

## Poster Program

(The location appears in parenthesis near to the session title, see plan on page 11)

### The Big Bang (Kammermusiksaal)

|  | Page |
|--|------|
| NIC_XI_169 Bertulani C., <i>Texas A&amp;M University-Commerce, Commerce</i><br>Screening of reaction rates in primordial nucleosynthesis   | 89   |
| NIC_XI_166 Hannaske R., <i>Forschungszentrum Dresden-Rossendorf, Dresden</i><br>Precision measurement of the photodissociation of the deuteron at energies relevant to<br>Big Bang nucleosynthesis | 90   |
| NIC_XI_106 Mathews G., <i>University of Notre Dame, Department of Physics</i><br>Evidence for a Primordial Magnetic Field in the Cosmic Microwave Background and<br>Large Scale Structure          | 91   |
| NIC_XI_105 Mathews G., <i>University of Notre Dame Department of Physics</i><br>Studies in the Big-Bang Nucleosynthesis of Lithium   | 92   |

### Chemical evolution (Kammermusiksaal)

|  | Page |
|--|------|
| NIC_XI_318 Alves-Brito A. , <i>Pontificia Universidad Católica de Chile, Santiago</i><br>What is the chemical connection between Galactic bulge and local thick disk red giant stars?            | 93   |
| NIC_XI_043 Andrievsky S., <i>Odessa National university, Astronomy observatory</i><br>NLTE strontium abundances in extremely metal poor halo stars   | 94   |
| NIC_XI_385 Bergemann M., <i>Max-Planck-Institut für Astrophysik, Garching</i><br>Chromium: NLTE abundances in metal-poor stars and nucleosynthesis in the Galaxy                                 | 95   |
| NIC_XI_284 Dutra Ferreira L., <i>U. Federal do Rio de Janeiro, Observatório do Valongo</i><br>On the Physical Existence of the Zeta Reticuli Moving Group: a chemical composition analysis       | 97   |
| NIC_XI_077 Howk J., <i>Univ. of Notre Dame, Dept. of Physics, Notre Dame, IN</i><br>Interstellar Constraints on the Primordial Abundance and Evolution of Lithium                                | 98   |
| NIC_XI_350 Kobayashi C., <i>ANU, RSAA, Weston ACT</i><br>Chemodynamical Simulation of the Milky Way Galaxy and the Galactic Archaeology  | 99   |
| NIC_XI_041 Korotin S., <i>Odessa National university, Astronomy observatory, Odessa</i><br>NLTE barium abundance in thin and thick disks of the Galaxy   | 100  |
| NIC_XI_055 Mathews G., <i>University of Notre Dame, Department of Physics</i><br>Origin and Evolution of Structure and Nucleosynthesis for Galaxies in the Local Group                           | 101  |
| NIC_XI_042 Mishenina T., <i>Odessa National University, Astronomical Observatory</i><br>Analysis of neutron capture elements in thin and thick disks of the Galaxy                               | 102  |
| NIC_XI_386 Mori M., <i>Center for Computational Sciences, University of Tsukuba</i><br>Chemical and dynamical evolution of Lyman alpha emitters and Lyman break galaxies                         | 103  |
| NIC_XI_097 Patrick Young P., <i>Arizona State University, Tempe</i><br>Compositional Variation of Dwarfs in the Solar Neighborhood   | 104  |
| NIC_XI_174 Prodanovic T., <i>University of Novi Sad, Faculty of Science, Novi Sad</i><br>Deuterium Link: From Interstellar Medium and Chemical Evolution to Cosmology and<br>Structure Formation | 105  |
| NIC_XI_059 Romano D., <i>Bologna University, Bologna</i><br>Galactic carbon and oxygen isotopic ratios   | 106  |
| NIC_XI_155 Romano D., <i>Bologna University, Bologna</i><br>Chemical evolution of elements from C to Zn in the Galaxy with different grids of stellar yields                                     | 107  |

|            |  |     |
|------------|--|-----|
| NIC_XI_259 | Schuler S., <i>National Optical Astronomy Observatory, Tucson</i><br>Nucleosynthesis in the Hyades Open Cluster: Evidence for the Enhanced Depletion of 12C  | 108 |
| NIC_XI_387 | Shetrone M., <i>McDonald Observatory, Texas</i><br>APOGEE: A high resolution SDSS-III H-band survey of the Milky Way   | 109 |
| NIC_XI_337 | Sobeck J., <i>University of Chicago, Chicago</i><br>Standing Apart: Galactic Chemical Evolution of the Transition Elements Copper and Zinc   | 110 |
| NIC_XI_202 | Suda T., <i>Keele University, Astrophysics Group, Keele</i><br>The Role of Mixing and Nucleosynthesis in Extremely Metal-Poor Stars and Implications for Chemical Enrichment of the Galaxy Using the SAGA Database | 111 |

