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**PLENARY TALKS**

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— **MONDAY**

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09:00–10:00

**PT-1 – An Overview of Relativistic Heavy Ion Measurements Over a Large Region of Phase Space**

Hagel, K.<sup>1</sup>

<sup>1</sup>*BRAHMS Collaboration*

10.00–10.30 **COFFEE BREAK** \_\_\_\_\_

10.30–11.30

**PT-2 – Fusion and breakup of weakly bound nuclei**

Gomes, P.R.S.<sup>1</sup>

<sup>1</sup>*Instituto de Física, Universidade Federal Fluminense, Niterói, Rio de Janeiro, Brazil,  
cep 24210-340*

11:30–12:30

**PT-3 – Present Status of Hadrontherapy**

Mazal, D. A. et al.<sup>1</sup>

<sup>1</sup>*Institut Curie Paris and Centre de Protontherapie d'Orsay, France, Massachusetts  
General Hospital, NPTC and Harvard Medical School, USA Tandar, CNEA, and Univ.  
de San Martin, Argentina*

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— **TUESDAY**

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09:00–10:00

**PT-4 – Nucleosynthesis at the extremes of temperature and density from thermonuclear to pycnonuclear reactions**

Wiescher, M.<sup>1</sup>

<sup>1</sup>*University of Notre Dame Department of Physics 225 Nieuwland Science Hall Notre  
Dame, IN 46556, USA*

10.00–10.30 **COFFEE BREAK** \_\_\_\_\_

10.30–11.30

**PT-5 – Progress on the accelerator based SPES-BNCT project at INFN Legnaro**

Esposito, J. et al<sup>1</sup>

<sup>1</sup>*INFN-LNL, Legnaro (Padova), Italy*

11:30–12:30

**PT-6 – Characterization of Phase Transitions in Small Systems**

Moretto, L. G.<sup>1</sup>

<sup>1</sup>*Lawrence Berkeley National Laboratory / University of California - Berkeley*

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WEDNESDAY

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09:00–10:00

**PT-7 – Baryon properties in a chiral quark model**

Gutsche, T.<sup>1</sup>

<sup>1</sup>*Institut of Theoretical Physics, University of Tuebingen, Auf der Morgenstelle 14,  
D-72076 Tuebingen, Germany*

10.00–10.30 COFFEE BREAK

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10.30–11.30

**PT-8 – Charged particles as a probe to understand the behaviour of a dosimeter: Studies of LiF:Ti,Mg irradiated with intermediate-energy ions**

Brandan, M.E.,<sup>1</sup> Massillon J-L, G.,<sup>1</sup> and Gamboa-deBuen, I.<sup>2</sup>

<sup>1</sup>*Instituto de Física, UNAM, Mexico*

<sup>2</sup>*Instituto de Ciencias Nucleares, UNAM, Mexico*

11:30–12:30

**PT-9 – GRETINA**

Macchiavelli, A.O.<sup>1</sup>

<sup>1</sup>*Nuclear Science Division, Lawrence Berkeley National Laboratory*

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THURSDAY

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09:00–10:00

**PT-10 – Chiral Nuclear Effective Field Theory**

van Kolck, U.<sup>1</sup>

<sup>1</sup>*Department of Physics, University of Arizona, Tucson, AZ 85721*

10.00–10.30 COFFEE BREAK

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10.30–11.30

**PT-11 – Experiments in Nuclear Astrophysics**

Rehm,K.E.<sup>1</sup>

<sup>1</sup>*Physics Division Argonne National Laboratory Argonne, IL USA*

11:30–12:30

**PT-12 – On the Role of the g9/2 intruder level for the upper fp-shell nuclei Ni, Cu, Zn, Ge, Se**

Draayer, J. P.<sup>1</sup> and Drumev, K. P.<sup>1</sup>

<sup>1</sup>*Department of Physics and Astronomy Louisiana State University Baton Rouge,  
Louisiana 70803-4001 USA*

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**FRIDAY**

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09:00–10:00

**PT-13 – Microcanonical Thermodynamics is the statistical fundament of Thermodynamics, heat can flow from cold to hot, and nuclear multifragmentation.**

Gross, D.H.E.<sup>1</sup>

*<sup>1</sup>Hahn-Meitner Institut, 14109 Berlin, Germany*

10.00–10.30 **COFFEE BREAK**

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10.30–11.30

**PT-14 – First Data from the Pierre Auger Project**

Etchegoyen, A. for the Pierre Auger Collaboration<sup>1</sup>

*<sup>1</sup>Tandar-CNEA and CONICET*

11:30–12:30

**PT-15 – Superheavy Elements: a Phantastic Story**

Greiner, Walter<sup>1</sup>

*<sup>1</sup>Frankfurt Institute for Advanced Studies Johann Wolfgang Goethe-Universität  
Max-von-Laue-Strasse 1 Frankfurt am Main, Germany*

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# Parallel Sessions:Nuclear Structure

— MONDAY

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16:00–16:20

## NS-1 – AGATA an HPGe segmented tracking array

Camera, F.<sup>1</sup>

<sup>1</sup>*University of Milano and INFN sez. Milano, Italia  
On behalf of the AGATA collaboration*

