COMMUNITY AND SITES

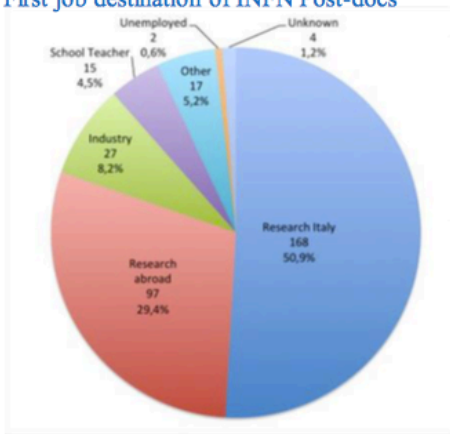
- c. 2100 staff
Number has been growing with recent new appointments
- over 3800 affiliated academic staff

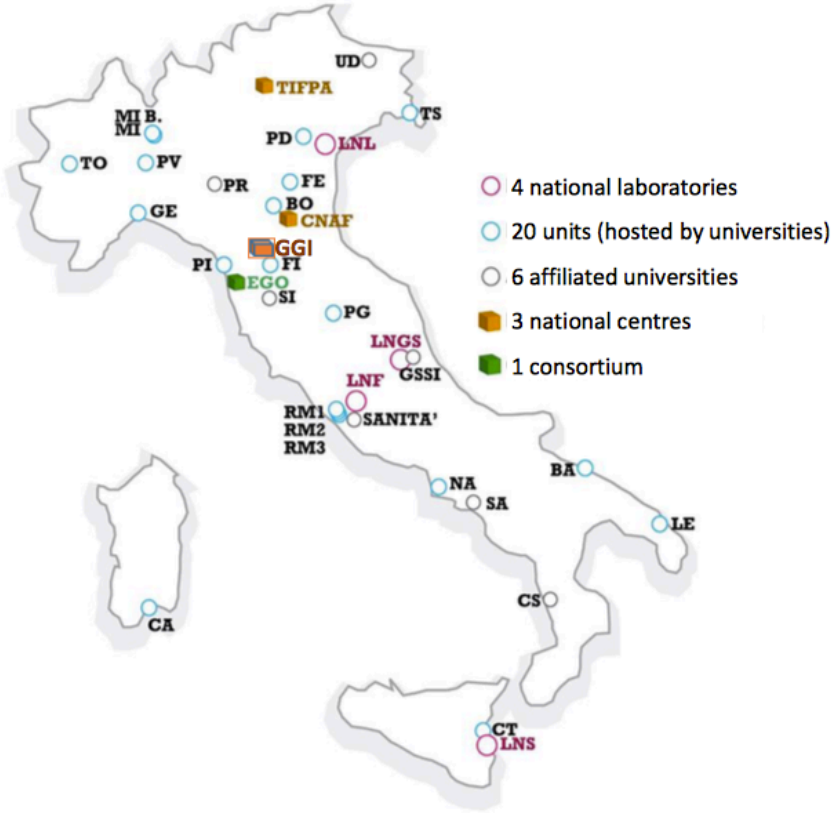
INFN operates in close collaboration with 26 Italian Universities as part of a wide cooperation scheme.

Every year INFN covers 20 percent of all grants available at Italian Universities for Ph.D. research projects in physics

(~150 grants/year)

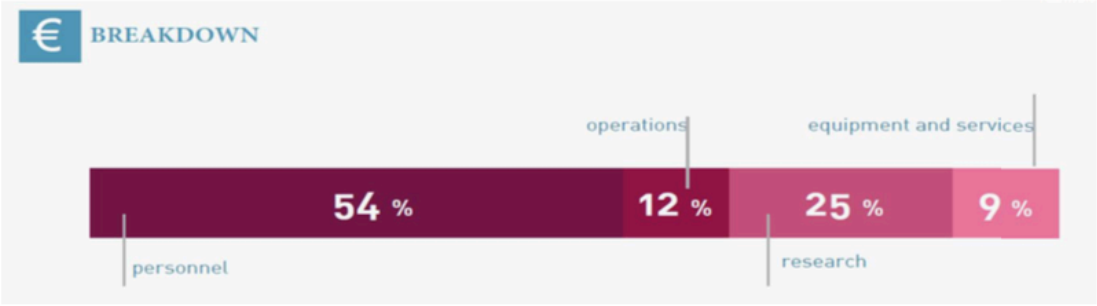
First job destination of INFN Post-docs





BUDGET & GOVERNANCE

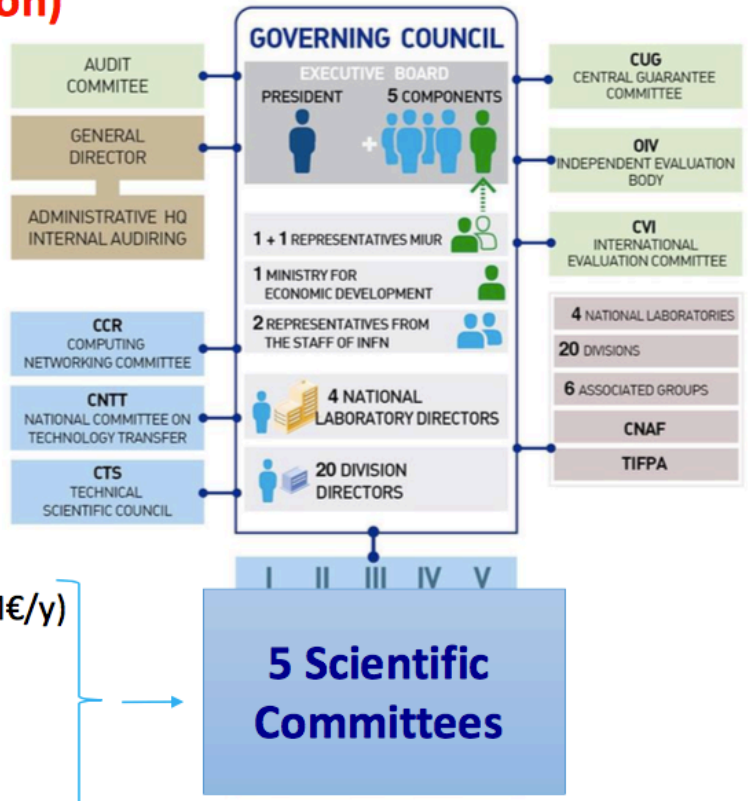
c. 330 MEuro/year (c. 300 MEuro from Ministry of Research)
Past years -> ~constant funding (no increase for inflation)



Scientific committee members: representatives for the units and the national labs.

