

**Thomas Baumann**

physicist

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- education** PhD (magna cum laude) in Nuclear Physics from the University of Giessen, Germany, February 1999. Title of dissertation: "Longitudinal Momentum Distributions of  $^8\text{B}$  and  $^{19}\text{C}$ : Signatures for One-Proton and One-Neutron Halos."  
Diplom in Physics from the University of Münster, Germany, June 1995. Title of thesis: "Untersuchung der Dipolriesenresonanz im angeregten  $^{120}\text{Sn}$ ."
- research positions** Physicist at the National Superconducting Cyclotron Laboratory (NSCL), Michigan State University, East Lansing, Michigan, since April 2003.  
Visiting assistant professor at the NSCL, March 1999–April 2003.  
Doctorate student at the Gesellschaft für Schwerionenforschung (GSI) in Darmstadt, Germany, 1995–1999.  
Research assistant at the NSCL 1993–1995.
- scholarships** Scholarship of the German National Merit Foundation (Studienstiftung), 1992–1995.
- experience** Planned and carried out experiments at GSI, the NSCL, RIKEN accelerator research facility in Japan, and Argonne National Laboratory.  
Development of programs for data analysis and detector simulation.  
Detector design and testing.  
Expert for DoE Review.  
Referee for Nuclear Instruments and Methods, Nuclear Physics A, and the American Institute of Physics.
- teaching** Honors Physics Mechanics, spring 2002.  
Lectured on fragment separators and neutron detection at the NSCL Minicourse on Experimental Techniques, July 2001.  
Lectured classes for Honors Physics Electricism, fall 2000.  
Course on PAW and GEANT at the NSCL, spring 2000.
- memberships** Deutsche Physikalische Gesellschaft, American Physical Society.
- outreach** State supervisor for the Michigan Science Olympiad.
- computing** Experienced user of VMS, UNIX/LINUX, Fortran, C++, PAW, GEANT, L<sup>A</sup>T<sub>E</sub>X, Tcl/Tk.
- language** German, English (fluent), French (functional), Spanish (basic).

## Publications in Refereed Scientific Journals

### 1. **Determination of the $N = 16$ shell closure at the oxygen drip line**

C. R. Hoffman, T. Baumann, D. Bazin, J. Brown, G. Christian, P. A. DeYoung, J. E. Finck, N. Frank, J. Hinnefeld, R. Howes, P. Mears, E. Mosby, S. Mosby, J. Reith, B. Rizzo, W. F. Rogers, G. Peaslee, W. A. Peters, A. Schiller, M. J. Scott, S. L. Tabor, M. Thoennessen, P. J. Voss, and T. Williams (MoNA Collaboration)  
Phys. Rev. Lett. 100 (2008) 152502

### 2. **Big Physics at Small Places: The Mongol Horde Model of Undergraduate Research**

P. J. Voss, J. E. Finck, R. H. Howes, J. Brown, T. Baumann, A. Schiller, M. Thoennessen, P. A. DeYoung, G. F. Peaslee, J. Hinnefeld, B. Luther, P. V. Pancella, W. F. Rogers  
Journal of College Teaching & Learning 5 (2008) 37–46

### 3. **Production of nuclei in neutron unbound states via primary fragmentation of $^{48}\text{Ca}$**

G. Christian, W. A. Peters, D. Absalon, D. Albertson, T. Baumann, D. Bazin, E. Breitbach, J. Brown, P. L. Cole, D. Denby, P. A. DeYoung, J. E. Finck, N. Frank, A. Fritsch, C. Hall, A. M. Hayes, J. Hinnefeld, C. R. Hoffman, R. Howes, B. Luther, E. Mosby, S. Mosby, D. Padilla, P. V. Pancella, G. Peaslee, W. F. Rogers, A. Schiller, M. J. Strongman, M. Thoennessen, L. O. Wagner  
Nucl. Phys. A 801 (2008) 101–113

### 4. **Discovery of $^{40}\text{Mg}$ and $^{42}\text{Al}$ suggests neutron drip-line slant towards heavier isotopes**

T. Baumann, A. M. Amthor, D. Bazin, B. A. Brown, C. M. Folden III, A. Gade, T. N. Ginter, M. Hausmann, M. Matos, D. J. Morrissey, M. Portillo, A. Schiller, B. M. Sherrill, A. Stolz, O. B. Tarasov, M. Thoennessen  
Nature 449 (2007) 1022–1024

