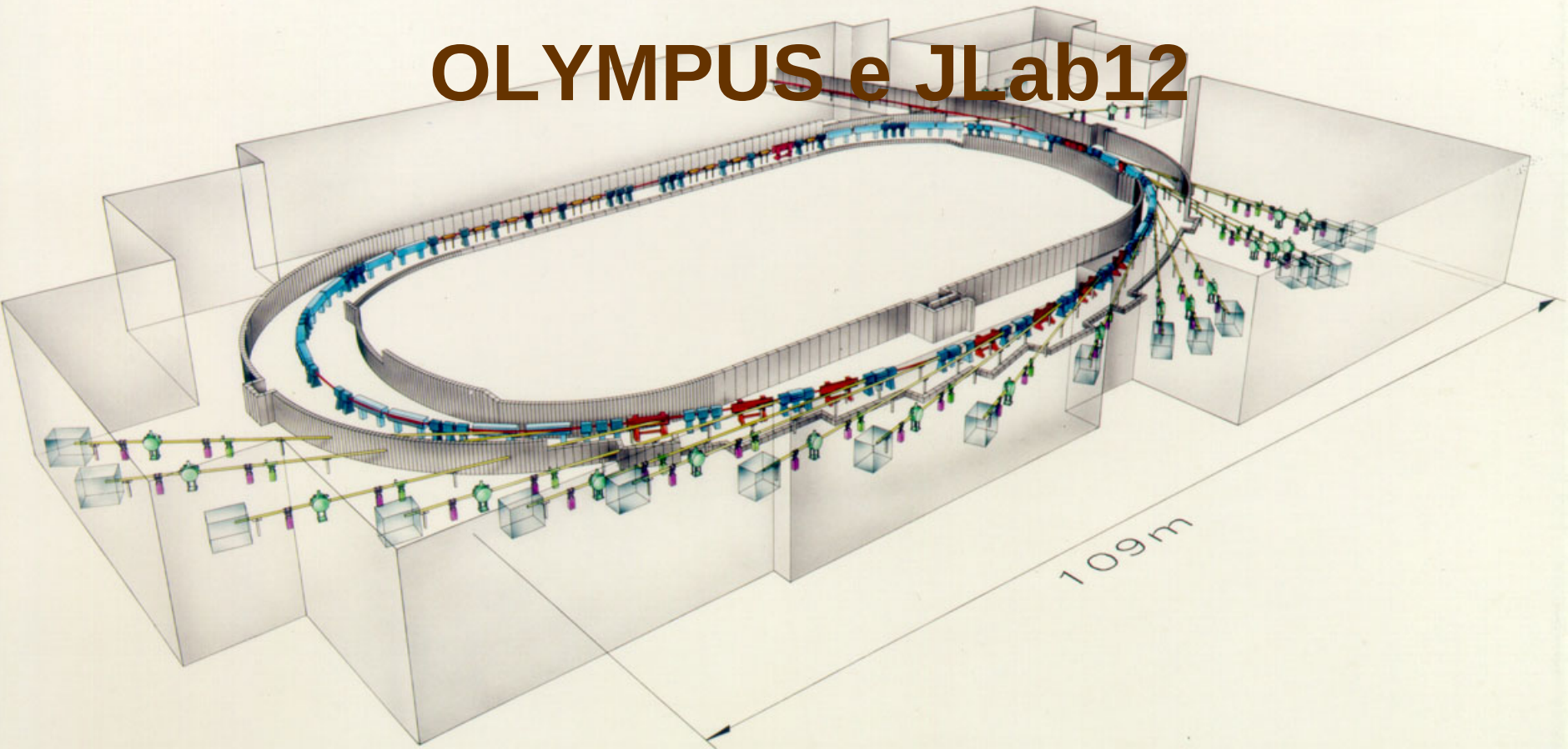


JLab12 Collaboration
Roma 10 giugno 2010

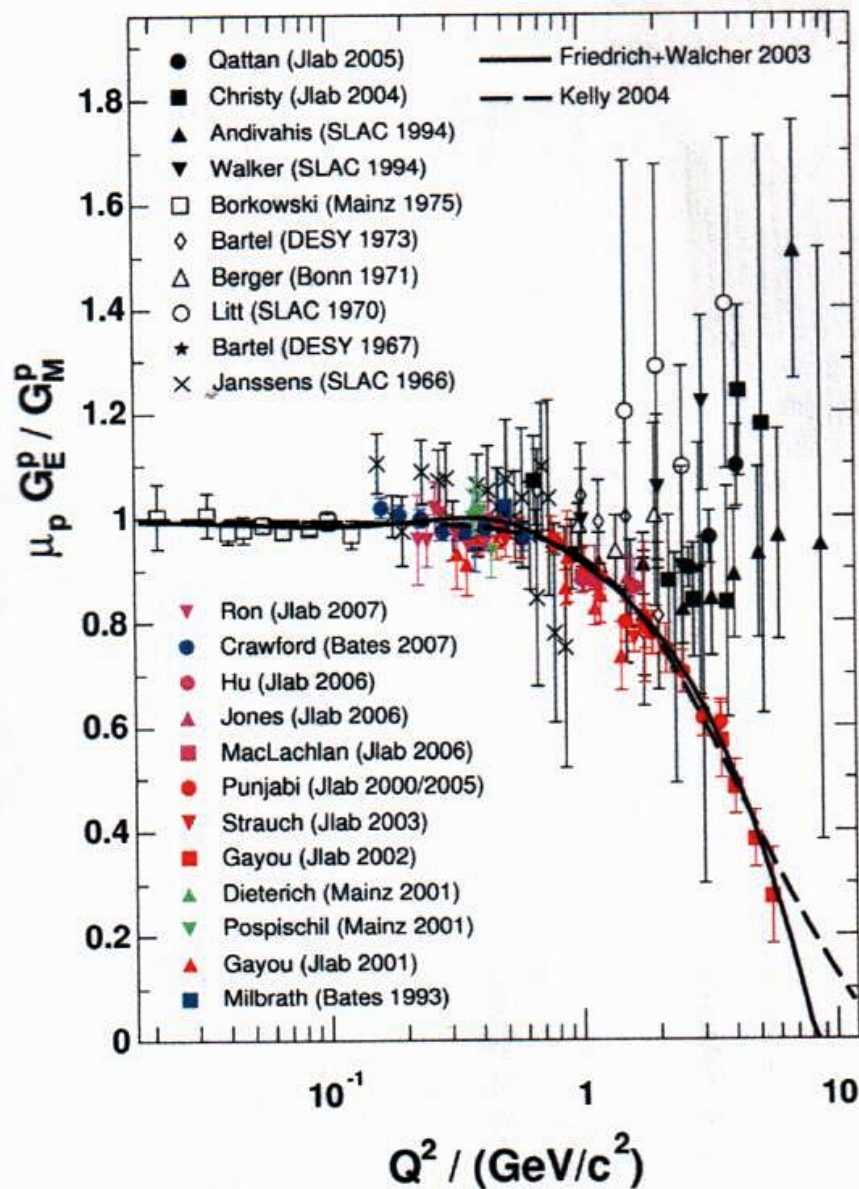
OLYMPUS e JLab12