Each committee is overseen by a **member of the Executive Board (bottom-up and top-down simultaneous approach)**

I particle physics at accelerators (budget:20 M€/y)
II astroparticle physics (budget: 12 M€/y)
III nuclear physics (budget: 9 M€/y)
IV theoretical physics (budget: 3 M€/y)
V technology R&Ds (budget: 5 M€/y)



INFN @ JLab

INFN presence since the beginning (1991)
Increasing interest in 12 GeV era
Exp Users: ~40 FTEs, including ~15 students (PhD and post-doc)
Theo Support: ~ 30 scientists, including ~ 10 students

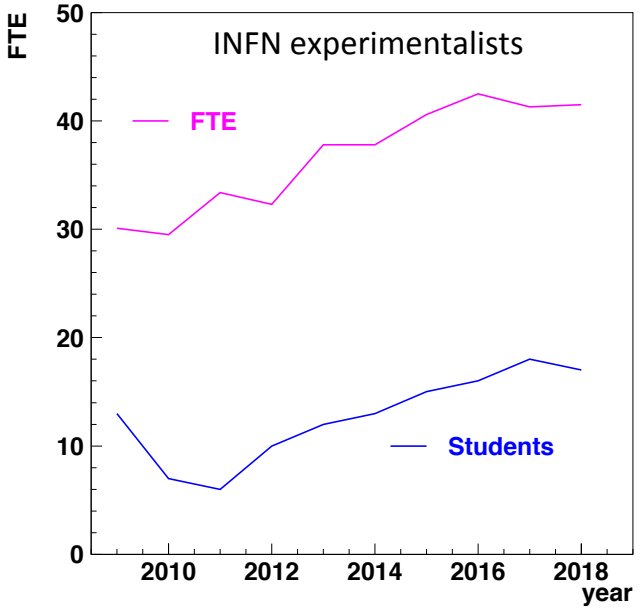
Spokespersonship: > 20% of approved 12 GeV experiments

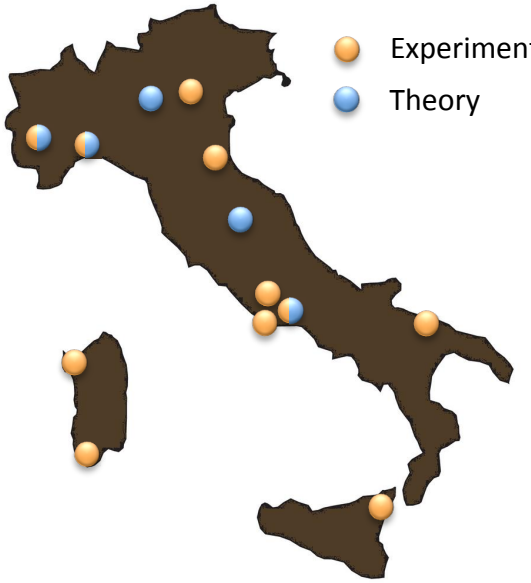
Responsibility roles: Hardware, Analysis, Coordinating
P. Rossi: Deputy Associate Director
M. Battaglieri: Hall-B Leader

R. De Vita: Hall-B Software Resp. and CCC member
M. Contalbrigo: DPWH Chair and CCC member
M. De Napoli: HPS Executive Committee member
A. Celentano: Chair of HPS Publications Committee

MoU: Renovated in September 2017

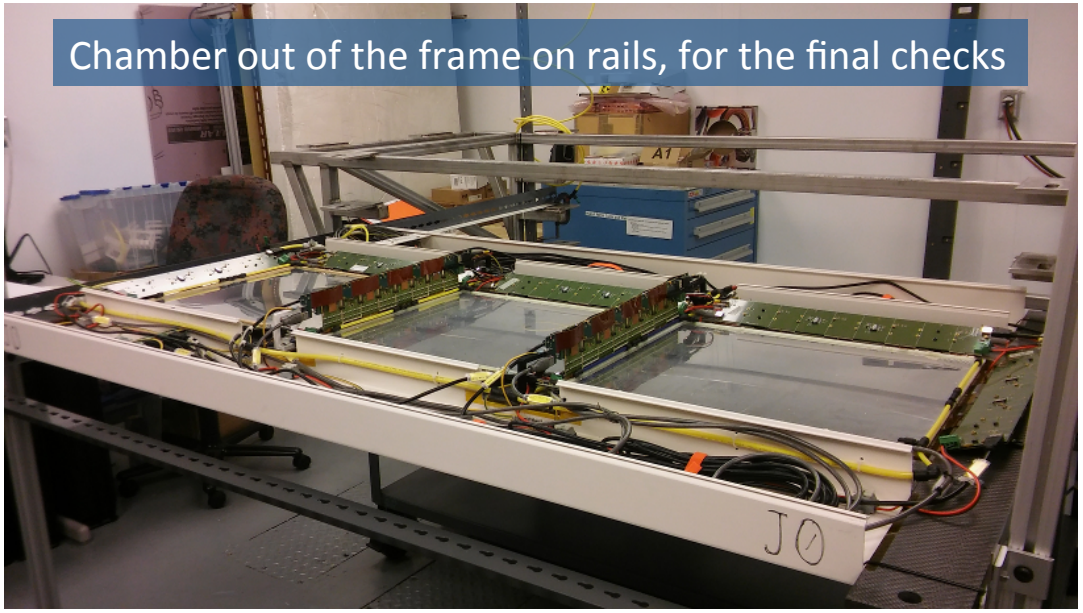
PAC members: INFN members since 1991
now: **A. Bacchetta** INFN-PV

