

Some slides from CTC...

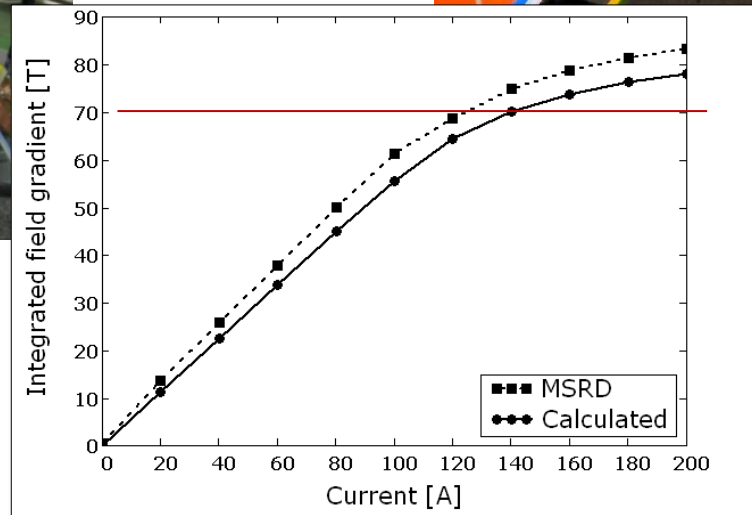
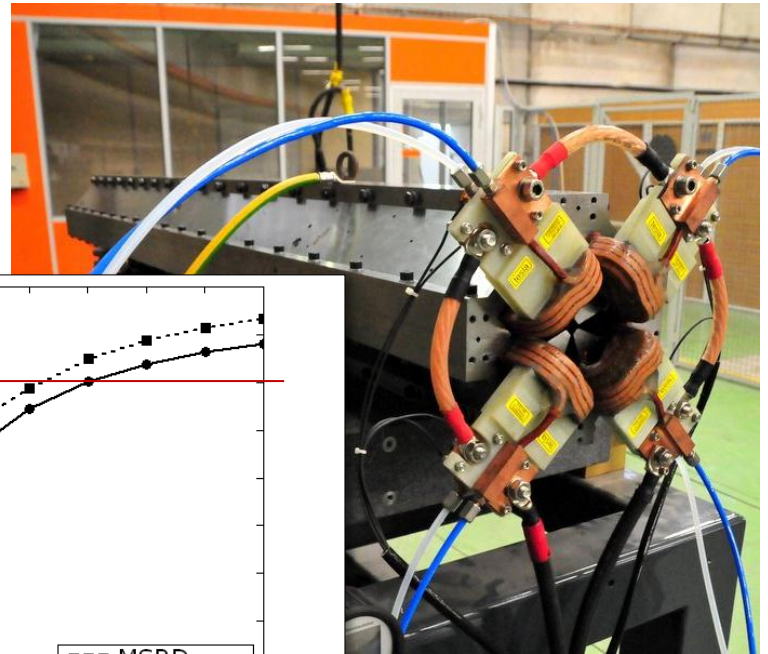
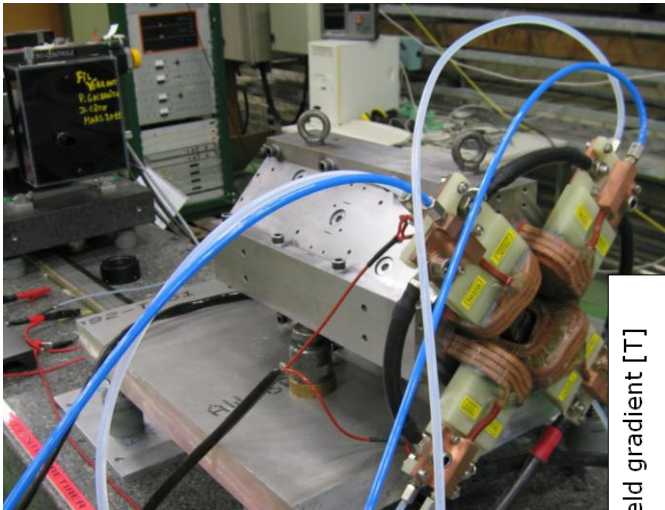
- Magnet prototypes and first measurements (M.Modena et al.)
- Progress on TBA-Module demonstrators (G.Riddone et al.) → see also BE Newsletter
- First simulations in order to define luminosity related observables (E. Gschwendtner et al.)