16.20–16.40

## NS-2 – Advanced Time Delayed $\beta\gamma\gamma(t)$ measurements in the N~20 island of inversion

Fraile, L.M. for the IS414 Collaboration<sup>1,2</sup>

<sup>1</sup>*PH Department, CERN CH-1211 Geneva 23, Switzerland*

<sup>2</sup>*Universidad Complutense, E-28040, Madrid, Spain*

16:40–17:00

## NS-3 – The ALTO project at IPN Orsay

Ibrahim, F.<sup>1</sup>

<sup>1</sup>*IPN Orsay, CNRS France*

17.00–17.30 COFFEE BREAK

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17.30–17.50

## NS-4 – Nuclear structure studies on moderately neutron-rich nuclei with PRISMA-CLARA

Napoli, D.R.<sup>1</sup>

<sup>1</sup>*INFN, Laboratori Nazionali di Legnaro Viale dell'Università 2 35020 Legnaro (PD) Italia*

17.50–18.10

## NS-5 – Resonant states in light nuclei revisited in full kinematic studies

Borge, M.J.G.,<sup>1</sup> Prezado, Y.,<sup>1</sup> Tengblad, O.,<sup>1</sup> Diget, C. Aa.,<sup>2</sup> Fynbo, H.O.U.,<sup>2</sup> and Riisager, K.<sup>2</sup>

<sup>1</sup>*Inst. Estructura de la materia CSIC Serrano 113bis, E28002-Madrid*

<sup>2</sup>*Department of Physics and Astronomy University of Aarhus DK-8000 Aarhus, Denmark*

18.10–18.30

## NS-6 – Laser spectroscopy: a powerful tool for the determination of the global properties of the ground and isomeric states

Roussi  re, B.<sup>1</sup>

<sup>1</sup>*Institut de Physique Nucl  aire, F-91406 Orsay Cedex, France*

18.30–18.50

## NS-7 – Spectroscopy of primary gamma radiation in heavy-ion fusion-evaporation reactions

Cristancho, F.<sup>1</sup> and Merch  n, E.<sup>1</sup>

<sup>1</sup>*Departamento de F  sica, Universidad Nacional de Colombia, Bogot  , Colombia*

— TUESDAY

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16:00–16:20

**NS-8 – Isovector and Isoscalar pairing multiplets in the vicinity of the A=56 nuclei.**

Bes, D. R.<sup>1</sup> and Civitarese, O.<sup>2</sup>

<sup>1</sup>*Lab. Tandar, Unidad Fisica. CAC, CNEA*

<sup>2</sup>*Dep. de Fisica. Univ. Nacional de La Plata.*

16.20–16.40

**NS-9 – Ground-state properties of several spherical and deformed isotopic chains in the Dirac-Hartree-Bogoliubov approximation**

Carlson, B.V. et al.<sup>1</sup>

<sup>1</sup>*Departamento de Física Instituto Tecnológico de Aeronáutica 12228-900 São José dos Campos, São Paulo, Brazil*

16.40–17.00

**NS-10 – Structure investigation of light proton-rich nuclei on the drip-line.**

Guimaraes, V. et al.<sup>1</sup>

<sup>1</sup>*Physics Institute - University of São Paulo - Brazil*

17.00–17.30 COFFEE BREAK

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17:30–17:50

**NS-11 – Paring Induced Interaction in Finite Nuclei and in Neutron Stars**

Vigezzi, E.<sup>1</sup>

<sup>1</sup>*Istituto Nazionale di Fisica Nucleare Sezione di Milano via Celoria 16 20133 Milano Italy*

17.50–18.10

**NS-12 – Cranking in Iso Space: a Probe to Neutron Proton Pairing and the Nuclear Symmetry Energy**

Wyss, R.<sup>1</sup>

<sup>1</sup>*KTH (Royal Institute of Technology) AlbaNova University Centre 106 91 Stockholm*

18.10–18.30

**NS-13 – Spatial characteristics of borromean, tango, samba and all-bound halo nuclei**

Yamashita, M.T. et al.<sup>1</sup>

<sup>1</sup>*Unidade Diferenciada de Itapeva, Universidade Estadual Paulista*

18.30–18.50

**NS-14 – Coulomb Energy Differences in Isobaric Multiplets**

Lenzi, S.M.<sup>1</sup>

<sup>1</sup>*Dipartimento di Fisica Università di Padova and INFN, Padova Italy*

18.50–19.10

**NS-15 – Recent achievements in the nuclear pairing problem**

Lombardo, U.<sup>1</sup>

<sup>1</sup>*Dipartimento di Fisica dell'Università di Catania and INFN, I.N.S. Catania (Italy)*

— THURSDAY

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16:00–16:20

**NS-16 – What is the Nature of the first excited K=0+ in Deformed Nuclei?**

Aprahamian, A.<sup>1</sup>

<sup>1</sup>*Institute for Structure & Nuclear Astrophysics (ISNAP) University of Notre Dame*

16.20–16.40

**NS-17 – New clues for the B(E2:  $0_1^+ \rightarrow 2_1^+$ ) behavior around  $^{68}\text{Ni}$  : seniority and p-n interaction**

Deloncle, I. et al.<sup>1</sup>

<sup>1</sup>*CSNSM CNRS/IN2P3 Université Paris-Sud XI Bât. 104 91405 Orsay Campus*

16.40–17.00

**NS-18 – The Importance of Triaxial Shapes in Odd and Even Z Nuclei from Y to Rh**

Hamilton, J.H. et al.<sup>1</sup>

<sup>1</sup>*Physics Department, Vanderbilt University, Nashville, TN 37235*

17.00–17.30 COFFEE BREAK

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17:30–17:50

**NS-19 – Spectroscopic Factors within an Algebraic Model**

Hess, P.O.<sup>1</sup>

<sup>1</sup>*Instituto de Ciencias Nucleares, UNAM, C.U., Circuito Exterior S/N, A.P. 70-543, 04510 Mexico D.F., Mexico*

