

Program Overview

| Nuclear Astrophysics / Study of Nuclei | Neutrinos, Neutron, Symmetries | American Competitiveness |
|---|-----------------------------------|--------------------------|
| Thursday, January 18th | | |
| 6:00 PM - 8:00 PM Registration Desk Open Regency Foyer | | |

| Nuclear Astrophysics / Study of Nuclei | Neutrinos, Neutron, Symmetries | American Competitiveness |
|--|--|---|
| Friday, January 19th | | |
| Registration Desk Open 7:30 AM – 5:00 PM, Regency Foyer | | |
| 9:00 AM - 10:30 AM Joint Plenary Session Regency A | | |
| 10:30 AM - 11:00 AM Coffee Break | | |
| 11:00 AM - 12:00 PM Joint Plenary Session Regency A | | |
| 1:30 PM - 3:00 PM Plenary Session I Regency A | 1:30 PM - 3:00 PM Plenary Session I Regency B | |
| 3:00 PM - 3:30 PM Coffee Break | | |
| 3:30 PM - 5:30 PM Plenary Session II Regency A | 3:30 PM - 5:50 PM Plenary Session II Regency B | |
| 6:00 PM - 7:15 PM Discussion on Nuclear Science Education and Outreach Regency A | | |
| 7:15 PM - 8:00 PM Joint Plenary Session Regency B | | |
| 8:15 PM - 10:00 PM WG Evening Session Structure: Regency A | | 8:30 PM - 9:45 PM Plenary Session I Regency B |

Saturday, January 20th
Registration Desk Open 8:00 AM – 5:00 PM, Regency Foyer

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|--|--|--|
| 8:30 AM - 12:00 PM Parallel WG Session I Theory: Buckingham Hot Matter: Columbian Structure: Regency A Astro: Water Tower | 8:30 AM - 9:30 AM Open Microphone Session Regency B | 8:30 AM - 10:05 AM Plenary Session II Comiskey |
| | 9:45 AM - 10:45 AM Parallel WG Session I WG-II: San Francisco WG-IV: Toronto WG-A: Regency B WG-B: Atlanta | 10:05 AM - 10:30 AM Coffee Break |
| | 10:45 AM - 11:15 AM Coffee Break | 10:30 AM - 11:30 AM Plenary Session III Comiskey |
| Lunch Break | 11:15 AM - 12:15 AM Parallel WG Session II WG-I: Regency B WG-III: Atlanta WG-C: Toronto WG-DM: San Francisco | |
| | Lunch Break | Lunch Break |
| 1:30 PM - 4:00 PM Parallel WG Session II Joint: Regency A Astro: Water Tower | 1:30 PM - 3:30 PM Parallel WG Session III WG-II: San Francisco WG-IV: Toronto WG-A: Regency B WG-B: Atlanta | 2:30 PM - 4:00 PM WG Session I Comiskey |
| | 3:30 PM - 4:00 PM Coffee Break | |
| 4:00 PM - 4:30 PM Coffee Break | 4:00 PM - 6:00 PM Parallel WG Session IV | 4:00 PM - 4:30 PM Coffee Break |
| 4:30 PM - 7:00 PM Parallel WG Session III Struct & Astro: Regency A EOS: Columbian Applications: Buckingham Facilities: Water Tower | WG-I: Regency B WG-III: Atlanta WG-C: Toronto WG-DM: San Francisco | 4:30 PM - 7:00 PM WG Session II Comiskey |
| | | |
| 8:00 PM - 10:00 PM Meeting of WG conveners & Organizers Columbian | 8:00 PM - 10:00 PM Meeting of WG conveners & Organizers Atlanta | |

Sunday, January 21st
Registration Desk Open 8:30 AM – 1:00 PM, Regency Foyer

| | | |
|---|---|--|
| 9:00 AM - 10:00 AM Plenary Session I Regency A | 9:00 AM - 10:30 AM Plenary Session I & Open Microphone Session Regency B | 9:00 AM - 10:30 AM WG Session III Acapulco |
| 10:00 AM - 10:30 AM Coffee Break | 10:30 AM - 11:00 AM Coffee Break | |
| 10:30 AM - 1:00 PM Plenary Session II Regency A | 11:00 AM - 1:00 PM Plenary Session II Regency B | 11:00 AM - 12:30 PM Closeout Session Acapulco |
| | | 12:30 PM - 1:30 PM Organizing Committee Meeting Acapulco |

Nuclear Astrophysics / Study of Nuclei

Friday, January 19th

9:00 AM - 10:30 AM Friday Morning

Joint Plenary Session with the town meeting on Neutrinos, Neutrons, Symmetries

Room: Regency A; Chair: Hamish Robertson

9:00 AM - 9:15 AM Charge and LRP process (R. Tribble)

9:15 AM - 9:30 AM Report from the workshop on education (P. McMahan-Norris)

9:30 AM - 10:00 AM Nuclear Physics (R. Casten)

10:00 AM - 10:30 AM Neutrino Physics (S. Freedman)

