

Janne Pakarinen on behalf of Peter Reiter

MINIBALL preparations 2016

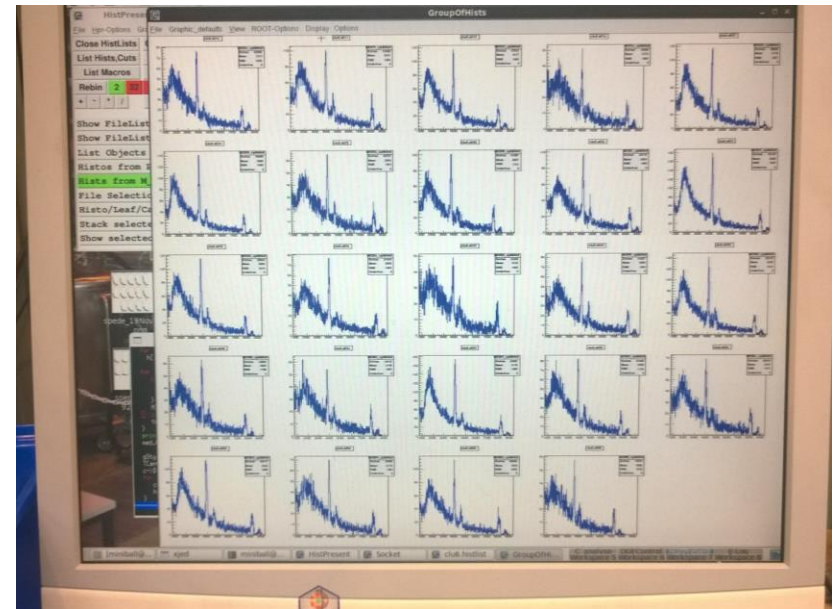
SPEDE tests

- ✦ Background: in-beam tests in November 2015
- ✦ Modified chamber mounted at MINIBALL, vacuum $\sim 8.6 \times 10^{-7}$ mbar
- ✦ Modified detector mounted together with new GO-box

=> no instabilities

- ✦ Married to MINIBALL DAQ
- ✦ Tests with sources

- No stable beam in June 2016



LaBr₃ tests - summary

- Analogue resolution good (2.5% as measured in Oslo)
- Digital resolution decent (3.0% better measurement with revised preamp)
- Energy range suitable for experiment
 - Two methods to instrument 6 detectors 😊
- Development of preamps now at Oslo for experiment with improved noise/longer tail to match DGF

Adapters for LaBr_3 -detectors



- Adapter fits and is easy to mount
- Some improvements to be made
=> new adapter back at CERN in July
- IS559 is ready to do experiments
from the end of August

MINIBALL set-up

- Now:
 - 2 Clusters mounted
- Week 27:
 - finishing SPEDE tests
 - pumping 3 Clusters pumping and cooling
- Week 28:
 - pumping 3 Clusters pumping and cooling
- Week 29 ->
 - mounting Clusters
 - mounting C-REX

C-REX ... T-REX modified for Coulex

T-REX - Si detector array designed for transfer experiments at REX-ISOLDE

- several experiments successfully performed since 2009
- several publications on physics results
- several PhD theses

Technical description

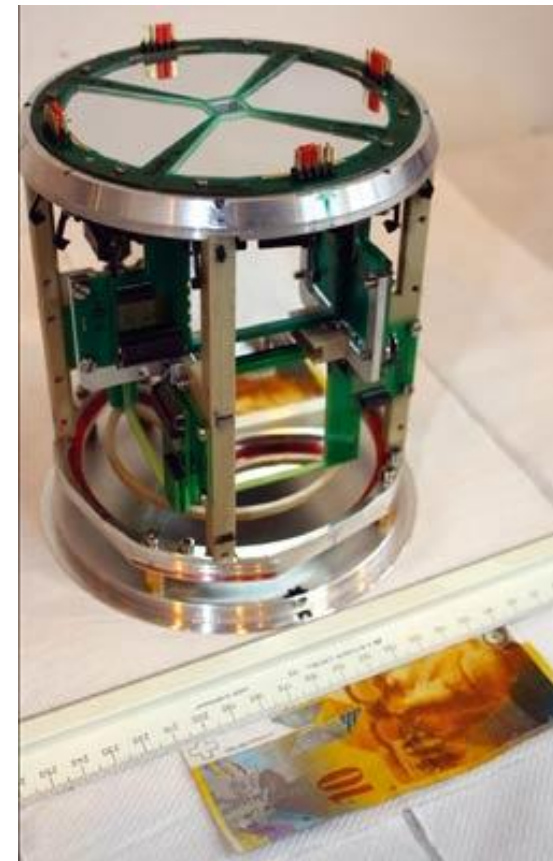
V. Bildstein et al., EPJA 48, 85 (2012)

Different requirements for Coulex

- heavy ions, higher energies, smaller range in Si
- elastic scattering (Rutherford)