### 5. **New isotope $^{44}\text{Si}$ and systematics of the production cross sections of the most neutron-rich nuclei**

O. B. Tarasov, T. Baumann, A. M. Amthor, D. Bazin, C. M. Folden III, A. Gade, T. N. Ginter, M. Hausmann, M. Matos, D. J. Morrissey, A. Nettleton, M. Portillo, A. Schiller, B. M. Sherrill, A. Stolz, M. Thoennessen  
Phys. Rev. C 75 (2007) 064613

### 6. **Shape and Structure of $N = Z$ $^{64}\text{Ge}$ : Electromagnetic Transition Rates from the Application of the Recoil Distance Method to Knockout Reaction**

K. Starosta, A. Dewald, A. Dunomes, P. Adrich, A. M. Amthor, T. Baumann, D. Bazin, M. Bowen, B. A. Brown, A. Chester, A. Gade, D. Galaviz, T. Glasmacher, T. Ginter, M. Hausmann, M. Horoi, J. Jolie, B. Melon, D. Miller, V. Moeller, R. P. Norris, T. Pissulla, M. Portillo, W. Rother, Y. Shimbara, A. Stolz, C. Vaman, P. Voss, D. Weisshaar, V. Zelevinsky  
Phys. Rev. Lett. 99 (2007) 042503

### 7. **Selective population and neutron decay of an excited state of $^{23}\text{O}$**

A. Schiller, N. Frank, T. Baumann, D. Bazin, B. A. Brown, J. Brown, P. A. DeYoung, J. E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, W. A. Peters, H. Scheit, M. Thoennessen, J. A. Tostevin  
Phys. Rev. Lett. 99 (2007) 112501

8. **Temperature and spin dependence of the giant dipole resonance width**  
P. Heckman, B. B. Back, T. Baumann, M. P. Carpenter, I. Diószegi, D. J. Hofman, T. L. Khoo, S. Mitsuoka, V. Nanal, T. Pennington, J. P. Seitz, M. Thoennessen, E. Tryggestad, R. L. Varner  
Nucl. Phys. A 750 (2005) 175
9. **Search for particle-bound  $^{26}\text{O}$  and  $^{28}\text{F}$  in p-stripping reactions**  
A. Schiller, T. Baumann, J. Dietrich, S. Kaiser, W. Peters, and M. Thoennessen  
Phys. Rev. C 72 (2005) 037601
10. **Production of rare isotope beams with the NSCL fragment separator**  
A. Stolz, T. Baumann, T. N. Ginter, D. J. Morrissey, M. Portillo, B. M. Sherrill, M. Steiner and J. W. Stetson  
Nucl. Instr. and Meth. B 241 (2005) 858–861
11. **First observation of  $^{60}\text{Ge}$  and  $^{64}\text{Se}$**   
A. Stolz, T. Baumann, N. H. Frank, T. N. Ginter, G. W. Hitt, E. Kwan, M. Mocko, W. Peters, A. Schiller, C. S. Sumithrarachchi and M. Thoennessen  
Phys. Lett. B 627 (2005) 32–37
12. **Fabrication of a modular neutron array: A collaborative approach to undergraduate research**  
R. H. Howes, T. Baumann, M. Thoennessen, J. Brown, P. A. DeYoung, J. Finck, J. Hinnefeld, K. W. Kemper, B. Luther, P. V. Pancella, G. F. Peaslee, W. F. Rogers, and S. Tabor  
Am. J. Phys. 73 (2005) 122
13. **Construction of a modular large-area neutron detector for the NSCL**  
T. Baumann, J. Boike, J. Brown, M. Bullinger, J. P. Bychowski, S. Clark, K. Daum, P. A. DeYoung, J. V. Evans, J. Finck, N. Frank, A. Grant, J. Hinnefeld, G. W. Hitt, R. H. Howes, B. Isselhardt, K. W. Kemper, J. Longacre, Y. Lu, B. Luther, S. T. Marley, D. McCollum, E. McDonald, U. Onwuemene, P. V. Pancella, G. F. Peaslee, W. A. Peters, M. Rajabali, J. Robertson, W. F. Rogers, S. L. Tabor, M. Thoennessen, E. Tryggestad, R. E. Turner, P. J. VanWylen, N. Walker  
Nucl. Inst. and Meth. A 543 (2005) 517–527
14. **Shell Structure of the Near-Dripline Nucleus  $^{23}\text{O}$**   
D. Cortina-Gil, J. Fernandez-Vazquez, T. Aumann, T. Baumann, J. Benlliure, M. J. G. Borge, L. V. Chulkov, U. Datta Pramanik, C. Forssén, L. M. Fraile, H. Geissel, J. Gerl, F. Hammache, K. Itahashi, R. Janik, B. Jonson, S. Mandal, K. Markenroth, M. Meister, M. Mocko, G. Münzenberg, T. Ohtsubo, A. Ozawa, Y. Prezado, V. Pribora, K. Riisager, H. Scheit, R. Schneider, G. Schrieder, H. Simon, B. Sitar, A. Stolz, P. Strmen, K. Sümmerer, I. Szarka, and H. Weick  
Phys. Rev. Lett. 93 (2004) 062501
15. **Nuclear structure of light exotic nuclei from break-up reactions**  
D. Cortina-Gil, J. Fernandez-Vazquez, T. Aumann, T. Baumann, J. Benlliure, M.J.G. Borge, L.V. Chulkov, U. Datta Pramanik, C. Forssén, L.M. Fraile, H. Geissel, J. Gerl, F. Hammache, K. Itahashi, R. Janik, B. Jonson, S. Mandal, K. Markenroth, M. Meister, M. Mocko, G. Münzenberg, T. Ohtsubo, A. Ozawa, Y. Prezado, V. Pribora, K. Riisager, H. Scheit, R. Schneider, G. Schrieder, H. Simon, B. Sitar, A. Stolz, P. Strmen, K. Sümmerer, I. Szarka, H. Weick  
Nucl. Phys. A 746 (2004) 479c–482c