10:30 AM - 11:00 AM Coffee Break

11:00 AM - 12:00 PM Friday Morning

Joint Plenary Session with the town meeting on Neutrinos, Neutrons, Symmetries

Room: Regency A; Chair: Hendrik Schatz

11:00 AM - 11:30 AM Nuclear Astrophysics (J. Truran)

11:30 AM - 12:00 PM Fundamental Symmetries (M. Ramsey-Musolf)

1:30 PM - 3:00 PM Friday Afternoon

Plenary Session I - Room: Regency A; Chair: Jolie Cizewski

1:30 PM - 2:00 PM Stellar Nuclear Astrophysics (M. Wiescher)

2:00 PM - 2:30 PM Nuclear Structure I (A. Macchiavelli)

2:30 PM - 3:00 PM Theoretical Challenges in the Theory of Nuclei (W. Nazarewicz)

3:00 PM - 3:30 PM Coffee Break

3:30 PM - 5:30 PM Friday Afternoon

Plenary Session II - Room: Regency A; Chair: Alan Wuosmaa

3:30 PM - 4:00 PM Nuclear Structure Research at Jefferson Lab (K. de Jager)

4:00 PM - 4:30 PM Nuclear Structure II (Th. Glasmacher)

4:30 PM - 5:00 PM Nuclear Matter EOS in the Laboratory and in Astrophysics (J. Lattimer)

5:00 PM - 5:30 PM Nuclear physics of exploding stars (J. Blackmon)

6:00 PM - 7:15 PM Friday Evening

Discussion on Nuclear Science Education and Outreach

Room: Regency A; Chair: Sherry Yennello

7:15 PM - 8:00 PM Friday Evening

Joint Plenary Session with the town meeting on Neutrinos, Neutrons, Symmetries

Room: Regency B; Chair: Wick Haxton

7:15 PM - 7:30 PM NSAC Report on Theory (B. Mueller)

7:30 PM - 7:45 PM Status Report NSAC RIB Task Force (J. Symons)

7:45 PM - 8:00 PM Status of the DUSEL Process (J. Kotcher)

8:15 PM - 10:00 PM Friday Evening

Working Group - Nuclear structure and reactions

Room: Regency A; Conveners: L. Cardman, R. Grzywacz, M. Carpenter, A. Gade, F. Liang

Saturday, January 20th

8:30 AM - 12:00 PM Saturday Morning

Parallel Working Group Session I

Nuclear Theory

Room: Buckingham; Conveners: T. Duguet, E. Ormand, R. Wiringa

Experiments with hot nuclei, dense matter

Room: Columbian; Conveners: W. Lynch, S. Yennello, L. Sobotka

Nuclear structure and reactions (This group starts Friday evening)

Room: Regency A; Conveners: L. Cardman, R. Grzywacz, M. Carpenter, A. Gade, F. Liang

Nuclear Astrophysics

Room: Water Tower; Conveners: A. Champagne, G. Fuller, M. Wiesche

10:00 AM - 10:30 AM Coffee Break

1:30 PM - 4:00 PM Saturday Afternoon

Parallel Working Group Session II

Joint nuclear physics

Room: Regency A; Conveners: L. Cardman, R. Grzywacz, E. Ormand, R. Wiringa, S. Yennello

Nuclear Astrophysics

Room: Water Tower; Conveners: A. Champagne, G. Fuller, M. Wiescher

4:00 PM - 4:30 PM Coffee Break

4:30 PM - 7:00 PM Saturday Afternoon

Parallel Working Group Session III

Nuclear Structure and Astrophysics (Theory and Experiment)

Room: Regency A; Conveners: A. Aprahamian, D. Dean

Nuclear Matter EOS in the Lab and in Astrophysics

Room: Columbian; Conveners: J. Piekarewicz, S. Reddy, B. Tsang

Applications and Nuclear Data (Joint with American Competitive Workshop)

Room: Buckingham; Conveners: A. Hayes, E. Norman, M. Chadwick

Facilities and Instrumentation

Room: Water Tower; Conveners: J. Beene, J. Nolen, I.-Y. Lee, M. Thoennessen

8:00 PM - 10:00 PM Saturday Evening

Meeting of working group conveners

Room: Columbian

Sunday, January 21st

9:00 AM - 10:00 AM Sunday Morning

Plenary Session - Room: Regency A; Chairs: Janssens & Schatz

9:00 AM - 9:15 AM Report: Nuclear Theory WG (E. Ormand)

9:15 AM - 9:30 AM Report: Experiments with hot nuclei, dense matter WG (S. Yenello)

9:30 AM - 9:45 AM Report: Nuclear structure and reactions WG (R. Grzywacz)

9:45 AM - 10:00 AM Report: Nuclear astrophysics WG (A. Champagne)

10:00 AM - 10:30 AM Coffee Break

10:30 AM - 1:00 PM Sunday Morning

Plenary Session - Room: Regency A; Chairs: Janssens & Schatz

10:30 AM - 10:45 AM Report: Joint Nuclear Physics WG (TBD)

10:45 AM - 11:00 AM Report: Nuclear Structure & Astrophysics (Theory & Experiment) WG
(D. Dean)

