



The Italian Collaboration at JLab

INFN presence since the beginning (1991)

Exp Users: ~60 scientists, including ~15 students (PhD and post-doc)

Th Support: ~ 30 scientists, including ~ 10 students

Spokespersonship: > 20% of approved 12 GeV experiments

Responsibility roles: Hardware, Analysis, Coordination

P. Rossi Deputy Associate Director

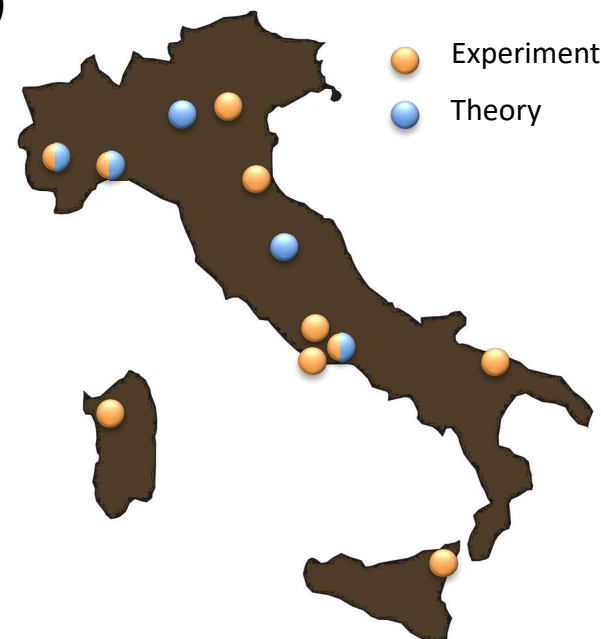
M. Battaglieri: Hall-B Leader

R. De Vita: Hall-B Software Responsible

M. Contalbrigo: Chair CLAS deep-process working group

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

External Funds: **CLASMED** Italy MIUR priority project
STRONG-2020 EU JRA “3D nucleon”
DeLightDMA Italian grant for “dark matter”
LiQuHaS Italy-Poland exchange program
Probes EU staff exchange program

- Nucleon 3D structure & dynamics
- Spectroscopy and exotic states
- Nuclear potentials and astrophysics
- * Light dark matter search

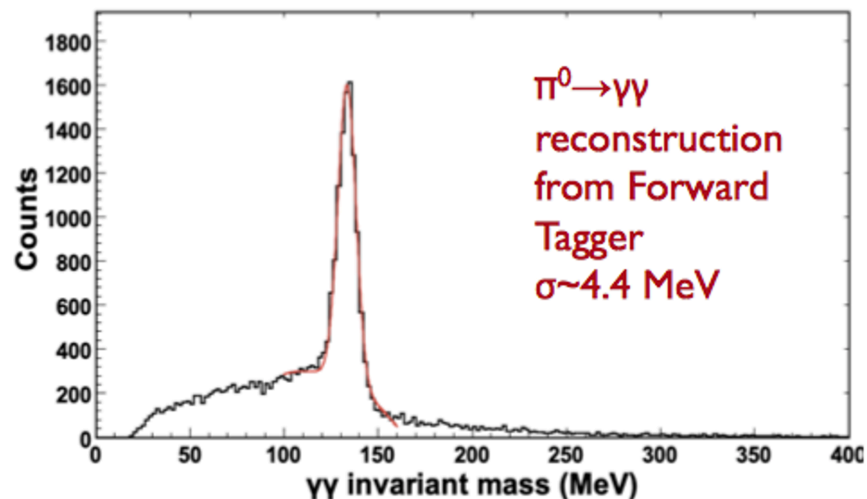
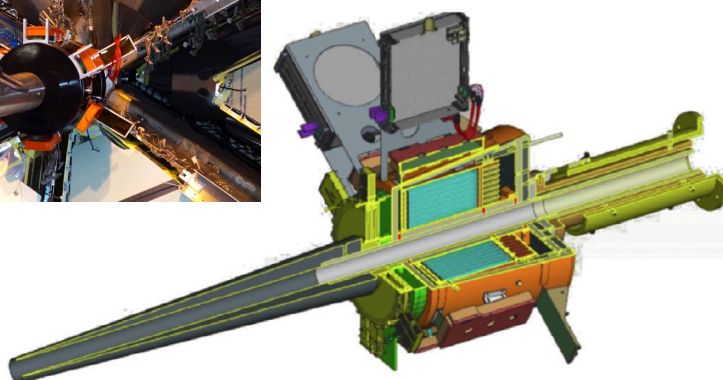
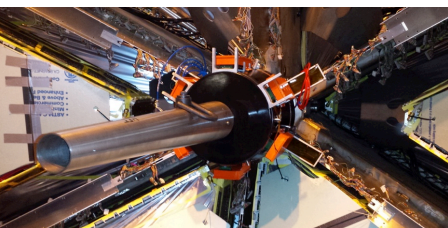
The CLAS12 Forward Tagger