Outline

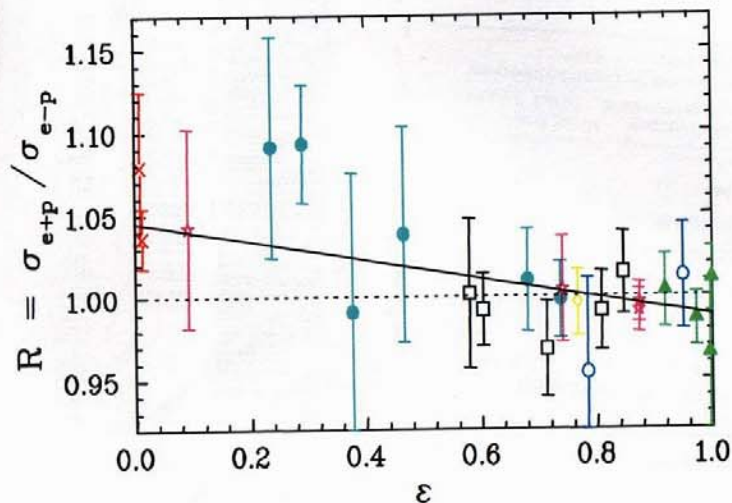
- Interesse per la fisica
- Interesse per la strumentazione
- Facilitazioni al test beam di DESY

