

PAPERS PUBLISHED

April 1, 2010 – March 31, 2011

Tests of nuclear half-lives as a function of host temperature: refutation of recent claims, J.C. Hardy, J.R. Goodwin, V.V. Golovko and V.E. Iacob, *Appl. Rad. and Isot.* **68**, 1550 (2010).

Superaligned nuclear β decay: symmetry breaking, CVC and CKM unitarity, J.C. Hardy and I.S. Towner, *Nucl. Phys. A* **844**, 138c (2010).

Precise half-life measurement of the superallowed β^+ emitter ^{26}Si , V.E. Iacob, J.C. Hardy, A. Banu, L. Chen, V.V. Golovko, J. Goodwin, V. Horvat, N. Nica, H.I. Park, L. Trache and R.E. Tribble, *Phys. Rev. C* **82**, 035502 (2010).

Precise half-life measurement of the superallowed β^+ emitter $^{38}\text{K}^m$, G.C. Ball, G. Boisvert, P. Bricault, R. Churchman, M. Domsbky, T. Lindner, J.A. Macdonald, E. Vandervoort, S. Bishop, J.M. D'Auria, J.C. Hardy, V.E. Iacob, J.R. Leslie and H.-B. Mak, *Phys. Rev. C* **82**, 045501 (2010).

Measurement of the half-life of ^{198}Au in a nonmetal: High precision measurement shows no host-material dependence, J.R. Goodwin, N. Nica, V.E. Iacob, A. Dibidad and J.C. Hardy, *Phys. Rev. C* **82**, 044320 (2010).

Comparative tests of isospin-symmetry-breaking corrections to superallowed $0^+ \rightarrow 0^+$ nuclear β decay, I.S. Towner and J.C. Hardy, *Phys. Rev. C* **82**, 065501 (2010).

Astrophysical reaction rates obtained by indirect techniques, R.E. Tribble, T. Al-Abdullah, A. Alharbi, J. Äystö, A. Banu, V. Burjan, F. Carstoiu, X. Chen, H.L. Clark, T. Davidson, C. Fu, C.A. Gagliardi, J.C. Hardy, V.E. Iacob, J. Jokinen, V. Kroha, Y.-W. Lui, M. McCleskey, A. Mukhamedzhanov, N. Nica, H.I. Park, B. Roeder, A. Saastamoinen, E. Simmons, G. Tabacaru, Y. Tokimoto, L. Trache, P.J. Woods, and Y. Zhai, *The 10th International Symposium on Origin of Matter and Evolution of Galaxies: OMEG-2010, AIP Conference Proceedings* **1289**, 239 (2010).

Experimental study of β -delayed proton decay of ^{23}Al for nucleosynthesis in novae, A. Saastamoinen, L. Trache, A. Banu, M.A. Bentley, T. Davinson, J.C. Hardy, V.E. Iacob, M. McCleskey, B.T. Roeder, E. Simmons, G. Tabacaru, R.E. Tribble, P.J. Woods and J. Äystö, *Phys. Rev. C* **83**, 045808 (2011).

Q_{EC} values of the superallowed β emitters ^{10}C , ^{34}Ar , ^{39}Ca and ^{46}V , T. Eronen, D. Gorelov, J. Hakala, J.C. Hardy, A. Jokinen, A. Kankainen, I.D. Moore, H. Penttila, M. Reponen, J. Rissanen, A. Saastamoinen and J. Aysto, *Phys. Rev. C* **83**, 055501 (2011).

Exotic nuclei and nuclear/particle astrophysics (III). From nuclei to stars, Proceedings of the 23rd Carpathian Summer School of Physics, Sinaia, Romania (June 2010). AIP Conference Proceedings, Vol. **1304** edited by L. Trache, S. Stoica and A. Smirnov (Melville, New York, 2010)

Studies of astrophysically interesting nucleus Al-23, A. Saastamoinen, L. Trache, A. Banu *et al.*, Nuclear Physics in Astrophysics IV (NPAIV 2009), J. Phys. Conference Series **202**, Pages (2010).

First measurement of the O-18(p, alpha)N-15 cross section at astrophysical energies, M. La Cognata, C. Spitaleri, A.M. Mukhamedzhanov *et al.*, Nuclear Physics in Astrophysics IV (NPAIV 2009), J. Phys. Conference Series **202**, Pages (2010).

Nuclear reactions with rare isotope beams – experiment, L. Trache, Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 32 (2010).

Astrophysically important reaction rates for novae and x-ray bursts from proton breakup at intermediate energies, A. Banu, L. Trache, F. Carstoiu *et al.*, Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 339 (2010).

Use of neutron transfer reactions to indirectly determine neutron capture cross sections on neutron-rich nuclei, M. McCleskey, A.M. Mukhamedzhanov, R.E. Tribble *et al.*, Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 387 (2010).

β -decay of Al-23 and nova nucleosynthesis, A. Saastamoinen, L. Trache, A. Banu *et al.*, Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 411 (2010).