News from CLIC Magnets System (1/3)

MAIN BEAM QUADRUPOLE Prototypes:

Assembly and tests of MBQs Type 1 and Type 4 COMPLETED.

- Magnetic measurements of Type 1 MBQ by “Single Stretched Wire” method confirm the nominal design Gradient of 200 T/m and the possibility to get higher gradient.
- Measurements by “Single Vibrating Wire” method (a NEW MM development of TE/MS-CMM) provided a first rough evaluation of the Field Quality that, as expected, is not acceptable (due to the poor quality in quadrant machining and grinding by the Contractor). (*Special Thanks to Carlo Petrone for the Magnetic Measurements*)

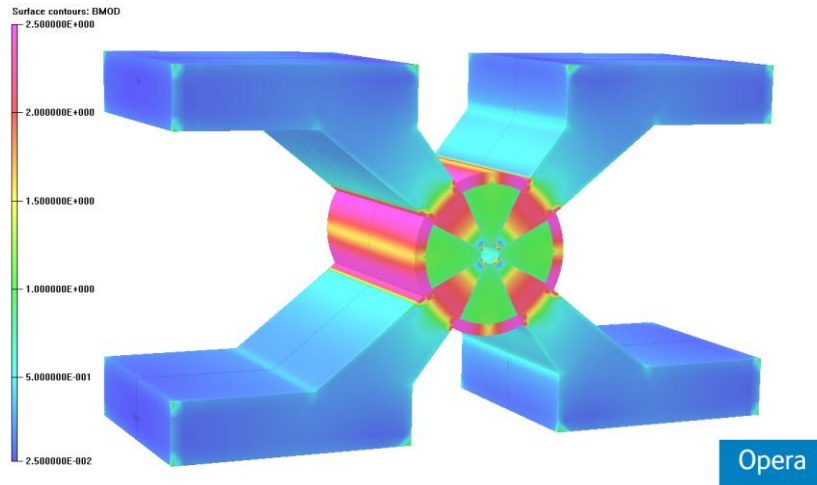


Both magnets are now available for Stability Tests and CLIC Lab Test Program

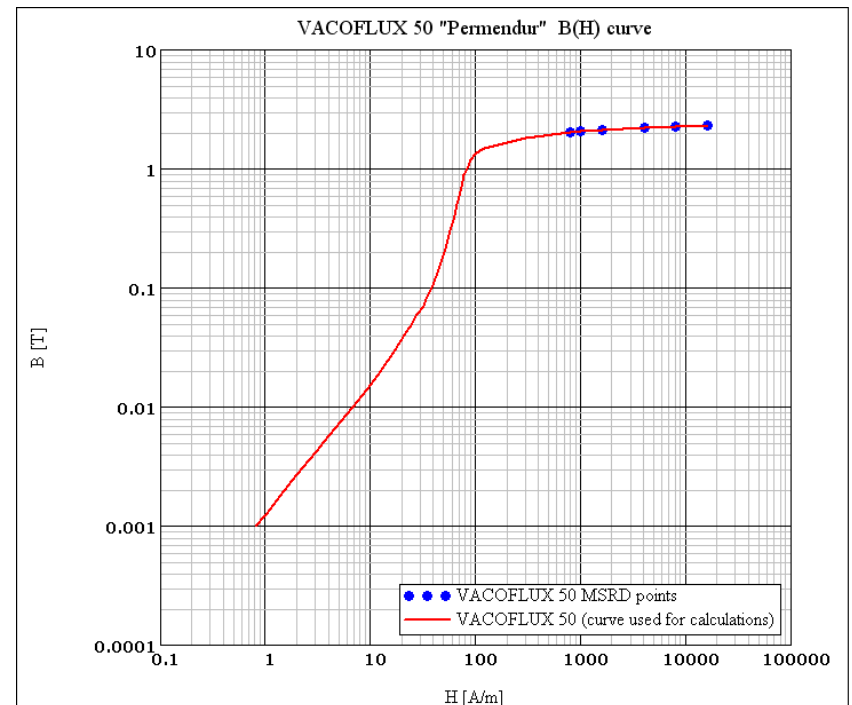
News from CLIC Magnets System (2/3)