16. **Single Proton Knock-Out from  $^{24}\text{F}$**   
M. Thoennessen, T. Baumann, B. A. Brown, J. Enders, N. Frank, P. G. Hansen, P. Heckman, B. A. Luther, J. Seitz, A. Stolz, E. Tryggestad  
Nucl. Phys. A 746 (2004) 536c–539c
17. **Half-life Limit of  $^{19}\text{Mg}$**   
N. Frank, T. Baumann, D. Bazin, R. R. C. Clement, M. W. Cooper, P. Heckman, W. A. Peters, A. Stolz, M. Thoennessen, M. S. Wallace  
Nucl. Phys. A 746 (2004) 551c–554c
18. **Half-life Limit of  $^{19}\text{Mg}$**   
N. Frank, T. Baumann, D. Bazin, R. R. C. Clement, M. W. Cooper, P. Heckman, W. A. Peters, A. Stolz, M. Thoennessen, M. S. Wallace  
Phys. Rev. C 68 (2003) 054309
19. **Erratum to: “Measurements of the interact ion cross sections for Ar and Cl isotopes”:  
[Nucl. Phys. A 709 (2002) 60]**  
A. Ozawa, T. Baumann, L. Chulkov, D. Cortina, U. Datta, J. Fernandez, H. Geissel, F. Hammache, K. Itahashi, M. Ivanov R. Janik, T. Kato, K. Kimura, T. Kobayashi, K. Markenroth, M. Meister, G. Münzenberg, T. Ohtsubo, S. Ohya, T. Okuda, A.A. Ogloblin, V. Pribora, M. Sekiguchi, B. Sitár, P. Strmen, S. Sugimoto, K. Sümmerer, T. Suzuki, I. Tanihata, Y. Yamaguchi  
Nucl. Phys. A 727 (2003) 465–466
20. **Single Proton Knock-Out Reactions from  $^{24,25,26}\text{F}$**   
M. Thoennessen, T. Baumann, B. A. Brown, J. Enders, N. Frank, P. G. Hansen, P. Heckman, B. A. Luther, J. Seitz, A. Stolz, E. Tryggestad  
Phys. Rev. C 68 (2003) 044318
21. **First two energy levels in  $^{15}\text{F}$**   
W. A. Peters, T. Baumann, D. Bazin, B. A. Brown, R. R. C. Clement, N. Frank, P. Heckman, B. A. Luther, F. Nunes, J. Seitz, A. Stolz, M. Thoennessen, E. Tryggestad  
Phys. Rev. C 68 (2003) 034607
22. **Using passive converters to enhance detection efficiency of 100-MeV neutrons**  
T. Baumann, H. Ikeda, M. Kurokawa, M. Miura, T. Nakamura, Y. Nishi, S. Nishimura, A. Ozawa, T. Sugimoto, I. Tanihata, M. Thoennessen  
Nucl. Instr. and Meth. A 505 (2003) 25–28
23. **MoNA—The Modular Neutron Array**  
B. Luther, T. Baumann, M. Thoennessen, J. Brown, P. DeYoung, J. Finck, J. Hinnefeld, R. Howes, K. Kemper, P. Pancella, G. Peaslee, W. Rogers, S. Tabor  
Nucl. Instr. and Meth. A 505 (2003) 33–35