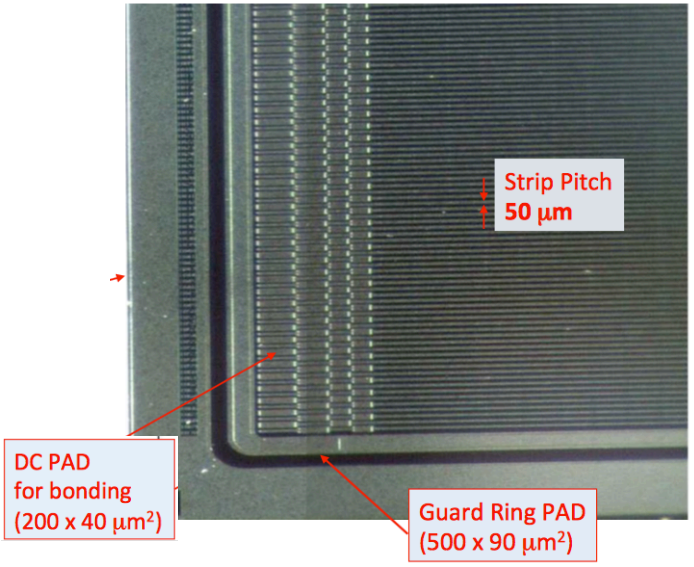




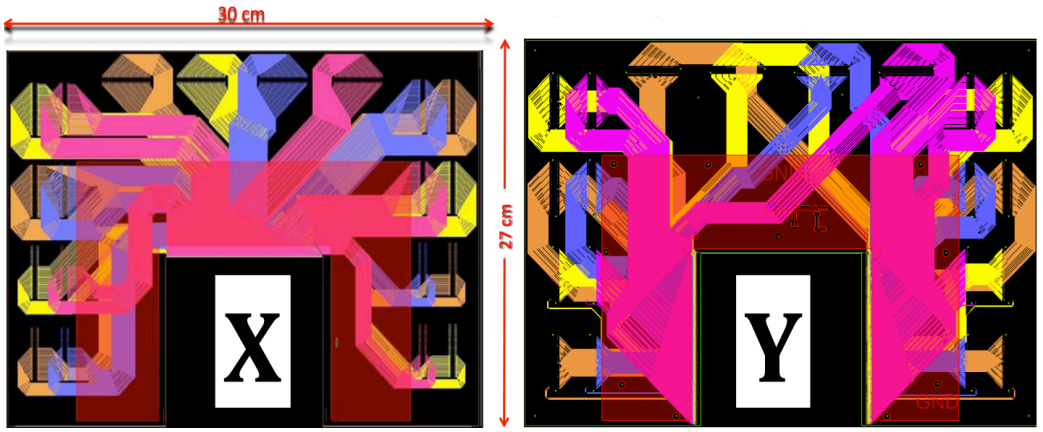
Hall-A SBS Tracker

Large area GEM chambers under cosmic and integration tests



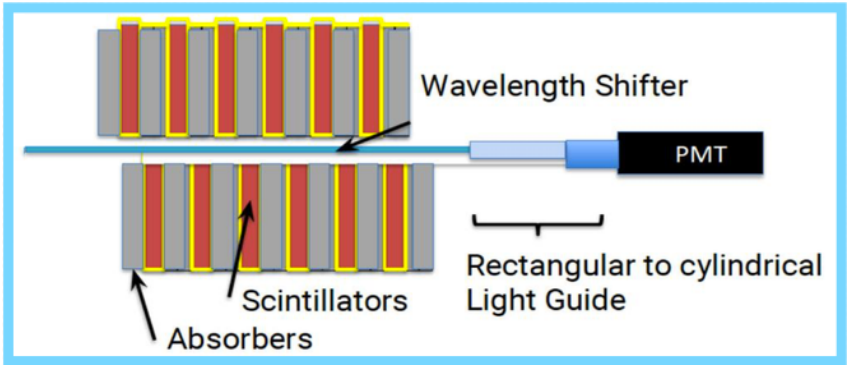


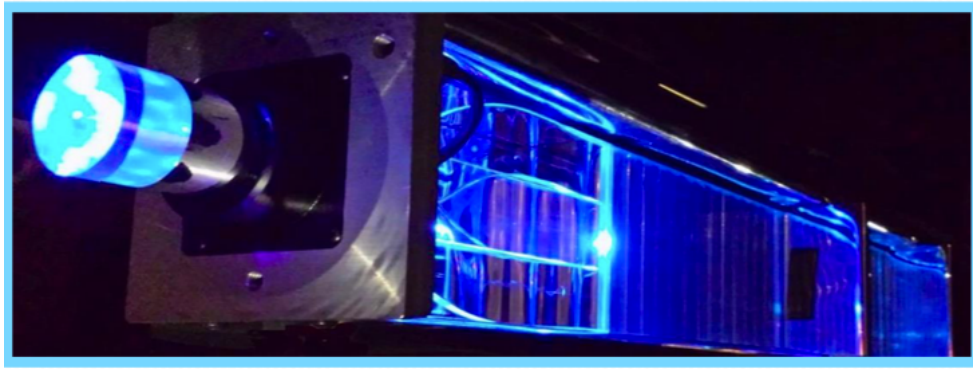
Small pitch silicon detector under final assembling