Very low energy protons from the beta decay of proton rich nuclei for nuclear astrophysics, E. Simmons, L. Trache, A. Banu *et al.*, Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 415 (2010).

Indirect approach to the H-2(d,p)H-3 reaction study, R. Sparta, R.G. Pizzone, C. Spitaleri *et al.*, Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 420 (2010).

Measurement of the beta-p emission of Mg-20 and the breakout from the hot CNO cycle, J.P. Wallace, G. Lotay, P.J. Woods *et al.*, Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 429 (2010).

The outreach session. Round table: "Science and society. Do (all) countries need science?!" L. Trache, Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 481 (2010).

Indirect methods for nuclear astrophysics with radioactive nuclear beams, L. Trache, 5th European Summer School on Experimental Nuclear Astrophysics, AIP Conference Proceedings 1213, 125 (2010).

Use of neutron transfer reactions to indirectly determine neutron capture cross sections on neutron-rich nuclei, M. McCleskey, A.M. Mukhamedzhanov, R.E. Tribble *et al.*, 5th European Summer School on Experimental Nuclear Astrophysics, AIP Conference Proceedings 1213, 225 (2010).

Very low energy protons from the beta decay of proton rich nuclei for nuclear astrophysics, E. Simmons, L. Trache, A. Banu *et al.*, 5th European Summer School on Experimental Nuclear Astrophysics, AIP Conference Proceedings 1213, 239 (2010).

The H-2(d,p)H-3 reaction at astrophysical energies studied via the Trojan Horse method and pole approximation validity test, R. Sparta, R.G. Pizzone, C. Spitaleri *et al.*, 5th European Summer School on Experimental Nuclear Astrophysics, AIP Conference Proceedings 1213, 242 (2010).

Astrophysical reaction rates obtained by indirect techniques, R.E. Tribble, T. Al-Abdullah, A. Alharbi *et al.*, 10th International Symposium on Origin of Matter and Evolution of Galaxies, AIP Conference Proceedings 1269, 239 (2010).

Elastic and inelastic scattering of 240-MeV ⁶Li ions from ⁴⁰Ca and ⁴⁸Ca and tests of a systematic optical potential, Krishichayan, X. Chen, Y.-W. Lui, J. Button, and D. H. Youngblood, Phys. Rev. C 81, 044612 (2010).

First observation of ¹⁴F, V.Z. Goldberg, B.T. Roeder, G.V. Rogachev, G.G. Chubarian, E.D. Johnson, C. Fu, A.A. Alharbi, M.L. Avila, A. Banu, M. McCleskey, J.P. Mitchell, E. Simmons, G. Tabacaru, L. Trache, and R.E. Tribble, Phys.Lett. B 692, 307 (2010).

Highly excited alpha-cluster states in ³²S studied with the thick target inverse kinematics method, M. Norrby, T. Lonroth, V.Z. Goldberg, G.V. Rogachev, M.S. Golovkov, K.-M. Kallman, M. Lattuada S.V. Petrov, S. Romano, B.B. Skorodumov, G.P. Tiourin, W.H. Trzaska, A. Tumino, and A.N. Vorontsov, Eur. Phys. J. A 46, 5 (2010).

The Texas–Edinburgh–Catania silicon array (TECSA): A detector for nuclear astrophysics and nuclear structure studies with rare isotope beams, B.T. Roeder, M. McCleskey, L. Trache, A.A. Alharbi, A. Banu, S. Cherubini, T. Davinson, V.Z. Goldberg, M. Gulino, R.G. Pizzone, E. Simmons, R. Sparta, A. Spiridon, C. Spitaleri, J.P. Wallace, R.E. Tribble, and P.J. Woods, Nucl. Instrum. Methods Phys. Res. A 634, 71 (2011).

Use of neutron transfer reactions to indirectly determine neutron capture cross sections on neutron-rich nuclei, M. McCleskey, A.M. Mukhamedzhanov, R.E. Tribble, E. Simmons, A. Spiridon, A.

Banu, B. Roeder, V. Goldberg, L. Trache, X.F. Chen, and Y.-W. Lui, Fifth European School on Experimental Nuclear Astrophysics, Santa Tecla, Sicily, (Italy), AIP Conference Proceeding, **1213**, 225 (2010).

Determination of the axial-vector weak coupling constant with ultracold neutrons, J. Liu, M.P. Mendenhall, A.T. Holley, H.O. Back, T.J. Bowles, L.J. Broussard, R. Carr, S. Clayton, S. Currie, B.W. Filippone, A. Garcia, P. Geltenbort, K.P. Hickerson, J. Hoagland, G.E. Hogan, B. Hona, T.M. Ito, C.-Y. Liu, M. Makela, R.R. Mammei, J.W. Martin, D. Melconian, C.L. Morris, R.W. Pattie, Jr., A. Perez Galvan, M.L. Pitt, B. Plaster, J.C. Ramsey, R. Rios, R. Russell, A. Saunders, S.J. Seestrom, W.E. Sondheim, E. Tatar, R.B. Vogelaar, B. VornDick, C. Wrede, H. Yan, and A.R. Young (UCNA Collaboration), Phys. Rev. Lett. **105**, 181803 (2010).