17.50–18.10

**NS-20 – Nuclear Forecasting as Pattern Recognition: Can we predict Nuclear Masses?**

Frank, A. et al.<sup>1</sup>

<sup>1</sup>*Instituto de Ciencias Nucleares, UNAM*

18.10–18.30

**NS-21 – Ground state energy fluctuations and chaos in nuclear masses**

Hirsch, J.G. et al.<sup>1</sup>

<sup>1</sup>*Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México, AP 70-543, 04510 México DF, Mexico*

— THURSDAY

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18.30–18.50

**NS-22 – The gamma decay of the GDR at finite temperature**

Million, B.<sup>1</sup>

<sup>1</sup>*INFN sez. Milano and Dipartimento di Fisica, università di Milano*

18.50–19.10

**NS-23 – The Mutability of Nuclear Shells**

Tabor, S. L.<sup>1</sup>

<sup>1</sup>*Physics Department, Florida State University, Tallahassee, Florida, 32306 U.S.A.*

19.10–19.30

**NS-24 – Theory of decay out of superdeformed bands**

Hussein, M.S. et al.<sup>1</sup>

<sup>1</sup>*Instituto de Física, Universidade de São Paulo, Caixa Postal 66318, 05315-970 São Paulo, SP, Brazil*

# Nuclear Reactions

## MONDAY

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16:00–16:20

### **NR-1 – Higher order effects in the $^{16}\text{O}(\text{d},\text{p})^{17}\text{O}$ and $^{16}\text{O}(\text{d},\text{n})^{17}\text{F}$ transfer reactions.**

Assuncao, M.,<sup>1</sup> Lichtenthäler, R.,<sup>1</sup> Guimarães, V.,<sup>1</sup> Lépine-Szily, A.,<sup>1</sup> Lima, G. F.,<sup>1</sup> and Moro, A.M.<sup>2</sup>

<sup>1</sup>*Instituto de Física, Universidade de São Paulo, Brasil*

<sup>2</sup>*Instituto Superior Técnico, Porto Salvo, Portugal*

16.20–16.40

### **NR-2 – Comparison between pre-equilibrium reactions models**

Soares Pompeia, C. A<sup>1</sup> and Carlson, B. V.<sup>1</sup>

<sup>1</sup>*Instituto Tecnológico de Aeronáutica São José dos Campos-SP Brazil*

16:40–17:00

### **NR-3 – Fragmentation measurements with Ca and Ni isotopes**

Mocko, M. et al.<sup>1</sup>

<sup>1</sup>*National Superconducting Cyclotron Laboratory, South Shaw Lane, East Lansing MI 48824, USA*

17.00–17.30 COFFEE BREAK

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17.30–18.00

### **NR-4 – Isomer and Ground State Partial Cross Sections in $^{90}\text{Zr}(\gamma, n)^{89}\text{Zr}$ Reactions from Threshold to 22 MeV**

Hunt, A. W., et al<sup>1</sup>

<sup>1</sup>*Idaho Accelerator Center, Idaho State University, Pocatello, ID, 83209-8263, USA Department of Physics, Idaho State University, Pocatello, ID, 83209-8160*

18.00–18.30

### **NR-5 – Gamma Rays Produced by Muon Capture on Al, Si, Ca, I, Au, and Bi.**

Measday, D.F.<sup>1</sup> and Stocki, T.J.<sup>1</sup>

<sup>1</sup>*Department of Physics and Astronomy University of British Columbia Vancouver, B.c. Canada V6T 1Z1*

18.30–19.00

### **NR-6 – Two-particle interferometry to study emission time sequence and isospin dependence in excited nuclear matter**

Colonna, N.<sup>1</sup>

<sup>1</sup>*Istituto Nazionale Fisica Nucleare, Sezione di Bari*

19:00–19:20

### **NR-7 – Incoherent $\pi^0$ photoproduction at intermediate and high energies ( $\sim 6$ GeV)**

Rodrigues, T. E.<sup>1</sup>

<sup>1</sup>*Instituto de Física da Universidade de São Paulo, P.O. Box 66318, CEP 05315-970, São Paulo, Brazil*

— TUESDAY

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16.00–16.40

**NR-8 – Fusion and breakup reactions with weakly bound nuclei**

Canto, L.F.,<sup>1</sup> Donangelo, R.,<sup>1</sup> and Marta, H.D.<sup>2</sup>

<sup>1</sup>*Instituto de Física, Universidade Federal do Rio de Janeiro, C.P. 68528, 21941-972, Rio de Janeiro, RJ, Brazil*

<sup>2</sup>*Instituto de Física, Facultad de Ingeniería, C.C. 30, C.P. 11000 Montevideo, Uruguay*

16:40–17:00

**NR-9 – Elastic scattering with weakly bound projectile: the  ${}^7\text{Li} + {}^{27}\text{Al}$  system**

Figueira, J.M.<sup>1</sup>

<sup>1</sup>*Departamento de Física, Comisión Nacional de Energía Atómica, Av. Gral. Paz 1499, 1650 San Martín, Provincia de Buenos Aires, Argentina.*

17.00–17.30 COFFEE BREAK

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17:30–17:50

**NR-10 – Fusion, reaction, and break-up cross sections for the systems  ${}^9\text{Be} + {}^{27}\text{Al}$ ,  ${}^{6,7}\text{Li} + {}^{27}\text{Al}$**

