

SELECTED FRENCH CONTRIBUTIONS TO JLAB

French Scientists are playing key roles in

- Defining the science program – both now and for the future
- Constructing critical equipment
- Executing, analyzing, and interpreting some of our best experiments

Some Statistics on French Involvement in JLab Science

- French Scientists are spokespersons on 14 Approved Experiments
- 114 PhD Scientists on at least one experiment proposal
- 48 Students or Former Students working at JLab
- 21 Postdocs have worked on or are working on JLab Research
- 19 Students have completed PhD research based on work at JLab
- 12 Students have thesis projects in progress
- 4 French high school students and 10 master's students
- 11 French students did their military service as "cooperant scientifique" at JLab

French Equipment Projects at JLab

Hall A

- Contributions to the standard equipment
- Calorimeter & high-speed DAQ for DVCS

Hall B

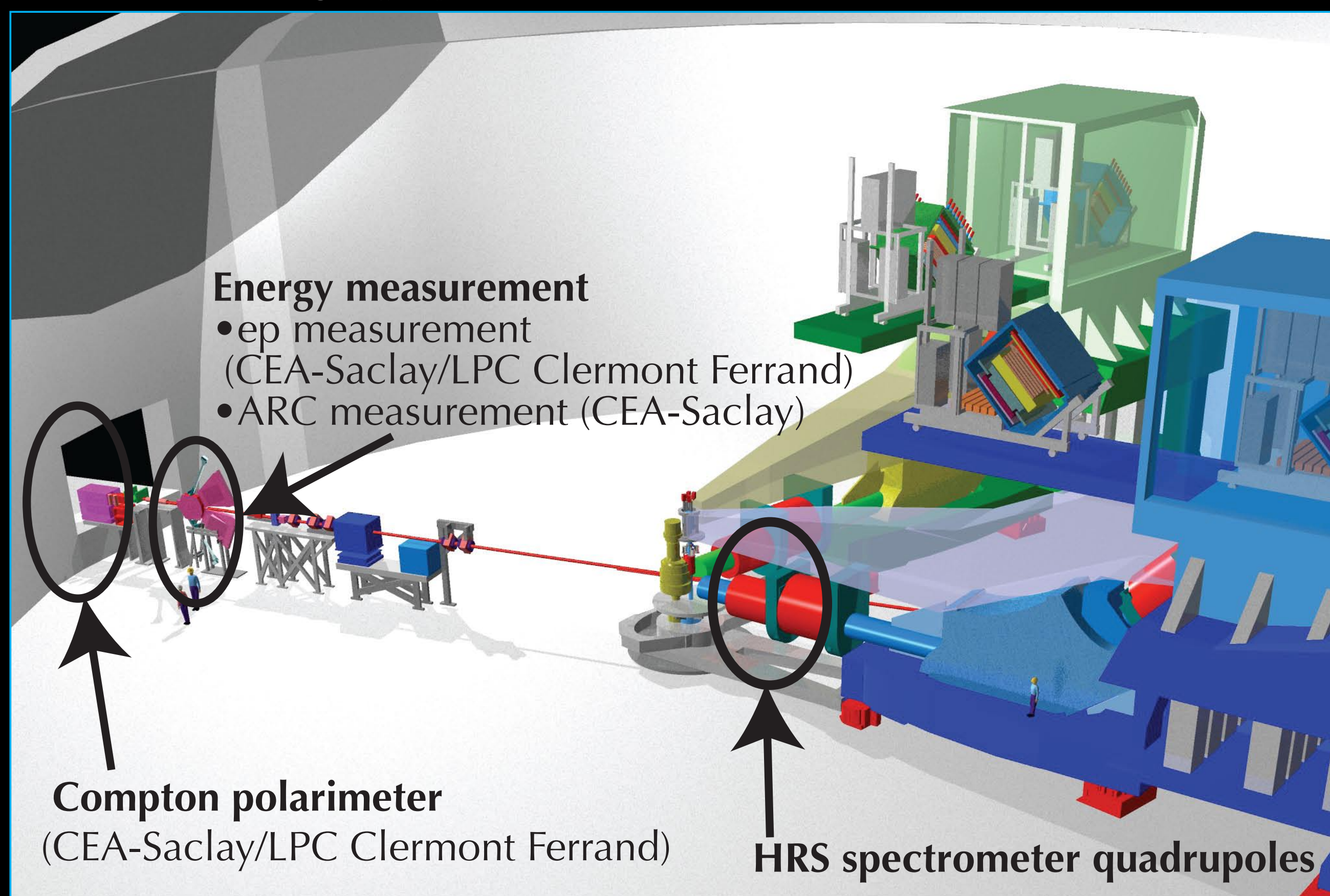
- Cryotarget
- Solenoid & calorimeter for DVCS