Fragment separator ACCULINNA-2, S.A. Krupko, A.S. Fomichev, V. Chudoba, A.V. Daniel, M.S. Golovkov, V.A. Gorshkov, L.V. Grigorenko, Yu.Ts. Oganessian, S.I. Sidorchuk, R.S. Slepnev, S.V. Stepantsov, O.B. Tarasov, G.M. TerAkopian, R. Wolski, S.N. Ershov, V.K. Lukyanov, B.V. Danilin, A.A. Korshennikov, V.Z. Goldberg, I.G. Mukha, H. Simon, M. Pfitzner, N.K. Timofeyuk, M.V. Zhukov, K. Lawrie, and R.T. Newman, International Symposium on Exotic Nuclei, Sochi, Russia, AIP Conference Proceeding **1224**, 516 (2010).

γ -ray strength function method and its application to ^{107}Pd , H. Utsunomiya, S. Goriely, H. Akimune, H. Harada, F. Kitatani, S. Goko, H. Toyokawa, K. Yamada, T. Kondo, O. Itoh, M. Kamata, T. Yamagata, Y.-W. Lui, I. Daoutidis, D. P. Arteaga, S. Hilaire, and A. J. Koning, Phys. Rev. C **82**, 064610 (2010).

Transverse collective flow and mid-rapidity emission of isotopically identified light charged particles, Z. Kohley, L.W. May, S. Wuenschel, M. Colonna, M. Di Toro, M. Zielinska-Pfabe, K. Hagel, R. Tripathi, A. Bonasera, G.A. Souliotis, D.V. Shetty, S. Galanopoulos, M. Mehlman, W. B. Smith, S.N. Soisson, B.C. Stein, and S.J. Yennello. Phys. Rev. C **83**, 044601 (2011).

Investigation of transverse collective flow of intermediate mass fragments, Z. Kohley, L.W. May, S. Wuenschel, A. Bonasera, K. Hagel, R. Tripathi, R. Wada, G.A. Souliotis, D.V. Shetty, S. Galanopoulos, M. Mehlman, W. B. Smith, S.N. Soisson, B.C. Stein, and S.J. Yennello. Phys. Rev. C **82**, 064601 (2010).

Measuring the temperature of hot nuclear fragments, S. Wuenschel, A. Bonasera, L.W. May, G.A. Souliotis, R. Tripathi, S. Galanopoulos, Z. Kohley, K. Hagel, D.V. Shetty, K. Huseman, S.N. Soisson, B.C. Stein, and S.J. Yennello. Nucl. Phys. **A843**, 1, (2010).

Isoscaling, SMM and the symmetry energy: Connecting the dots, P. Marini, A. Botvina, A. Bonasera, Z. Kohley, L.W. May, R. Tripathi, S. Wuenschel, S.J. Yennello, AIP Conference Proceeding **1304**, 382 (2010).

Isoscaling studies in the $^{86}\text{Kr} + ^{112,124}\text{Sn}, ^{197}\text{Au}$ reactions at beam energy of 30 MeV/u, R. Tripathi, B.C. Stein, Z. Kohley, L.W. May, P. Marini, A. Bonasera, G.A. Souliotis, S. Wuenschel, S. Galanopoulos, D.V. Shetty, K. Huseman, S.N. Soisson, S.J. Yennello. Proceeding of DAE Symp. on Nucl. Phys. **55**, 484 (2010).

Penning trap mass spectrometry of neutron-rich Fe and Co isotopes around N=40 with LEBIT, R. Ferrer, M. Block, C. Bachelet, C. M. Campbell, M. Facina, C. M. Folden III, C. Guénaut, S. Schwarz, B. Barquest, G. Bollen, A. A. Kwiatkowski, D. L. Lincoln, A. M. Prinke, R. Ringle, J. Savory, and P. Schury, D. J. Morrissey and G. K. Pang, Phys. Rev. C **81**, 044318 (2010).

Power law behavior of the isotope yield distributions in the multifragmentation regime of heavy ion reactions, M. Huang, R. Wada, Z. Chen, T. Keutgen, S. Kowalski, K. Hagel, M. Barbui, A. Bonasera, C. Bottosso, T. Materna, J. B. Natowitz, L. Qin, M. R. D. Rodrigues, P. K. Sahu, K. J. Schmidt, and J. Wang, Phys. Rev. C **82**, 054602 (2010)

A new stopping power parameterization for 0.1-15 MeV/nucleon heavy and superheavy ions in solids and gases, M. Barbui, D. Fabris, M. Lunardon, S. Moretto, G. Nebbia, S. Pesente, G. Viesti, K. Hagel, J. B. Natowitz, R. Wada, Nucl. Instrum. Methods Phys. Res. **B268**, 2377 (2010).