11:00 AM - 11:15 AM Report: Nuclear Matter EOS in the Lab and in Astrophysics WG (J.
Piekarewicz)

11:15 AM - 11:30 AM Report: Facilities and Instrumentation WG (TBD)

11:30 AM - 1:00 PM Discussion of white paper and resolution

Neutrinos, Neutron, Fundamental Symmetries Program

Friday, January 19th

9:00 AM - 10:30 AM Friday Morning

Joint Plenary Session with the town meeting on Nuclear Astrophysics / Study of Nuclei

Room: Regency A; Chair: Hamish Robertson

9:00 AM - 9:15 AM Charge and LRP process (R. Tribble)

9:15 AM - 9:30 AM Report from the workshop on education (P. McMahan-Norris)

9:30 AM - 10:00 AM Nuclear Physics (R. Casten)

10:00 AM - 10:30 AM Neutrino Physics (S. Freedman)

10:30 AM - 11:00 AM Coffee Break

11:00 AM - 12:00 PM Friday Morning

Joint Plenary Session with the town meeting on Nuclear Astrophysics / Study of Nuclei

Room: Regency A; Chair: Hendrik Schatz

11:00 AM - 11:30 AM Nuclear Astrophysics (J. Truran)

11:30 AM - 12:00 PM Fundamental Symmetries (M. Ramsey-Musolf)

1:30 PM - 3:00 PM Friday Afternoon

Plenary Session I - Room: Regency B; Chair: Michael Ramsey-Musolf

1:30 PM - 2:00 PM Rare & forbidden Processes (P. Huffman)

2:00 PM - 2:30 PM Weak probes of Strong Interaction (B. Holstein)

2:30 PM - 3:00 PM Precision Measurements of SM properties (D. Hertzog)

3:00 PM - 3:30 PM Coffee Break

3:30 PM - 5:50 PM Friday Afternoon

Plenary Session II - Room: Regency B; Chair: Hamish Robertson

3:30 PM - 4:00 PM Theory for Neutrinos and Fundamental Symmetries (B. Balantekin)

4:00 PM - 4:30 PM Neutrino Properties (S. Elliott)

4:30 PM - 5:00 PM Solar, Reactor, Accelerator Neutrinos (J. Klein)

5:00 PM - 5:30 PM Supernovae, UHE and Neutrino Interactions (G. McLaughlin)

5:30 PM - 5:50 PM Dark Matter (A. Hime)

6:00 PM - 7:15 PM Friday Evening

Discussion on Nuclear Science Education and Outreach

Room: Regency A; Chair: Sherry Yennello

7:15 PM - 8:00 PM Friday Evening

Joint Plenary Session with the town meeting on Nuclear Astrophysics / Study of Nuclei

Room: Regency B; Chair: Wick Haxton

7:15 PM - 7:30 PM NSAC Report on Theory (B. Mueller)

7:30 PM - 7:45 PM Status Report NSAC RIB Task Force (J. Symons)

7:45 PM - 8:00 PM Status of the DUSEL Process (J. Kotcher)