QDO SHORT Prototype:

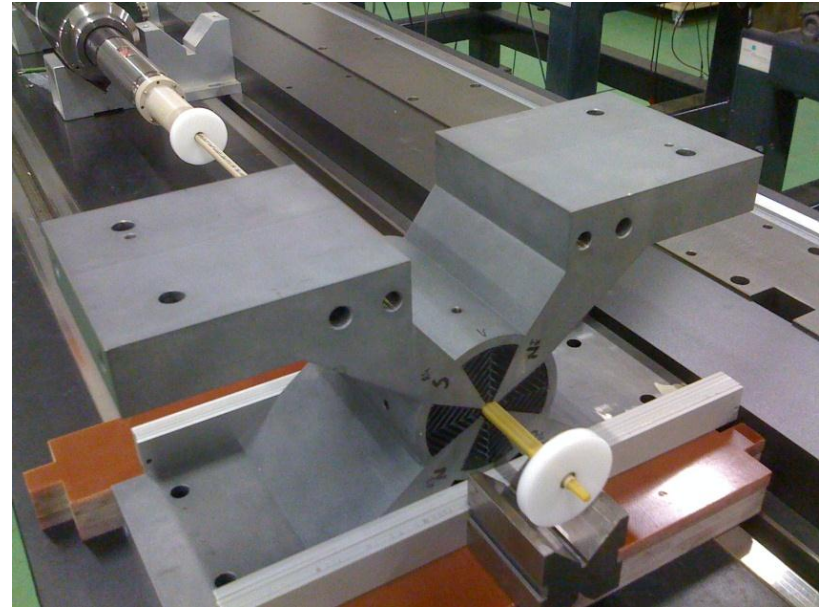
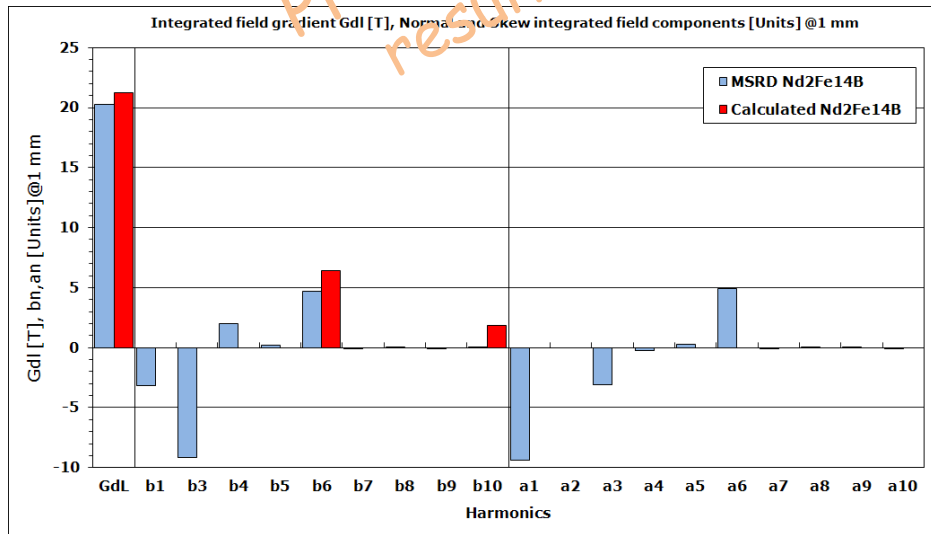
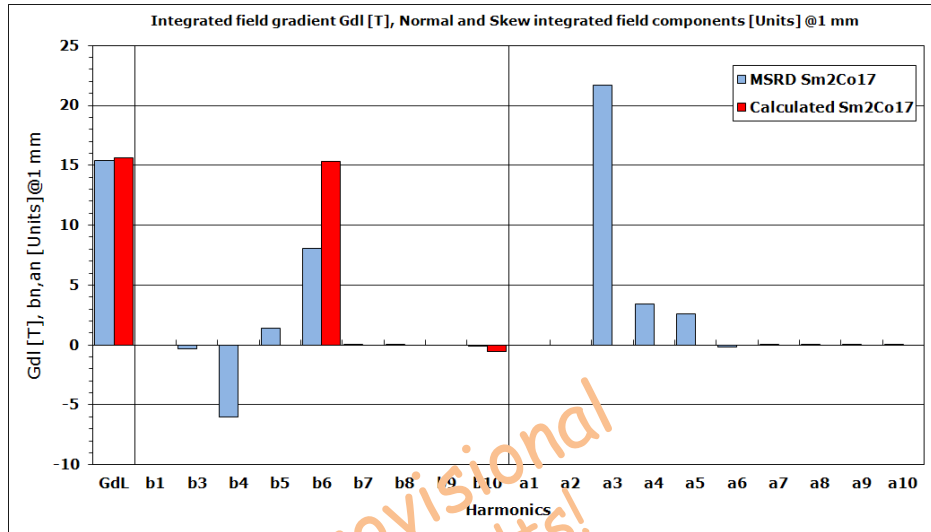
- Assembly and tests of core part completed; Coils under manufacturing (3/4 ready).
- Magnetic Measurements by “Single Stretched Wire” method confirm the design gradients of ~ 150 and 200 T/m in the configuration with only permanent magnet blocks
- Measurements by “Single Vibrating Wire” method provided a first rough evaluation of the Field Quality in the range of what expected and required.