Symmetry energy of dilute warm nuclear matter, J.B. Natowitz, G. Ropke, S. Typel, D. Blaschke, A. Bonasera, K. Hagel, T. Klahn, S. Kowalski, L. Qin, S. Shlomo, R. Wada, H.H. Wolter, Phys. Rev. Lett. **104**, 202501 (2010).

Kaon and pion production in central Au+Au collisions at $\sqrt{s} = 62.4$ GeV, I. C. Arsene, I. G. Bearden, D. Beavis, S. Bekele, C. Besliu, B. Budick, H. Bøggild, C. Chasman, C. H. Christensen, P. Christiansen, H. H. Dalgaard, R. Debbé, J. J. Gaardhøje, K. Hagel, H. Ito, A. Jipa, E. B. Johnson, C. E. Jørgensen, R. Karabowicz, N. Katrynska, E. J. Kim, T. M. Larsen, J. H. Lee, G. Løvholden, Z. Majka, M. J. Murray, J. Natowitz, B. S. Nielsen, C. Nygaard, D. Pal, A. Qviller, F. Rami, C. Ristea, O. Ristea, D. Röhrich, S. J. Sanders, P. Staszé, T. S. Tveter, F. Videbæk, R. Wada, H. Yang, Z. Yin, and I. S. Zgura, Phys. Lett. B **687**, 36 (2010).

The isospin dependence of the nuclear equation of state near the critical point, M. Huang, A. Bonasera, Z. Chen, R. Wada, K. Hagel, J.B. Natowitz, P.K.Sahu, L. Qin, T. Keutgen, S. Kowalski, T. Materna, J. Wang, M.Barbui, C. Bottosso, M. R.D.Rodrigues, Phys. Rev. C **81**, 044618 (2010)

Secondary neutrons as the main source of neutron-rich fission products in the bombardment of a thick U target by 1 GeV protons, A.E. Barzakh, G. Lhersonneau, L.Kh. Batist, D.V. Fedorov, V.S. Ivanov, K.A. Mezilev, P.L. Molkanov, F.V. Moroz, S.Yu. Orlov, V.N. Panteleev, Yu.M. Volkov, O. Alyakrinskiy, M. Barbui, L. Stroe and L.B. Tecchio, Eur. Phys. J. A **47**, 70 (2011).

A novel approach to isoscaling: The role of the order parameter $m = N-f-Z(f)/A(f)$, M. Huang, Z. Chen, S. Kowalski *et al.*, Nucl. Phys. **A847**, 233 (2010).

Isobaric yield ratios and the symmetry energy in heavy-ion reactions near the Fermi energy, M. Huang, Z. Chen, S. Kowalski *et al.*, Phys. Rev. C **81**, 044620 (2010).

Experimental investigations of clustering in low density nuclear matter, J.B. Natowitz, K. Hagel, R. Wada *et al.*, Carpathian Summer School of Physics Conference, in Exotic Nuclei and Nuclear – Particle Astrophysics III: From Nuclei to Stars, AIP Conference Proceedings **1304**, 135 (2010).

Low density nuclear matter in Fermi energy collisions, L. Qin, K. Hagel, R. Wada *et al.*, International Workshop on Nuclear Dynamics in Heavy-Ion Reactions and the Symmetry Energy (IWND2009), Int. J. Mod. Phys. E **19**, 1513 (2010).

The isospin dependence of the nuclear phase transition near the critical point, Z. Chen, R. Wada, A. Bonasera *et al.*, International Workshop on Nuclear Dynamics in Heavy-Ion reactions and the Symmetry Energy (IWND2009), Int. J. Mod. Phys. E **19**, 1570 (2010).

Isoscaling and the symmetry energy in the multifragmentation regime of heavy-ion collisions, Z. chen, S. Kowalski, M. Huang *et al.*, Phys. Rev. C **81**, 064613 (2010).

Isospin dependence of the nuclear equation of state near the critical point, M. Hunag, Z. Chen, S. Kowalski *et al.*, Phys. Rev. C **81**, 044620 (2010).

Isospin- and momentum-dependence effective interactions for the baryon octet and the properties of hybrid stars, J. Xu, L.W. Chen, C.M. Ko, and B.A. Li, Phys. Rev. C **81**, 055803 (2010).

Transition density and pressure in hot neutron stars, J. Xu, L.W. Chen, C.M. Ko, and B.A. Li, Phys. Rev. C **81**, 055805 (2010).

Density slope of the nuclear symmetry energy from the neutron skin thickness of heavy nuclei, L. W. Chen, C.M. Ko, B.A. Li, and J. Xu, Phys. Rev. C **82**, 024321 (2010).