## Stars (left gallery)

Page

|            |  |     |
|------------|--|-----|
| NIC_XI_225 | Abu Kassim H., <i>University of Malaya, Kuala Lumpur</i><br>An Improved Charged-Particle Induced Thermonuclear Reaction Rate   | 112 |
| NIC_XI_306 | Angelou G., <i>Monash University, Centre for Stellar and Planetary Astrophysics</i><br>'δ μ mixing' on the Red Giant Branch  | 113 |
| NIC_XI_388 | Assunção M., <i>Universidade Federal de São Paulo, São Paulo</i><br>Possible Tsallis nonextensive corrections to Gamow peak  | 114 |
| NIC_XI_237 | Bemmerer D., <i>Forschungszentrum Dresden-Rossendorf, Dresden</i><br>A possible accelerator laboratory in the Dresden Felsenkeller   | 115 |
| NIC_XI_206 | Bertone P., <i>Argonne National Laboratory, Argonne</i><br>14N+p Elastic Scattering and the S-factor for 14N(p,γ)15O at Stellar Energies   | 116 |
| NIC_XI_294 | Caciolli A., <i>INFN - Padua, Padova</i><br>LUNA: The 15N(p,γ)16O reaction study at low energies with a BGO detector   | 117 |
| NIC_XI_070 | Carnelli P., <i>Laboratorio TANDAR, CONICET, San Martín, Buenos Aires</i><br>Angular Distributions of Alpha Particles in Breakup Reactions   | 118 |
| NIC_XI_053 | La Cognata M., <i>University of Catania, INFN-LNS, Catania</i><br>AGB and RGB nucleosynthesis: the influence of new, high-accuracy measurements of the 18O(p,α)15N and 17O(p,α)14N low-energy resonances | 119 |
| NIC_XI_136 | Couder M., <i>Univ. of Notre Dame and The Joint Institute for Nuclear Astrophysics</i><br>The St. George recoil separator at the university of Notre Dame, a status update                               | 120 |
| NIC_XI_361 | Fraile L., <i>Universidad Complutense, Facultad de CC. Físicas, Madrid</i><br>Study of the β-delayed particle emission of 17Ne   | 121 |
| NIC_XI_093 | Fraile L., <i>Universidad Complutense, Facultad de CC. Físicas, Madrid</i><br>A nuclear astrophysics underground accelerator facility at Canfran   | 122 |
| NIC_XI_224 | Hirschi R., <i>Keele University, EPSAM, Keele</i><br>Nucleosynthesis analysis of the Sakurai's object  | 123 |
| NIC_XI_283 | Horiuchi W., <i>Niigata University, Niigata</i><br>Ab initio many-body calculations of reactions important for astrophysics  | 124 |
| NIC_XI_254 | Lemut A., <i>Lawrence Berkeley National Laboratory, Nuclear Science Division</i><br>The DIANA Underground Accelerator Facility at DUSEL Laboratory   | 126 |
| NIC_XI_279 | Marta M., <i>Forschungszentrum Dresden – Rossendorf</i><br>The 14N(p,γ)15O reaction studied at 0.6 - 2 MeV.  | 127 |
| NIC_XI_168 | Ostrowski A., <i>Universität Heidelberg, Heidelberg</i><br>Hydrostatic carbon-burning: Reaction cross section inside the Gamow window  | 128 |
| NIC_XI_076 | Oulebsir N., <i>Universitat Abderrahmane Mira, Béjaïa</i><br>Study of 12C(α,γ)16O reaction via the transfer reaction 12C(7Li,t)16O   | 129 |
| NIC_XI_049 | Palmerini S., <i>Dipartimento di Fisica, Università degli Studi di Perugia</i><br>Effects of new reaction rates on p-capture nucleosynthesis in Low Mass Stars   | 130 |
| NIC_XI_160 | Sayre D., <i>Ohio University, Edwards Accelerator Laboratory, Athens</i><br>Angular Distribution Anisotropy of the Ec.m.= 2.68 MeV Resonance in the 12C(α,γ)16O Reaction and Its Astrophysical Impact    | 131 |

|            |  |     |
|------------|--|-----|
| NIC_XI_280 | Tang X, <i>University of Notre Dame, Notre Dame</i><br>Test of extrapolating models for heavy ion fusion reactions at extreme sub-barrier energies                     | 132 |
| NIC_XI_286 | Targosz-Sleczka N., <i>Univeristy of Szczecin, Institute of Physics, Szczecin</i><br>Enhanced electron screening in nuclear reactions: a plasma or solid-state effect? | 133 |
| NIC_XI_027 | Ugalde C., <i>Argonne National Lab, Lemont, IL</i><br>Measuring the $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ reaction rate with a bubble chamber.                   | 134 |
| NIC_XI_173 | Wierling A., <i>Universitaet Rostock, Institute of Physics, Rostock</i><br>Screening correction to nuclear reaction rates in brown dwarfs and low-mass stars           | 135 |
| NIC_XI_210 | Yusof N., <i>University of Malaya, Kuala Lumpur</i><br>Impact of Mass Loss and Rotation on the Evolution of Very Massive Stars   | 136 |