De Barbará, E.<sup>1</sup>

<sup>1</sup>*Laboratorio TANDAR, Departamento de Física, Comisión Nacional de Energía Atómica, Av. del Libertador 8250, 1429 Buenos Aires, Argentina*

17.50–18.20

**NR-11 – Fusion hindrance and quasi-fission in heavy-ion induced reactions: disentangling the effect of different parameters**

Trotta, M. et al.<sup>1</sup>

<sup>1</sup>*INFN-Sezione di Napoli, I-80126 Napoli, Italy*

18.20–18.50

**NR-12 – Prompt dipole  $\gamma$ -ray emission: a new cooling mechanism in fusion heavy-ion reactions**

Pierroutsakou, D. on behalf of the EXOTIC and MEDEA collaborations<sup>1</sup>

<sup>1</sup>*INFN, Sezione di Napoli, I-80126, Napoli, Italy*

18.50–19.20

**NR-13 – The interaction of  ${}^{12}\text{C}$  and  ${}^{16}\text{O}$  with medium-heavy nuclei**

Cerutti, F.,<sup>1</sup> Gadioli, E.,<sup>1</sup> Mairani, A.,<sup>2</sup> and Pepe, A.<sup>1</sup>

<sup>1</sup>*Dipartimento di Fisica, Università di Milano and INFN, Sezione di Milano, Italia*

<sup>2</sup>*Dipartimento di Fisica Nucleare e Teorica, Università di Pavia and INFN, Sezione di Pavia, Italia*

19.20–19.50

**NR-14 – Quasi-elastic barrier distribution in light systems.**

Crema, E.<sup>1</sup>

<sup>1</sup>*Departamento de Física Nuclear, Universidade de São Paulo, Caixa Postal 66318, 05315-970, São Paulo, Brazil.*

— THURSDAY

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16:00–16:20

**NR-15 – Production Rates of Neutron-Rich Nuclei Near the Fluorine Drip-line**

Kwan, E.,<sup>1</sup> Morrissey, D. J.,<sup>1</sup> Davies, D. A.,<sup>1</sup> Steiner, M.,<sup>1</sup> Sumithrarachchi, C. S.,<sup>1</sup> and Weissman, L.<sup>1</sup>

<sup>1</sup>*National Superconducting Cyclotron Laboratory, Michigan State University, East Lansing, MI 48824, USA*

16.20–17.00

**NR-16 – Recent results obtained with the RIBRAS - Radioactive Ion Beam facility.**

Lépine-Szily, A.,<sup>1</sup> Lichtenthäler, R.,<sup>1</sup> Guimarães, V.,<sup>1</sup> Benjamim, E. A.,<sup>1</sup> Faria, P.N. de,<sup>1</sup> Gomes, P.R.S.,<sup>2</sup> Arazi, A.,<sup>3</sup> Padron, I.,<sup>4</sup> Denke, R.Z.,<sup>1</sup> Pires, K.C.C.,<sup>1</sup> Mendes, D.R.,<sup>1</sup> Camargo Jr., O.,<sup>1</sup> Alcantara Nuñez, J.A.,<sup>1</sup> Meira, M. P.,<sup>1</sup> and Barioni, A.<sup>1</sup>

<sup>1</sup>*Instituto de Física, Universidade de São Paulo, Brasil*

<sup>2</sup>*Instituto de Física, Universidade Federal Fluminense, Brasil*

<sup>3</sup>*Tandar, CNEA, Argentina*

<sup>4</sup>*Cuba*

17.00–17.30 COFFEE BREAK

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17:30–18:00

**NR-17 – Nuclei in Cosmic Rays - Results from AMS01 and Potential of AMS02**

Steuer, M.<sup>1, 2, 3</sup>

<sup>1</sup>*Laboratory of Nuclear Science, MIT, Cambridge, USA*

<sup>2</sup>*CERN-PH, Geneva, Switzerland*

<sup>3</sup>*The AMS Collaboration*

18.00–18.30

**NR-18 – Measurements of stellar nuclear-reaction rates by means of Accelerator Mass Spectrometry**

Arazi, A.,<sup>1</sup> Faestermann, T.,<sup>2</sup> Fernández Niello, J.O.,<sup>2</sup> Knie, K.,<sup>2</sup> Korschinek, G.,<sup>2</sup> Richter, E.,<sup>3</sup> Rugel, G.,<sup>2</sup> and Wallner, A.<sup>4</sup>

<sup>1</sup>*Laboratorio TANDAR, Comisión Nacional de Energía Atómica, Argentina*

<sup>2</sup>*Technische Universität München, Germany*

<sup>3</sup>*Forschungszentrum Rossendorf, Germany*

<sup>4</sup>*Universität Wien, Austria*

# Nuclear Physics Applications

## MONDAY

16:00–16:30

### NPA-1 – Light ion interactions of concern for hadrontherapy

Cerutti, F.,<sup>1,2</sup> Ballarini, F.,<sup>3</sup> Battistoni, G.,<sup>2</sup> Colleoni, P.,<sup>1,2</sup> Ferrari, A.,<sup>4</sup> Förtzsch, S.V.,<sup>5</sup> Gadioli, E.,<sup>1,2</sup> Garzelli, M.V.,<sup>1</sup> Mairani, A.,<sup>3</sup> Ottolenghi, A.,<sup>3</sup> Pinsky, L.S.,<sup>6</sup> and Sala, P.R.<sup>2</sup>

