

# Gamma Spectroscopy Working Group Session

## Conveners:

Mike Carpenter (ANL), Paul Fallon (LBNL), Alexandra Gade (MSU)

## Speakers:

"GRETINA/GRETA status and plans"

"GRETINA science campaign at ANL"

"GRETINA simulations"

"GRETINA/AGATA tracking studies"

"Future GRETA Data-Acq: ideas and plans"

"Gammasphere / Clovershare"

"CAGRA campaign"

"APOLLO"

Augusto Macchiavelli

Shaofei Zhu

Lew Riley

Torben Lauritsen

Mario Cromaz

Mike Carpenter

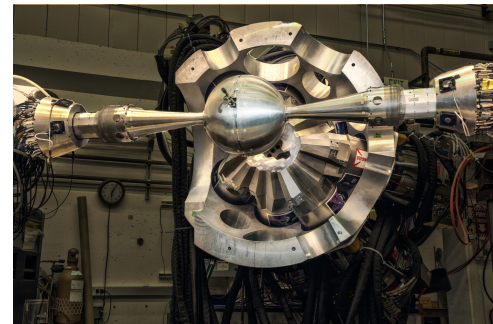
Eiji Ideguchi

Aaron Couture

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## **GRETINA ATLAS/CARIBU Campaign**

- Over 130 days of beam time for 18 experiments
- Coulomb Excitation (Stable/CARIBU, CHICO2)
- Deep Inelastic Reactions and Transfer/Multi-transfer reactions to study Neutron-Rich Nuclei (Stable/CARIBU, CHICO2/Phoswich Wall)



## **GRETINA NSCL second campaign: Fall 2015 – Spring 2017**

- 14 GRETINA experiments approved ~2400hrs. Next PAC is tentatively planned for spring 2016 and will consider new GRETINA proposals.

## **GRETINA Technical Status**

- Eight quads (Q1-Q8) currently operating, Q9 expected Fall 2015. Q10 ordered. Working on the procurement of Q11. Expect to order Q12 in FY16.
- Improved computing and acquisition capabilities: increased number of cores, increased (x2) storage capacity, upgraded network. Firmware (energy-filter, trigger) improvements.
- Work on GRETINA GEANT4 simulations continues: supports ongoing GRETINA physics analysis and performance studies, and GRETA science case

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## **GRETA**

- Received strong community endorsement in the long range planning process and a top priority for FRIB equipment. Working towards CD0 in 2015 and timely completion for “full power” FRIB operations.

## **Gammasphere**

- The digital data acquisition system is completed through phase 2 and available for use in experiments. A campaign with Gammasphere coupled to the Goddess charged particle array was recently completed.

## **CloverShare**

- First campaigns at NSCL and RCNP were carried out in 2014-15. Plans include future runs at TAMU (Fall 2015), Notre Dame (Winter 2015) and RCNP (Spring 2016)

## **APOLLO**

- Development experiments completed in 2014. First science measurements approved by the ATLAS PAC for stable isotopes. Integration with digital HELIOS is underway. Experiments to exploit upcoming in-flight (AIRIS) and high-purity CARIBU beams are planned.