## Grains and gamma-ray observations (right gallery) Page

|            |  |     |
|------------|--|-----|
| NIC_XI_211 | Ávila J., <i>Australian National University, Canberra</i><br>Tungsten Isotopic Compositions In Stardust Sic Grains From AGB Stars: An Evaluation of Reaction Rates at The Hf-Ta-W-Re-Os Region                                     | 137 |
| NIC_XI_371 | Bose M., <i>Washington University, Saint Louis</i><br>Stardust Material in the Meteorite SAH 97096   | 138 |
| NIC_XI_099 | Buntain J., <i>Monash University, Centre for Stellar &amp; Planetary Astrophysics, Clayton</i><br>Wind composition beyond the tip of the AGB and its relevance to stardust grains  | 139 |
| NIC_XI_314 | Davis A., <i>University of Chicago, Enrico Fermi Institute, Chicago, IL</i><br>Making CHILI: a progress report   | 140 |
| NIC_XI_239 | Gyngard F., <i>Carnegie Institution of Washington, Washington DC</i><br>Oxygen Rich Stardust Grains from Novae   | 141 |
| NIC_XI_215 | Kodolanyi J., <i>Max Planck Institute of Chemistry, Mainz</i><br>A promising method to obtain accurate Mg and Fe isotope compositional data on presolar silicate particles found in the primitive carbonaceous chondrite Acfer 094 | 142 |
| NIC_XI_336 | Kretschmer K., <i>Max-Planck-Institute for Extraterrestrial Physics, Garching</i><br>Massive stars and the inner Galaxy's ISM: tracing the gamma-ray line from $^{26}\text{Al}$  | 143 |
| NIC_XI_075 | Leitner J., <i>Max-Planck-Institut für Chemie, Abteilung Partikelchemie, Mainz</i><br>The Inventory of Presolar Grains in Primitive Meteorites: A NanoSIMS Study of C-, N-, and O-isotopes in NWA 852                              | 144 |
| NIC_XI_163 | Liu M., <i>Carnegie Institution of Washington, Washington</i><br>Lithium-beryllium-boron isotopes in the meteorites: implications for irradiation in the early solar system  | 145 |
| NIC_XI_158 | Ohlendorf H., <i>Universitätssternwarte München, München</i><br>$^{26}\text{Al}$ emission from the Scorpius-Centaurus association  | 146 |
| NIC_XI_085 | Ott U., <i>Abteilung Biogeochemie, Max-Planck-Institut für Chemie, Mainz</i><br>Possible r-process origin for Xenon-H  | 147 |
| NIC_XI_238 | Zinner E., <i>Washington University, Campus Box 1105, St. Louis</i><br>Silicon Carbide Grains of Type X and Supernova Nucleosynthesis  | 148 |

## Core-collapse supernovae (left gallery) Page

|            |   |     |
|------------|---|-----|
| NIC_XI_287 | Fujimoto S., <i>Kumamoto National College of Technology, Kumamoto</i><br>Abundances of ejecta from neutrino- and magnetically-driven core collapse supernovae | 149 |
| NIC_XI_170 | Horiuchi W., <i>Niigata University, Niigata</i><br>Electro-weak responses of $^4\text{He}$ using realistic nuclear interactions                               | 150 |
| NIC_XI_142 | Irrgang A., <i>Dr. Karl Remeis-Sternwarte, Bamberg</i><br>HIP 60350: A supernova ejected hyper-runaway star?  | 151 |
| NIC_XI_379 | Lentz E., <i>Oak Ridge National Laboratory, Oak Ridge, TN</i><br>Evaluating nuclear physics inputs in core-collapse supernova models                          | 152 |

|            |   |     |
|------------|---|-----|
| NIC_XI_319 | Müller B., <i>Max-Planck-Institut für Astrophysik, Garching</i><br>A general relativistic neutrino-hydrodynamics code for core-collapse supernovae        | 153 |
| NIC_XI_276 | O'Connor E., <i>California Institute of Technology, TAPIR, Pasadena</i><br>Black Hole Formation in Massive Star Collapse                                  | 154 |
| NIC_XI_182 | Paar N., <i>University of Zagreb, Faculty of Science, Zagreb</i><br>Self-consistent theory of stellar electron capture rates                              | 155 |
| NIC_XI_349 | Röpke G., <i>Institut für Physik, Univ. Rostock, Rostock</i><br>Light Clusters in Core-Collapse Supernovae  | 156 |
| NIC_XI_137 | Sumiyoshi K., <i>Numazu College of Technology, Numazu, Shizuoka</i><br>Neutrino bursts from failed supernovae as a promising target of neutrino astronomy | 157 |
| NIC_XI_157 | Werneck Mintz B., <i>U. Fed. Rio de Janeiro/U. Heidelberg</i><br>Thermal Nucleation of Quark Matter in a Lepton-Rich Environment                          | 158 |
| NIC_XI_389 | Yudin A. V., <i>Institute for Theoretical and Experimental Physics, Moscow, Russia</i><br>Excluded volume approximation for supernova matter              | 159 |

## Hypernovae and mergers (left gallery)

Page

|            |   |     |
|------------|---|-----|
| NIC_XI_196 | Bauswein A., <i>Max-Planck-Institut fuer Astrophysik, Garching</i><br>Simulations of strange star mergers and observational consequences                  | 160 |
| NIC_XI_335 | Hartmann D., <i>Clemson University, Clemson</i><br>Probing Baryons in Gas and Dust to the Highest Redshifts with GRBs                                     | 161 |
| NIC_XI_213 | Kawagoe S., <i>The University of Tokyo, Institute of Industrial Science, Tokyo</i><br>Unique feature of expected event number of neutrinos from collapsar | 162 |
| NIC_XI_078 | Tominaga N., <i>Konan University, Faculty of Science and Engineering, Kobe</i><br>Nucleosynthesis in jet-induced supernovae                               | 163 |