<sup>1</sup>Dipartimento di Fisica, Università di Milano, Italy

<sup>2</sup>INFN, Sezione di Milano, Italy

<sup>3</sup>Dipartimento di Fisica Nucleare e Teorica, Università di Pavia and INFN, Sezione di Pavia, Italy

<sup>4</sup>CERN, Switzerland (on leave from INFN, Sezione di Milano, Italy)

<sup>5</sup>iThemba Laboratory for Accelerator Based Sciences, Somerset West, South Africa

<sup>6</sup>Houston University, Texas, USA

16.30–17.00

### NPA-2 – A Tandem-ESQ for Accelerator-Based Boron Neutron Capture Therapy.

Kreiner, A.J.,<sup>1,2</sup> Kwan, J.W.,<sup>3</sup> Burlon, A.A.,<sup>2,1</sup> Henestroza, E.,<sup>3</sup> Minsky, D.M.,<sup>1,2</sup> Valda, A.A.,<sup>1,2</sup> Debray, M.E.,<sup>1,2</sup> and Somacal, H.<sup>1,2</sup>

<sup>1</sup>Departamento de Física, CNEA, Av. Gral. Paz 1499, CP 1650, Villa Martelli, Argentina.

<sup>2</sup>Escuela de Ciencia y Tecnología. Universidad de San Martín, Argentina.

<sup>3</sup>Ernest Orlando Lawrence Berkeley National Laboratory, University of California, Berkeley, USA.

17.00–17.30 COFFEE BREAK

17:30–18:00

### NPA-3 – Nuclear Physics Issues in Space Radiation Risk Assessment - The FLUKA Monte Carlo Transport Code Used for Space Radiation Measurement and Protection

Andersen, V. et al.<sup>1</sup>

<sup>1</sup>University of Houston 4800 Calhoun Rd. Houston, TX77204

18.00–18.20

### NPA-4 – Development of a tomographic system for online dose measurements in BNCT (Boron Neutron Capture Therapy)

Minsky, D.M.,<sup>1,2</sup> Valda, A.A.,<sup>1,2</sup> Burlon, A.A.,<sup>1,2,3</sup> Kreiner, A.J.,<sup>1,2,4</sup> and Somacal, H.<sup>1,2</sup>

<sup>1</sup>Escuela de Ciencia y Tecnología (UNSAM), San Martín, Buenos Aires, Argentina

<sup>2</sup>Dpto. de Física, Centro Atómico Constituyentes, Comisión Nacional de Energía Atómica, Buenos Aires, Argentina

<sup>3</sup>Fundación J.B. Sauberan, Argentina

<sup>4</sup>CONICET, Argentina

18.20–18.40

### NPA-5 – Geant4 Simulation of a Fiber Based Scintillating Detector for Brachytherapy Treatment (GESIB)

Onumah, N.; Gueye P.<sup>1</sup>

<sup>1</sup>Hampton University

18.40–19.00

### NPA-6 – Space Applications of the FLUKA Monte-Carlo Code: Lunar and Planetary Exploration

Wilson, T.L. et al.<sup>1</sup>

<sup>1</sup>NASA-JSC, Houston, Texas 77058 USA

— TUESDAY

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16:00–16:30

**NPA-7 – Direct contributions of nuclear science to society: an experience in Latin America**

Sajo-Bohus, L.,<sup>1</sup> Greaves, E. D.,<sup>1</sup> and Colmenero, L.<sup>2</sup>

<sup>1</sup>Universidad Simón Bolívar, Sección de Física Nuclear, Caracas, Venezuela

<sup>2</sup>Centro Diagnóstico Docente, Las Mercedes, Caracas Venezuela

16.30–16.50

**NPA-8 – A novel technique to estimate the track dimensions induced by heavy ions on UHMWPE.**

Del Grosso, M. F.,<sup>1,2</sup> Chappa, V. C.,<sup>2</sup> García Bermúdez, G.,<sup>1,3,4</sup> and Mazzei, R.<sup>5</sup>

<sup>1</sup>U.A. de Física. CNEA

<sup>2</sup>U. A. Materiales. CNEA

<sup>3</sup>Escuela de Ciencia y Tecnología, Universidad Nacional de General San Martín

<sup>4</sup>Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina

<sup>5</sup>U. A. Tecnológicas y Agropecuarias, CNEA

16.50–17.30 COFFEE BREAK

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17:30–18:00

**NPA-9 – Multielemental Composition Determination of Human Amniotic Fluid**

Liendo, J.A.,<sup>1,2,3</sup> González, A.C.,<sup>2</sup> Rojas, A.,<sup>1</sup> Fletcher, N.,<sup>3</sup> Caussyn, D. D.,<sup>3</sup>

Wiedenhöver, I.,<sup>3</sup> Barber, P.,<sup>3</sup> Sajo-Bohus, L.,<sup>1</sup> and Simosa, V.<sup>4</sup>

<sup>1</sup>Departamento de Física, Universidad Simón Bolívar, Caracas, Venezuela

<sup>2</sup>Centro de Física, Instituto Venezolano de Investigaciones Científicas, Caracas, Venezuela

<sup>3</sup>Physics Department, The Florida State University, Tallahassee, USA

<sup>4</sup>Centro Nacional de Genética Humana y Experimental, Universidad Central de Venezuela, Caracas, Venezuela