Hall C

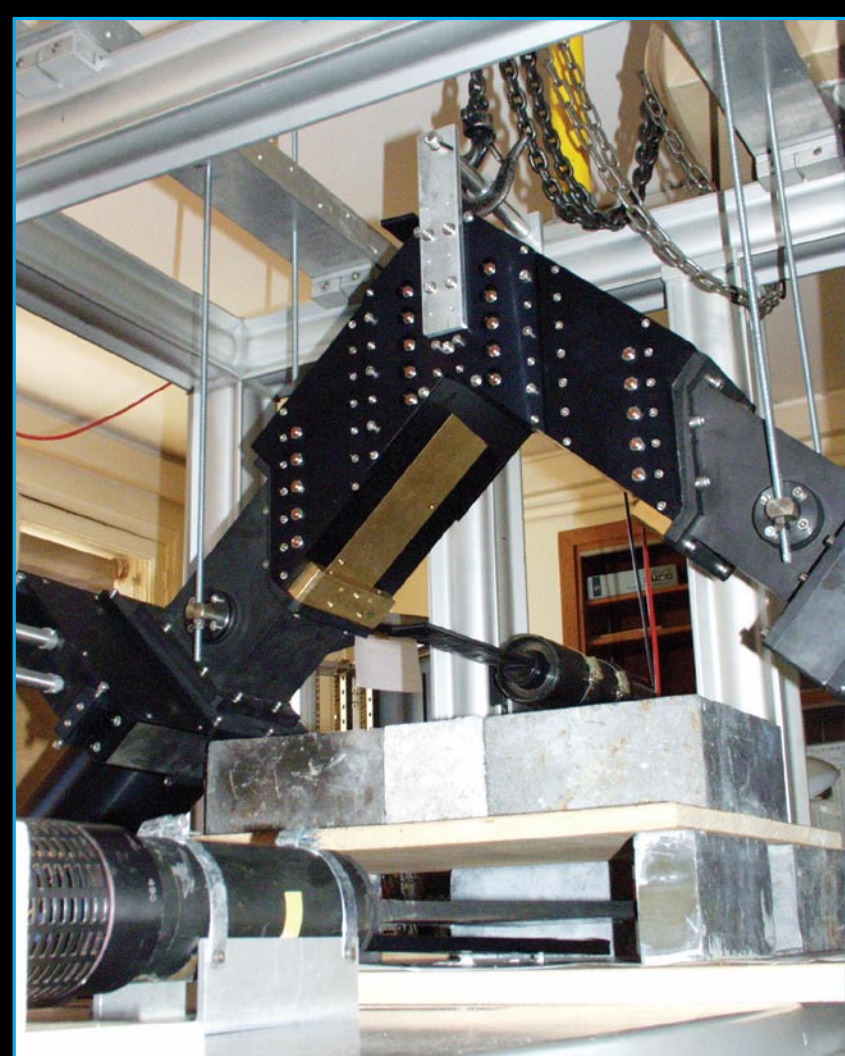
- T₂₀ experiment (Polder, Quad, ...)
- G0 Spectrometer (Detectors, electronics, ...)

Hall A

Major contributions to Hall A standard equipment Nucleon holography from DVCS cross-section & data