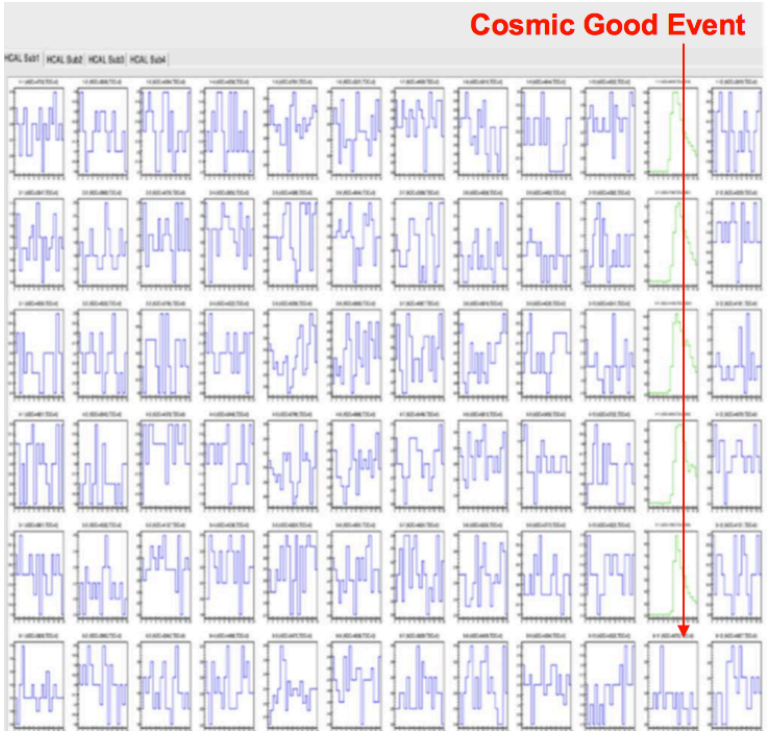
Hall-A SBS HCAL-J

288/288 modules ready for installation in Hall-A





Cosmic test with final electronics provides preliminary time resolution of 0.6 ns



Hall-B Equipment

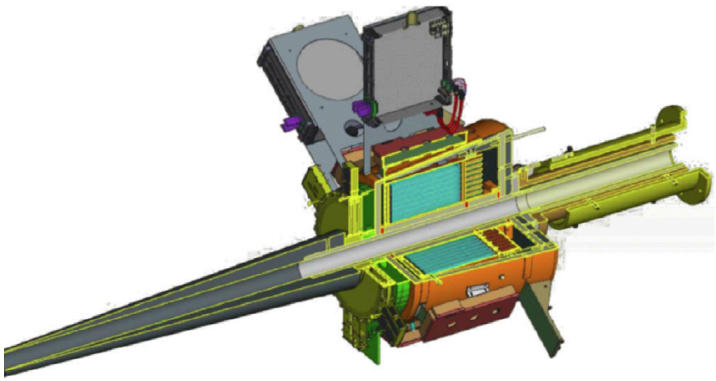
ELSEVIER

Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment

Volume 959, 11 April 2020, 163475

The CLAS12 Forward Tagger

A. Acker [a], D. Attié [a], S. Aune [a], J. Ball [a], P. Baron [a], M. Bashkanov [b], M. Battaglieri [c, d], R. Behary [e], F. Benmokhtar [e], A. Bersani [c], Q. Bertrand [a], D. Besin [a], T. Bey [a], P. Black [f], P. Bonneau [d], F. Bossù [a], R. Boudouin [a], M. Boyer [a] ... L. Zana [d]



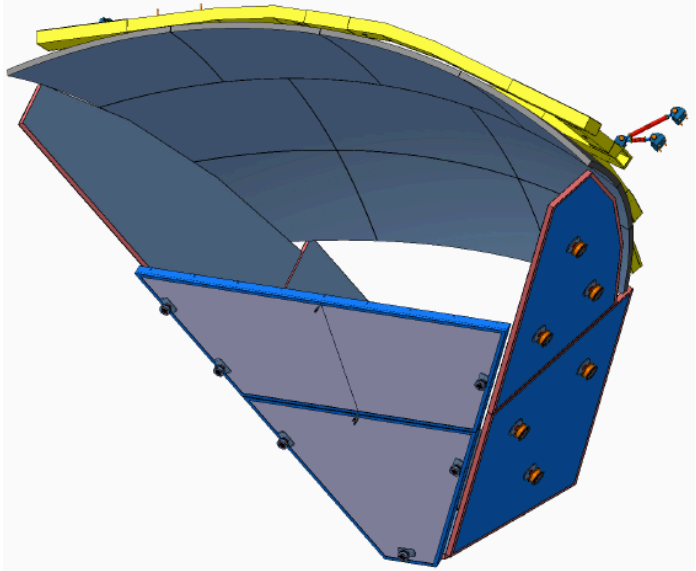
ELSEVIER

Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment

Volume 964, 1 June 2020, 163791

The CLAS12 Ring Imaging Cherenkov detector

M. Contalbrigo [a], V. Kubarovsky [f], M. Mirazita [b], P. Rossi [f, b], G. Angelini [b, j], H. Avakian [f], K. Bailey [g], I. Balossino [a], L. Barion [a], F. Benmokhtar [h], P. Bonneau [f], W. Briscoe [j], W. Brooks [k], E. Cisbani [c], C. Cuevas [f], P. Degtiarenko [f], C. Dickover [f], K. Hafidi [g] ... A. Yegneswaran [f]