PM material type	Integrated gradient $\int G dl$ [T]	
	MSRD	Calculated
VACOMAX 225HR ($\text{Sm}_2\text{Co}_{17}$)	15.4	15.6
VACODYM 655HR ($\text{Nd}_2\text{Fe}_{14}\text{B}$)	20.3	21.2

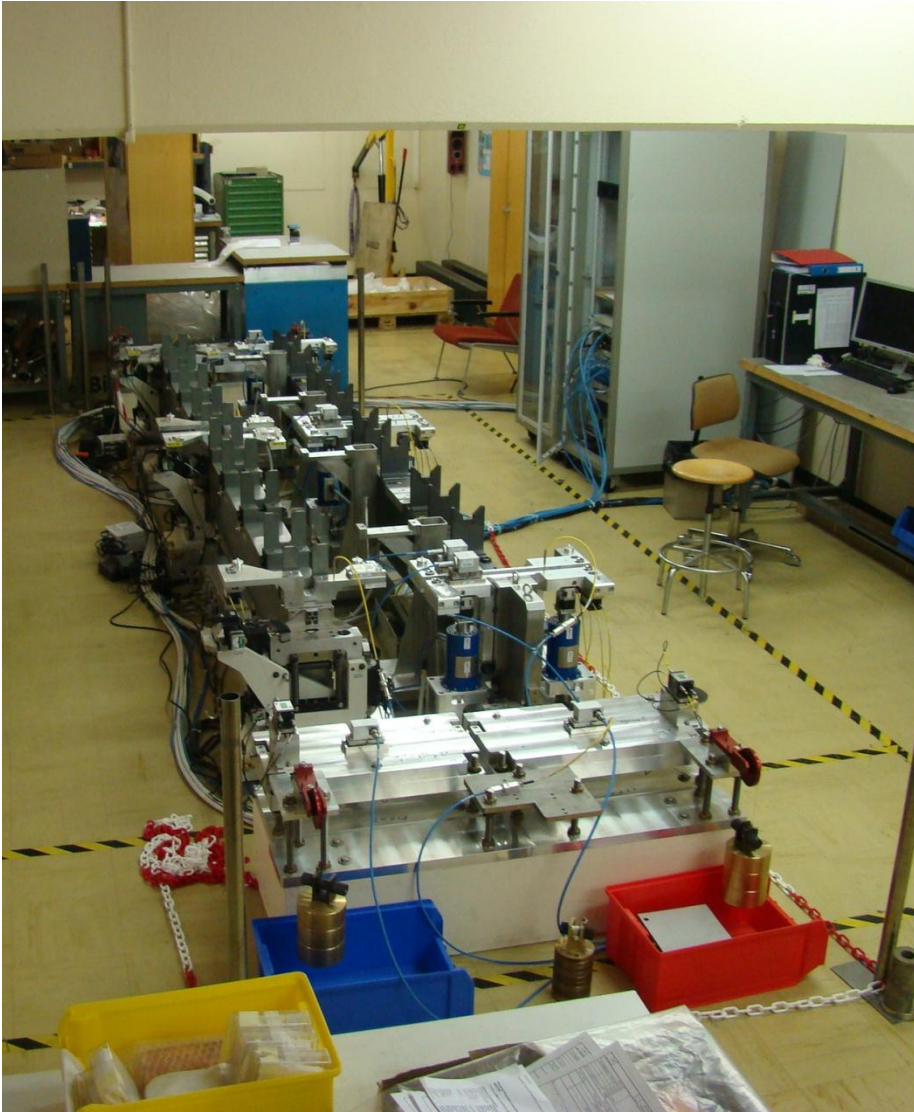


News from CLIC Magnets System (3/3)



More precise measurement of the Field Quality will be provide by the NEW rotating coils system (\varnothing of 7.7 mm) under commissioning in these days (*Special Thanks to Olaf Dunkel*).

Two-beam module