## Compact objects (left gallery)

Page

|            |  |     |
|------------|--|-----|
| NIC_XI_072 | Bandyopadhyay D., <i>Saha Institute of Nuclear Physics, Kolkata</i><br>Strongly Magnetized Neutron Star Crust  | 164 |
| NIC_XI_033 | Banik S., <i>Variable Energy Cyclotron Centre, 1/AF, Kolkata</i><br>Shear viscosity and the nucleation of antikaon condensed matter in hot neutron stars                     | 165 |
| NIC_XI_301 | Chung-Yeol R., <i>Soongsil University, Seoul</i><br>The medium effect of magnetic moments of baryons on the neutron  | 166 |
| NIC_XI_040 | Kafexhiu E., <i>Max-Planck-Institut für Kemphysik, Heidelberg</i><br>Excitation and destruction of nuclei in hot astrophysical plasmas around black holes                    | 167 |
| NIC_XI_080 | Lau K., <i>Michigan State University, East Lansing</i><br>Nuclear reactions in the crust of accreting neutron star   | 168 |
| NIC_XI_111 | Maruyama T., <i>Japan Atomic Energy Agency, Ibaraki</i><br>Liquid-gas mixed phase in nuclear matter at finite temperature  | 169 |
| NIC_XI_057 | Mathews G., <i>University of Notre Dame, Department of Physics, Notre Dame</i><br>Ultra High-Energy Neutrinos via Heavy-Meson Synchrotron Emission in Strong Magnetic Fields | 170 |
| NIC_XI_056 | Mathews G., <i>University of Notre Dame, Department of Physics, Notre Dame</i><br>Nuclear Equation of State in the Presence of a Strong Magnetic Field                       | 171 |
| NIC_XI_125 | Nakazato K., <i>Kyoto University, Graduate School of Science, Kyoto</i><br>Pasta Phase with Gyroid Morphology at Subnuclear Densities  | 172 |
| NIC_XI_273 | Newton W., <i>Texas A&amp;M University-Commerce, Commerce, TX</i><br>Astrophysical constraints on the nuclear symmetry energy  | 173 |
| NIC_XI_056 | Ogul R., <i>Department of Physics, University of Selcuk, Konya, Turkey</i><br>Symmetry Energy in Isoscaling for Nuclear Reactions  | 174 |

|            |  |     |
|------------|--|-----|
| NIC_XI_154 | Partha Roy Chowdhury P., <i>University of Calcutta, Physics Department, Kolkata</i><br>Nuclear matter for compact stars and its properties at finite temperature | 175 |
| NIC_XI_032 | Peng Q., <i>Department of Astronomy, Nanjing University, Nanjing</i><br>Physics on huge X-ray luminosity of Magnetars  | 176 |
| NIC_XI_269 | Steiner A., <i>JINA/NSCL, Michigan State University</i><br>The Equation of State from Observed Masses and Radii of Neutron Stars                                 | 177 |
| NIC_XI_088 | Tatsumi T., <i>Kyoto University, Kyoto</i><br>Magnetic orderings in compact stars  | 178 |
| NIC_XI_071 | Togashi H., <i>Waseda University, Tokyo</i><br>The Equation of State of Asymmetric Nuclear Matter at Zero and Finite Temperatures with the Variational Method    | 179 |
| NIC_XI_197 | Voskresenskaya M., <i>GSI, Darmstadt</i><br>Nuclear equation of state in the relativistic mean field model with density dependent coupling constants             | 180 |
| NIC_XI_031 | Xu R., <i>School of Physics, Peking University, Beijing</i><br>Compact stars: Laboratory for extremely dense and cold matter                                     | 181 |

## The s-process (Kammermusiksaal)

Page

|            |   |     |
|------------|---|-----|
| NIC_XI_244 | Bennett M., <i>Keele University, Lennard-Jones Laboratory, Keele</i><br>The effect of $^{12}\text{C} + ^{12}\text{C}$ rate uncertainties on the weak s-process component  | 182 |
| NIC_XI_159 | Best A., <i>University of Notre Dame, Joint Institute for Nuclear Astrophysics</i><br>Determination of the Stellar Reaction Rates of $^{17}\text{O}(\alpha, n)^{20}\text{Ne}$ and $^{17}\text{O}(\alpha, \gamma)^{21}\text{Ne}$ | 183 |
| NIC_XI_338 | Bisterzo S., <i>Universita di Torino, Torino</i><br>The effect of r-process enhancement in binary CEMP-s+r stars  | 184 |
| NIC_XI_328 | Bucher B., <i>Nieuwland Science Hall, Notre Dame</i><br>A Study of $^{12}\text{C}(^{12}\text{C}, n)^{23}\text{Mg}$  | 185 |
| NIC_XI_323 | Collon P., <i>University of Notre Dame, Nuclear Science Laboratory, Notre Dame</i><br>Re-measuring the half-life of $^{60}\text{Fe}$  | 186 |
| NIC_XI_313 | Feinberg G., <i>Soreq Nuclear Research Center, Yavne</i><br>A liquid-lithium target project for production of high-intensity quasi-stellar neutrons   | 188 |
| NIC_XI_143 | Frischknecht U., <i>University of Basel, Basel</i><br>Effects of rotation on the weak s process   | 189 |
| NIC_XI_242 | Giron S., <i>Université Paris XI, IPN-Orsay, Orsay</i><br>Indirect study of $^{60}\text{Fe}(n, \gamma)^{61}\text{Fe}$ via the transfer reaction $^{60}\text{Fe}(d, p)^{61}\text{Fe}$  | 190 |
| NIC_XI_291 | Huther L., <i>GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt</i><br>Stellar enhancement factors in a parity dependent approach  | 191 |
| NIC_XI_172 | Lau H., <i>Monash University, Centre of Stellar and Planetary Astrophysics, Clayton</i><br>Nucleosynthesis yields from SAGB stars   | 192 |
| NIC_XI_186 | Lederer C., <i>Faculty of Physics - VERA-Laboratory, University of Vienna, Vienna</i><br>Definition of a standard neutron field with the $^{7}\text{Li}(p, n)^{7}\text{Be}$ reaction  | 193 |
| NIC_XI_146 | Massimi C., <i>Departement of Physics, University of Bologna, Bologna</i><br>New experimental measurement of the $^{25}\text{Mg}$ neutron capture cross section at n_TOF  | 194 |
| NIC_XI_255 | Pignatari M., <i>University of Victoria, Dept. of Physics and Astronomy, Canada</i><br>Neutron capture processes in stars between the s process and the r process   | 195 |
| NIC_XI_285 | Pignatari M., <i>University of Victoria, Dept. of Physics and Astronomy, Canada</i><br>Nucleosynthesis in the He-burning shell in massive stars   | 196 |
| NIC_XI_029 | Pritychenko B., <i>National Nuclear Data Center, Brookhaven National Laboratory</i><br>Complete calculation of evaluated Maxwellian-averaged cross sections and their errors for s-process nucleosynthesis                      | 197 |
| NIC_XI_272 | Sonnabend K., <i>Institut für Kernphysik, Technische Universität Darmstadt, Darmstadt</i><br>Investigation of s-process branching nuclei with real photons  | 198 |

