

## PUBLICATIONS DURING 2000

### HEAVY-ION NUCLEAR PHYSICS RESEARCH

The  $^{44}\text{Ti}(\alpha, p)$  Reaction and Its Implication on the  $^{44}\text{Ti}$  Yield in Supernovae  
A. A. Sonzogni, K. E. Rehm, I. Ahmad, F. Borasi, D. L. Bowers, F. Brumwell, J. Caggiano, C. N. Davids, J. P. Greene, B. Harss, A. Heinz, D. Henderson, R. V. F. Janssens, C. L. Jiang, G. McMichael, J. Nolen, R. C. Pardo, M. Paul, J. P. Schiffer, R. E. Segel, D. Seweryniak, R. H. Siemssen, J. W. Truran, J. Uusitalo, I. Wiedenhöver, and B. Zabransky  
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P. Reiter, T. L. Khoo, T. Lauritsen, C. J. Lister, D. Seweryniak, A. A. Sonzogni, I. Ahmad, N. Amzal, P. Bhattacharyya, P. A. Butler, M. P. Carpenter, A. J. Chewter, J. A. Cizewski, C. N. Davids, K. Y. Ding, N. Fotiades, J. P. Greene, P. T. Greenlees, A. Heinz, W. F. Henning, R.-D. Herzberg, R. V. F. Janssens, G. D. Jones, H. Kankaanpää, F. G. Kondev, W. Korten, M. Leino, S. Siem, J. Uusitalo, K. Vetter, and I. Wiedenhöver  
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C. E. Svensson, A. O. Macchiavelli, A. Juodagalvis, A. Poves, I. Ragnarsson, S. Åberg, D. E. Appelbe, R. A. E. Austin, C. Baktash, G. C. Ball, M. P. Carpenter, E. Caurier, R. M. Clark, M. Cromaz, M. A. Deleplanque, R. M. Diamond, P. Fallon, M. Furlotti, A. Galindo-Uribarri, R. V. F. Janssens, G. J. Lane, I. Y. Lee, M. Lipoglavsek, F. Nowacki, S. D. Paul, D. C. Radford, D. G. Sarantites, D. Seweryniak, F. S. Stephens, V. Tomov, K. Vetter, D. Ward, and C. H. Yu  
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Level Structure of  $^{94,95,96}\text{Tc}$  at High Spins and Shell-Model Calculations

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Quasicontinuous Decay Spectra of Superdeformed Bands in  $^{192,194}\text{Pb}$  and Energy Gaps in Level Density at Moderate Angular Momenta

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C. Fahlander, M. Palacz, D. Rudolph, D. Sohler, J. Blomqvist, J. Kownacki, L. O. Norlin, J. Nyberg, A. Algora, C. Andreoiu, G. de Angelis, A. Ataç, D. Bazzacco, L. Berglund, T. Bäck, J. Cederkäll, B. Cederwall, Zs. Dombradi, B. Fant, E. Farnea, A. Gadea, M. Górska, H. Grawe, N. Hashimoto-Saitoh, A. Johnson, A. Kerek, W. Klamra, K. Lagergren, S. M. Lenzi, A. Likar, M. Lipoglavšek, M. Moszyński, D. R. Napoli, C. Rossi-Alvarez, H. A. Roth, T. Saitoh, D. Seweryniak, Ö. Skeppstedt, M. Weiszflog, and M. Wolińska

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D. G. Jenkins, D. P. Balamuth, M. P. Carpenter, C. J. Lister, D. Seweryniak, S. M. Fischer, R. M. Clark, P. Fallon, A. O. Macchiavelli, C. E. Svensson, D. G. Sarantites, N. S. Kelsall, and R. Wadsworth

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J. Ekman, D. Rudolph, C. Fahlander, R. J. Charity, W. Reviol, D. G. Sarantites, V. Tomov, R. M. Clark, M. Cromaz, P. Fallon, A. O. Macchiavelli, M. P. Carpenter, and D. Seweryniak

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C. E. Svensson, A. O. Macchiavelli, A. Juodagalvis, A. Poves, I. Ragnarsson, S. Åberg, D. E. Appelbe, R. A. E. Austin, C. Baktash, G. C. Ball, M. P. Carpenter, E. Caurier, R. M. Clark, M. Cromaz, M. A. Deleplanque, R. M. Diamond, P. Fallon, M. Furlotti, A. Galindo-Uribarri, R. V. F. Janssens, G. J. Lane, I. Y. Lee, M. Lipoglavsek, F. Nowacki, S. D. Paul, D. C. Radford, D. G. Sarantites, D. Seweryniak, F. S. Stephens, V. Tomov, K. Vetter, D. Ward, and C. H. Yu