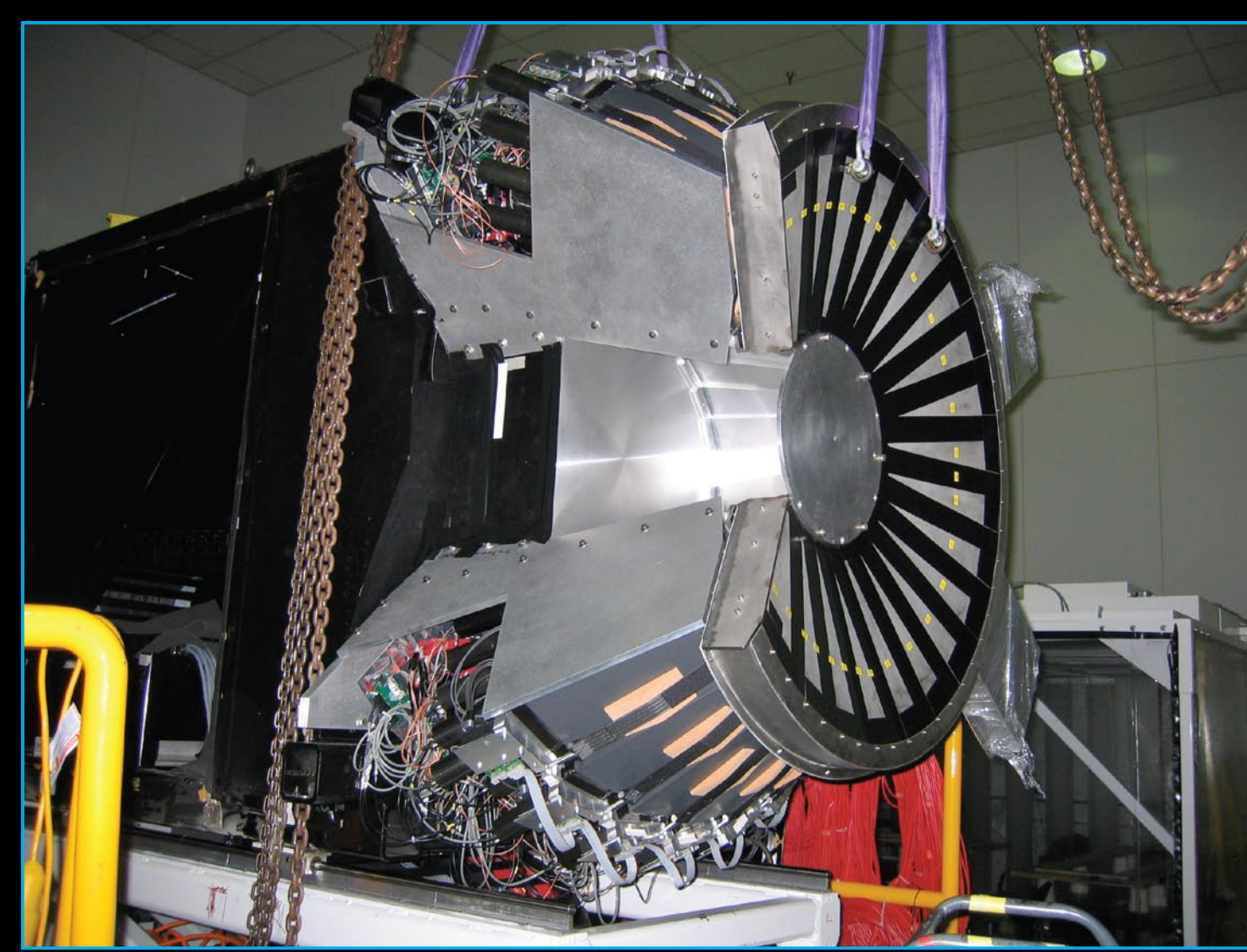


Dedicated Equipment:



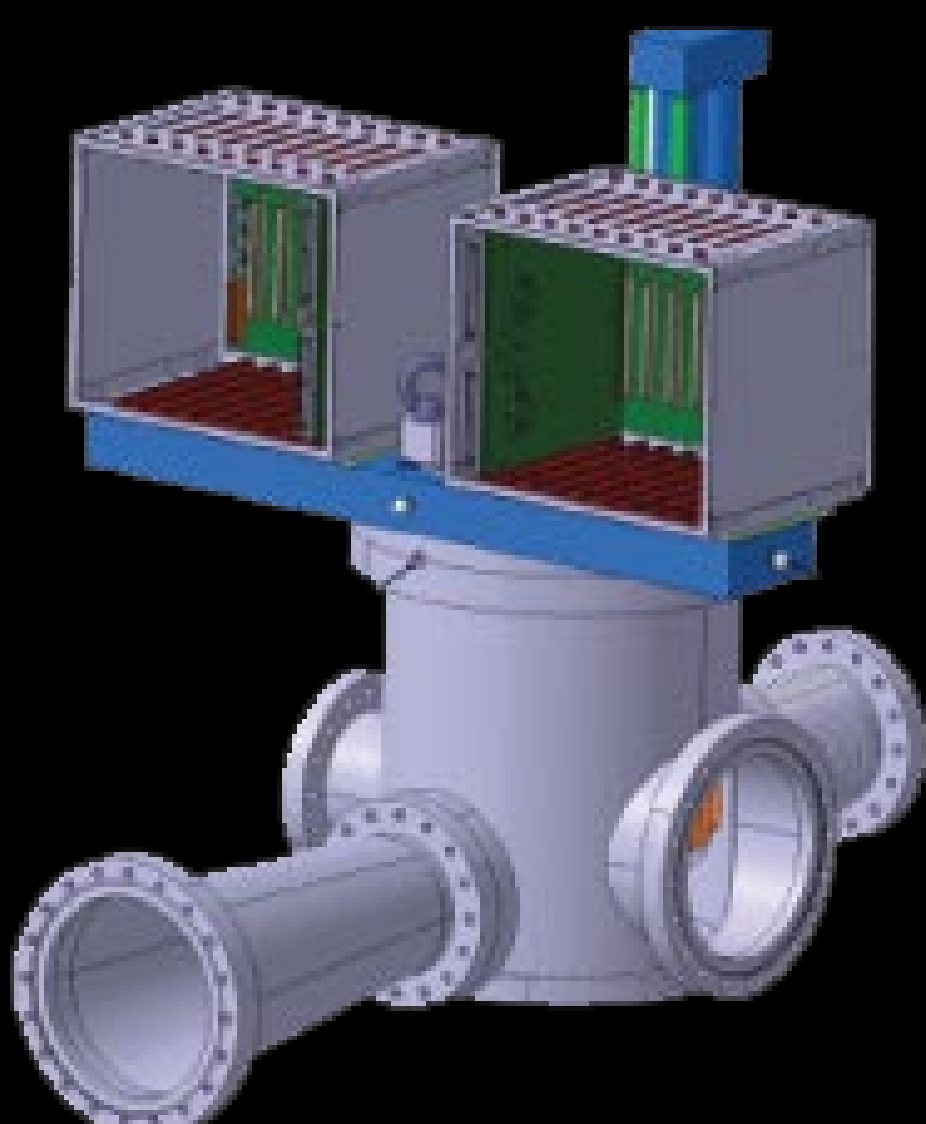
HAPPEX experiment (CEA-Saclay)

- focal plane electron detector



Deeply Virtual Compton Scattering
(LPC Clermont Ferrand/ CEA-Saclay)