18.00–18.30

**NPA-10 – Activities on bio-medical research by nuclear microscopy at iThemba LABS, Cape Town, South Africa**

Pineda-Vargas, C.A.<sup>1</sup>

<sup>1</sup>iThemba LABS P.O. Box 722 Somerset West 7129

18.30–19.00

**NPA-11 – Use of neutrons for the detection of explosives in Civil Security applications**

Viesti, G.<sup>1</sup>

<sup>1</sup>Dipartimento di Fisica Università di Padova and INFN Sezione di Padova, Padova (Italy)

19.00–19.20

**NPA-12 – Radiometric analysis of Quaternary coastal deposits of the Brazilian Southeast**

Anjos, R.M.,<sup>1</sup> Macario, K.,<sup>1</sup> Veiga, R.,<sup>1</sup> Sanches, N.,<sup>1</sup> Bastos, J.,<sup>1</sup> and Mosquera, B.<sup>1</sup>

<sup>1</sup>Instituto de Física da Universidade Federal Fluminense Av. Gal. Milton Tavares de Souza, s/n , Gragoatá, 24210-340, Niterói, RJ, Brazil

— THURSDAY

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16:00–16:30

**NPA-13 – Searching the Pyramid of the Sun in Teotihuacan, Using Muon Absorption**

Alfaro, R.,<sup>1</sup> Belmont-Moreno, E.,<sup>1</sup> Cervantes, A.,<sup>1</sup> Grabski, V.,<sup>1</sup> Lopez-Robles, J.M.,<sup>1</sup> Manzanilla, L.,<sup>1</sup> Martinez-Davalos, A.,<sup>1</sup> Moreno, M.,<sup>1</sup> and Menchaca-Rocha, A.<sup>1</sup>

<sup>1</sup>*Instituto de Física, Universidad Nacional Autónoma de México*

16.30–17.00

**NPA-14 – Recent studies of GFAA (Group for Applied Physics with Accelerators)**

Added, N.;<sup>1</sup> Rizzutto, M.A.,<sup>1</sup> Tabacniks, M.H.,<sup>2</sup> Curado, J.F.,<sup>1</sup> and Barbosa, M.D.L.<sup>2</sup>

<sup>1</sup>*DFN - Ifusp - Brasil*

<sup>2</sup>*FAP - Ifusp - Brasil*

17.00–17.30 COFFEE BREAK

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17:30–18:00

**NPA-15 – Design, Modeling and Simulations in the RACE Project: First study for the development of a transport line.**

Maidana, C. O.,<sup>1</sup> Hunt, A. W.,<sup>1</sup> Beller, D.,<sup>2</sup> and Folkman, K.<sup>2</sup>

<sup>1</sup>*Idaho Accelerator Center & Idaho State University, Department of Physics, PO Box 8106, Pocatello, ID 83209 - USA*

<sup>2</sup>*Idaho Accelerator Center, Idaho State University, 1500 Alvin Ricken Drive, Pocatello, ID 83201 - USA*

18.00–18.20

**NPA-16 – Measurement of neutron capture cross-sections at n\_TOF (CERN), and their implications to Astrophysics and ADS**

Tagliente, G. and the n\_TOF Collaboration<sup>1</sup>

<sup>1</sup>*Istituto Nazionale Fisica Nucleare, Sezione di Bari*

18.20–18.40

**NPA-17 – Charge-state distribution and spurious ionic charge states in a tandem accelerator**

Negri, A.E.,<sup>1</sup> Arazi, A.,<sup>1</sup> Capurro, O.A.,<sup>1</sup> De Barbera, E.,<sup>1</sup> Fernández Niello, J.O.,<sup>1</sup> Figueiras, J.M.,<sup>1</sup> Martí, G.V.,<sup>1</sup> Pacheco, A.J.,<sup>1</sup> and Testoni, J.E.<sup>1</sup>

<sup>1</sup>*Departamento de Física, Comisión Nacional de Energía Atómica, Buenos Aires, Argentina*

18.40–19.00

**NPA-18 – On Line Release Simulator of Radioactive Beams produced by ISOL**

Turrión, M.,<sup>1</sup> Tengblad, O.,<sup>1</sup> Fraile, L.M.,<sup>2</sup> and García Borge, M.J.<sup>1</sup>

<sup>1</sup>*Instituto de Estructura de la Materia, CSIC Serrano 113bis, E-24006 Madrid (Spain)*

<sup>2</sup>*ISOLDE-CERN, Geneva, Switzerland*

# Subnuclear Physics

## MONDAY

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16:00–16:30

### SP-1 – Recent advances in Chiral Perturbation Theory

Goity, J.L.<sup>1,2</sup>

<sup>1</sup>*Department of Physics, Hampton University, Hampton, VA 23668, USA.*

<sup>2</sup>*Thomas Jefferson National Accelerator Facility, Newport News, VA 23606, USA.*

16.30–17.00

### SP-2 – Nuclear Structure aspects of neutrinoless double beta decay

Civitarese, O.<sup>1</sup>

<sup>1</sup>*Dep. of Physics. University of La Plata*

17.00–17.30 COFFEE BREAK

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17:30–18:00

### SP-3 – The structure of the nucleon

Bijker, R.<sup>1</sup>

<sup>1</sup>*ICN-UNAM, AP 70-543, 04510 México DF, México*

18.00–18.30

### SP-4 – Two flavor color superconductivity under compact stars conditions

Gomez Dumm, D.,<sup>1</sup> Grunfeld, A. G.,<sup>2</sup> and Scoccola, N. N.<sup>2</sup>