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C. Andreoiu, D. Rudolph, C. E. Svensson, A. V. Afanasjev, J. Dobaczewski, I. Ragnarsson, R. A. E. Austin, C. Baktash, M. P. Carpenter, R. M. Clark, J. Eberth, C. Fahlander, D. S. Haslip, R. V. F. Janssens, T. L. Khoo, F. Kondev, D. R. LaFosse, T. Lauritsen, S. D. Paul, T. Rodinger, D. G. Sarantites, D. Seweryniak, T. Steinhardt, O. Thelen, H. G. Thomas, J. C. Waddington, W. Weintraub, and J. N. Wilson

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D. G. Jenkins, D. P. Balamuth, M. P. Carpenter, C. J. Lister, D. Seweryniak, S. Fischer, R. M. Clark, P. Fallon, A. O. Macchiavelli, C. Svensson, D. Sarantites, N. S. Kelsall, and R.

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F. G. Kondev, M. P. Carpenter, R. V. F. Janssens, K. Abu Saleem, I. Ahmad, M. Alcorta, H. Amro, P. Bhattacharyya, L. T. Brown, J. Caggiano, C. N. Davids, S. M. Fischer, A. Heinz, B. Heskind, R. A. Kaye, T. L. Khoo, T. Lauritsen, C. J. Lister, W. C. Ma, R. Nouicer, J. Ressler, W. Reviol, L. L. Riedinger, D. Seweryniak, S. Siem, A. A. Sonzogni, J. Uusitalo, P. G.

Varmette, and I. Wiedenhöver

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Entry Distributions and Fusion Dynamics in the Radiative Capture Reaction of  $^{90}\text{Zr} + ^{90}\text{Zr}$

F. G. Kondev, M. P. Carpenter, C. J. Lister, R. V. F. Janssens, K. Abu Saleem, I. Ahmad, H. Amro, J. Caggiano, C. N. Davids, A. Heinz, B. Heskind, R. A. Kaye, T. L. Khoo, T. Lauritsen, W. C. Ma, J. Ressler, W. Reviol, L. L. Riedinger, D. G. Sarantites, D. Seweryniak, S. Siem, A. A. Sonzogni, P. G. Varmette, and I. Wiedenhöver

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First Observation of Excited Structures in Neutron Deficient, Odd-Mass Pt, Au and Hg Nuclei

F. G. Kondev, M. P. Carpenter, R. V. F. Janssens, K. Abu Saleem, I. Ahmad, M. Alcorta, H. Amro, P. Bhattacharyya, L. T. Brown, J. Caggiano, J. A. Cizewski, M. Danchev, C. N. Davids, S. M. Fischer, D. J. Hartley, A. Heinz, B. Heskind, R. A. Kaye, T. L. Khoo, T. Lauritsen, C. J. Lister, W. C. Ma, R. Nouicer, G. L. Poli, J. Ressler, W. Reviol, L. L. Riedinger, D. Seweryniak, S. Siem, M. B. Smith, A. A. Sonzogni, J. Uusitalo, P. G. Varmette, and I. Wiedenhöver

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P. Reiter, T. L. Khoo, T. Lauritsen, C. J. Lister, D. Seweryniak, A. A. Sonzogni, I. Ahmad, N. Amzal, P. Bhattacharyya, P. A. Butler, M. P. Carpenter, A. J. Chewter, J. A. Cizewski, C. N. Davids, K. Y. Ding, N. Fotiades, J. P. Greene, P. T. Greenlees, A. Heinz, W. F. Henning, R.-D. Herzberg, R. V. F. Janssens, G. D. Jones, F. G. Kondev, W. Korten, M. Leino, S. Siem, J. Uusitalo, K. Vetter, and I. Wiedenhöver