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



Volume 959, 11 April 2020, 163475



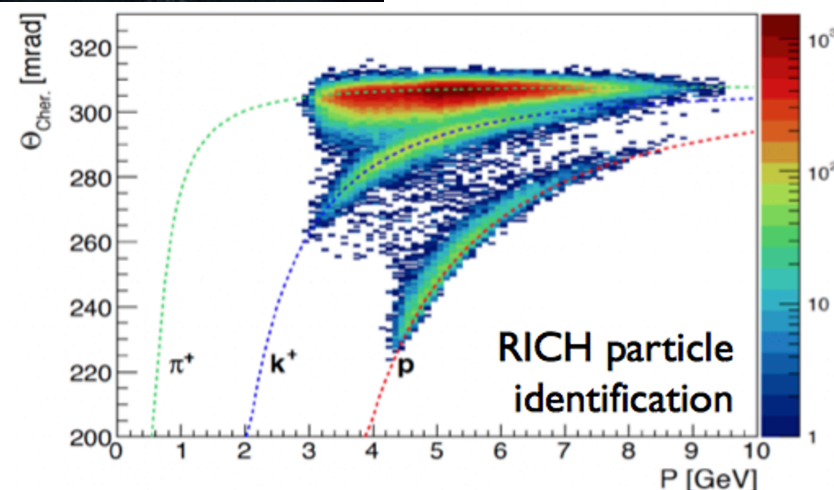
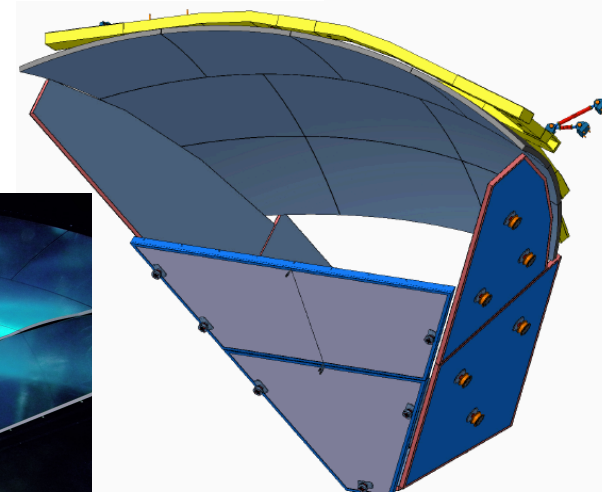
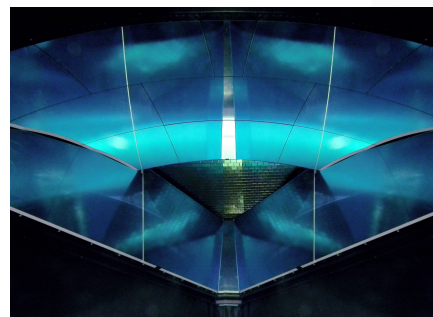
The CLAS12 Ring Imaging Cherenkov