<sup>1</sup>*Dpto. de Fisica, UNLP, Argentina*

<sup>2</sup>*Dpto. de Fisica, TANDAR, CNEA, Argentina*

18.30–19.00

### SP-5 – Extracting the Hadron Spectrum of QCD Using a Space-Time Lattice

Basak, S.,<sup>1</sup> Edwards, R.,<sup>2</sup> Fleming, G.T.,<sup>3</sup> Heller, U.M.,<sup>4</sup> Lichtl, A.,<sup>5</sup> Morningstar, C.,<sup>5</sup> Richards, D.,<sup>2</sup> Sato, I.,<sup>1</sup> and Wallace, S.<sup>1</sup>

<sup>1</sup>*Department of Physics, University of Maryland, College Park, MD 20742, USA*

<sup>2</sup>*Thomas Jefferson National Accelerator Facility, Newport News, VA 23606, USA*

<sup>3</sup>*Sloane Physics Laboratory, Yale University, New Haven, CT 06520, USA*

<sup>4</sup>*American Physical Society, Ridge, NY 11961-9000, USA*

<sup>5</sup>*Department of Physics, Carnegie Mellon University, Pittsburgh, PA 15213, USA*

— TUESDAY

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16:00–16:30

**SP-6 – QCD running coupling with diquarks**

Frederico, T.,<sup>1</sup> Marinho, J.A.O.,<sup>1</sup> and Gambin, E.<sup>1</sup>

<sup>1</sup>*Departamento de Fisica, Instituto Tecnologico de Aeronautica, Centro Tecnico Aeroespacial, 12.228-900 Sao Jose dos Campos, SP, Brasil*

16.30–17.00

**SP-7 – Effective interactions from q-deformed quark fields**

Timoteo, V. S.<sup>1</sup> and Lima, C. L.<sup>2</sup>

<sup>1</sup>*CESET / UNICAMP*

<sup>2</sup>*IF / USP*

17.00–17.30 **COFFEE BREAK**

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17:30–18:00

**SP-8 – The ALICE Silicon Pixel Detector**

Moretto, S.,<sup>1</sup> Antinori, F.,<sup>1</sup> Dima, R.,<sup>1</sup> Fabris, D.,<sup>1</sup> Lunardon, M.,<sup>1</sup> Pepato, A.,<sup>1</sup> Scarlassara, F.,<sup>1</sup> Segato, G.,<sup>1</sup> Turrisi, R.,<sup>1</sup> Viesti, G.,<sup>1</sup> Bruno, G.E.,<sup>2</sup> Caselle, M.,<sup>2</sup> Dalessandro, A.,<sup>2</sup> Elia, D.,<sup>2</sup> Fini, R.A.,<sup>2</sup> Ghidini, B.,<sup>2</sup> Lenti, V.,<sup>2</sup> Manzari, V.,<sup>2</sup> Navach, F.,<sup>2</sup> Santoro, R.,<sup>2</sup> Cinausero, M.,<sup>3</sup> Fioretto, E.,<sup>3</sup> Prete, G.,<sup>3</sup> Vannucci, L.,<sup>3</sup> and Anelli, G.<sup>4</sup>

<sup>1</sup>*Dipartimento di Fisica dell’Università and INFN, Padova, Italy*

<sup>2</sup>*Dipartimento di Fisica dell’Università and INFN, Bari, Italy*

<sup>3</sup>*Laboratori Nazionali INFN di Legnaro, Legnaro, Italy*

<sup>4</sup>*CERN, CH-1211 Geneva 23, Switzerland*

18.00–18.30

**SP-9 – Recent Results From the PHOBOS Experiment at RHIC**

Garcia, Edmundo<sup>1</sup>

<sup>1</sup>*University of Illinois at Chicago*

18.30–19.00

**SP-10 – Strangeness Production At the Relativistic Heavy Ion Collider**

Munhoz, M. G.<sup>1</sup>

<sup>1</sup>*Universidade de São Paulo*

19.00–19.30

**SP-11 – Recent results from RHIC**

Hallman, T.<sup>1</sup>

<sup>1</sup>*BNL , USA*

— THURSDAY

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16:00–16:30

**SP-12 – Primary Cosmic Rays Composition: Simulations and Detector Design**

Supanitsky, A. D.,<sup>1</sup> Etchegoyen, A.,<sup>2</sup> and Medina-Tanco, G.<sup>3</sup>

<sup>1</sup>*Laboratorio Tandar, Comisión Nacional de Energía Atómica, Av. Del Libertador 8250, (1429) Buenos Aires, Argentina*

<sup>2</sup>*Laboratorio Tandar, Comisión Nacional de Energía Atómica and CONICET, Av. Del Libertador 8250, (1429) Buenos Aires, Argentina*

<sup>3</sup>*Instituto Astronomico e Geofísico, Univ. de São Paulo, Rua do Matao 1226, 05508-900, São Paulo, SP, Brasil*

16.30–17.00

**SP-13 – Fluorescence Detector Upgrade for the Auger Southern Observatory**

Melo, D.G.,<sup>1</sup> Micheletti, M.I.,<sup>1</sup> Tamashiro, A.A.,<sup>2</sup> Etchegoyen, A.,<sup>1</sup> and Rovero, A.C.<sup>2</sup>

<sup>1</sup>*Lab. Tandar/CNEA - CONICET. Av. Gral. Paz 1499, San Martín, Prov. Bs. As., Argentina.*

<sup>2</sup>*IAFE - CONICET, Ciudad Universitaria, Ciudad de Buenos Aires, Argentina.*