Saturday, January 20th

8:30 AM - 9:30 AM Saturday Morning

Open Microphone Session

Room: Regency B; Moderator: John Wilkerson

9:45 AM - 10:45 AM Saturday Morning

Parallel Working Group Session I

Neutrino WG-II: Solar Neutrinos

Room: San Francisco; Convenors: Josh Klein, Bruce Vogelaar

Neutrino WG-IV: Supernovae, UHE, Neutrino Interactions

Room: Toronto; Convenors: John Beacom, Gail McLaughlin, Alan Poon

Symmetries WG-A: Precision Studies of Standard Model Electroweak Observables

Room: Regency B; Convenors: David Hertzog, Bill Marciano

Symmetries WG-B: Electroweak Probes of the Strong Interaction

Room: Atlanta; Convenors: Geoff Greene, Barry Holstein

10:45 AM - 11:15 AM Coffee Break

11:15 AM - 12:15 PM Saturday Morning

Parallel Working Group Session II

Neutrino WG-I: Neutrino Properties, Charge Conjugation, Lepton Flavor Violation

Room: Regency B; Convenors: Guido Drexlin, Steve Elliott

Neutrino WG-III: Reactor, Accelerator Neutrinos

Room: Atlanta; Convenors: Yuri Efremenko, Bill Louis

Symmetries WG-C: Rare and Forbidden Processes

Room: Toronto; Convenors: Paul Huffman, Allena Opper

Symmetries WG-DM: Dark Matter in Nuclear Physics

Room: San Francisco; Convener: Spencer Klein

1:30 PM - 3:30 PM Saturday Afternoon

Parallel Working Group Session III

Neutrino WG-II: Solar Neutrinos

Room: San Francisco; Convenors: Josh Klein, Bruce Vogelaar

Neutrino WG-IV: Supernovae, UHE, Neutrino Interactions

Room: Toronto; Convenors: John Beacom, Gail McLaughlin, Alan Poon

Symmetries WG-A: Precision Studies of Standard Model Electroweak Observables

Room: Regency B; Convenors: David Hertzog, Bill Marciano

Symmetries WG-B: Electroweak Probes of the Strong Interaction

Room: Atlanta; Conveners: Geoff Greene, Barry Holstein

3:30 PM - 4:00 PM Coffee Break

4:00 PM - 6:00 PM Saturday Afternoon

Parallel Working Group Session IV

Neutrino WG-I: Neutrino Properties, Charge Conjugation, Lepton Flavor Violation

Room: Regency B; Conveners: Guido Drexlin, Steve Elliott

Neutrino WG-III: Reactor, Accelerator Neutrinos

Room: Atlanta; Conveners: Yuri Efremenko, Bill Louis

Symmetries WG-C: Rare and Forbidden Processes

Room: Toronto; Conveners: Paul Huffman, Allena Opper

Symmetries WG-DM: Dark Matter in Nuclear Physics

Room: San Francisco; Convener: Spencer Klein

8:00 PM - 10:00 PM Saturday Evening

Meeting of WG convenors with Organizers

Room: Atlanta

Sunday, January 21st

9:00 AM - 10:30 AM Sunday Morning

Plenary Session I - Room: Regency B

Chair: Zheng-Tian Lu

9:00 AM - 9:20 AM Summary Report: Symmetries (Michael Ramsey-Musolf)

9:20 AM - 9:40 AM Summary Report: Neutrinos (R. G. Hamish Robertson)

9:40 AM - 10:30 AM Open Microphone Session (Moderator: TBA)

10:30 AM - 11:00 AM Coffee Break

11:00 AM - 1:00 PM Sunday Morning

Plenary Session II - Room: Regency B

Moderators: Michael Ramsey-Musolf & R. G. Hamish Robertson

11:00 AM - 1:00 PM Discussion of recommendations, white paper, writing assignments, schedule

American Competitiveness Workshop Program

Friday, January 19th

6:00 PM - 7:15 PM Friday Evening

Discussion on Nuclear Science Education and Outreach
Room: Regency A; Chair: Sherry Yenello

8:30 PM - 9:45 PM Friday Evening

Plenary Session I: Energy - Room: Regency B; Chair: Calvin Howell
8:30 PM - 8:45 PM Goals of the workshop, Ed Hartouni (LLNL)
8:45 PM - 9:15 PM Global Nuclear Energy Partnership, John Herczeg (DOE)
9:15 PM - 9:45 PM Advanced Fuel Cycle and nuclear data needs, Phillip Finck (INL)

Saturday, January 20th

8:30 AM - 10:05 AM Saturday Morning

Plenary Session II: National Security - Room: Comiskey; Chair: Ed Hartouni
8:30 AM - 9:00 AM National Nuclear Security, Mark Chadwick (LANL)
9:00 AM - 9:30 AM From building bombs to finding them Dennis McNabb (LLNL)
9:30 AM - 10:05 AM Radiation Effects Testing, Peggy McMahan Norris (LBNL)

10:05 AM - 10:30 AM Coffee Break

10:30 AM - 11:30 AM Saturday Morning

Plenary Session III: Medical Applications - Room: Comiskey; Chair: Thomas Glasmacher
10:30 AM - 11:00 AM Advances in Charged-particle Beam Therapy, Jonathan Farr (MPRI)
11:00 AM - 11:30 AM Advances in Medical Imaging Using Nuclear Physics Techniques, Stan Majewski (JLab)

2:30 PM - 4:00 PM Saturday Afternoon

Working Group Session I - Room: Comiskey; Nuclear Energy and Nuclear Data; Convener: David Robertson

4:00 PM - 4:30 PM Coffee Break

4:30 PM - 7:00 PM Saturday Afternoon

Working Group Session II - Room: Comiskey; National Security, Nuclear Medicine and Industry; Convener: Thomas Glasmacher

Sunday, January 21st

9:00 AM - 10:30 AM Sunday Morning

Working Group Session III - Room: Acapulco; Convener: TBA

10:30 AM - 11:00 AM Coffee Break

11:00 AM - 12:30 PM Sunday Morning

Closeout Session: Summary and Recommendations; Room: Acapulco; Chairs: Ed Hartouni and Calvin Howell