Incompressibility of asymmetric nuclear matter, L.W. Chen, B.J. Cai, C. Shen, C.M. Ko, J. Xu, and B.A. Li, Int. J. Mod. Phys. E **19**, 1675 (2010).

Transition density and pressure at the inner edge of neutron star crusts, J. Xu, C.M. Ko, L.W. Chen, B.A. Li, and H.R. Ma, Int. J. Mod. Phys. E **19**, 1705 (2010).

Medium effects on charged pion ratio in heavy ion collisions, C.M. Ko, Y. Oh, and J. Xu, Int. J. Mod. Phys. E **19**, 1763 (2010).

Density matrix expansion for the isospin- and momentum-dependent MDI interaction, J. Xu and C.M. Ko, Phys. Rev. C **82**, 044311 (2010).

J/ ψ production and elliptic flow in relativistic heavy ion collisions, T. Song, C.M. Ko, S.H. Lee, and J. Xu, Phys. Rev. C **83**, 014914 (2010).

Dilepton production in schematic causal viscous hydrodynamics, T. Song, K.C. Han, and C.M. Ko, Phys. Rev. C **83**, 024904 (2010).

Effects of triangular flow on di-hadron azimuthal correlations in relativistic heavy ion collisions, J. Xu and C.M. Ko, Phys. Rev. C **83**, 021903(R) (2010).

Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV in a multiphase transport model, J. Xu and C.M. Ko, Phys. Rev. C **83**, 034904 (2010).

Energy release from hadron-quark phase transition in neutron stars and the axial w mode of gravitational waves, W. Lin, B.A. Li, J. Xu, C.M. Ko, and D.H. Wen, Phys. Rev. C **83**, 045802 (2010).

Identifying multiquark hadrons from heavy ion collisions, S. Cho, T. Furumoto, T. Hyodo, D. Jido, C.M. Ko, S.H. Lee, M. Nielsen, A. Ohnishi, T. Sekihara, S. Yasui, and K. Yazaki, Phys. Rev. Lett. **106**, 212001 (2011).

Jet conversion and quark coalescence in relativistic heavy-ion collisions, C.M. Ko, IL Nuovo Cimento, **34**, 13 (2011).

Charms in relativistic heavy ion collisions, C.M. Ko, S.H. Lee, W. Liu, Y. Oh, S. Yasui, and B.W. Zhang, Proceedings of XXVI Max Born Symposium on Strong Interactions, Wroclaw, Poland, July 9-11, 2009, edited by D. Blaschke, K. Redlich, L. Turko, and D. Zablocki, Acta Phys. Polo. B, Proc. Suppl., **3**, 601-610 (2010).

Charmonium production and elliptic flow in relativistic heavy ion collisions, C.M. Ko, S.H. Lee, T. Song, and J. Xu, Proceedings of International Workshop on Hot and Cold Baryonic Matter, Budapest, Hungary, August 15-20, 2010, EPJ Web of Conferences **13**, 04001: 1-8 (2011).

Exotics from Heavy Ion Collisions, A. Ohnishi, S. Cho, T. Furumoto, T. Hyodo, D. Jido, C.M. Ko, S.H. Lee, M. Nielsen, T. Sekihara, S. Yasui, and K. Yazaki, Proceedings of International Conference on Structure of Baryons, Osaka, Japan, December 7-11 (2010).

Astrophysical S factor for the $^{15}\text{N}(p,\gamma)^{16}\text{O}$ reaction, A.M. Mukhamedzhanov, M. La Cognata, and V. Kroha, Phys. Rev. C **83**, 044604 (2011).

Solar fusion cross sections. II. The pp chain and CNO cycles, E.G. Adelberger, A. Garcí'a, R.G. Hamish Robertson, and K.A. Snover, A.B. Balantekin, K. Heeger, and M.J. Ramsey-Musolf, D. Bemmerer and A. Junghans, C.A. Bertulani, J.-W. Chen, H. Costantini and P. Prati, M. Couder, E. Uberseder, and M. Wiescher, R. Cyburt, B. Davids, S. J. Freedman, M. Gai, D. Gazit, L. Gialanella and G. Imbriani, U. Greife, M. Hass, W.C. Haxton, T. Itahashi, K. Kubodera, K. Langanke, D. Leitner, M. Leitner, P. Vetter, and L. Winslow, L.E. Marcucci, T. Motobayashi, A. Mukhamedzhanov R.E. Tribble, Kenneth M. Nollett, F.M. Nunes, T.-S. Park, P.D. Parker, R. Schiavilla, E.C. Simpson, C. Spitaleri, F. Strieder and H.-P. Trautvetter, K. Suemmerer, and S. Typel, *Rev. Mod. Phys.* **83**, 195 (2011).

Distortion effects on Trojan Horse applications, R.G. Pizzone, C. Spitaleri, A.M. Mukhamedzhanov, L.D. Blokhintsev, C.A. Bertulani, B.F. Irgaziev, M. La Cognata, L. Lamia and S. Romano, *Few-Body Systems* **50**, 319 (2011).