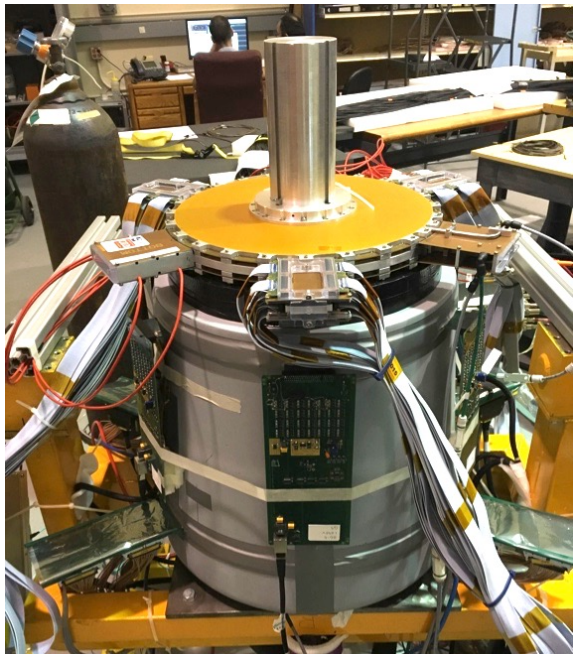


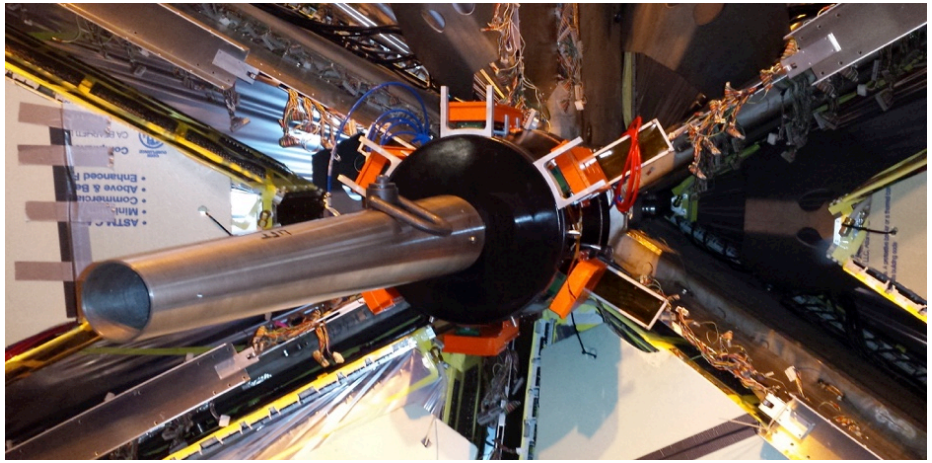
Forward Tagger in Hall-B

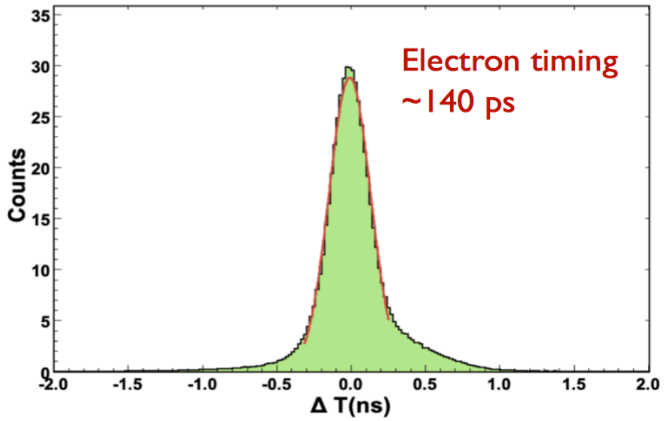
Part of CLAS12:
- low-Q^2 events
- e, γ detection
- trigger