12:30 PM - 1:30 PM Sunday Afternoon

Organizing Committee Meeting - Room: Acapulco

Nuclear Astrophysics / Study of Nuclei

Working Group Session Programs

Friday, January 19th

8:00 PM - 10:00 PM

| Working Group: Nuclear Structure and Reactions | | |
|---|--|---------------------------|
| Time: Friday, January 19 th , 8:15 PM - 9:25 PM; Room: Regency A | | |
| Conveners: L. Cardman, R. Grzywacz, M. Carpenter, A. Gade, F. Liang | | |
| 8:15 PM | TBA | <i>Ingo Wiedenhover</i> |
| 8:35 PM | One-nucleon knockout reactions | <i>Terry</i> |
| 8:40 PM | Present and future opportunities for neutron-fragment coincidence measurements at a fast fragmentation beam facility | <i>Jerry Hinnefeld</i> |
| 8:45 PM | On the future of inelastic scattering | <i>Cottle</i> |
| 8:50 PM | Need for comparisons between stable and unstable scattering | <i>K. Kemper</i> |
| 8:55 PM | Nuclear structure at FSU | <i>Mark Riley</i> |
| 9:00 PM | Short-Range Correlations | <i>John Watson</i> |
| 9:05 PM | The DOM and its potential for nuclear structure studies | <i>Charity</i> |
| 9:10 PM | Reaching the driplines | <i>Stolz</i> |
| 9:15 PM | Beta-delayed neutron spectroscopy in the region near the neutron drip line | <i>D. Morrissey</i> |
| 9:20 PM | Binding-Energy Systematics of T=0 States of Even-Even Self-Conjugate Nuclides | <i>Friedrich Everling</i> |
| 9:25 PM | END | |

Saturday, January 20th

Session I: 8:30 AM - 12:00 PM

| Working Group: Nuclear Theory | | |
|--|---|----------------------|
| Time: Saturday, January 20th, 8:30 AM - 12:00 PM ; Room: Buckingham Conveners: T. Duguet, E. Ormand, R. Wiringa | | |
| Invited Talks | | |
| 8:30 AM | Challenges in Nuclear Structure | <i>T. Papenbrock</i> |
| 8:55 AM | Challenges in Nuclear Reactions | <i>I. Thompson</i> |
| Contributed Talks | | |
| 9:20 AM | NN and NNN interactions | <i>R. Machleidt</i> |
| 9:25 AM | Using EFT in nuclear physics | <i>TBD</i> |
| 9:30 AM | Renormalization Group methods | <i>S. Bogner</i> |
| 9:35 AM | Ab initio studies of nuclei with GFMC | <i>S. Pieper</i> |
| 9:42 AM | Ab initio studies of nuclei with the NCSM | <i>P. Navratil</i> |
| 9:49 AM | Ab initio studies of nuclei with Coupled Clusters | <i>D. Dean</i> |
| 9:54 AM | Electroweak currents | <i>R. Schiavilla</i> |
| 9:59 AM | Coffee Break | |
| 10:25 AM | Nuclear and neutron matter | <i>J. Carlson</i> |
| 10:30 AM | Green's function approach to the nuclear many-body problem | <i>W. Dickhoff</i> |
| 10:35 AM | The future of the nuclear shell model | <i>B.A. Brown</i> |
| 10:40 AM | The role of the continuum in the shell model | <i>A. Volya</i> |
| 10:45 AM | Projected Shell Model | <i>Y. Sun</i> |
| 10:50 AM | AFMC approach to the shell model | <i>G. Stoitcheva</i> |
| 10:55 AM | Emergent phenomena and quantum chaos | <i>S. Frauendorf</i> |
| 11:00 AM | Universal energy density functional | <i>D. Furnstahl</i> |
| 11:05 AM | Relativistic mean field approaches | <i>A. Afansjev</i> |
| 11:10 AM | Microscopic theories for LACM*, including fission | <i>W. Nazarewicz</i> |
| 11:15 AM | Symmetry-based descriptions of nuclei | <i>M. Caprio</i> |
| 11:20 AM | Inelastic, transfer and breakup reactions | <i>F. Nunes</i> |
| 11:25 AM | Pre-equilibrium dynamics | <i>T. Kawano</i> |
| 11:30 AM | Populating the compound nucleus | <i>J. Escher</i> |
| 11:35 AM | Sub-barrier reactions | <i>H. Esbensen</i> |
| 11:40 AM | Predictive power on nuclear models and their application to high density matter in neutron stars and supernovae | <i>J. Stone</i> |
| 11:45 AM | Use of overlap functions | <i>A. Zhanov</i> |
| 11:50 AM | END | |

| Working Group: Experiments with Hot Nuclei, Dense Matter | | |
|--|--------------|-----------------|
| Time: Saturday, January 20th, 8:30 AM - 12:00 PM ; Room: Columbian Conveners: W. Lynch, S. Yennello, L. Sobotka | | |
| 8:30 AM | TBA | <i>B.A. Li</i> |
| 9:00 AM | TBA | <i>Famiano</i> |
| 9:10 AM | TBA | <i>Tsang</i> |
| 9:20 AM | TBA | <i>Westfall</i> |
| 9:30 AM | TBA | <i>Natowitz</i> |
| 9:40 AM | TBA | <i>Sobotka</i> |
| 9:50 AM | TBA | <i>Garg</i> |
| 10:00 AM | Coffee Break | |
| 10:20 AM | TBA | <i>Schroder</i> |
| 10:30 AM | TBA | <i>Yennello</i> |
| 10:40 AM | TBA | <i>Phair</i> |
| 10:50 AM | TBA | <i>deSouza</i> |
| 11:00 AM | Discussion | |
| 12:00 PM | END | |