**24. First search for  $^{16}\text{Be}$**

T. Baumann, N. Frank, B. A. Luther, D. J. Morrissey, J. P. Seitz, B. M. Sherrill, M. Steiner, J. Stetson, A. Stolz, M. Thoennessen, I. Wiedenhöver  
Phys. Rev. C 67 (2003) 061303(R)

**25. Low-lying E1 strength in  $^{20}\text{O}$**

E. Tryggestad, T. Baumann, P. Heckmann, M. Thoennessen, T. Aumann, D. Bazin, Y. Blumenfeld, J. R. Beene, T. A. Lewis, D. C. Radford, D. Shapira, R. L. Varner, M. Chartier, M. L. Halbert, J. F. Liang  
Phys. Rev. C 67 (2003) 064309

**26. Spectroscopic factors measured in inclusive proton-knockout reactions on  $^8\text{B}$  and  $^9\text{C}$  at intermediate energies**

J. Enders, T. Baumann, B. A. Brown, N. H. Frank, P. G. Hansen, P. R. Heckman, B. M. Sherrill, A. Stolz, M. Thoennessen, J. A. Tostevin, E. J. Tryggestad, S. Typel, M. S. Wallace  
Phys. Rev. C 67 (2003) 064301

**27. Nuclear and Coulomb break-up of  $^8\text{B}$**

D. Cortina-Gil, J. Fernandez-Vazquez, F. Attalah, T. Baumann, J. Benlliure, M.J.G. Borge, L. Chulkov, C. Forssén, L.M. Fraile, H. Geissel, J. Gerl, K. Itahashi, R. Janik, B. Jonson, S. Karlsson, H. Lenske, S. Mandal, K. Markenroth, M. Meister, M. Mocko, G. Münzenberg, T. Ohtsubo, A. Ozawa, Yu. Parfenova, V. Pribora, A. Richter, K. Riisager, R. Schneider, H. Scheit, G. Schrieder, N. Shulgina, H. Simon, B. Sitar, A. Stolz, P. Strmen, K. Sümmerer, I. Szarka, S. Wan, H. Weick, M.V. Zhukov  
Nucl. Phys. A 720 (2003) 3–19

**28. High-energy breakup of  $^8\text{B}$**

M. Meister, D. Cortina-Gil, J. Fernandez-Vazquez, K. Markenroth, F. Attallah, T. Baumann, J. Benlliure, M.J.G. Borge, L.V. Chulkov, U. Datta Pramanik, C. Forssén, L. M. Fraile, H. Geissel, J. Gerl, F. Hammache, K. Itahashi, R. Janik, B. Jonson, S. Karlsson, H. Lenske, S. Mandal, M. Mocko, G. Münzenberg, T. Ohtsubo, A. Ozawa, Y. Parfenova, V. Pribora, K. Riisager, H. Scheit, R. Schneider, K. Schmidt, G. Schrieder, H. Simon, B. Sitar, A. Stolz, P. Strmen, K. Sümmerer, I. Szarka, S. Wan, H. Weick, M. Zhukov  
Nucl. Phys. A 718 (2003) 431c–433c

**29. Measurement of the interaction cross sections for Ar and Cl isotopes**

A. Ozawa, T. Baumann, L. Chulkov, D. Cortina, U. Datta, J. Fernandez, H. Geissel, F. Hammache, K. Itahashi, M. Ivanov R. Janik, T. Kato, K. Kimura, T. Kobayashi, K. Markenroth, M. Meister, G. Münzenberg, T. Ohtsubo, S. Ohya, T. Okuda, A.A. Ogloblin, V. Pribora, M. Sekiguchi, B. Sitar, P. Strmen, S. Sugimoto, K. Sümmerer, T. Suzuki, I. Tanihata, Y. Yamaguchi  
Nucl. Phys. A 709 (2002) 60–72