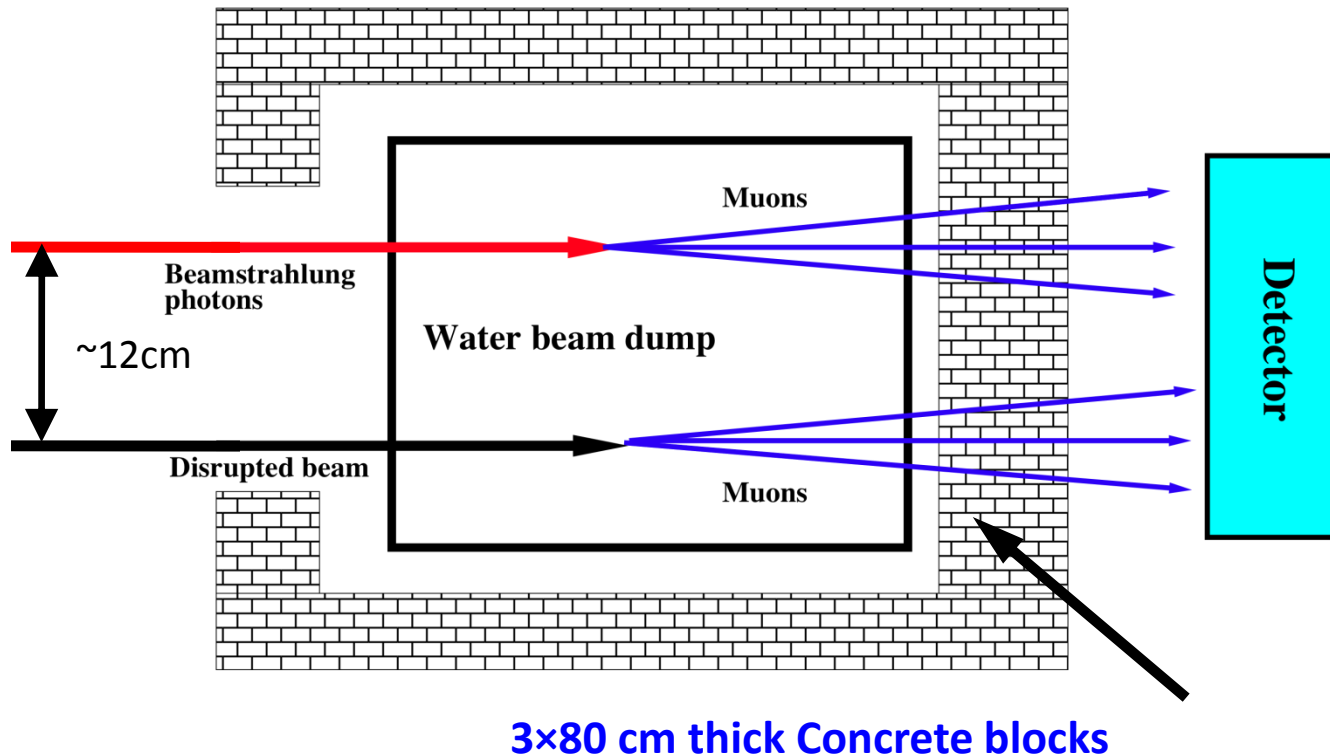


- TS for “integrated” girders in CLEX in progress, comments from WG members are being implemented (contacted several firms which showed interest): CfT by end of Sept 2011
- DBQ and BPM mock-up, including vacuum chambers, received at CERN → installation will start after pre-alignment tests will be finished
- components for first 2 RF units at CERN → under cleaning and brazing
- equipment for “thermal” tests available at CERN