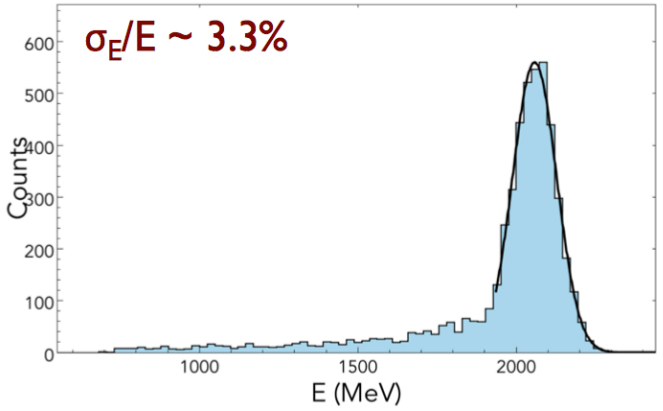
Installed in 07/2017

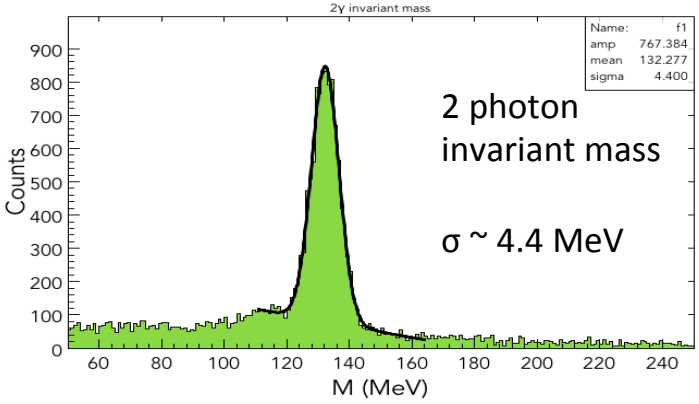
In use since 02/2018











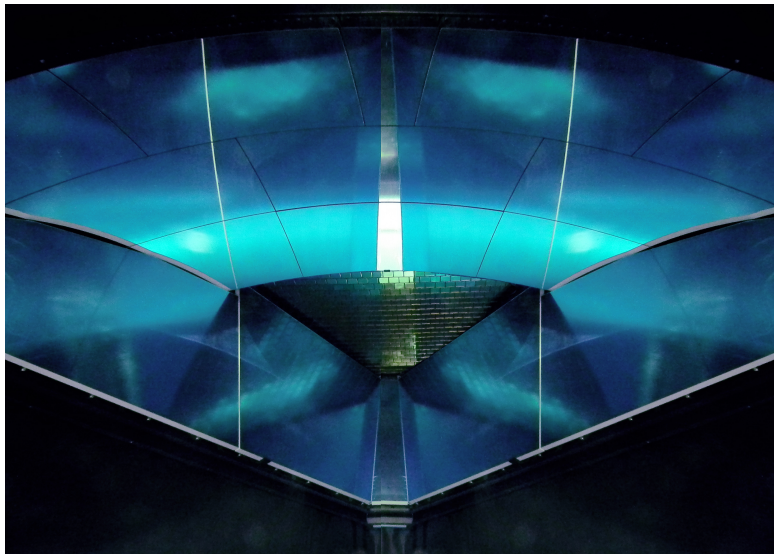
RICH in Hall-B

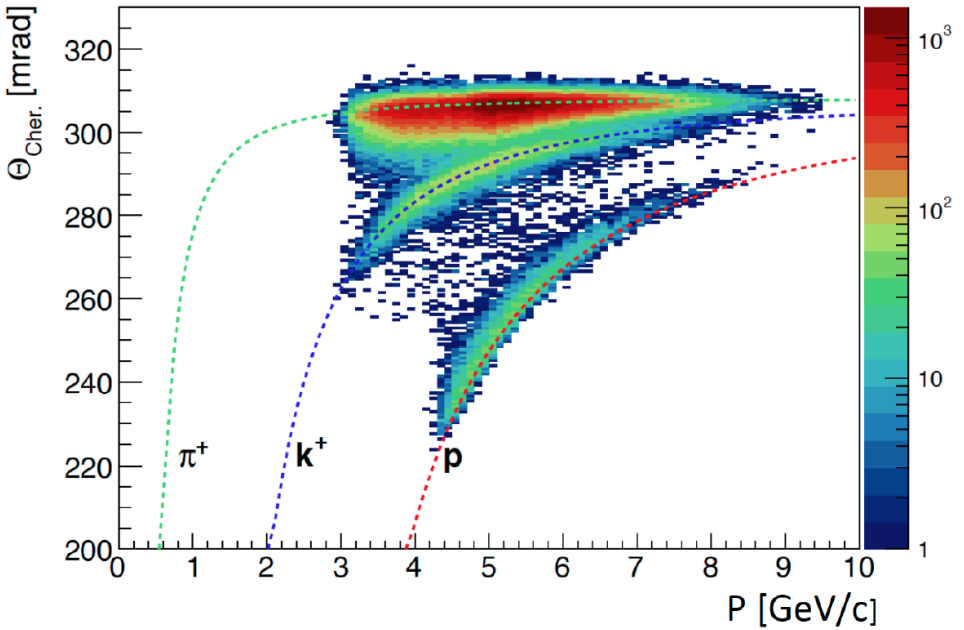
Part of CLAS12:

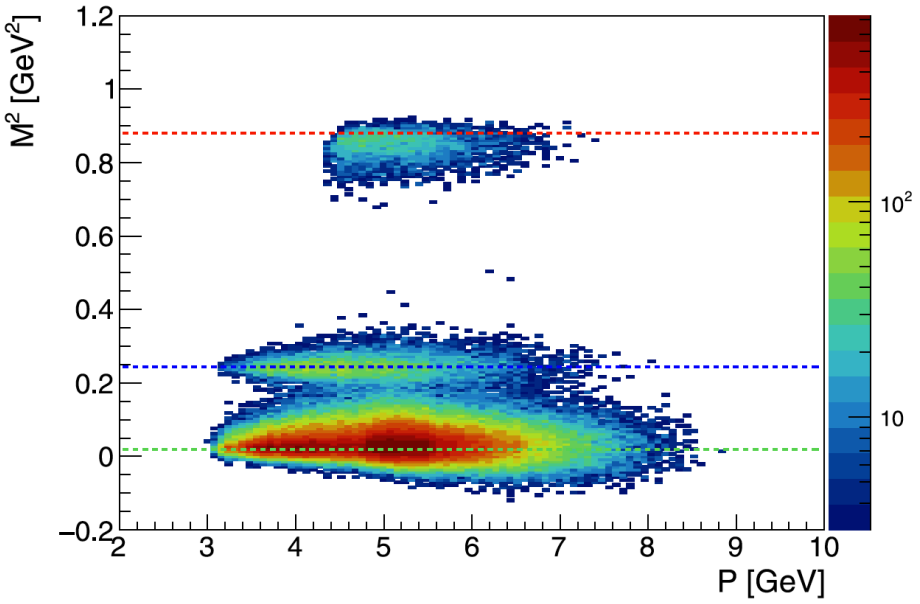
Hadron identification
3-8 Gev/c momentum range

Installed in 01/2018

In use since 02/2018







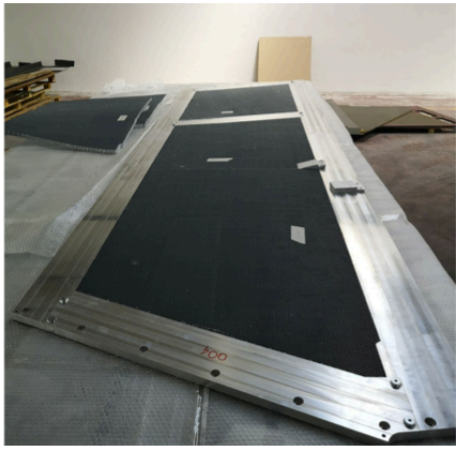
RICH 2

Installation expected at the end of 2021

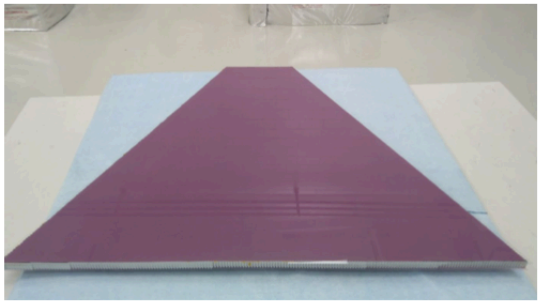
In time for the start of demanding
polarized target experiments

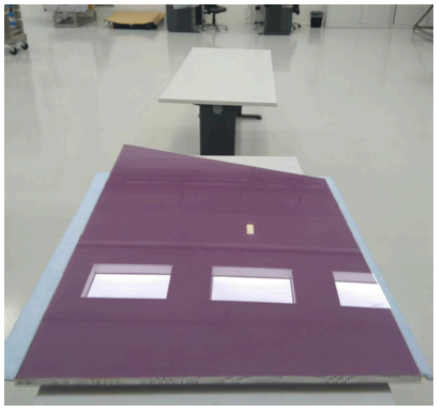
Component production in line with JLab schedule
(only ~ 4 months delay due to COVID)