**30. Low-lying dipole strength in  $^{20}\text{O}$**

E. Tryggestad, T. Aumann, T. Baumann, D. Bazin, J.R. Beene, Y. Blumenfeld, B.A. Brown, M. Chartier, M.L. Halbert, P. Heckman, J.F. Liang, D.C. Radford, D. Shapira, M. Thoennessen, R.L. Varner  
Phys. Lett. B 541 (2002) 52–58

31. **Improving neutron detection efficiency by using passive converters**  
 T. Baumann, H. Ikeda, M. Kurokawa, M. Miura, T. Nakamura, Y. Nishi, S. Nishimura, A. Ozawa, T. Sugimoto, I. Tanihata, M. Thoennessen  
 Nucl. Instr. and Meth. B 192 (2002) 339–344
32.  **$^8\text{He}$ - $^6\text{He}$ : a comparative study of electromagnetic fragmentation reactions**  
 M. Meister, K. Markenroth, D. Aleksandrov, T. Aumann, T. Baumann, M.J.G. Borge, L.V. Chulkov, D. Cortina-Gil, B. Eberlein, Th.W. Elze, H. Emling, H. Geissel, M. Hellström, B. Jonson, J.V. Kratz, R. Kulesa, A. Leistenschneider, I. Mukha, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, M. Pfützner, V. Pribora, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, H. Simon, O. Tengblad, M.V. Zhukov  
 Nucl. Phys. A 700 (2002) 3–16
33. **Experimental evidence for the  $^8\text{B}$  ground state configuration**  
 D. Cortina-Gil, K. Markenroth, F. Attalah, T. Baumann, J. Benlliure, M.J.G. Borge, L.V. Chulkov, U. Datta Pramanik, J. Fernandez-Vazquez, C. Forssén, L.M. Fraile, H. Geissel, J. Gerl, F. Hammache, K. Itahashi, R. Janik, B. Jonson, S. Karlsson, H. Lenske, S. Mandal, M. Meister, M. Mocko, G. Münzenberg, T. Ohtsubo, A. Ozawa, V. Parfenova, V. Pribora, K. Riisager, H. Scheit, R. Schneider, K. Schmidt, G. Schrieder, H. Simon, B. Sitar, A. Stolz, P. Strmen, K. Sümmerer, I. Szarka, S. Wan, H. Weick, M. Zhukov  
 Phys. Lett. B 529 (2002) 36–41
34. **Catching energetic heavy-ion beams in gas**  
 T. Baumann, M.J. Chromik, R.R.C. Clement, C. Freigang, P. Heckman, J.P. Seitz, B.M. Sherrill, M. Thoennessen, E.J. Tryggestad  
 Nucl. Instr. and Meth. B 184/4 (2001) 473–477
35. **Evidence for a New Low-Lying Resonance State in  $^7\text{He}$**   
 M. Meister, K. Markenroth, D. Aleksandrov, T. Aumann, L. Axelsson, T. Baumann, M.J.G. Borge, L.V. Chulkov, W. Dostal, B. Eberlein, Th.W. Elze, H. Emling, C. Forssén, H. Geissel, M. Hellström, R. Holzmann, B. Jonson, J.V. Kratz, R. Kulesa, A. Leistenschneider, I. Mukha, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, H. Simon, O. Tengblad, M.V. Zhukov  
 Phys. Rev. Lett. 88 (2002) 102501
36. **One-nucleon removal cross sections for  $^{17,19}\text{C}$  and  $^{8,10}\text{B}$**   
 D. Cortina-Gil, T. Baumann, H. Geissel, H. Lenske, K. Sümmerer, L. Axelsson, U. Bergmann, M.J.G. Borge, L.M. Fraile, M. Hellström, M. Ivanov, N. Iwasa, R. Janik, B. Jonson, K. Markenroth, G. Münzenberg, F. Nickel, T. Nilsson, A. Ozawa, K. Riisager, G. Schrieder, W. Schwab, H. Simon, C. Scheidenberger, B. Sitar, T. Suzuki, M. Winkler  
 Eur. Phys. J. A 10 (2001) 49–56
37.  **$S_{17}(0)$  Determined from the Coulomb Breakup of 83 MeV/nucleon  $^8\text{B}$**   
 B. Davids, D.W. Anthony, T. Aumann, S.M. Austin, T. Baumann, D. Bazin, R.R.C. Clement, C.N. Davids, H. Esbensen, P.A. Lofy, T. Nakamura, B.M. Sherrill, J. Yurkon  
 Phys. Rev. Lett. 86 (2001) 2750–2753