17.00–17.30 **COFFEE BREAK**

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17:30–18:10

**SP-14 – The Physics with Linearly-Polarized Photon in Hall B of Jefferson Lab**

Cole, P.L. (for the CLAS Collaboration)<sup>1</sup>

<sup>1</sup>*Department of Physics Idaho State University Pocatello, Idaho 83201 USA*

18.10–18.50

**SP-15 – Search for Modification of Vector Meson Properties in Nuclei**

Djalali,C.<sup>1</sup>

<sup>1</sup>*University of South Carolina, USA*

18.50–19.10

**SP-16 – Spin Duality on the Neutron ( ${}^3\text{He}$ )**

Solvignon, P. H.<sup>1</sup>

<sup>1</sup>*Temple University*

19.10–19.30

**SP-17 – The G0 Experiment : Parity Violation in e-N Scattering**

Bailey, S. L.<sup>1</sup>

<sup>1</sup>*The College of William and Mary*

19.30–19.50

**SP-18 – Hypernuclear physics with FINUDA at the DAΦNE facility.**

Grion, N.<sup>1</sup>

<sup>1</sup>*Istituto Nazionale di Fisica Nucleare, INFN-Trieste.*

# Nuclear Thermodynamics and Dynamics

## TUESDAY

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16:00–16:30

### NTD-1 – Isospin Transport at Fermi Energy

Baran, V.,<sup>1</sup> Colonna, M.,<sup>1</sup> Di Toro, M.,<sup>1</sup> Zielińska-Pfabé, M.,<sup>2</sup> and Wolter, H.H.<sup>3</sup>

<sup>1</sup>*Laboratori Nazionali del Sud, Catania, Italy*

<sup>2</sup>*Smith College, Northampton, Ma, USA*

<sup>3</sup>*Sektion Physik, University of Munich, Germany*

16.30–17.00

### NTD-2 – Reaction Geometry from Low-Velocity Correlations

Danielewicz, P.<sup>1</sup>

<sup>1</sup>*National Superconducting Cyclotron Laboratory, Michigan State University*

17.00–17.30 COFFEE BREAK

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17:30–18:00

### NTD-3 – Multifragmentation studied with antisymmetrized molecular dynamics

Ono, A.<sup>1</sup>

<sup>1</sup>*Department of Physics, Tohoku University, Sendai 980-8578, Japan*

18.00–18.30

### NTD-4 – A classical mechanics study of isoscaling

López, J.A.,<sup>1</sup> Escudero, C.,<sup>1</sup> and Dorso, C.O.<sup>2</sup>

<sup>1</sup>*University of Texas at El Paso*

<sup>2</sup>*Universidad de Buenos Aires*

18.30–19.00

### NTD-5 – Bimodality: a robust signature of the liquid-gas phase transition of nuclear matter?

Tamain B., Pichon M., Bougault R., Lopez O. for the INDRA-ALADIN collaborations<sup>1</sup>

<sup>1</sup>*LPC ENSICAEN 14050 Caen cedex, France*

19.00–19.30

### NTD-6 – Isoscaling, Geometry and Correlations

Dorso,C.<sup>1</sup> and Lopez, J.<sup>2</sup>

<sup>1</sup>*Dpto.Fisica-Fcen-UBA,Argentina*

<sup>2</sup>*University of Texas at El Paso,USA*

19.30–20.00

### NTD-7 – Phase Transition in Small System: from nuclear physics to astrophysics

Chomaz, Ph<sup>1</sup> and Gulminelli, F<sup>2</sup>

<sup>1</sup>*GANIL, DSM-CEA/IN2P3-CNRS, BP 5027, F-14076 CAEN cedex 5, FRANCE*

<sup>2</sup>*LPC Caen, IN2P3-CNRS et Université F-14050 CAEN cedex, FRANCE*

— THURSDAY

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16:00–16:30

**NTD-8 – Nuclear Multifragmentation and Zipf's Law**

Bauer, W<sup>1</sup>

<sup>1</sup>*Department of Physics and Astronomy, Michigan State University, East Lansing, MI, USA*

16.30–17.00

**NTD-9 – Clusters in hot and dense fluids**

Campi, X.<sup>1</sup>

<sup>1</sup>*L.P.T.M.S. Orsay, France*

17.00–17.30 **COFFEE BREAK**

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17:30–18:00

**NTD-10 – A quark model with excluded volume correction for hyper-matter at high density.**

De Paoli, A.L.<sup>1</sup>

<sup>1</sup>*Departamento de Fisica, Facultad de Ciencias Exactas, Universidad Nacional de La Plata*

18.00–18.30

**NTD-11 – The Equation of State of Symmetric and Asymmetric Nuclear Matter**

Shlomo, S.<sup>1</sup>

<sup>1</sup>*Cyclotron Institute, Texas A&M University, College Station, Tx 77843, USA*

18.30–19.00

**NTD-12 – Probing densities and shapes of emitting sources in heavy-ion collisions**

Verde, G.<sup>1</sup>

<sup>1</sup>*INFN, Sezione di Catania*

19.00–19.30

**NTD-13 – Density Dependence of the Symmetry Energy in the Equation of State of Asymmetric Nuclear Matter**

Yennello, S.J., Shetty, D.V., Souliotis, G.A.<sup>1,1</sup>

<sup>1</sup>*Texas A & M University*

19.30–20.00

**NTD-14 – The energetics and structure of fermionic  ${}^3\text{He}$  droplets**

Szybisz, Leszek<sup>1</sup>

<sup>1</sup>*TANDAR-CNEA, DPTO.FISICA-FCEN-UBA, and CONICET*