- Electromagnetic calorimeter
- Custom electronics



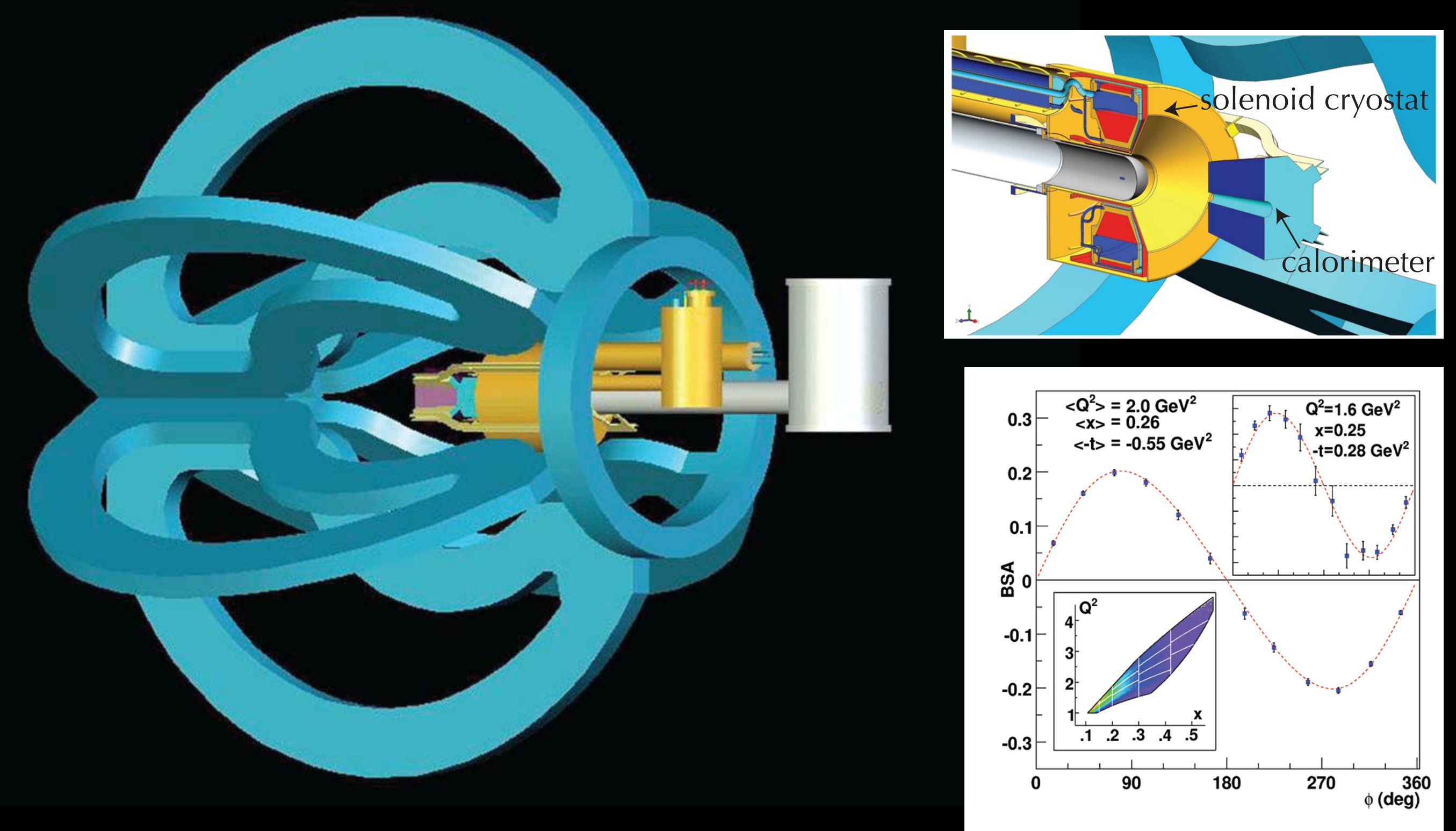
12 GeV Upgrade:

Compton polarimeter electron detector
(LPC Clermont Ferrand)