Fisica: anomalie nelle misure del fattore di forma del protone. Rosenbluth $\leftrightarrow$ Proton Recoil Polarization

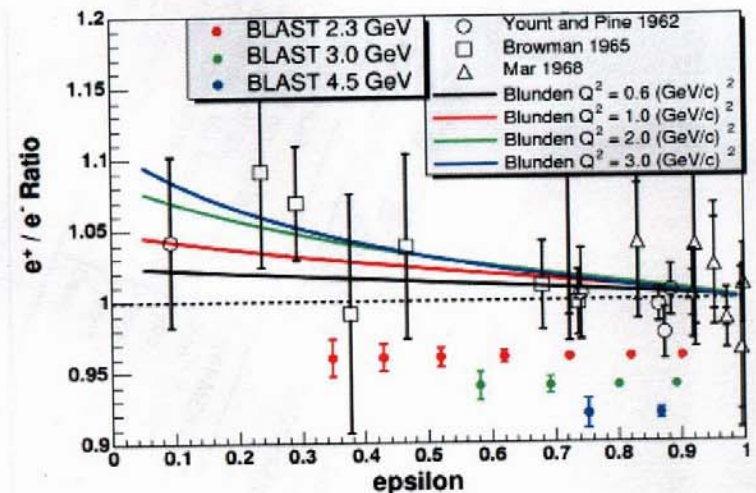


Results for e^+/e^- ratio

Direct test of **real part** of 2γ amplitude



SLAC data
Arrington (2003)



Olympus
projected data

Rivelatore BLAST a DESY

FIGURE 3. THE OLYMPUS SPECTROMETER

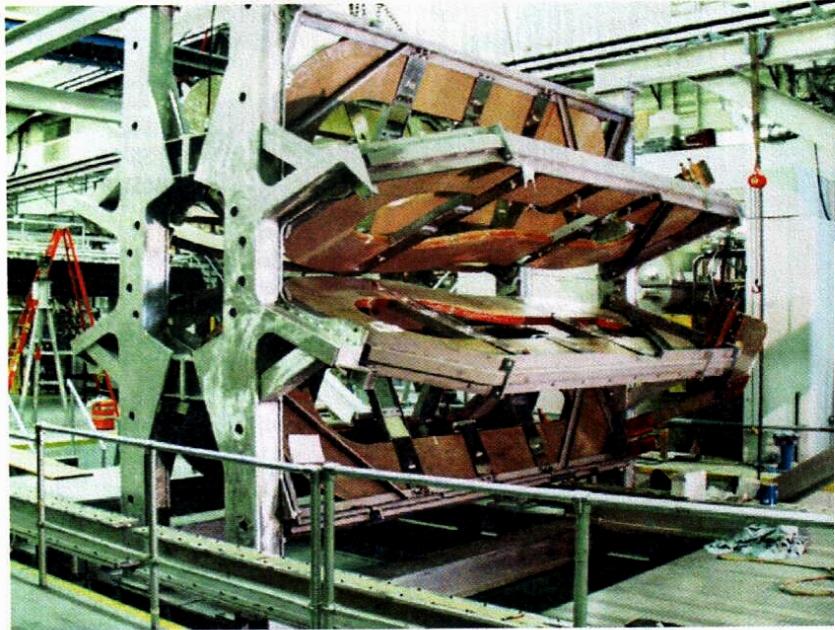
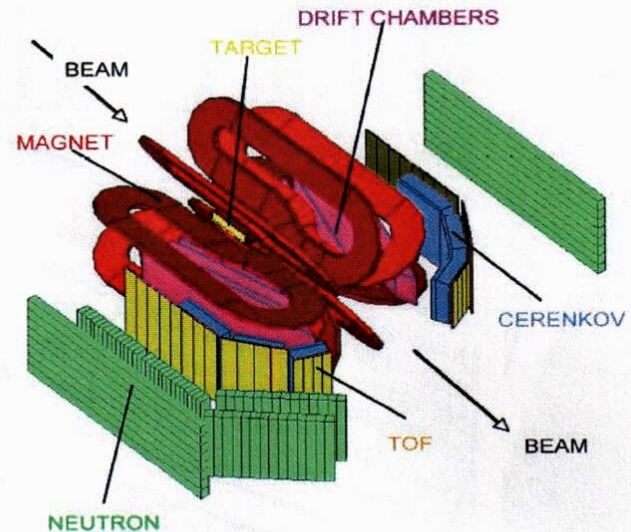
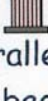
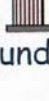