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

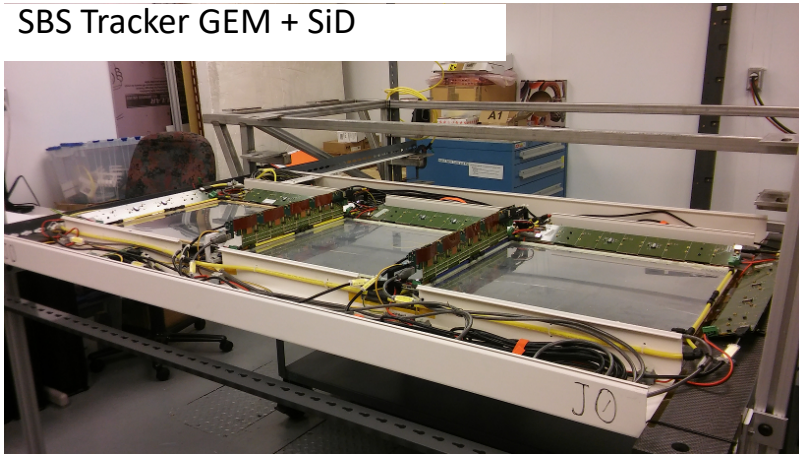


Volume 964, 1 June 2020, 163791

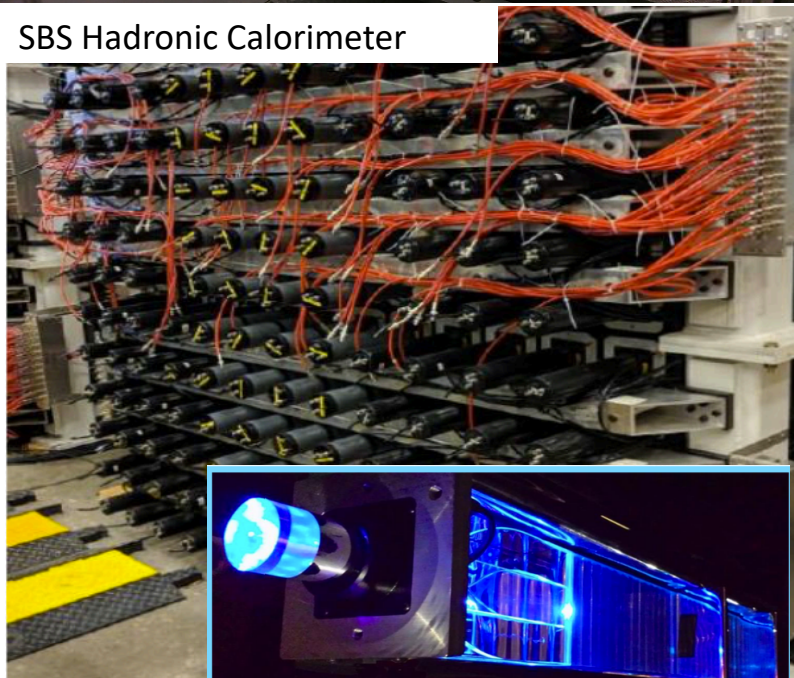


Super Big-Bite Experiment in Hall-A

SBS Tracker GEM + SiD

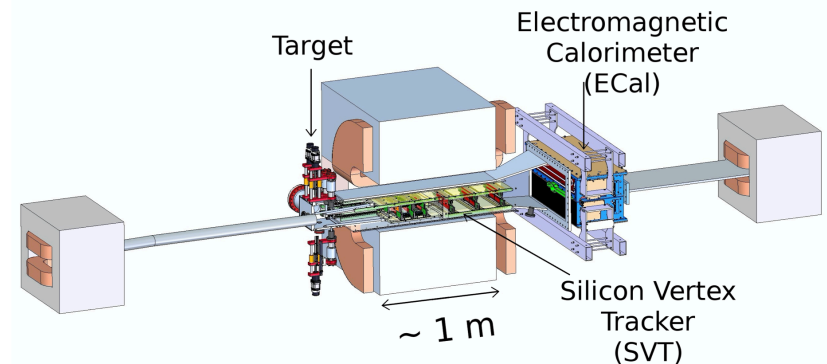


SBS Hadronic Calorimeter



Light-Dark Matter Experiments

Heavy-photon search (HPS) experiment

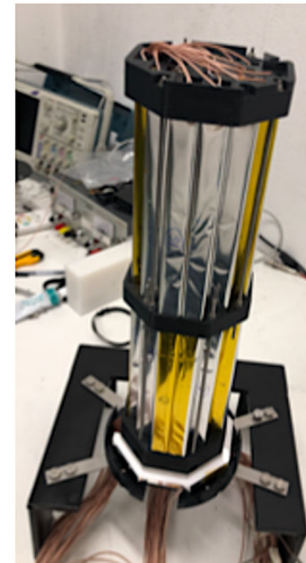


Beam-dump experiment (BDX)