38.  **$^8\text{He}$ - $^6\text{He}$ : a comparative study of nuclear fragmentation reactions**  
 K. Markenroth, M. Meister, B. Eberlein, D. Aleksandrov, T. Aumann, L. Axelsson, T. Baumann, M.J.G. Borge, L.V. Chulkov, W. Dostal, Th.W. Elze, H. Emling, H. Geissel, A. Grünschloss, M. Hellström, J. Holeczek, B. Jonson, J.V. Kratz, R. Kulesa, A. Leistenschneider, I. Mukha, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, M. Pfützner, V. Pribora, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, H. Simon, J. Stroth, O. Tengblad, M.V. Zhukov  
 Nucl. Phys. A 679 (2001) 462–480
39. **Direct Evidence for the Breakdown of the  $N = 8$  Shell Closure in  $^{12}\text{Be}$**   
 A. Navin, D.W. Anthony, T. Aumann, T. Baumann, D. Bazin, Y. Blumenfeld, B.A. Brown, T. Glasmacher, P.G. Hansen, R.W. Ibbotson, P.A. Lofy, V. Maddalena, K. Miller, T. Nakamura, B.V. Pritychenko, B.M. Sherrill, E. Spears, M. Steiner, J.A. Tostevin, J. Yurkon, A. Wagner  
 Phys. Rev. Lett. 85 (2000) 266
40. **Slowing Down of Relativistic Few-Electron Heavy Ions**  
 H. Weick, H. Geissel, C. Scheidenberger, F. Attallah, T. Baumann, D. Cortina, M. Hausmann, B. Lommel, G. Münzenberg, N. Nankov, F. Nickel, T. Radon, H. Schatz, K. Schmidt, J. Stadlmann, K. Sümmerer, M. Winkler, H. Wollnik  
 Nucl. Instr. and Meth. B 164/165 (2000) 168–179
41. **Halo Excitations in Fragmentation of  $^6\text{He}$  at 240 MeV/u on Carbon and Lead Targets**  
 D. Aleksandrov, T. Aumann, L. Axelsson, T. Baumann, M.J.G. Borge, L.V. Chulkov, J. Cub, W. Dostal, B. Eberlein, Th.W. Elze, H. Emling, H. Geissel, V.Z. Goldberg, A. Grünschloss, M. Hellström, J. Holeczek, R. Holzmann, B. Jonson, J.V. Kratz, G. Kraus, R. Kulesa, Y. Leifels, A. Leistenschneider, T. Leth, K. Markenroth, M. Meister, I. Mukha, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, B. Petersen, M. Pfützner, V. Pribora, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, W. Schwab, H. Simon, M.H. Smedberg, J. Stroth, A. Surowiec, O. Tengblad, M.V. Zhukov  
 Nucl. Phys. A 669 (2000) 51
42. **Measurement of the Coulomb Dissociation of  $^8\text{B}$  at 254 MeV/nucleon and the  $^8\text{B}$  Solar Neutrino Flux**  
 N. Iwasa, F. Boué, G. Surówka, K. Sümmerer, T. Baumann, B. Blank, S. Czajkowski, A. Förster, M. Gai, H. Geissel, E. Grosse, M. Hellström, P. Koczon, B. Kohlmeyer, R. Kulesa, F. Laue, C. Marchand, T. Motobayashi, H. Oeschler, A. Ozawa, M.S. Pravikoff, E. Schwab, W. Schwab, P. Senger, J. Speer, C. Sturm, A. Surowiec, T. Teranishi, F. Uhlig, A. Wagner, W. Walus, C.A. Bertulani  
 Phys. Rev. Lett. 83 (1999) 2910
43. **Direct Experimental Evidence for Strong Admixture of Different Parity States in  $^{11}\text{Li}$**   
 H. Simon, D. Aleksandrov, T. Aumann, L. Axelsson, T. Baumann, M.J.G. Borge, L.V. Chulkov, R. Collatz, J. Cub, W. Dostal, B. Eberlein, Th.W. Elze, H. Emling, H. Geissel, A. Grünschloß, M. Hellström, J. Holeczek, R. Holzmann, B. Jonson, J.V. Kratz, G. Kraus, R. Kulesa, Y. Leifels, A. Leistenschneider, T. Leth, I. Mukha, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, B. Petersen, M. Pfützner, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, W. Schwab, M.H. Smedberg, J. Stroth, A. Surowiec, O. Tengblad, M.V. Zhukov  
 Phys. Rev. Lett. 83 (1999) 496

