

INT Program INT-17-1a Workshop Week 3

Nuclear Reactions: A Symbiosis between Experiment, Theory and Applications

March 13 - 16, 2017

ALL TALKS WILL BE HELD IN C-520, UNLESS OTHERWISE NOTED.

Monday, March 13, 2017

Morning session chair: Jutta Escher, Lawrence Livermore National Lab

- 8:00 AM Registration, room C411
9:00 AM Welcome
Larry McLerran, Director, Institute for Nuclear Theory
9:15 AM "Gamov Shell Model"
Marek Ploszajczak, GANIL
10:05 AM "Recent advances in understanding of shells evolution in N=7 isotones and Nitrogen isotopes"
Grigory Rogachev, Texas A&M University
10:35 AM Coffee break
10:50 AM "Current nuclear reaction research at ATLAS"
Birger Back, Argonne National Laboratory
11:40 AM Discussion Session

Afternoon session chair: Filomena Nunes, MSU/NSCL

- 1:45 PM "Integrating ab initio structure models into accurate reaction calculations using EFT"
Pierre Capel, Université libre de Bruxelles (ULB)
2:15 PM "Search for cluster structure using radioactive beams"
Tan Ahn, University of Notre Dame
2:45 PM Coffee break
3:00 PM "Experiment and Phenomenology for Reactions with 3 Bodies in the Final State"
Carl Brune, Ohio University
3:30 PM "Unbound nuclei by projectile fragmentation and transfer"
Angela Bonaccorso, INFN
4:00 PM Discussion Session

Tuesday, March 14, 2017

Morning session chair: Nicholas Scielzo, Lawrence Livermore National Laboratory

- 8:55 AM Announcements
Organizers
9:00 AM "FRIB"
Fernando Montes, Michigan State University
9:50 AM "Particle Spectroscopy of Unbound States for Nuclear Astrophysics"
Jeffery Blackmon, Louisiana State University
10:20 AM Coffee break
10:40 AM "Nuclear Exotic Modes and Their Impact on Astrophysical Observables"
Nadia Tsoneva, Institut für theoretische Physik
11:10 AM "Connecting Nuclear Structure to Stellar Astrophysics"
Anton Tonchev, LLNL

11:30 AM Discussion Session

Afternoon session chair: Birger Back, Argonne National Laboratory

1:45 PM "Proton Transfer Reactions on Exotic Beams to Probe Nucleosynthesis"
Dan Bardayan, University of Notre Dame

2:15 PM "⁸⁶Kr(d,p) reaction studies: constraining the single-particle ANC"
Jolie Cizewski, Rutgers University

2:45 PM Coffee break

3:00 PM "Study of inclusive breakup reactions induced by weakly bound nuclei"
Lei Jin, Ohio University

3:30 PM Discussion Session

Wednesday, March 15, 2017

Morning session chair: Jeffery Blackmon, Louisiana State University

8:55 AM Announcements
Organizers

9:00 AM "Neutron capture rates and r-process nucleosynthesis"
Rebecca Surman, University of Notre Dame

9:50 AM "Investigation of the surrogate method via the simultaneous measurement of fission and gamma-emission probabilities"
Beatriz Jurado, CENBG

10:20 AM Coffee break

10:40 AM "Nuclear structure and astrophysics investigations at TRIUMF-ISAC"
Adam Garnsworthy, TRIUMF

11:30 AM Discussion Session

Afternoon session chair: Beatriz Jurado, CENBG

1:45 PM "Experimental Neutron Capture Studies and Needed Nuclear Theory"
Aaron Couture, Los Alamos National Laboratory

2:15 PM "Compound-nuclear Reactions with Unstable Isotopes: Constraining Cross Sections with Indirect Data and Theory"
Jutta Escher, Lawrence Livermore National Lab

2:45 PM Coffee break

3:00 PM "Beta-decay studies to understand reactions"
Nicholas Scielzo, Lawrence Livermore National Laboratory

3:30 PM Discussion Session

7:00 PM Optional dinner Mamma Melina's

Thursday, March 16, 2017

Morning session chair: Kristina Launey, Louisiana State University

8:55 AM Announcements
Organizers

9:00 AM "Weakly bound and unbound light nuclei from ab initio theory"
Petr Navratil, TRIUMF

9:50 AM "Continuum in NCSM"
Bruce R. Barrett, University of Arizona

10:20 AM Coffee break

10:40 AM "Super-radiance in nuclear reactions"
Naftali Auerbach, Tel Aviv University

11:30 AM Discussion Session

Afternoon session chair: Charlotte Elster, Ohio University

1:45 PM "Latest developments and future applications of the dispersive optical model"
Willem Dickhoff, Washington University

2:15 PM "Connecting fundamental models with nuclear reaction evaluations"
Gustavo Nobre, Brookhaven National Laboratory

2:45 PM Coffee break

3:00 PM "Non-local optical potentials"
Filomena Nunes, Michigan State University

3:30 PM "Asymmetry dependence of Gogny-based optical potential"
Guillaume Blanchon, CEA

4:00 PM Discussion Session

Friday, March 17, 2017

Morning session TBD

3:00 PM Discussion session