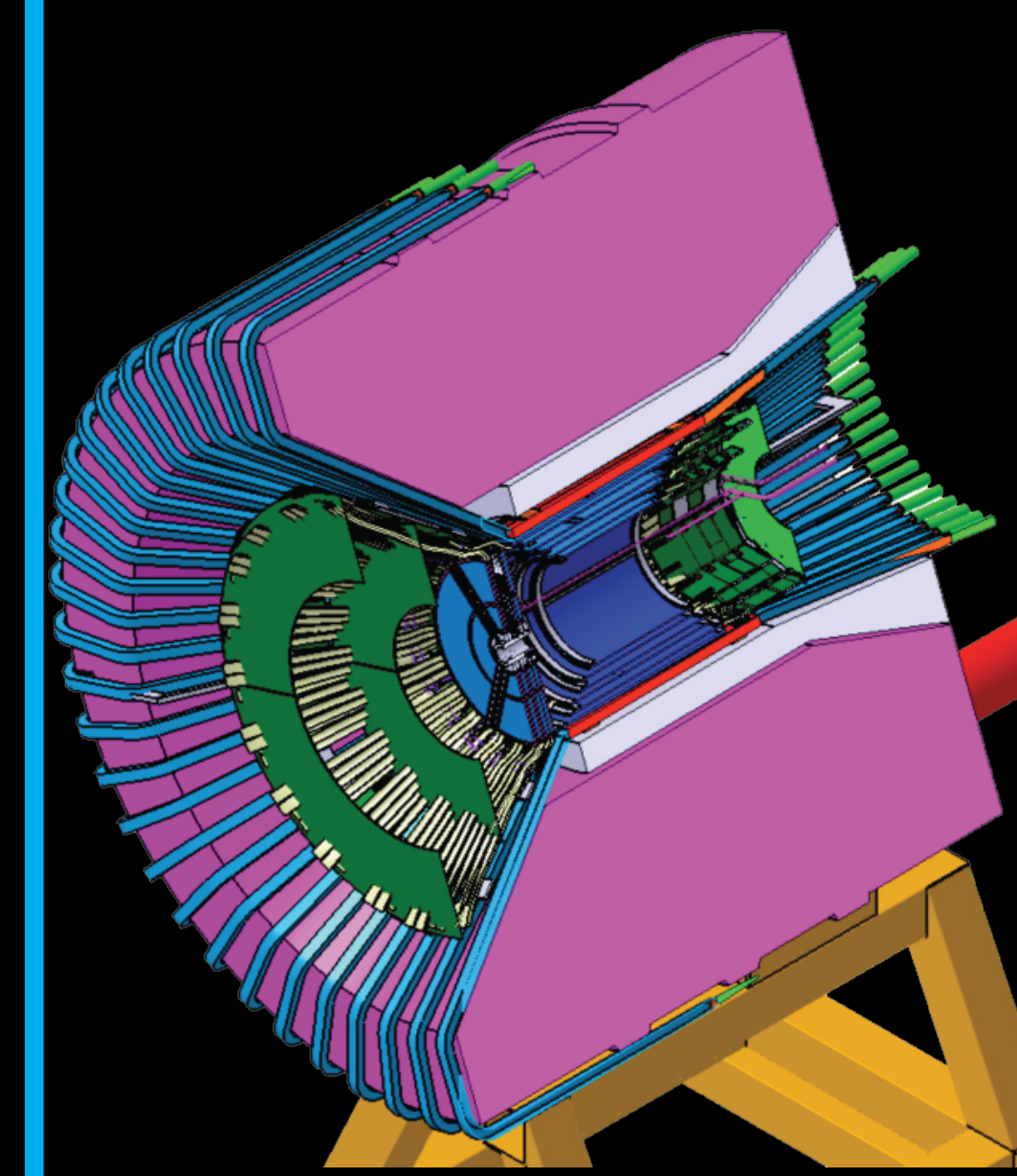
One 12 GeV DVCS experiment approved

Hall B

IN2P3 Orsay and CEA-Saclay contributed to the CLAS Proton femto-tomography with DVCS Beam Spin Asymmetry