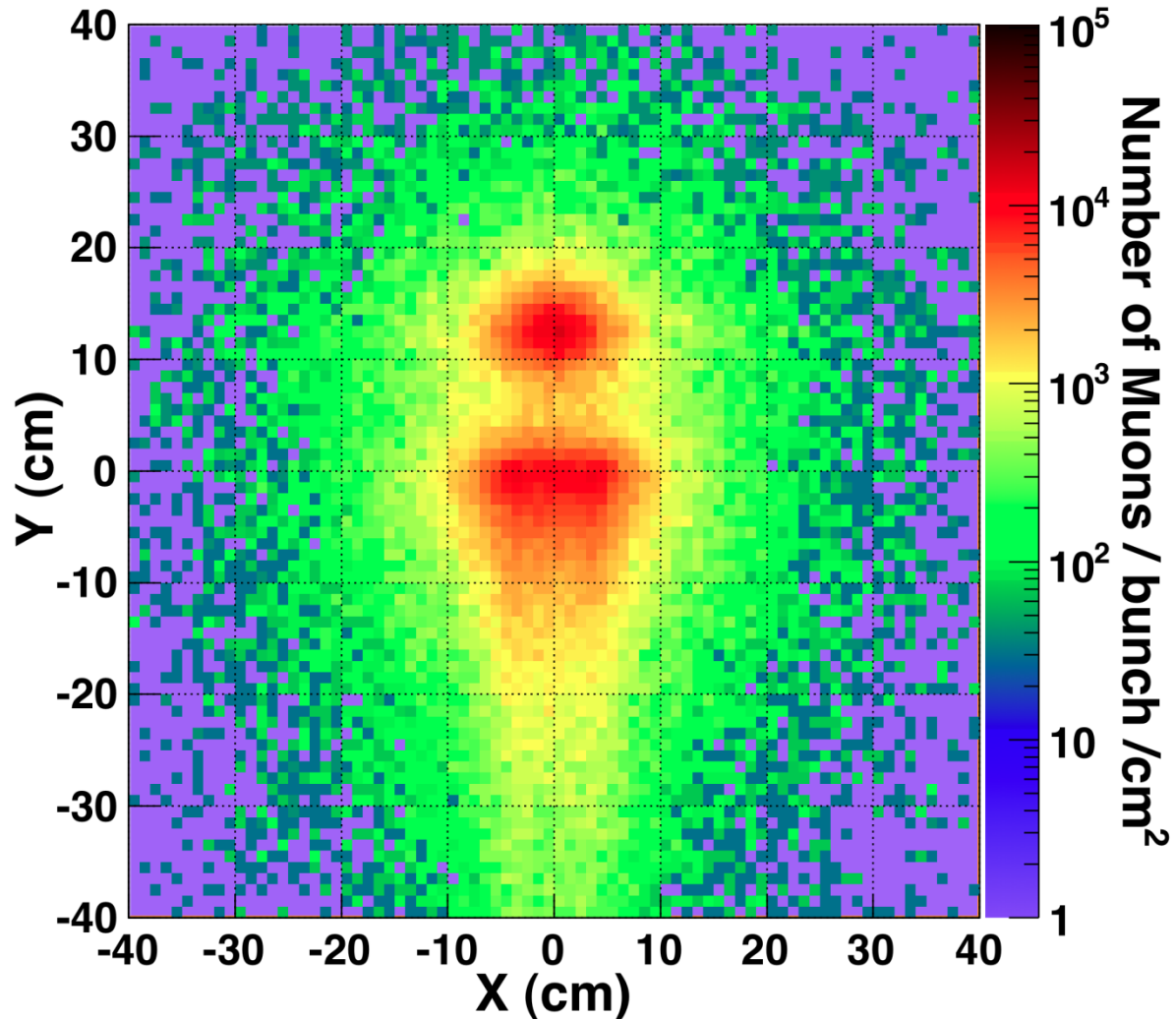
Geometry of the Luminosity Monitoring

Converter - **water** in main dump → muons → detector behind the dump

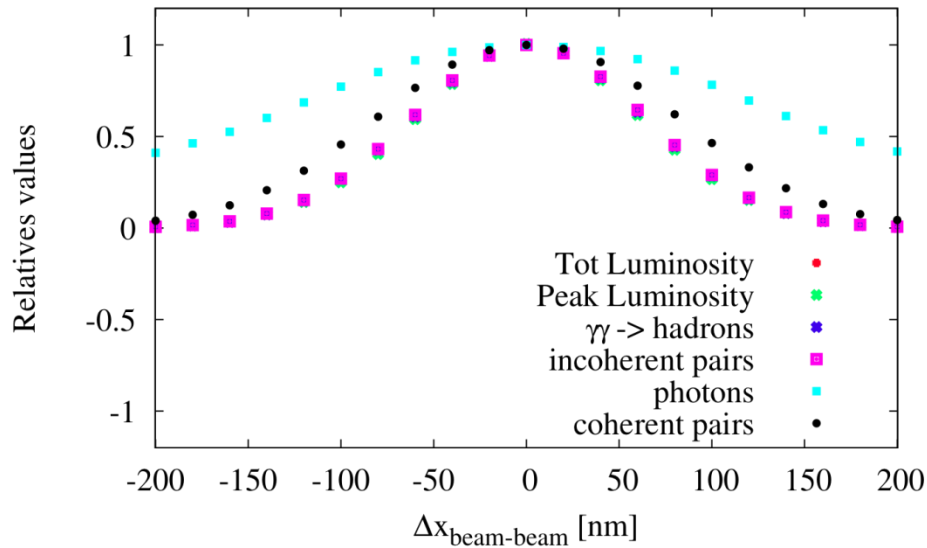
Separation of
disrupted beam
and
beamstrahlung
photons ~ 12cm