Mechanical composite structure



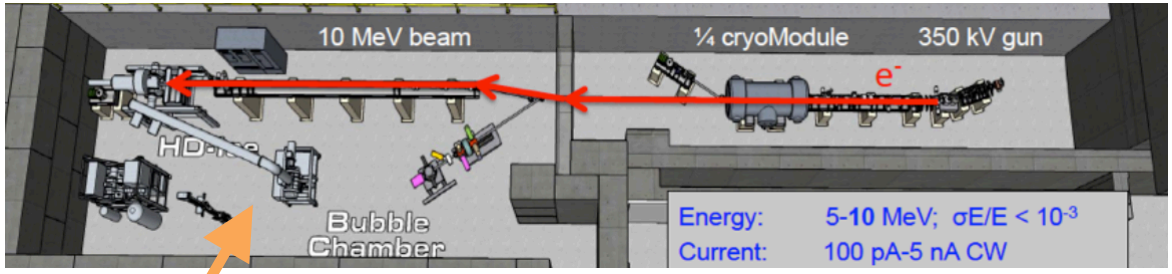
Glass-skin mirrors

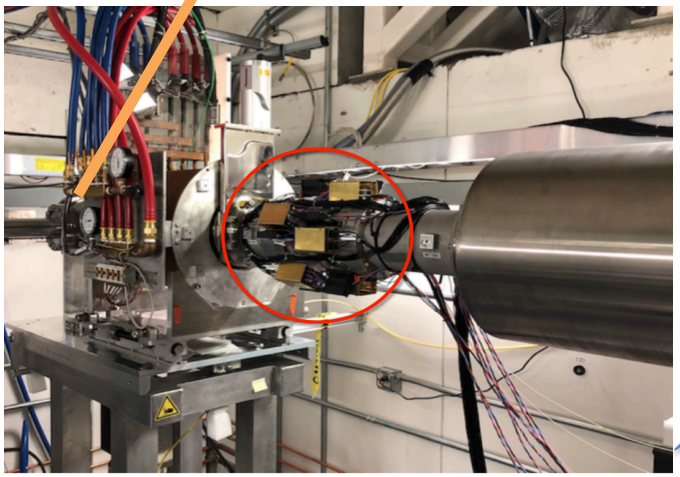




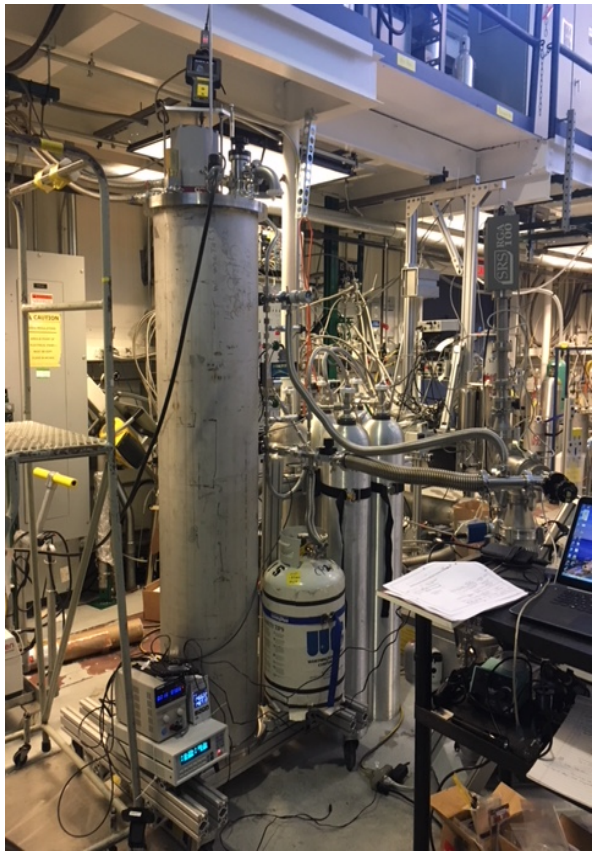
Aerogel storage in dry-cabinets

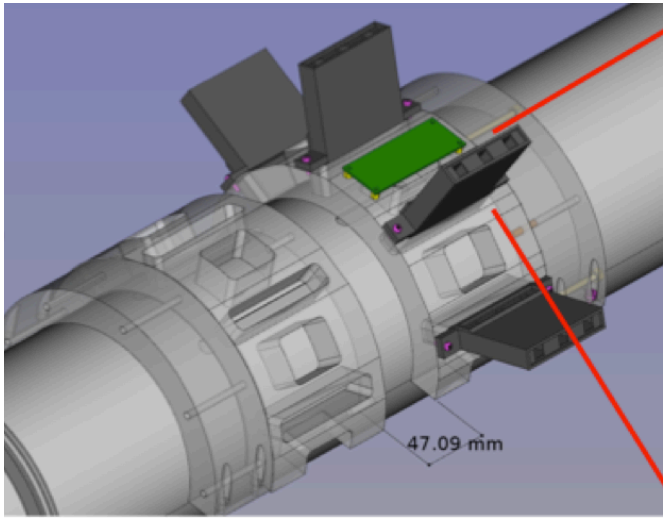
HD-ice



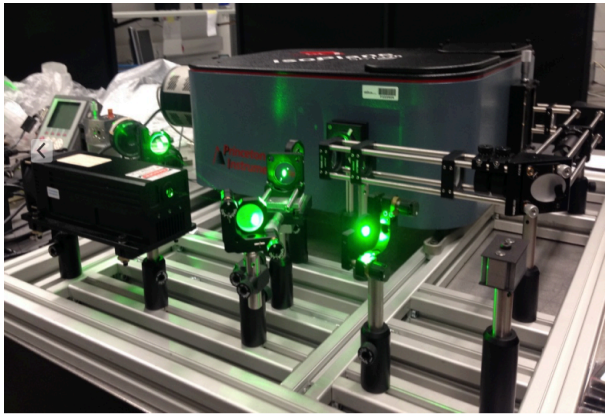


HD-ice tests at UITF
Apparatus under commissioning

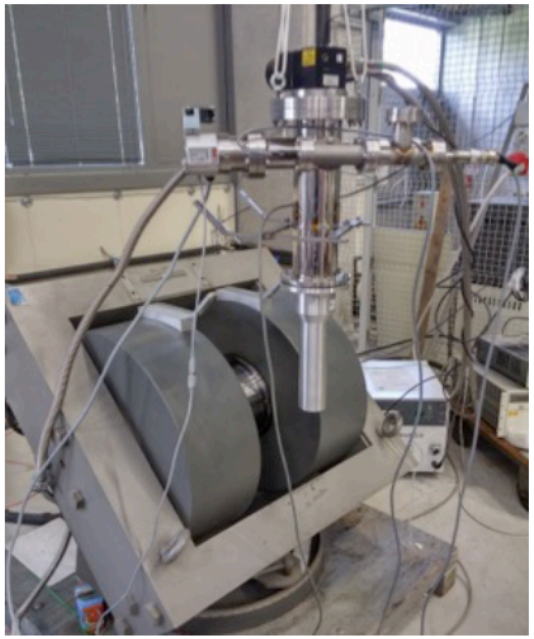


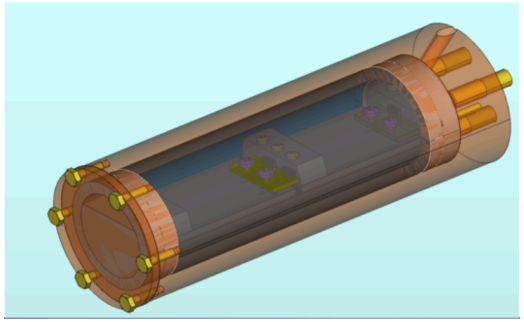


Distillation and
Raman analysis
of the HD gas purity

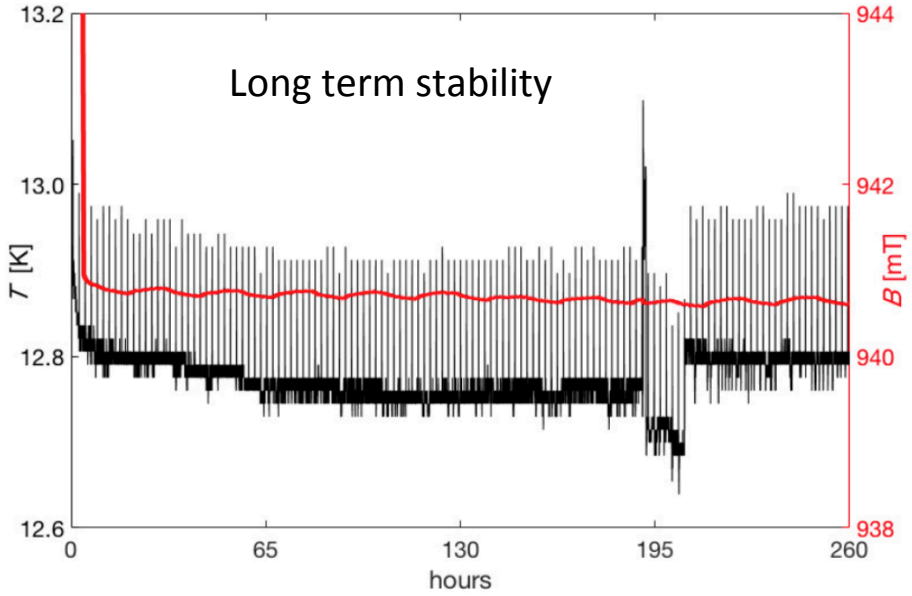