| Working Group: Nuclear Structure and Reactions | | |
|---|--|-------------------------|
| Time: Saturday, January 20th, 8:30 AM - 12:00 PM ; Room: Regency A Conveners: L. Cardman, R. Grzywacz, M. Carpenter, A. Gade, F. Liang | | |
| Invited | | |
| 8:30 AM | TBA | <i>Kim Lister</i> |
| 8:50 AM | Perspectives of two-nucleon knockout reactions | <i>Bazin</i> |
| 8:55 AM | Clarion highlights | <i>David Radford</i> |
| 9:00 AM | Coulex with rare ISOL beams: Physics opportunities | <i>Cyrus Baktash</i> |
| 9:05 AM | Evolution of shell structure through the static electromagnetic moments of nuclei towards extreme proton-to neutron ratios | <i>Kei Minamisono</i> |
| 9:10 AM | g-factor measurements with Recoil in Vacuum technique | <i>Nick Stone</i> |
| 9:15 AM | On the future of in-beam gamma-ray spectroscopy following fast fragmentation | <i>P. Fallon</i> |
| 9:20 AM | Neutron rich with GS | <i>Joe Hamilton</i> |
| 9:25 AM | Excursions into the continuum | <i>Torben Lauritsen</i> |
| 9:30 AM | DIC with regards to X5 | <i>Rod Clark</i> |
| 9:35 AM | DIC and CHICO (to be confirmed) | <i>Doug Cline</i> |
| 9:40 AM | Using DIC to Study Neutron Rich nuclei to moderate Spins | <i>Mike Carpenter</i> |
| 9:45 AM | RDT (to be confirmed) | <i>Darek Seweryniak</i> |
| 9:50 AM | Nuclear Structure Studies with Rare Isomers and Rare Isotopes | <i>Partha Chowdury</i> |

| Working Group: Nuclear Structure and Reactions | | |
|--|---|---|
| Time: Saturday, January 20 th , 8:30 AM - 12:00 PM; Room: Regency A | | |
| Conveners: L. Cardman, R. Grzywacz, M. Carpenter, A. Gade, F. Liang | | |
| 9:55 AM | Simplicity in Complex Systems: Many-body Symmetries, recent results and future perspectives | <i>Rick Casten</i> |
| 10:00 AM | Future opportunities with plunger lifetime measurements | <i>P. Adrich</i> |
| 10:05 AM | Proton and two-proton emitters | <i>K. Rykaczewski</i> |
| 10:10 AM | Alpha spectroscopy near ¹⁰⁰ Sn | <i>Sean Liddick</i> |
| 10:15 AM | N-rich spectroscopy with ranging out techniques | <i>Jeff Winger</i> |
| 10:20 AM | Decay spectroscopy of fission fragments at HRIBF | <i>C. Gross</i> |
| 10:25 AM | Future opportunities for the study of beta decay far from the valley of stability | <i>Paul Mantica</i> |
| 10:30 AM | Studies of Gamow-Teller strength in n-rich nuclei | <i>R. Grzywacz</i> |
| 10:35 AM | An array for comprehensive discrete spectroscopy following beta decay | <i>David Kulp</i> |
| 10:40 AM | Nuclear-structure related mass measurements with LEBIT | <i>Michael Block</i> |
| 10:45 AM | The emerging hypernuclear program at JLab | <i>Ed Hungerford</i> |
| 10:50 AM | TBA | <i>Walter Loveland</i> |
| 11:10 AM | Mechanism of In-Flight Fission of ²³⁸ U to Produce Secondary Radioactive Beams | <i>Folden</i> |
| 11:15 AM | Fusion reaction with n-rich nuclei | <i>Felix Liang</i> |
| 11:20 AM | Production and decay of SHE at the BGS | <i>Ken Gregorich</i> |
| 11:25 AM | Chemistry of SHE at BGS | <i>Ken Gregorich</i> |
| 11:30 AM | Acitinde nuclei | <i>Walter Reviol</i> |
| 11:35 AM | Superheavy spectroscopy | <i>Teng Lek Khoo</i> |
| 11:40 AM | (d,p) along the Z=50 and N=82 isotones | <i>Jolie Cizewski</i> |
| 11:45 AM | Surrogate technique for measuring reaction cross sections | <i>Lee Bernstein or Rod Clark or Con Beausang</i> |
| 11:50 AM | Charge exchange reactions | <i>Zegers</i> |
| 11:55 AM | When nuclei become neutron rich | <i>W. Walters</i> |
| 12:00 PM | END | |

| Working Group: Nuclear Astrophysics | | |
|--|--|------------------------|
| Time: Saturday, January 20th, 8:30 AM - 12:00 PM ; Room: Water Tower Conveners: A. Champagne, G. Fuller, M. Wiesche | | |
| Review Talks (20+10) | | |
| 8:40 AM | Expt. nuclear astrophysics (stellar evolution) | <i>Joachim Görres</i> |
| 9:10 AM | Theoretical explosions | <i>Tony Mezzacappa</i> |
| 9:40 AM | Expt. nuclear astrophysics (explosions) | <i>Brad Sherrill</i> |
| 10:10 AM | Coffe Break | |
| Contributed Talks (5+2) | | |
| 10:40 AM | Low Energy Accelerator | <i>Paul Vetter</i> |
| 10:47 AM | Low Energy Measurements | <i>Claudio Ugalde</i> |
| 10:54 AM | CTAG @ HIGS | <i>Henry Weller</i> |
| 11:01 AM | nu SNS | <i>Uwe Greif</i> |
| 11:08 AM | Nat'l Ignition Facility | <i>Uwe Greif</i> |
| 11:15 AM | Indirect Techniques | <i>Akhram Zhanov</i> |
| 11:22 AM | Indirect Measurements | <i>Wanpeng Tan</i> |
| 11:29 AM | Fusion Measurements | <i>Cheng Lie Jiang</i> |
| 11:40 AM | Discussion | |
| 12:00 PM | END | |