**44. New results on the halo structure of  $^8\text{B}$**

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**Published Reports**

**1. Excitation and Fragment-Neutron Correlations of Halo Nuclei**

D. Aleksandrov, T. Aumann, L. Axelsson, T. Baumann, M.J.G. Borge, D. Cortina-Gil, L.V. Chulkov, W. Dostal, B. Eberlein, T.W. Elze, H. Emling, C. Forssén, H. Geissel, A. Grünschlöss, M. Hellström, B. Jonson, J.V. Kratz, R. Kulesa, Y. Leifels, A. Leistenschneider, K. Markenroth, M. Meister, I. Mukha, G. Münzenberg, T. Nilsson, G. Nyman, M. Pfützner, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, H. Simon, O. Tengblad, M.V. Zhukov

GSI 2001-1 (2001) 21

**2. The Astrophysical  $S_{17}$  Factor Determined by Coulomb Break-Up of  $^8\text{B}$  at 254 A MeV**

N. Iwasa, F. Boué, G. Surowka, K. Sümmerer, T. Baumann, B. Blank, S. Czajkowski, A. Förster, M. Gai, H. Geissel, E. Grosse, M. Hellström, P. Koczon, B. Kohlmeier, R. Kulesa, F. Laue, C. Marchand, T. Motobayashi, H. Oeschler, A. Ozawa, M.S. Pravikoff, E. Schwab, W. Schwab, P. Senger, J. Speer, C. Sturm, A. Surowiec, T. Teranishi, F. Uhlig, A. Wagner, W. Walus, C.A. Bertulani

GSI 99-1 (1999) 28

**3. Measurements of  $\sigma_{-1p}$  and  $\sigma_{-1n}$  for  $^8,^{10}\text{B}$  and  $^{17,19}\text{C}$  Isotopes**

D. Cortina-Gil, A. Ozawa, T. Baumann, H. Geissel, K. Sümmerer, T. Aumann, L. Axelsson, U. Bergmann, M.J.G. Borge, L. Fraile, M. Hellström, M. Ivanov, N. Iwasa, R. Janik, B. Jonson, H. Lenske, K. Markenroth, G. Münzenberg, F. Nickel, T. Nilsson, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, W. Schwab, H. Simon, B. Sitar, M.H. Smedberg, P. Strmen, T. Suzuki, M. Winkler, H. Wollnik, M.V. Zhukov

GSI 99-1 (1999) 27

**4. Nuclear Structure Studies of  $^8\text{B}$  via Momentum Measurements**

T. Baumann, H. Geissel, H. Lenske, K. Markenroth, W. Schwab, M.H. Smedberg, T. Aumann, L. Axelsson, U. Bergmann, M.J.G. Borge, D. Cortina-Gil, L. Fraile, M. Hellström, M. Ivanov, N. Iwasa, R. Janik, B. Jonson, G. Münzenberg, F. Nickel, T. Nilsson, A. Ozawa, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, H. Simon, B. Sitar, P. Strmen, K. Sümmerer, T. Suzuki, M. Winkler, H. Wollnik, M.V. Zhukov

GSI 99-1 (1999) 26

**5. Development of TPC for Heavy Ion Tracking**

T. Baumann, V. Hlinka, M. Ivanov, R. Janik, L. Lúčan, W. Schwab, B. Sitár, P. Strmeň, I. Szarka

Acta Physica Universitatis Comenianae XXXVII (1996) 3–18

## Invited Talks

1. **Discovery of  $^{40}\text{Mg}$  and  $^{42}\text{Al}$**

Invited talk at the 2008 April Meeting of the American Physical Society, St. Louis, Missouri, April 11–15, 2008

2. **MoNA – The Modular Neutron Array at the NSCL**

Invited talk at the 17th International Conference on the Application of Accelerators in Research and Industry (CAARI 2002), Denton, Texas, November 12–16, 2002.

3. **The NSCL Coupled Cyclotron Project: Status and Latest News**

Invited talk at the 16th International Conference on the Application of Accelerators in Research and Industry (CAARI 2000), Denton, Texas, November 1–4, 2000.