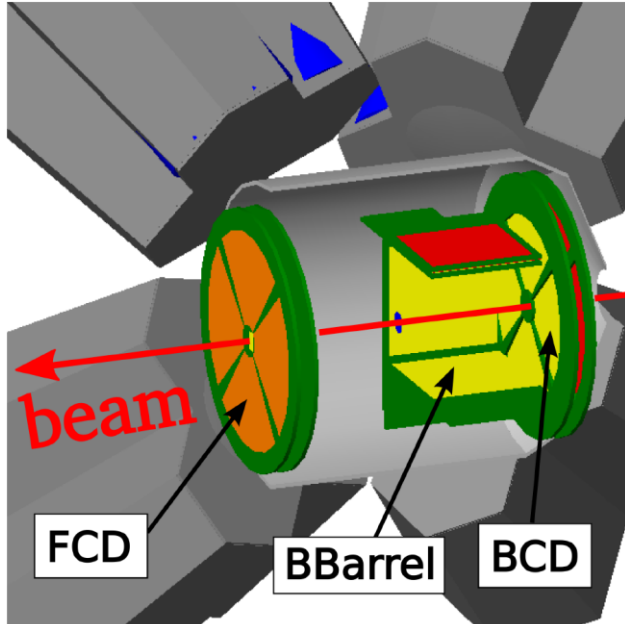
→ C-REX (modified detector arrangement)

- large angular coverage, also in backward direction
- multiple Coulex, reorientation (Q_2 moments) peak in backward direction



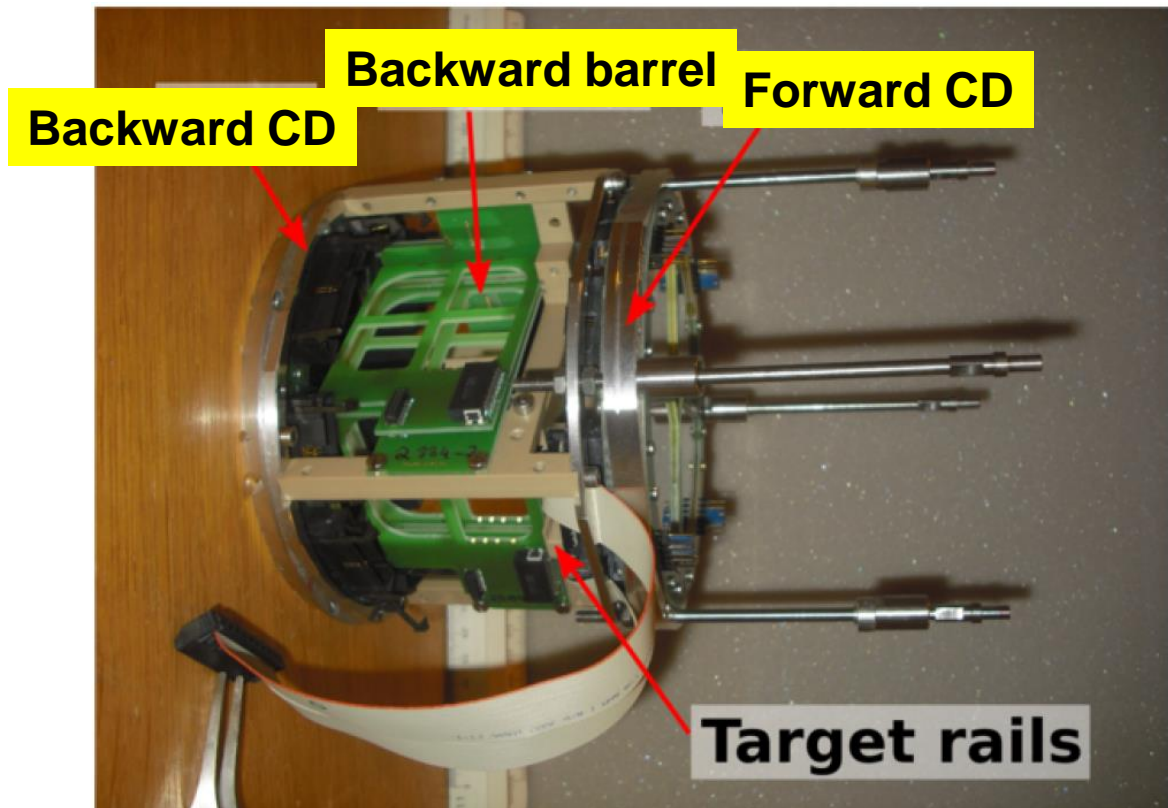
CERN Courier Aug 2011

C-REX ... T-REX modified for Coulex



- C-REX will be delivered on 17. July to ISOLDE for being mounted for the 2016 campaign
- All MINIBALL experiments planned to be scheduled agreed to use C-REX

... works successfully @ intensity $> 10^7/s$
D. Mücher et al. (IS510)



Stefanie Hellgartner, PhD thesis (TU München, 2015)

Back matter

- MINIBALL ready for campaign early August
- Set-up team as declared today:
 - J. Pakarinen, D. Cox, J. Ojala, T. Kröll, D. Rosiak, M. Seidlitz, N. Warr, M. von Schmid, C. Henrich, L. Gaffney, A. Illana, J. Snäll, T. Davinson
- Thanks to D. Cox, P. Jones, G. Tveten, T. Kröll and N. Warr for material