CLAS 12



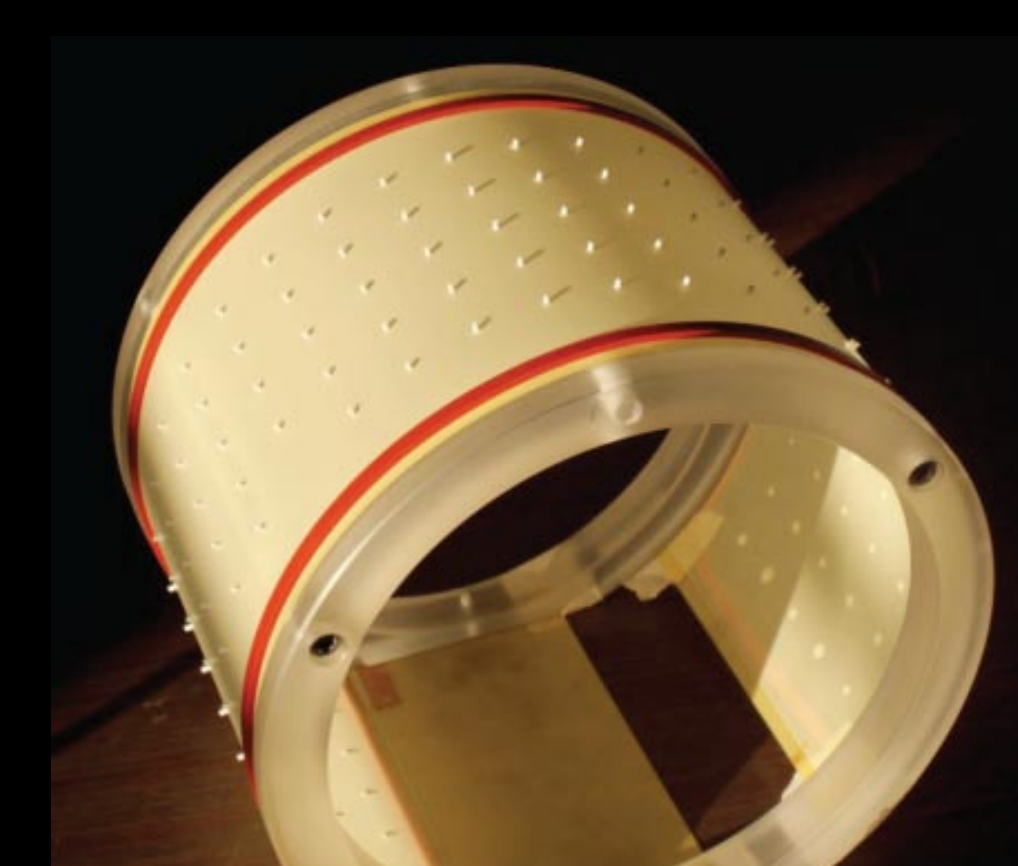
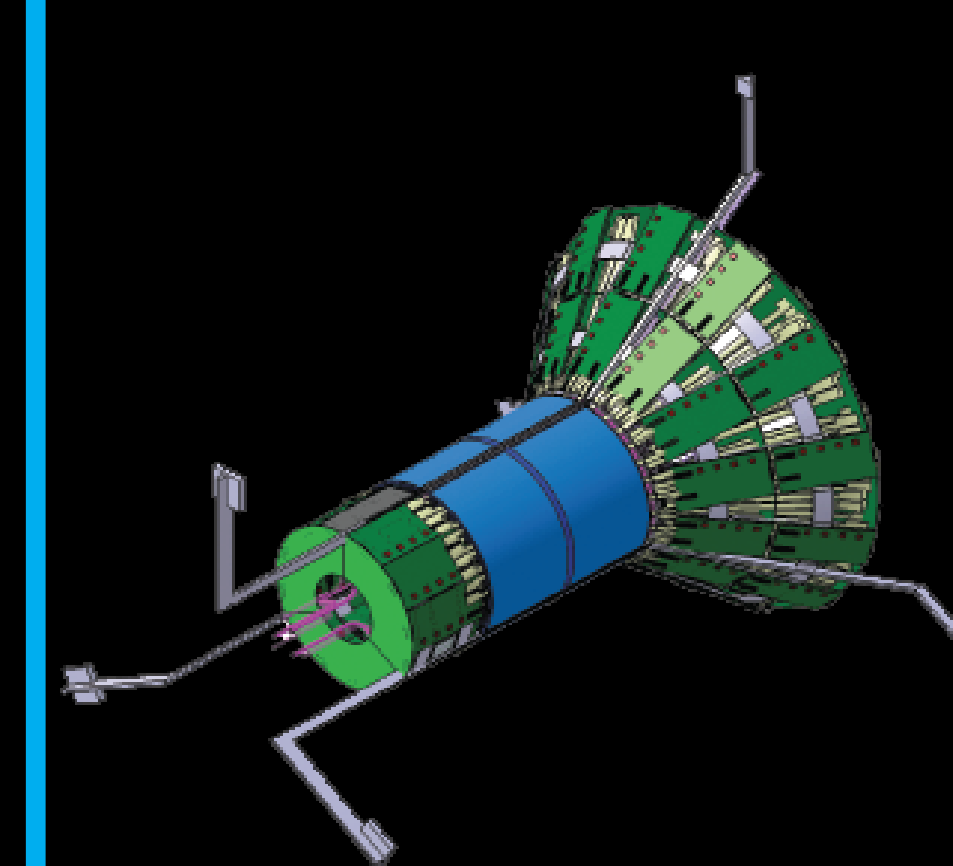
French labs are involved in the design & construction of the central detector of CLAS12:

- Tracking detectors, solenoid (CEA-Saclay)
- Time of flight, neutron detection (IPN-Orsay, LPSC-Grenoble)
- European project (7th PCRD)



New generation of Micromegas detectors (CEA):

- Thin (100µm PCB), cylindrical geometry
- Operation in high magnetic field
- R&D in progress (ANR fundings)



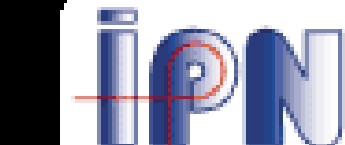
The French hadronic physics community has a leading role in several proposals already approved with CLAS12



Jefferson Lab



IN2P3
Institut National de Physique Nucléaire et de Physique des Particules



LPSC
Grenoble