|            |   |     |
|------------|---|-----|
| NIC_XI_152 | Wagemans C., <i>University of Gent, Gent</i><br>The $^{41}\text{Ca}(\text{n},\alpha)^{38}\text{Ar}$ reaction cross section up to 100 keV neutron energy | 199 |
| NIC_XI_375 | Wallner A., <i>VERA Labor, Fakultät für Physik, Wien</i><br>AMS and Nuclear Astrophysics  | 200 |
| NIC_XI_145 | Worley C., <i>Observatoire de la Côte d'Azur, Nice</i><br>Neutron-capture element abundances in the globular clusters: 47 Tuc, NGC 6388 and NGC 362     | 201 |

## Novae (right gallery)

Page

|            |  |     |
|------------|--|-----|
| NIC_XI_228 | Bardayan D., <i>Oak Ridge National Lab, Physics Division, Oak Ridge</i><br>Direct Measurements of $(\text{p},\gamma)$ cross sections at astrophysical energies using radioactive beams and the Daresbury Recoil Separator*                     | 202 |
| NIC_XI_245 | Campbell S., <i>Universitat Politècnica de Catalunya, Barcelona</i><br>Fluid Dynamics Simulations of Ejecta from Novae Explosions  | 203 |
| NIC_XI_262 | Casanova J., <i>U. Politecnica de Catalunya &amp; Inst. d'Estudis Espacials de Catalunya</i><br>On mixing at the core-envelope interface during classical nova outbursts   | 204 |
| NIC_XI_149 | Chippes K., <i>University of York, Department of Physics, York</i><br>Proton decay of $^{26}\text{Si}$ via the $^{28}\text{Si}(\text{p},\text{t})^{26}\text{Si}$ Reaction and Implications for $^{25}\text{Al}(\text{p},\gamma)^{26}\text{Si}$ | 205 |
| NIC_XI_325 | Fallis J., <i>TRIUMF, Vancouver, BC</i><br>Direct measurements of radiative capture reactions with radioactive beams at DRAGON   | 206 |
| NIC_XI_100 | Herlitzius C., <i>TU München, Physik Department E12, Garching</i><br>Lifetime measurements of excited nuclear states of astrophysical interest via the Doppler Shift Attenuation Method  | 207 |
| NIC_XI_288 | Jose J., <i>Univ. Politecnica de Catalunya, Barcelona</i><br>Hydrodynamic Models of Type I X-Ray Bursts: Metallicity Effects   | 208 |
| NIC_XI_366 | Kahl D., <i>Center for Nuclear Study, the University of Tokyo, Wako, Saitama</i><br>The $^{28}\text{Si}(\alpha,\text{p})$ and $^{30}\text{S}(\alpha,\text{p})$ reactions with CRIB to study X-ray Bursts                                       | 209 |
| NIC_XI_344 | Laird A., <i>University of York, York</i><br>Direct measurement of the $^{18}\text{F}(\text{p},\text{a})^{15}\text{O}$ reaction at novae temperatures  | 210 |
| NIC_XI_334 | Saastamoinen A., <i>University of Jyväskylä, Jyväskylä</i><br>$\beta$ -delayed proton decay of $^{23}\text{Al}$ and nova nucleosynthesis   | 211 |
| NIC_XI_390 | de Séerville N., <i>Université Paris XI, IPN-Orsay, Orsay</i><br>Spectroscopic study of $^{26}\text{Si}$ for application to nova gamma-ray emission.   | 212 |
| NIC_XI_270 | Setoodehnia K., <i>McMaster University, Hamilton</i><br>Study of Astrophysically Important Excited States of $^{30}\text{S}$ via the $^{28}\text{Si}(\text{He},\text{ny})^{30}\text{S}$  | 213 |
| NIC_XI_124 | Yamaguchi H., <i>University of Tokyo, RIKEN campus, Center for Nuclear Study</i><br>Alpha-induced astrophysical reactions studied at CRIB  | 214 |