Indirect measurement of $^{17}\text{O}(p,\alpha)^{14}\text{N}$ cross section at ultra-low energies, M. L. Sergi, C. Spitaleri A. Coc, A. Mukhamedzhanov, V. Burjan, S. Cherubini, V. Crucill'a, M. Gulino, F. Hammache, Z. Hons, B. Irgaziev, G. Kiss, V. Kroha, M. La Cognata, L. Lamia, R.G. Pizzone, S.M.R. Puglia, G.G. Rapisarda, S. Romano, N. de Sereville, E. Somorjai, S. Tudisco and A. Tumino, *J. Phys: Conference Series* **202**, 012021 (2010).

Study of the $^6\text{Li}(n, \alpha)^3\text{H}$ reaction via the ^2H quasi-free break-up, M. Gulino, C. Spitaleri, S. Cherubini, V. Crucillà, M. La Cognata, L. Lamia, R.G. Pizzone, S. Romano, M.L. Sergi, A. Tumino, Li Chengbo, Z. Elekes, E. Somorjai, V. Burjan, V. Kroha and A Mukhamedzhanov, *J. Phys. G* **37**, 125105 (2010).

Effect of high-energy resonances on the $^{18}\text{O}(p, \alpha)^{15}\text{N}$ reaction rate at AGB and post-AGB relevant temperatures, M. La Cognata, C. Spitaleri and A. M. Mukhamedzhanov, *Astrophys. J.* **723**, 1512 (2010).

Recent studies on Trojan Horse method, Silvio Cherubinia, Claudio Spitaleri, Marisa Gulino, Marco La Cognata, Rosario G. Pizzone, Livio Lamia, Giuseppe G. Rapisarda, Stefano Romano, Letizia Sergi, Akram Mukhamedzhanov, Livius Trache, R.E. Tribble, Shigeru Kubono, Hidetoshi Yamaguchi, and Aurora Tumino, *Acta Phys. Polonica B* **42**, 769 (2011).

Unitary correlation in nuclear reaction theory: Separation of nuclear reactions and spectroscopic factor, A.M. Mukhamedzhanov and A.S. Kadyrov, *Phys. Rev. C* **82**, 051601(R) (2010).

Excitation of compound states in the subsystems as indirect tool in nuclear astrophysics, A.M. Mukhamedzhanov, M. La Cognata, C. Spitaleri, and R. E. Tribble, *Eur. J. Phys. Web of Conferences* **2**, 13001 (2010).

Asymptotic normalization coefficient and important astrophysical process $^{15}\text{N}(p, \gamma)^{16}\text{O}$, A.M. Mukhamedzhanov, A. Banu, P. Bem, V. Burjan, C.A. Gagliardi, V.Z. Goldberg, Z. Hons, V. Kroha, M. La Cognata, S. Piskor, R.G. Pizzone, S. Romano, E. Simeckova, C. Spitaleri, L. Trache and R.E. Tribble, *J. Phys. Conference Series* **202**, 012017 (2010).

Indirect study of the $^2\text{H}(d,p)^3\text{H}$ and $^2\text{H}(d,n)^3\text{He}$ reactions at astrophysical energies via the Trojan Horse method, A. Tumino, C. Spitaleri, A.M. Mukhamedzhanov, S. Typel, M. Aliotta, V. Burjan, M. Gimenez del Santo, G.G. Kiss, V. Kroha and Z. Hons, *Few-Body Systems* **50**, 323 (2011),

Improved results on the extraction of $^{11}\text{B}(p,\alpha)^8\text{Be}$ S(E)-factor via the Trojan Horse method, L. Lamia, C. Spitaleri, S. Romano, N. Carlin, S. Cherubini, Cheng-Bo Li, V. Crucillà, M.G. Del Santo, M. Gulino, G.G. Kiss, V. Kroha, S. Kubono, M. La Cognata, A.M. Mukhamedzhanov, R.G. Pizzone, S.M.R. Puglia, Qun-Gang Wen, G.G. Rapisarda, M.L. Sergi, Shu-Hua Zhou, E. Somorjai, F. Souza, A. Szanto de Toledo, G. Tabacaru, S. Tudisco, A. Tumino, Y. Wakabayashi, H. Yamaguchi, *Memorie della Società Astronomica Italiana Supplement*, **14**, 39 (2010).

DWBA momentum distribution and its effect on THM, M. La Cognata, C. Spitaleri, A. Mukhamedzhanov, V. Goldberg, B. Irgaziev, L. Lamia, R.G. Pizzone, M.L. Sergi and R.E. Tribble, *Nucl. Phys.* **A834**, 658c (2010),

Damping effects on centroid energies of isoscalar compression modes, D.C. Fuls, V.M. Kolomietz, S.V. Lukyanov, and S. Shlomo, *EPL* **90**, 20006 (2010).