Session II: 1:30 PM - 4:00 PM

| Working Group: Joint nuclear physics | | |
|---|----------------------------|--------------------|
| Time: Saturday, January 20th, 1:30 PM - 4:00 PM ; Room: Regency A Conveners: L. Cardman, R. Grzywacz, E. Ormand, R. Wiringa, S. Yennello | | |
| 1:30 PM | Theory Summary | <i>E. Ormand</i> |
| 1:50 PM | Hot Nuclei Summary | <i>L. Sobotka</i> |
| 2:10 PM | Stucture/Reactions Summary | <i>R. Grzywacz</i> |
| 2:30 PM | RISAC Report | <i>R. Casten</i> |
| 2:45 PM | Open Discussion | <i>D. Geesaman</i> |
| 4:00 PM | END | |

| Working Group: Nuclear Astrophysics | | |
|---|--|-------------------------|
| Time: Saturday, January 20 th , 1:30 PM - 4:00 PM; Room: Water Tower | | |
| Conveners: A. Champagne, G. Fuller, M. Wiesche | | |
| Contributed Talks (5+2) | | |
| 1:35 PM | TBA | <i>Carl Brune</i> |
| 1:42 PM | Charge Exchange Reactions | <i>Remco Zegers</i> |
| 1:49 PM | n-Capture | <i>Aaron Couture</i> |
| 1:56 PM | rp-Process + LEBIT | <i>Stefan Schwarz</i> |
| 2:03 PM | rp-Process and XRB | <i>Matt Anthon</i> |
| 2:10 PM | TBA | <i>Ernst Rehm</i> |
| 2:17 PM | Need for Theory, Complementary Approaches for RIBs | <i>Michael Smith</i> |
| 2:30 PM | Discussion | |
| 3:00 PM | SDSS, Metal Poor Stars | <i>Tim Beers</i> |
| 3:07 PM | n-Rich Nuclei and Superbursts | <i>Ed Brown</i> |
| 3:14 PM | r-Process | <i>Jorge Pereira</i> |
| 3:21 PM | TOF Measurements | <i>Milam Matos</i> |
| 3:28 PM | MoNA for Nuclear Astrophysics | <i>Andreas Schiller</i> |
| 3:30 PM | Discussion | |
| 4:00 PM | END | |

Session III: 4:30 PM - 7:00 PM

| Working Group: Nuclear Structure and Astrophysics (Theory and Experiment) | | |
|---|-----|------------------|
| Time: Saturday, January 20 th , 4:30 PM - 7:00 PM; Room: Regency A | | |
| Conveners: A. Aprahamian, D. Dean | | |
| Invited (25+5) | | |
| 4:30 PM | TBA | Alex Brown |
| Contributed (5+2) | | |
| 5:00 PM | TBA | Yang Sun |
| 5:07 PM | TBA | Akram Zhanov |
| 5:14 PM | TBA | Jolie Cizewski |
| 5:21 PM | TBA | Goran Arbanas |
| 5:28 PM | TBA | Andrew Steiner |
| 5:35 PM | TBA | Karl Van Bibber |
| 5:42 PM | TBA | Allan Wuosmaa |
| 5:49 PM | TBA | Ken Nollett |
| 5:56 PM | TBA | Jon Engel |
| 6:03 PM | TBA | Ralph Hix |
| 6:10 PM | TBA | Michael Smith |
| 6:17 PM | TBA | Michael Wiescher |
| 6:24 PM | TBA | Gail McLaughlin |

| Working Group: Nuclear Matter EOS in the Lab and in Astrophysics | | |
|---|--------------------------------|--------------------------|
| Time: Saturday, January 20 th , 4:30 PM - 7:00 PM; Room: Columbian | | |
| Conveners: J. Piekarewicz, S. Reddy, B. Tsang | | |
| Review Talks | | |
| 4:30 PM | Theoretical | <i>Madappa Prakash</i> |
| 4:55 PM | Experimental | <i>Bill Lynch</i> |
| 5:20 PM | Observational | <i>Robert Rutledge</i> |
| Contributed Talks | | |
| 5:45 PM | TBA | <i>Mark Alford</i> |
| 5:55 PM | TBA | <i>Joe Carlson</i> |
| 6:05 PM | TBA | <i>Andrew Steiner</i> |
| 6:15 PM | TBA | <i>Pawel Danielewicz</i> |
| 6:25 PM | TBA | <i>Abby Bickley</i> |
| 6:35 PM | Discussion / Summary / Outlook | <i>Chuck Horowitz</i> |
| 7:00 PM | END | |