## X-ray bursts (right gallery)

Page

|            |  |     |
|------------|--|-----|
| NIC_XI_205 | Almaraz-Calderon S., <i>University of Notre Dame, Notre Dame</i><br>The level structure of $^{18}\text{Ne}$  | 215 |
| NIC_XI_296 | Borzov I., <i>GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt</i><br>Forbidden EC-capture and crust heating in accreting neutron stars                            | 216 |
| NIC_XI_098 | Chae K., <i>Oak Ridge National Laboratory, Oak Ridge</i><br>A new technique for measuring astrophysically important $(\alpha,\text{p})$ reactions                          | 217 |
| NIC_XI_189 | Couder M., <i>University of Notre Dame &amp; Joint Institute for Nuclear Astrophysics</i><br>Design of SECAR, a new recoil separator for astrophysics at the NSCL and FRIB | 218 |
| NIC_XI_351 | Cyburt R., <i>NSCL, MSU, East Lansing</i><br>A modern $^{150}(\text{a,g})^{19}\text{Ne}$ reaction rate for X-ray burst models  | 219 |

|            |   |     |
|------------|---|-----|
| NIC_XI_126 | Diget C., <i>Department of Physics, University of York, York</i><br>Study of the $^{18}\text{Ne}(\alpha, p)^{21}\text{Na}$ Hot-CNO breakout reaction using SHARC, a new, versatile, silicon array                         | 220 |
| NIC_XI_302 | Estrade A., <i>NSCL, East Lansing</i><br>Mass measurements of neutron rich isotopes in the Fe region and electron capture processes in neutron star crusts  | 221 |
| NIC_XI_315 | Horoi M., <i>Department of Physics, Central Michigan University, Mount Pleasant</i><br>Role of Shell Model Nuclear Level Densities for Nuclear Astrophysics   | 222 |
| NIC_XI_178 | Kankainen A., <i>Department of Physics, University of Jyväskylä, Jyväskylä</i><br>Mass measurements at JYFLTRAP for explosive hydrogen burning below A=60   | 223 |
| NIC_XI_232 | Langer C., <i>GSI Darmstadt, Darmstadt</i><br>Coulomb dissociation reactions on proton-rich Ar isotopes   | 224 |
| NIC_XI_216 | Marganiec J., <i>EMMI, GSI Darmstadt, LAND-R3B Collaboration, Darmstadt</i><br>Study of the $^{150}(\text{O}(2\text{p}), \gamma)^{17}\text{Ne}$ reaction by the Coulomb Dissociation method.                              | 225 |
| NIC_XI_233 | Matos M., <i>Louisiana State University, &amp; Oak Ridge National Laboratory</i><br>The Array for Nuclear Astrophysics Studies with Exotic Nuclei (ANASEN)*   | 226 |
| NIC_XI_201 | Saul B., <i>University of Santiago de Compostela, Facultad de Fisica</i><br>Coulomb dissociation of $^{27}\text{P}$ : a reaction of astrophysical interest  | 227 |
| NIC_XI_141 | Togano Y., <i>RIKEN, Nishina Center, Saitama</i><br>Astrophysical reaction rate of $^{30}\text{S}(\text{p}, \gamma)^{31}\text{Cl}$ studied by Coulomb dissociation  | 228 |
| NIC_XI_127 | Tuff A., <i>Department of Physics, The University of York, York</i><br>A study of resonant states involved in breakout from the hot-CNO cycle using inelastic proton scattering of $^{21}\text{Na}$ in inverse kinematics | 229 |

## Explosive nucleosynthesis (Kammermusiksaal)

Page

|            |  |     |
|------------|--|-----|
| NIC_XI_114 | Biswas M., <i>Variable Energy Cyclotron Centre, Kolkata</i><br>Study of transfer reaction channel produced in the system $^{12}\text{C}+^{27}\text{Al}$ at 73 MeV  | 231 |
| NIC_XI_091 | Ershova O., <i>GSI, Darmstadt</i><br>Coulomb dissociation reactions on Mo isotopes for astrophysics applications   | 232 |
| NIC_XI_128 | Farkas J., <i>Institute of Nuclear Research (ATOMKI), Debrecen</i><br>Half-life determination of $^{133m}\text{Ce}$ for activation cross section measurements  | 233 |
| NIC_XI_257 | Glorius J., <i>Institut für Kernphysik, Technische Universität Darmstadt, Darmstadt</i><br>Investigation of neutron-nucleus optical potentials   | 234 |
| NIC_XI_135 | Gordo P., <i>Nuclear Physics Center of the University of Lisbon, Lisboa</i><br>The IRIS facility: A new tool for nuclear astrophysics  | 235 |
| NIC_XI_207 | Güray R., <i>Kocaeli University, Department of Physics, Kocaeli</i><br>$^{152}\text{Gd}(\text{p}, \gamma)^{153}\text{Tb}$ reaction cross section measurement for the astrophysical p-process                               | 236 |
| NIC_XI_133 | Gyürky G., <i>MTA ATOMKI, Debrecen</i><br>Measuring $\alpha$ -induced cross sections in the region of the heavy p-nuclei: the case of $^{169}\text{Tm}+\alpha$   | 237 |
| NIC_XI_130 | Halász Z., <i>Institute of Nuclear Research (HAS-ATOMKI), Debrecen</i><br>$\alpha$ -induced activation reaction cross section measurement $^{130}\text{Ba}$ relevant for the astrophysical p-process                       | 238 |
| NIC_XI_022 | Hoffman R., <i>LLNL, Livermore CA</i><br>Reaction rate sensitivity of $^{44}\text{Ti}$ production in massive stars and implications of a thick target yield measurement for $^{40}\text{Ca}(\alpha, \gamma)^{44}\text{Ti}$ | 240 |
| NIC_XI_200 | Ornelas A., <i>University of Lisbon, Nuclear Physics Center, Lisbon</i><br>How important is the Family? Alpha nuclear potentials and p-process nucleosynthesis   | 241 |
| NIC_XI_195 | Pain S., <i>University of the West of Scotland, Paisley</i><br>Measurements using $^{26}\text{Al}$ beams for understanding the astrophysical destruction of $^{26}\text{Al}$   | 242 |