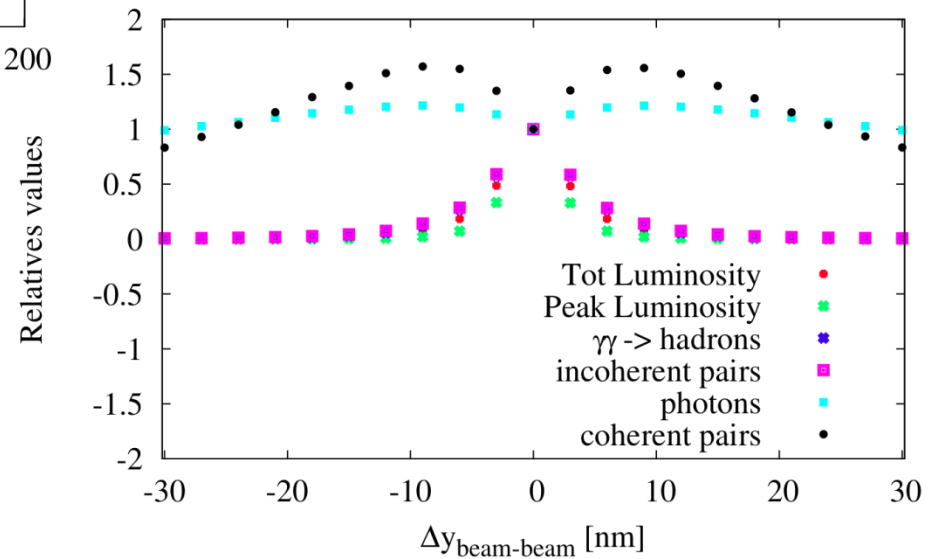
Spatial Distribution of Muons after Beam Dump (No Offset)



Luminosity and Backgrounds Beam-Beam Offset



B. Dalena and D. Schulte



Spatial Distribution of Muons after Beam Dump (Vertical Offset)

-30 nm

Non Offset

+30