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F. G. Kondev, R. V. F. Janssens, D. J. Hartley, M. P. Carpenter, C. J. Lister, K. Abu Saleem,  
I. Ahmad, D. L. Balabanski, P. Chowdhury, D. M. Cullen, M. Danchev, G. D. Dracoulis, H.  
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Riley, D. Seweryniak, I. Shestakova, G. Sletten, P. M. Walker, C. Wheldon, I. Wiedenhöver,  
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P. Bhattacharyya, J. Caggiano, M. Devlin, A. Heinz, F. G. Kondev, T. Lauritsen, D. G.  
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C. E. Svensson, A. O. Macchiavelli, A. Juodagalvis, A. Poves, D. E. Appelbe, R. A. E. Austin,  
C. Baktash, G. C. Ball, M. P. Carpenter, R. M. Clark, M. Cromaz, M. A. Deleplanque, R. M.  
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M. Lipoglavsek, S. D. Paul, D. C. Radford, D. G. Sarantites, D. Seweryniak, F. S. Stephens,  
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W. Reviol, D. G. Sarantites, R. J. Charity, V. Tomov, D. Rudolph, R. M. Clark, P. Fallon, A.  
O. Macchiavelli, M. P. Carpenter, and D. Seweryniak

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I. Shestakova, P. Chowdhury, R. D'Alarcao, C. J. Pearson, Z. Podolyak, P. M. Walker, C. Wheldon, D. M. Cullen, I. Ahmad, M. P. Carpenter, R. V. F. Janssens, T. L. Khoo, F. G. Kondev, C. J. Lister, D. Seweryniak, and I. Wiedenhöver  
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High-Spin States in Exotic, Neutron-Rich Nuclei Near and Above  $^{208}\text{Pb}$

G. J. Lane, B. Fornal, R. Broda, A. P. Byrne, G. D. Dracoulis, R. M. Clark, M. Cromaz, M. A. Deleplanque, R. M. Diamond, P. Fallon, R. V. F. Janssens, I. Y. Lee, A. O. Macchiavelli, F. S. Stephens, C. E. Svensson, K. Vetter, D. Ward, and I. Wiedenhöver  
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Gammasphere and FMA: A Journey Along the Proton Drip-Line

D. Seweryniak and the Gammasphere Collaboration  
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Systematic Study of Energy-Spin Entry Distributions at the Proton Dripline in the  $A \sim 170$  Region

M. B. Smith, J. A. Cizewski, M. P. Carpenter, K. S. Abu Saleem, I. Ahmad, H. Amro, M. Danchev, C. N. Davids, D. J. Hartley, A. Heinz, R. V. F. Janssens, T. L. Khoo, F. G. Kondev, G. J. Lane, T. Lauritsen, C. J. Lister, W. C. Ma, G. L. Poli, J. Ressler, W. Reviol, L. L. Riedinger, D. Seweryniak, and I. Wiedenhöver  
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Entry Distribution of  $^{220}\text{Th}$  - A Method to Determine the Fission Barrier of an Unstable Nucleus

A. Heinz, T. L. Khoo, P. Reiter, I. Ahmad, P. Bhattacharyya, J. Caggiano, M. P. Carpenter, J. A. Cizewski, C. N. Davids, W. F. Henning, R. V. F. Janssens, G. D. Jones, R. Julin, F. G. Kondev, T. Lauritsen, C. J. Lister, D. Seweryniak, S. Siem, A. A. Sonzogni, J. Uusitalo, and I. Wiedenhöver

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H. Amro, P. G. Varomette, W. C. Ma, B. Herskind, G. B. Hagemann, G. Sletten, R. Janssens, A. Bracco, M. Bergström, M. Carpenter, J. Domsheit, S. Frattini, D. Hartley, H. Hubel, T. L. Khoo, T. Lauritsen, K. Lister, B. Million, S. Ødegård, R. B. Piercy, L. L. Riedinger, K. A. Schmidt, S. Siem, and J. A. Winger  
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R. Broda, B. Fornal, W. Królas, T. Pawlat, J. Wrzesinski, P. J. Daly, C. T. Zhang, P. Bhattacharyya, Z. W. Grabowski, G. J. Lane, R. M. Clark, G. D. Dracoulis, A. P. Byrne, R. V. F. Janssens, I. Wiedenhöver, K. H. Maier, J. Blomqvist, and M. Rejmund  
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Spectroscopy of  $^{189}\text{Pb}$  and  $^{191}\text{Pb}$

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**OPERATION AND DEVELOPMENT OF ATLAS  
and  
R & D RELATED TO A FUTURE ADVANCED EXOTIC BEAM FACILITY**

**Multiple Charge State Beam Acceleration at ATLAS**

J. A. Nolen, P. N. Ostroumov, R. C. Pardo, K. W. Shepard, G. P. Zinkann,  
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