|            |  |     |
|------------|--|-----|
| NIC_XI_051 | Robertson D., <i>University of Notre Dame, Nuclear Science Laboratory, Notre Dame</i><br>New measurements of the $^{40}\text{Ca}(\alpha,\gamma)^{44}\text{Ti}$ reaction important in explosive nucleosynthesis scenarios     | 243 |
| NIC_XI_044 | Sauerwein A., <i>Institut für Kernphysik, Universität zu Köln, Köln</i><br>Experiments on proton- and $\alpha$ -induced reactions of particular relevance for the p process  | 244 |
| NIC_XI_199 | Skakun Y., <i>NSC KIPT, Institute of High Energy and Nuclear Physics, Kharkiv</i><br>Proton capture reaction cross sections on $^{74}\text{Se}$ , $^{76}\text{Se}$ , and $^{77}\text{Se}$ in p-process relevant energy range | 245 |
| NIC_XI_061 | Spyrou A., <i>Michigan State University, NSCL, East Lansing</i><br>$^{120}\text{Te}$ a p-process branching point: the effect on $^{115}\text{Sn}$ .  | 246 |
| NIC_XI_129 | Szűcs T., <i>Institute of Nuclear Research (ATOMKI), Debrecen</i><br>The new p-process database of KADoNiS   | 247 |
| NIC_XI_229 | Weigand M., <i>GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt</i><br>Cross section measurements of $^{103}\text{Rh}(p,\gamma)^{104}\text{Pd}$ with the Karlsruhe $4\pi$ BaF <sub>2</sub> detector                  | 248 |

## Type Ia supernovae (right gallery)

|            |  | Page |
|------------|--|------|
| NIC_XI_281 | Calder A., <i>Stony Brook University, Stony Brook</i><br>An Investigation Into the Systematics of Type Ia Supernovae.  | 249  |
| NIC_XI_221 | Glazyrin S., <i>Institute for Theoretical and Experimental Physics, Moscow</i><br>Properties of nuclear flame in presupernova white dwarf  | 250  |
| NIC_XI_316 | Jackson A., <i>SUNY Stony Brook, Stony Brook, NY</i><br>Evaluating Systematic Dependencies of Type Ia Supernovae: The Influence of Deflagration to Detonation Density            | 251  |
| NIC_XI_391 | Jordan IV G. C., <i>Center for Astrophysical Thermonuclear Flashes, Chicago</i><br>Nucleosynthetic Signatures of Neutron Rich Isotopes from FLASH Type Ia Supernovae Simulations | 252  |
| NIC_XI_309 | Krueger B., <i>SUNY Stony Brook, Stony Brook, NY</i><br>On Variations of the Brightness of Type Ia Supernovae With the Age of the Host Stellar Population                        | 253  |
| NIC_XI_277 | Leising M., <i>Clemson University, Department of Physics &amp; Astronomy, Clemson</i><br>NuSTAR Studies of Type Ia Supernovae  | 254  |
| NIC_XI_187 | Pakmor R., <i>Max-Planck-Institut für Astrophysik, Garching</i><br>Type Ia supernovae from white dwarf mergers   | 255  |
| NIC_XI_067 | Seitenzahl I., <i>Max Planck Institute for Astrophysics, Garching</i><br>Nucleosynthetic post-processing of Type Ia supernovae with variable tracer masses                       | 256  |

## The r-process (Kammermusiksaal)

|            |   | Page |
|------------|---|------|
| NIC_XI_266 | Aoki W., <i>National Astronomical Observatory of Japan, Tokyo</i><br>Thorium enrichment in the Milky Way Galaxy   | 257  |
| NIC_XI_265 | Audi G., <i>CSNSM-Orsay, Bat. 108, ORSAY</i><br>Recent changes on the mass surface; moving the r-process path?  | 258  |
| NIC_XI_063 | Benhamouda N., <i>USTHB, Faculté de Physique, ALGIERS</i><br>Number projected energy and heat capacity in the thermodynamic system.                     | 259  |
| NIC_XI_292 | Borzov I., <i>GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt</i><br>Beta-decay near the N=126 neutron shell and the r-process                 | 260  |
| NIC_XI_083 | Chipps K., <i>University of York, Department of Physics, York</i><br>TACTIC: A New Detector for Tracking in Low Energy Nuclear Astrophysics             | 261  |
| NIC_XI_326 | Costiris N., <i>University of Athens, Physics Department, Athens</i><br>Half-Lives for R-Process Nucleosynthesis Using the ANN Statistical Global Model | 262  |