Symmetry energy of dilute warm nuclear matter, J.B. Natowitz, G. Ropke, S. Typel, D. Blaschke, A. Bonasera, K. Hagel, T. Klahn, S. Kowalski, L. Qin, S. Shlomo, R. Wada, and H.H. Walter, *Phys. Rev. Lett.* **104**, 202501 (2010).

Modern energy density functional for properties of nuclei and the nuclear matter equation of state, S. Shlomo, *Phys. At. Nucl.* **73**, 1390 (2010).

Freeze-out properties of hot nuclear matter created in heavy-ion collisions, S. Shlomo, *Nucl. Phys. At. Energy* **4(11)**, 347 (2010).

Event-by-event jet quenching, Ricardo Rodriguez, Rainer J. Fries, and Enrique Ramirez, *Phys. Lett. B* **693**, 108 (2010).

Scaling of elliptic flow, recombination and sequential freeze-out of hadrons in heavy-ion collisions, Min He, Rainer J. Fries, and Ralf Rapp, *Phys. Rev. C* **82**, 034907 (2010).

Event-by-event jet quenching and higher fourier moments of hard probes, Rainer J. Fries and Ricardo Rodriguez, *Nucl. Phys.* **A855**, 424 (2011).

High energy nuclear collisions: Theory overview, Rainer J. Fries, *Pramana* **75**, 235 (2010).

Quark recombination in heavy ion collisions, Rainer J. Fries, PoS, Workshop on Critical Examination of RHIC Paradigms (CERP2010), Austin, Texas, April 2010.

The A(1)(1260) as a rho-pi resonance in nuclear matter, D. Cabrera, D. Jido, R. Rapp, and L. Roca, *Prog. Theor. Phys.* **123** (2010) 719-742.

Charmonium and bottomonium in heavy-ion collisions, R. Rapp, D. Blaschke and P. Crochet, *Prog. Part. Nucl. Phys.* **65**, 209 (2010).

Medium modifications of the rho meson in nuclear photoproduction, F. Riek, R. Rapp, T.-S. H. Lee, and Y. Oh, *Phys. Rev. C* **82**, 015202 (2010).

Quarkonia and heavy-quark relaxation times in the quark-gluon Pplasma, F. Riek and R. Rapp, *Phys. Rev. C* **82**, 035201 (2010).

Charmonium in medium: from correlators to experiment, X. Zhao and R. Rapp, *Phys. Rev. C* **82**, 064905 (2010).

The CBM physics book: compressed baryonic matter in laboratory experiments, B. Friman, C. Höhne, J. Knoll, S. Leupold, J. Randrup, R. Rapp and P. Senger (editors), *Lect. Notes Phys.* **814**, 1 (2011).

In-medium vector mesons, dileptons and chiral restoration, R. Rapp, *AIP Conf. Proc.* **1322**, 55 (2010).

Axialvector resonance in nuclear matter, D. Cabrera, D. Jido, R. Rapp and L. Roca, *AIP Conf. Proc.* **1322**, 90 (2010).

Scaling properties at freeze-out in relativistic heavy-ion collisions, M.M. Aggarwal *et al.* (STAR Collaboration), *Phys. Rev. C* **83**, 034910 (2011).

Strange and multi-strange particle production in Au+Au collisions at $\sqrt{s_{NN}} = 62.4$ GeV, M.M. Aggarwal *et al.* (STAR Collaboration), *Phys. Rev. C* **83**, 024901 (2011).

Measurement of the parity-violating longitudinal single-spin asymmetry for the W^\pm boson production in polarized proton-proton collisions at $\sqrt{s_{NN}} = 500$ GeV, M.M. Aggarwal *et al.* (STAR Collaboration), *Phys. Rev. Lett.* **106**, 062002 (2011).

New experimental constraints for the standard model from muon decay, R. Bayes, J.F. Bueno, A. Hillairet, Yu.I. Davydov, P. Depommier, W. Faszler, C.A. Gagliardi, A. Gaponenko, D.R. Gill, A. Grossheim, P. Gumplinger, M.D. Hasinoff, R.S. Henderson, J. Hu, D.D. Koetke, R.P. McDonald, G.M. Marshall, E.L. Mathie, R.E. Mischke, K. Olchanski, A. Olin, R. Openshaw, J.-M. Poutissou, R. Poutissou, V. Selivanov, G. Sheffer, B. Shin, T.D.S. Stanislaus, R. Tacik, R.E. Tribble, *Phys. Rev. Lett.* **106**, 041804 (2011).

Measurement of the bottom contribution to non-photon electron production in p+p collisions at $\sqrt{s_{NN}} = 200$ GeV, M.M. Aggarwal *et al.* (STAR Collaboration), *Phys. Rev. Lett.* **105**, 202301 (2010).

Parton energy loss in heavy-ion collisions via direct-photon and charged-particle azimuthal correlations, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Rev. C* **82**, 034909 (2010).