Target Holding Magnet

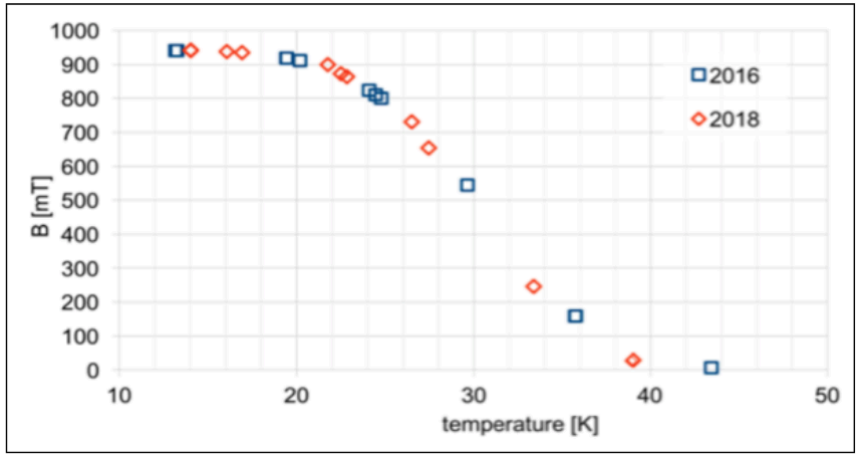




MgB2 trapped magnetization after transition to superconductor

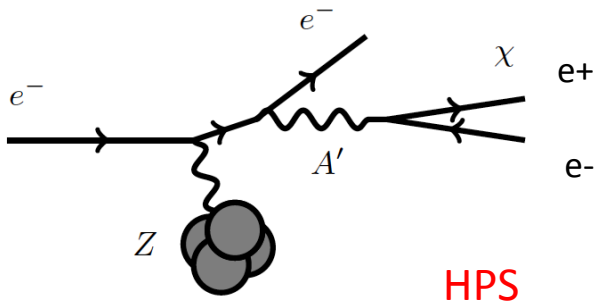


Temperature dependence

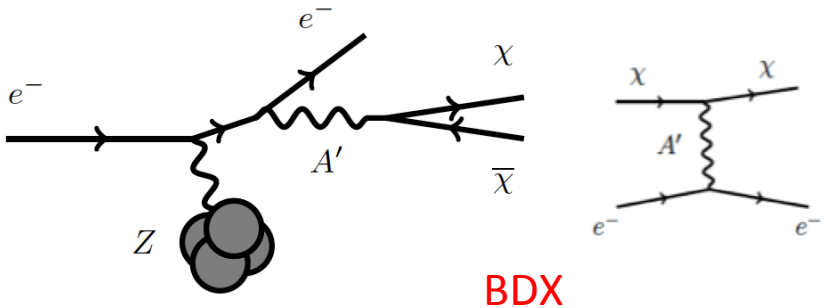


Dark Sector

Feasibility study, equipment and running of light dark matter search experiemnts



HPS



BDX

Mini-BDX:

Parasitical run
Beyond Hall-A dump
2.2 GeV beam energy
$2x10^{21}$ EOT in spring
Streaming readout tests

Positron @ JLab

White paper
Loi in preparation for PAC49 (‘21)