# Low Energy Community Meeting Closeout

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for the LECM Organizing Committee:
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Guy Savard (ANL), Hendrik Schatz (MSU / JINA), Michael Smith (ORNL),
Ingo Wiedenhover (Florida State Univ.),
Alan Wuosmaa (Univ. of Connecticut), Sherry Yennello (Texas A&M Univ.)

# Meeting Overview

- Over 180 participants
- Many more following the LECM via webcast …

- Very full schedule including
  - 4 workshops / meetings [ReA upgrade, AIRIS, HRS, SECAR]
  - Plenary Talks on Science, Education, Funding Agencies …
  - 9 Working Group Sessions
  - Post-workshop [GRETINA]

- LECM has evolved into a vital tool to
  - build collaborations and consensus
  - share latest ideas and results
  - plan our future

# ReA Upgrade Workshop

- Over 60 participants (1/3 of LECM2015)
- Exciting science drives need for reaccelerated beam energies beyond existing NSCL ReA facility
- 14 talks on science opportunities with ReA6 / ReA9 / ReA12 energy upgrades

- Planned outcome: Whitepaper on science opportunities in different energy regimes
  - draft by end of 2015 / early 2016
- Please contribute science cases to the Whitepaper
- Contact Hiro Iwasaki and Alexandra Gade with your ideas

- Website https://people.nscl.msu.edu/~iwasaki/rea6.html

# Argonne In-Flight Radioactive Ion Separator (AIRIS) Workshop

- ~40 Participants met on Thurs. evening (8/20) to discuss opportunities using AIRIS in-flight radioactive beams
- 9 presentations covering:
  - Technical design and expected performance of AIRIS
  - Physics interests related to Nuclear Structure, Reactions, and Astrophysics
  - Beam properties required by experimental detection systems
- Workshop conclusions:
  - Formation of an AIRIS working group
  - Development of a list of secondary beam properties required for specific physics cases of interest
- Website: www.phy.anl.gov/airis
- Point of contact: crhoffman@anl.gov

# SECAR and HRS Meetings

- Strong re-endorsements for two key separators for FRIB – SECAR and HRS
- Meetings featured presentations on
  - Status updates
  - Science opportunities
  - Auxiliary equipment
  - Ways to get involved
- The community is engaged in these projects
- Short summaries will be posted online next week
- New collaborators welcome ! Get involved at

  HRS website http://hrs.lbl.gov/
  SECAR: http://fribastro.org/5_EQUIPMENT/SECAR/SECAR.html

# Working Group Meetings

*August 21 13:30 – 15:30 WG 1 Sessions*
1. Decay Station I (Robert Grzywacz - Univ. Tennessee) - [BPS 1400]
2. Recoil Separator (Matt Amthor - Bucknell, Wolfgang Mittig - MSU, Jerry Nolan - ANL) - [BPS 1415]
3. Precision Measurements (Kei Minamisono - MSU) - [BPS 1420]
4. Astrophysics Equipment (Michael Smith - ORNL / Hendrik Schatz - MSU / Catherine Deibel - LSU / Ernst Rehm - ANL) - [BPS 1410]

*August 21 16:00 – 18:00 WG 2 Sessions*
5. Nuclear Data Program (Jun Chen - MSU) - [BPS 1420]
6. Decay Station II (Robert Grzywacz - Univ. Tennessee) - [BPS 1400]
7. Gamma Spectroscopy (Paul Fallon - LBNL) - [NSCL Lecture Hall]
8. Silicon Arrays (Steve Pain - ORNL) - [BPS 1410]
9. JENSA (Kelly Chipps - ORNL) - [BPS 1415]

- 3-slide Working Group summaries will be posted on the LECM2015 website and at fribusers.org throughout next week

# Data Acquisition Workshop

- FRIB DAQ Working Group Meeting was hosted by the Physics Division of Argonne National Laboratory, July 29-30, 2015
  - Detector working groups were invited to send representatives
  - FRIB Detector Collaboration needs were presented; others shared recent experiences integrating large detector systems; topics for study were developed
- Current Topical panels - *Collaborators being sought* –
  - Timing - identification or development of time distribution protocols, interfaces and hardware to enable high precision coordination of experimental systems and event data time stamping
  - Accelerator/Beamline interface and control - experimenter interfaces and access to monitoring and controls
- Meeting presentations, summaries and panel work to be available on the web.
- A web site is being developed.
- Contact Robert Varner (varnerrl@ornl.gov) to become involved.

# Nuclear Theory Initiatives

Nuclear theory community is in the process of launching a suite of new initiatives to ensure that the experimental program reaches its full potential:

- Establishment of a national FRIB Theory Alliance, which will enhance the field through the national FRIB theory fellow program; establishing tenure-track bridge positions in nuclear theory; fostering interdisciplinary collaborations; and shepherding international initiatives
- New investments in computational nuclear physics theory, including expansion of SciDAC programs and workforce development to fully exploit U.S. leadership in high-performance computing
- Expansion of educational initiatives, including TALENT

# GRETINA Users Meeting

- GRETINA has completed two science campaigns
- In high demand for future campaigns
- Focus will be on GRETINA siting beyond 2017
- Presentations will be given from NSCL, ANL, RIKEN RIBF
- GRETA
  - community anticipates that GRETA will be a flagship detector for FRIB
  - GRETA completion is essential for FRIB science

# Resolutions

- The highest priority in low-energy nuclear physics and nuclear astrophysics is the timely completion of the Facility for Rare Isotope Beams and the initiation of its full science program
- Opportunities for breakthrough science rest on availability of beam time at the present facilities
  - NSCL: We support effective operations of NSCL to allow capitalizing on the unique opportunities afforded by ReA3 and the GRETINA fast-beam campaign
  - ANL: We support enhancements of ATLAS, particularly the AIRIS and multi-user upgrades, that will increase the availability and diversity of beams for its users
  - ARUNA: We support operations and initiatives at the University-based laboratories. These are essential for scientific innovation and workforce development
- We endorse the nuclear theory initiatives
- We reaffirm the need for the energy upgrades to NSCL's ReA facility
- We endorse GRETA, HRS, SECAR, and other equipment initiatives for FRIB