Balance functions from Au+Au, d+Au and p+p collisions at $\sqrt{s_{NN}} = 200$ GeV, M.M. Aggarwal *et al.* (STAR Collaboration), *Phys. Rev. C* **82**, 024905 (2010).

Azimuthal di-hadron correlations in d+Au and Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV measured at the STAR detector, M.M. Aggarwal *et al.* (STAR Collaboration), *Phys. Rev. C* **82**, 024912 (2010).

Upsilon cross section in p+p collisions at $\sqrt{s_{NN}} = 200$ GeV, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Rev. D* **82**, 012004 (2010).

Higher moments of net-proton multiplicity distributions at RHIC, M.M. Aggarwal *et al.* (STAR Collaboration), *Phys. Rev. Lett.* **105**, 022302 (2010).

Three-particle coincidence of the long range pseudorapidity correlation in high energy nucleus-nucleus collisions, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Rev. Lett.* **105**, 022301 (2010).

Inclusive π^0 , η , and direct photon production in p+p and d+Au collisions at $\sqrt{s_{NN}} = 200$ GeV, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Rev. C* **81**, 064904 (2010).

Longitudinal scaling property of the charge balance function in Au+Au collisions at 200 GeV, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Lett. B* **690**, 239 (2010).

Observation of charge-dependent azimuthal correlations and possible local strong parity violation in heavy ion collisions, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Rev. C* **81**, 054908 (2010).

Solar fusion cross sections II: The pp chain and CNO cycles, E.G. Adelberger, A. Garcia, R.G. Hamish Robertson, K.A. Snover, A.B. Balantekin, K. Heeger, M.J. Ramsey-Musolf, D. Bemmerer, A. Junghans, C.A. Bertulani, J.-W. Chen, H. Costantini, D. Prati, M. Couder, E. Uberseder, M. Wiescher, R. Cyburt, B. Davids, S.J. Freedman, M. Gai, D. Gazit, L. Gialanella, G. Imbriani, U. Griefe, M. Hass, W.C.

Haxton, T. Itahashi, K. Kubodera, K. Langanke, D. Leitner, M. Leitner, P. Vetter, L. Winslow, L.E. Marcucci, T. Motobayashi, A. Mukhamedznahov, R.E. Tribble, K.M. Nollet, F.M. Nunes, T.-S.Park, P.D. Parker, R. Schiavilla, E.C. Simpson, C. Spitaleri, F. Strieder, H.-P. Trautvetter, K. Suemmerer, S. Typel, *Rev. Mod. Phys.* **83**, 195 (2011).

Identified high p_T spectra in Cu+Cu collisions at $\sqrt{s_{NN}} = 200$ GeV, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Rev. C* **81**, 054907 (2010).

Charged and strange hadron elliptic flow in Cu+Cu collisions at $\sqrt{s_{NN}} = 62.4$ and 200 GeV, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Rev. C* **81**, 044902 (2010).

Observation of $\pi^+\pi^-\pi^+\pi^-$ photoproduction in ultra-peripheral heavy ion collisions at $\sqrt{s_{NN}} = 200$ GeV at the STAR detector, B.I. Abelev *et al.* (STAR Collaboration), *Phys. Rev. C* **81**, 044901 (2010).

Identified charged hadron production in p+p collisions at $\sqrt{s_{NN}} = 62.4$ and 200 GeV, A. Adare *et al.* (PHENIX Collaboration), *Phys. Rev. C* **83**, 064903 (2011).

High p_T non-photonic electron production in p+p collisions at $\sqrt{s_{NN}} = 200$ GeV, H. Agakishiev *et al.* (STAR Collaboration), *Phys. Rev. D* **83**, 052006 (2011).

Studies of di-jet survival and surface emission bias in Au+Au collisions via angular correlations with respect to back-to-back leading hadrons, H. Agakishiev *et al.* (STAR Collaboration), *Phys. Rev. C* **83**, 061901 (2011).

Measurement of neutral mesons in p+p collisions at $\sqrt{s_{NN}} = 200$ GeV and scaling properties of hadron production, A. Adare *et al.* (PHENIX Collaboration), *Phys. Rev. D* **83**, 052004 (2011).

Cross section and double helicity asymmetry for η mesons and their comparison to neutral pion production in p+p collisions at $\sqrt{s_{NN}}=200$ GeV, A. Adare *et al.* (PHENIX Collaboration), *Phys. Rev. D* **83**, 032001 (2011).

Nuclear modification factors of phi mesons in d+Au, Cu+Cu and Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV, A. Adare *et al.* (PHENIX Collaboration), *Phys. Rev. C* **83**, 024909 (2011).

High p_T direct photon and π^0 triggered azimuthal jet correlations and measurement of k_T for isolated direct photons in p+p collisions at $\sqrt{s_{NN}}=200$ GeV, A. Adare *et al.* (PHENIX Collaboration), *Phys. Rev. D* **82**, 072001 (2010).