|            |   |     |
|------------|---|-----|
| NIC_XI_340 | Fedorov D., <i>Aarhus University, Aarhus</i><br>Alternative path for bridging the A=5,8 mass gap in neutron-rich nucleosynthesis scenarios  | 263 |
| NIC_XI_392 | Francois P., <i>Paris-Meudon Observatory, Paris, France</i><br>Constraints on the weak r-process: Abundance of Palladium in metal poor stars  | 264 |
| NIC_XI_393 | Hansen C. J., <i>ESO, Garching, Germany</i><br>Silver and Palladium - tracers of the weak r-process   | 265 |
| NIC_XI_258 | Jokinen A., <i>University of Jyväskylä, Jyväskylä</i><br>Precision mass measurements of neutron-rich nuclei connecting A~80 and A~130 waiting point regions   | 267 |
| NIC_XI_249 | Jones K., <i>University of Tennessee, 401 Nielsen Physics Building, Knoxville</i><br>Single particle spectroscopy of $^{133}\text{Sn}$ via the (d,p) reaction in inverse kinematics                   | 268 |
| NIC_XI_140 | Ketelaer J., <i>Max-Planck-Institut für Kernphysik, Heidelberg</i><br>TRIGA-TRAP: Mass measurements on neutron-rich nuclides at TRIGA Mainz   | 269 |
| NIC_XI_110 | Lascar D., <i>Northwestern University, Department of Physics and Astronomy</i><br>Precision Mass Measurements at CARIBU   | 270 |
| NIC_XI_297 | Loens H., <i>GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt</i><br>Fission and mass properties of super-heavy elements for r-process nucleosynthesis  | 271 |
| NIC_XI_036 | Mashonkina L., <i>Institute of Astronomy, Russian Academy of Sciences, Moscow</i><br>Detailed abundance analysis of the very metal-poor, r-process enhanced star HE 2327-5642                         | 272 |
| NIC_XI_235 | Mumpower M., <i>North Carolina State University, Raleigh</i><br>The Influence of Neutron Capture Rates on the Rare Earth Peak   | 273 |
| NIC_XI_058 | Nabi J., <i>GIK Institute of Engineering Sciences &amp; Technology, Topi</i><br>First-forbidden stellar beta decay rates for neutron-rich nickel isotopes   | 274 |
| NIC_XI_330 | Nishimura N., <i>NAOJ, DTA, Mitaka</i><br>R-process Nucleosynthesis in Magnetically Dominated Core-Collapse Supernovae  | 275 |
| NIC_XI_274 | Otsuki K., <i>Fukuoka University, Faculty of Science, Fukuoka</i><br>Direct capture and r-process   | 276 |
| NIC_XI_246 | Rapisarda E., <i>CSFNSM, Catania</i><br>17F breakup reactions: a touchstone for indirect measurements   | 277 |
| NIC_XI_165 | Roberts L., <i>UCSC, Department of Astronomy and Astrophysics, Santa Cruz, CA</i><br>Integrated Nucleosynthesis from Neutrino Driven Winds  | 278 |
| NIC_XI_300 | Rodríguez D., <i>Departamento de Física Atómica Molecular y Nuclear, Granada</i><br>Nuclear Astrophysics with MATS: precise Measurements on very short-lived nuclei using an Advanced Trapping System | 279 |
| NIC_XI_268 | Rodríguez T., <i>GSI, Theory Division, Darmstadt</i><br>Study of neutron rich Cadmium isotopes and the possible N=82 shell quenching  | 280 |
| NIC_XI_054 | Roederer I., <i>Department of Astronomy, University of Texas, Austin, TX</i><br>A Range of Neutron-Capture Abundance Ratios Produced by the r-Process   | 281 |
| NIC_XI_271 | Savard G., <i>Argonne National Laboratory, Argonne, Illinois</i><br>Production and study of r-process nuclei at the CARIBU facility   | 282 |
| NIC_XI_358 | Smith K., <i>1 Cyclotron, Michigan State Univ., East Lansing</i><br>$\beta$ -decay and neutron emission studies of r-process nuclei near $^{137}\text{Sb}$  | 283 |
| NIC_XI_252 | Surman R., <i>Union College, Department of Physics and Astronomy, Schenectady</i><br>Neutron capture in the r-process   | 284 |
| NIC_XI_395 | Rosenbusch M., <i>University Greifswald</i><br>Implementation of a MR-ToF isobar separator at the on-line mass spectrometer ISOLTRAP  | 285 |

## Observations of metal-poor stars (Kammermusiksaal)

Page

|            |   |       |
|------------|---|-------|
| NIC_XI_312 | Allen D., <i>Universidade de São Paulo</i><br>A detailed analysis of CEMP stars   | 3 (A) |
| NIC_XI_320 | Barzdis A., <i>University of Latvia, Riga</i><br>High resolution spectroscopy of two metal-poor red giants: HD 232078 and HD 218732   | 286   |
| NIC_XI_322 | Barzdis A., <i>University of Latvia, Riga</i><br>Niobium in the spectra of metal-poor stars   | 287   |
| NIC_XI_317 | Dobrovolskas V., <i>Vilnius University Astronomical Observatory, Vilnius</i><br>Chemical abundances in metal-poor giants: limitations imposed by the use of classical<br>1D stellar atmosphere models | 288   |
| NIC_XI_263 | Ivanauskas A., <i>Institute of Theoretical Physics of Vilnius University, Vilnius</i><br>3D hydrodynamical CO5BOLD model atmospheres of late-type giants: stellar<br>abundances from molecular lines  | 290   |
| NIC_XI_132 | Kennedy C., <i>Michigan State University, Joint Institute for Nuclear Astrophysics</i><br>CNO Abundances in Metal-Poor Stars  | 291   |
| NIC_XI_096 | Placco V., <i>Instituto de Astronomia, Geofísica e Ciências Atmosféricas, São Paulo</i><br>A Search for Additional Metal-Poor Candidates from HES using Carbon Abundance<br>Estimates                 | 292   |
| NIC_XI_304 | Sbordone L., <i>Max Planck Institute for Astrophysics</i><br>Local stars formed at z>10: a sample extracted from the SDSS   | 4 (A) |
| NIC_XI_028 | Whalen D., <i>Carnegie Mellon University, Pittsburgh</i><br>Chemical Enrichment of Metal-Poor Stars by the First Supernovae   | 5 (A) |

# Poster distribution plan

Kongreßhaus Stadthalle Heidelberg  
(Upper floor)