## Seminar Talks

1. **The Modular Neutron Array & the MoNA collaboration**

Physics Department Seminar, Central Michigan University, Mount Pleasant, Michigan, March 30, 2006

2. **The Coupled Cyclotron Facility and MoNA at the NSCL**

Triangle Universities Nuclear Laboratory Seminar, Durham, North Carolina, November 21, 2002

3. **Halo Nuclei**

Research-Experience-for-Undergraduates Seminar, Michigan State University, July 19, 2002

4. **Longitudinal Momentum Distributions of  $^8\text{B}$  and  $^{19}\text{C}$ , signatures for one-proton and one-neutron halos**

NSCL Seminar, National Superconducting Cyclotron Laboratory, East Lansing, Michigan, September 8, 1999

## Other Presentations

1. **Observation of new neutron-rich Mg, Al, and Si isotopes**

Talk at the 2007 Fall Meeting of the Division of Nuclear Physics, American Physical Society, Newport News, Virginia, October 10–13, 2007

2. **Detection Efficiency of the Modular Neutron Array**

Talk at the 2006 Fall Meeting of the Division of Nuclear Physics, American Physical Society, Nashville, Tennessee, October 25–28, 2006

3. **FPGA-based Trigger Logic for the Modular Neutron Array**

Talk at the 2004 Spring Meeting of the American Physical Society, Denver, Colorado, May 1–4, 2004

4. **Status of the MoNA project**  
Talk at the 2003 Fall Meeting of the Division of Nuclear Physics, American Physical Society, Tucson, Arizona, October 29–November 1, 2003
5. **Single-proton knock-out reactions from  $^{24,25,26}\text{F}$**   
Talk at the 2003 Spring Meeting of the American Physical Society, Philadelphia, Pennsylvania, April 5–8, 2003
6. **Search for  $^{16}\text{Be}$**   
Talk at the 2002 Fall Meeting of the Division of Nuclear Physics, American Physical Society, East Lansing, Michigan, October 9–12, 2002
7. **Search for  $^{16}\text{Be}$**   
Poster at the Conference on Frontiers of Nuclear Structure, Berkeley, California, July 29–August 2, 2002
8. **Using passive converters to enhance detection efficiency of 100-MeV neutrons**  
Poster at the Tenth Symposium on Radiation Measurements and Applications, University of Michigan, Ann Arbor, Michigan, USA, May 21–23, 2002
9. **Development of a new neutron wall for the NSCL**  
Talk at the Annual Fall Meeting of the Division of Nuclear Physics of the American Physical Society, Williamsburg, Virginia, October 4–7, 2000
10. **Stopping energetic beams in gas**  
Poster at the Fifth International Conference on Radioactive Nuclear Beams (RNB-5), Divonne, France, April 2000
11. **Probing the nuclear structure of  $^8\text{B}$  and  $^{19}\text{C}$ , measuring longitudinal momentum distributions after one-nucleon removal**  
Poster at the Second International Conference on Exotic Nuclei and Atomic Masses (ENAM98), Bellaire, Michigan, USA, June 1998
12. **Longitudinal Momentum Distributions: A Probe for Nuclear Structure**  
Talk at the Halo '98 workshop, Lisboa, Portugal, April 1998
13. **Probing Nuclear Structure of Light Exotic Nuclei with Breakup Reactions**  
Talk at the meeting of the German Physical Society DPG 98, Bochum, Germany, March 1998
14. **Investigation of Halo Nuclei at Relativistic Energies, Measurements of longitudinal momentum distributions at the Fragment Separator FRS**  
Talk at the Halo '97 workshop, Särö, Göteborg, Sweden, June 1997
15. **Untersuchung von Halo-Kernen bei relativistischen Energien**  
Talk at the meeting of the German Physical Society DPG 97, Göttingen, Germany, February 1997

16. **Investigation of Halo Nuclei at Relativistic Energies, Measurements of longitudinal momentum distributions at the FRS**  
Poster at the Gull Lake Conference on Nuclear Physics Near the Drip Lines, Gull Lake, Michigan, USA, September 1996
17. **Study of relativistic halo-nuclei at the Fragment Separator (FRS) of GSI**  
Talk at the Halo '96 workshop, Guildford, United Kingdom, April 1996
18. **High Energy Photon Production in Inelastic Alpha Scattering**  
Poster at the Giant Resonances Conference (GR95), Groningen, The Netherlands, June 28–July 1, 1995
19. **Giant Resonances Built on Highly Excited States in  $^{120}\text{Sn}$**   
Talk at the Spring Meeting of the American Physical Society, Crystal City, VA, April 1994