Figure 3.7: The eight coil BLAST toroid without its detectors

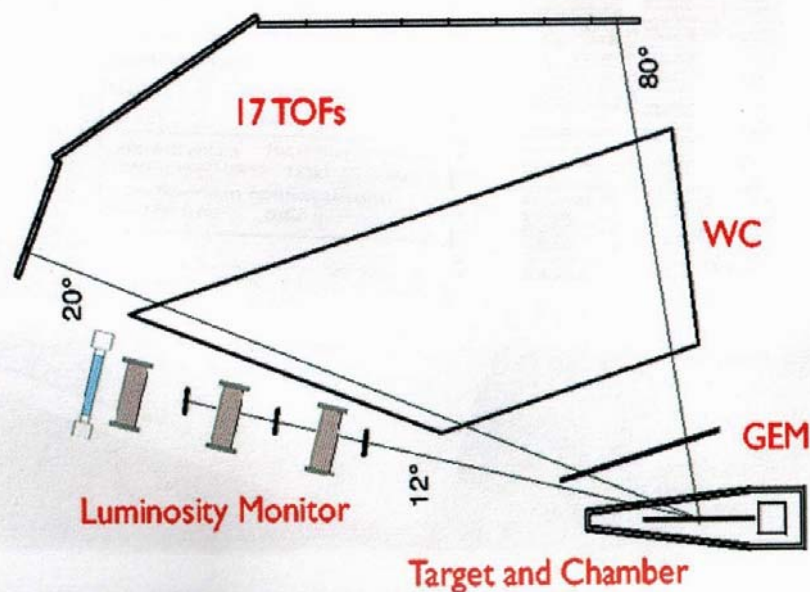


Configuration

2x telescopes at 12° (GEM acceptance):

- | | SC | MWPCs | | | |
|-----|---|---|---|---|-----|
| var |  |  |  |  | yes |
| usa |  |  |  |  | |
- ~parallel (redundancy)
 - fall-back
 - GEM efficiency monitoring
 - timing (improve s/n ratio)
 - others?

Other installation options?



Electronics Components

GEM $\Rightarrow$ FEC $\Rightarrow$ ADC+VME Controller $\Rightarrow$ DAQ

2D Readout

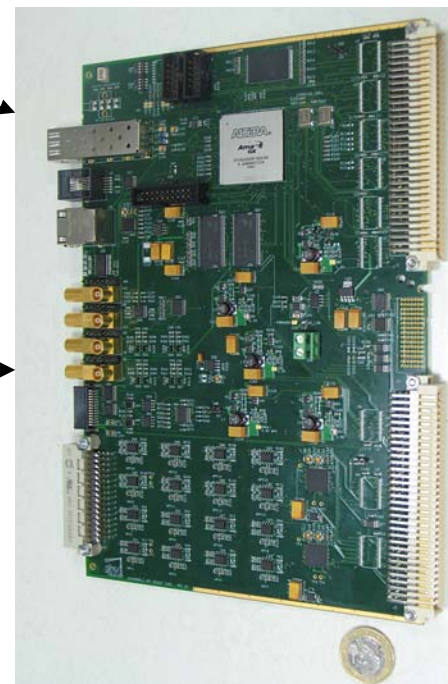
49.5 mm

8 mm

80 mm

Up to
16 FEC

Up
to
10
m
or
+ ?



Main features:

- Use analog readout APV25 chips (wire-bonded on standard PCB, no ceramics): proven to work in COMPASS
- ZIF connector on the GEM side (no soldering on readout foil)
- Minimum electronics components (front-end + VME custom module)
- Copper connection between front-end and VME

- GEM detector per Luminosity Monitor
(circa 3000 canali -> 24 schede FEC + 1,5
moduli VME di readout dell'elettronica
prevista per GEM JLab12)
e forse GEM tracking (circa 1000 canali)

Da confrontare con i 60000 canali di JLAB12

Esperimento prende dati per circa 3 mesi
nel 2012

DESY beam test in Dec/09: setup