| Working Group: Facilities and Instrumentation | | |
|---|-------------------------------|----------------------------------|
| Time: Saturday, January 20 th , 4:30 PM - 7:00 PM; Room: Water Tower | | |
| Conveners: J. Beene, J. Nolen, I.-Y. Lee, M. Thoennessen | | |
| Invited | | |
| 4:30 PM | ANL RIA Plan | <i>D. Geesmann</i> |
| 4:45 PM | MSU RIA Plan | <i>G. Bollen</i> |
| 5:00 PM | RIA discussion | |
| Plan at Laboratories | | |
| 5:15 PM | ANL | <i>R. Janssens</i> |
| 5:23 PM | FSU | <i>S. Tabor</i> |
| 5:27 PM | LBNL | <i>K. Gregorich + D. Leitner</i> |
| 5:35 PM | MSU | <i>T. Glasmacher</i> |
| 5:43 PM | Notre Dame | <i>M. Wiescher</i> |
| 5:48 PM | ORNL | <i>J. R. Beene</i> |
| 5:56 PM | TAMU | <i>S. Yennello</i> |
| 6:04 PM | TUNL | <i>C.R. Howell</i> |
| 6:09 PM | Yale | <i>A. Heinz</i> |
| Equipment | | |
| 6:12 PM | GRETA | <i>I.Y. Lee</i> |
| 6:20 PM | GRETA Auxiliary Detectors | <i>D.G. Sarantites</i> |
| 6:25 PM | Plans of Astrophysics | <i>M. Smith</i> |
| 6:33 PM | RF Separator | <i>I. Wiedenhoever</i> |
| 6:37 PM | HELIOS | <i>A. Wuosmaa</i> |
| 6:40 PM | Large Acceptance Spectrometer | <i>G. Souliotis</i> |
| 6:43 PM | Stewardship Instrumentation | <i>S. Pain</i> |
| 6:46 PM | END | |

AGENDA (revised: 1/15/2007)

TIMES ALLOCATIONS FOR SPEAKERS:

30 minutes = 25 minutes presentation + 5 minutes discussion and speaker change

25 minutes = 20 minutes presentation + 5 minutes discussion and speaker change

20 minutes = 17 minutes presentation + 3 minutes discussion and speaker change

14 minutes = 12 minutes presentation + 2 minutes discussion and speaker change

10 minutes = 8 minutes presentation + 2 minutes discussion and speaker change

Saturday, January 20, 2007

14:00 - 18:00: **Nuclear Energy and Nuclear Data**

Conveners: David Robertson (UM-Columbia) and ?

TIME

14:00 Opening remarks by David Robertson

14:05 Lee Schroeder (LBNL)
*Opportunities for the Nuclear Science Community to
Contribute to the Nation's Energy Future*

14:35 Filip Kondev (ANL)
Measurements of beta-decay of Fission Fragments for the AFCI

14:49 Michael Dunn (ORNL)
Status of Neutron Beam Capabilities at ORELA

15:03 Mark Stoyer (LLNL)
Overview of the Nuclear Physics Program at the National Ignition Facility

15:17 Jerry Wilhelmy (LANL)
Mix Diagnostics at the NIF and Rochester

15:31 Short Presentations and Discussion

16:00 Break

16:30 Mike Herman (BNL)
Nuclear Data for Reactor Physics

16:55 Davis Kulp (Georgia Tech)
The Georgia Tech Data Search Engine

17:09 Michael Smith (ORNL)
Nuclear Data Needs for Astrophysics Studies

17:29 Short Presentations and Discussion

18:00 Session Adjourned

14:00 - 19:00: **National Security and Other Applications**
Conveners: Thomas Glasmacher (MSU/NSCL) and ?

TIME

14:00 Opening remarks by Thomas Glasmacher

14:05 Bill Hagan (DHS and SAIC)
Title ?

14:30 Chris Morris (LANL)
Proton and Muon Radiography

14:50 Harry Miley (PNNL)
Title ?

15:04 E. Frank Moore (ANL)
Title ?

15:18 Robert Ledoux (Passport Systems, Inc.)
Title ?

15:32 Naresh Menon (Physical Optics Corp.)
Building R&D Teams

15:52 Discussion

16:00 Break

16:30 Brad Sherrill (MSU/NSCL)
Nuclear Science Workforce Survey

16:40 Steve Wender (LANL)
Nuclear Applications using Neutron Beams

17:05 John Becker (LLNL)
Nuclear Science for Stockpile Stewardship

- 17:30 Dave Vieira (LANL)
Nuclear Cross Sections for National Security
- 17:44 Carl Brune (Ohio University)
Applied Nuclear Physics at Ohio University
- 18:00 Break
- 18:15 Peggy McMahan Norris (LBNL)
Cross-section Measurements using Mono-energetic Neutron Beams at LBNL
- 18:29 Rod Clark (LBNL)
Cross-section Determinations via the Surrogate Reaction Method
- 18:43 Discussion
- 19:00 Adjourn Session