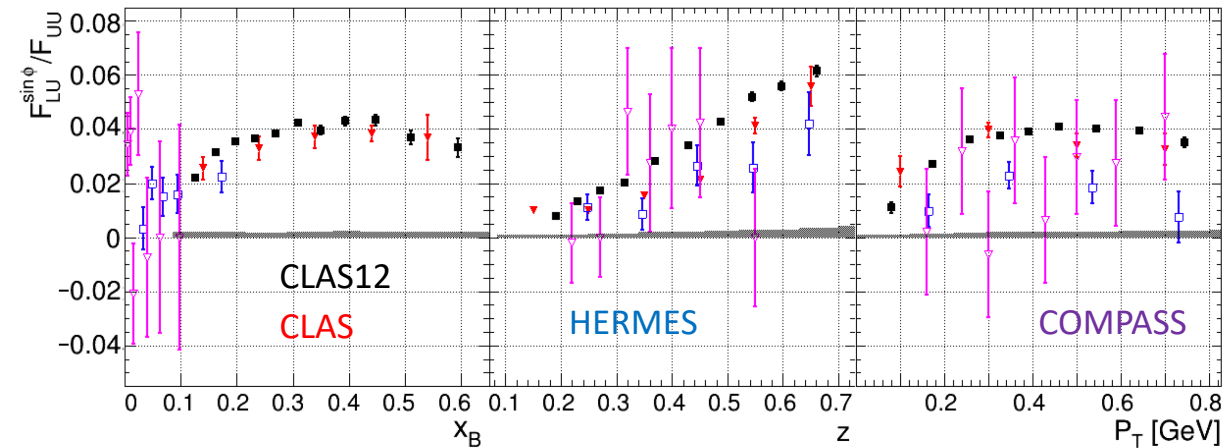
BDX-MINI successful run in 2020

Loi for a full scale detector submitted for a NSF grant (13 M\$)

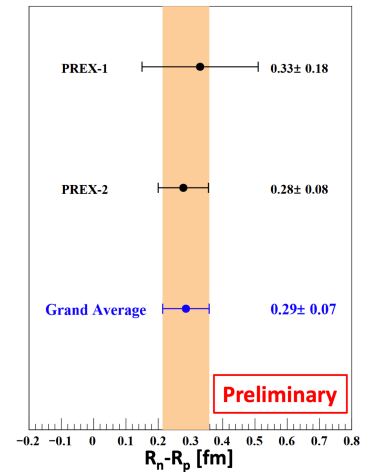
accepted by EPJ



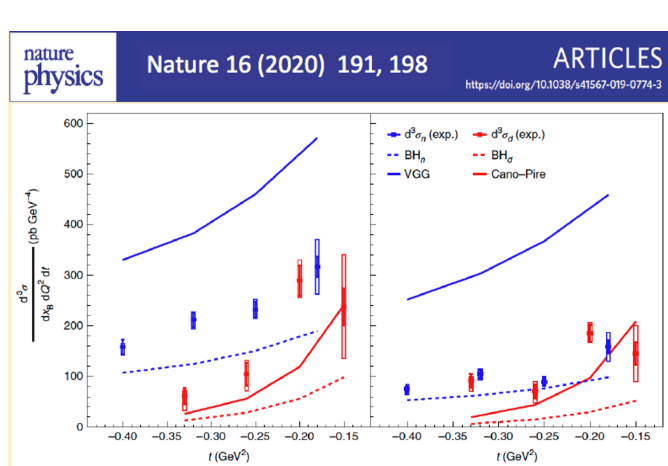
First results from CLAS12: beam-spin asymmetry for semi-inclusive pion production ($ep \rightarrow e'\pi, \pi\pi X$)
submitted to PRL



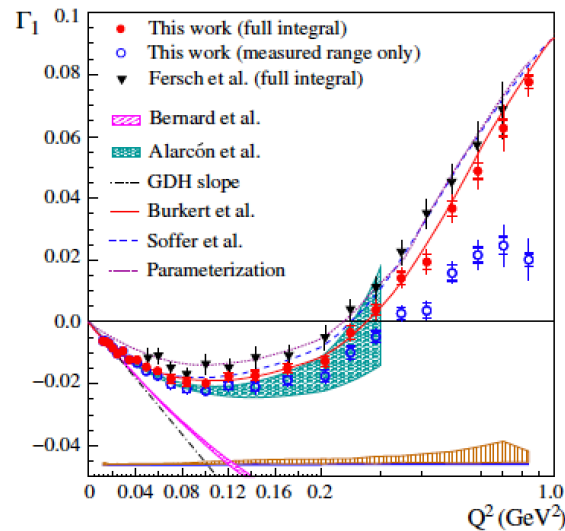
PREX-II Neutron skin and neutron star EOS
presented at APS 20



Hall-A Deep-virtual Compton scattering on neutron ($en \rightarrow e'\gamma n$)



CLAS meas. of proton spin structure at long Distances *accepted by Nature*



HPS pilot exclusion and projections
Phys. Rev. D 98 (2018) 9, 091101

