

## 2002

5<sup>th</sup> November 2002, University of Washington, Center for Experimental Nuclear Physics and Astrophysics, Nuclear Physics Laboratory (CENPA-NPL), **invited by Prof. Kurt Snover**  
*Progress on the astrophysically interesting  ${}^7\text{Be}(p,\gamma){}^8\text{B}$  and  ${}^4\text{He}({}^3\text{He},\gamma){}^7\text{Be}$  fusion reaction*  
C. Bordeanu

## 2003

University of Washington, CENPA-NPL, Seattle, 15 July 2003  
*First Steps on a new  $S_{34}$  Determination Project*  
C. Bordeanu

APS DNP Meeting Oct 2003, Tucson, Arizona  
*Preparations for a Precision Measurement of the  ${}^3\text{He}(\alpha,\gamma){}^7\text{Be}$  Cross section*  
Cristina Bordeanu, Jeff Mannor, Patrick Peplowski, Kurt Snover, Derek Storm

2003 Fall Meeting of the Division of Nuclear Physics, October 30 - November 1, 2003, Tucson, Arizona 2003  
*Precision Measurements of Astrophysically Interesting Reaction Cross Sections*  
Peplowski P., Bordeanu C; Snover K; Storm D; Manor J

## 2004

University of Washington, CENPA-NPL, Seattle, 17<sup>th</sup> August 2004, **invited by the seminar chair, technical director of the lab, Prof. Derek Storm**  
*Progress in  ${}^3\text{He}+{}^4\text{He}$  experiment, August 2004*  
C. Bordeanu

## 2005

2005 2nd Joint Meeting of the Nuclear Physics Divisions of the APS and The Physical Society of Japan, September 18–22, 2005; Maui, Hawaii 2005  
*Determination of Energy Loss of 3-MeV alpha particles in Ni foil and  ${}^3\text{He}$  Gas Using a  $\text{Mg}(\alpha,\gamma)$  Resonance*  
K.P. Michnicki; C. Bordeanu; J.D. Lowrey; K.A. Snover; D.W. Storm

National Nuclear Physics Summer School 2005, Berkeley, CA June 5th to 17th 2005  
 *${}^3\text{He}(\alpha,\gamma){}^7\text{Be}$  Cross Section Measurement-Project Overview*  
Bordeanu C.

The 2nd International Conference on Nuclear Physics in Astrophysics, Debrecen, Hungary May 16–20, 2005

Á. Horváth, K. Ieki, Á. Kiss, A. Galonsky, M. Thoennessen, T. Baumann, D. Bazin, C. A. Bertulani, C. Bordeanu, N. Carlin, M. Csanád, F. Deák, P. DeYoung, N. Frank, T. Fukuchi, Zs. Fülöp, A. Gade, D. Galaviz, C. Hoffman, R. Izsák, W. A. Peters, H. Schelin, A. Schiller, R. Sugo, Z. Seres and G. I. Veres

*Can the neutron-capture cross sections be measured with Coulomb dissociation?*

University of Washington, CENPA-NPL, Seattle, 11<sup>th</sup> April 2005, **invited by the seminar chair, technical director of the lab, Prof. Derek Storm**

*$^3\text{He}(\alpha,\gamma)^7\text{Be}$  Cross Section Measurement-Project Overview*

C. Bordeanu

University of Washington, CENPA-NPL, Seattle, 29<sup>th</sup> November 2005, **invited by the seminar chair, technical director of the lab, Prof. Derek Storm**

*Actual stage on the way to perform  $^3\text{He}+^4\text{He}\rightarrow^7\text{Be}+\gamma$  experiment*

C. Bordeanu

Texas A&M, College Station, USA, 26<sup>th</sup> July 2005, **invited by the seminar chair (I was part of an experiment running at cyclotron at that time)**

*$^3\text{He}(\alpha,\gamma)^7\text{Be}$  Cross Section Measurement- Project Overview*

C. Bordeanu

National Nuclear Physics Summer School 2005, Berkeley, CA June 5th to 17th  
9.06.2005

*$^3\text{He}(\alpha,\gamma)^7\text{Be}$  Cross Section Measurement-Project Overview*

C. Bordeanu

2005 Annual Reports NPL-CENPA pg.52)

*Progress in  $^3\text{He}(\alpha,\gamma)^7\text{Be}$*

R.W. Abel, C. Bordeanu, R. M. Donovan,† J. D. Lowrey,‡ K. P. Michnicki, K. A. Snover and D.W. Storm

2005 Annual Reports NPL-CENPA pg.53

*Gas cell design for  $^3\text{He}(\alpha,\gamma)^7\text{Be}$*

M. Bacrania, C. Bordeanu, G. C. Harper, K. A. Snover and D.W. Storm

2005 Annual Reports NPL-CENPA pg.54

*Using  $^{24}\text{Mg}(\alpha,\gamma)$  resonances to determine energy losses in a gas cell*

C. Bordeanu, J. D. Lowrey, K.P. Michnicki, K. A. Snover and D.W. Storm

Poster at NPL-CENPA 2005

*$^3\text{He}+^4\text{He}$  precise cross section measurement for nuclear astrophysics*

C. Bordeanu, K.A.Snover, D.W.Storm, K.P.Michnicki, J.D.Lowrey, T.Ahmed, J.Sibile

Poster at NPL-CENPA 2005

*Precise Determination of gamma ray yields from the beta decay of  $^{32}\text{Cl}$*

S.Triambak, A.Garcia, D.Melconian, C. Bordeanu, E.G.Adelberger, J.C.Hardy, V.Iacob, L.Trache, R.E.Trible, G.Tabacaru

## 2006

2006 Annual Reports NPL-CENPA pg. 45

*Astrophysical S-factor for the  $^3\text{He} + ^4\text{He}$  reaction: energy loss and beam heating in the gas cell*

C. Bordeanu, N. Boyd, A. Batchelor, J. A. Mitchell, K. A. Snover and D.W. Storm

*Ge efficiency measurements and calculations for the  $^4\text{He} + ^3\text{He}$  experiment*

C. Bordeanu, T.A. D. Brown, Y. Kharoti, J. Sibille, K. A. Snover and D.W. Storm

2006 Annual Reports NPL-CENPA pg.54

*Measurement of the absolute  $\gamma$  branches in the decay of  $^{32}\text{Cl}$*

C. Bordeanu, A. Garcia, J. C. Hardy, V. E. Iacob, D. Melconian, N. Nica, H. I. Park, G. Tabacaru, L. Trache, S. Triambak, R. E. Tribble and Y. Zhai

Bucharest, 11<sup>th</sup> January 2006

*Actual stage on the way to perform  $^3\text{He}+^4\text{He}\rightarrow^7\text{Be}+\gamma$  experiment*

C. Bordeanu

Atomki, Debrecen, Hungary, 23<sup>rd</sup> February 2006, **invited by the ATOMKI deputy, Prof.**

**Zsolt Fulop**

*Achievements on the preparations for the  $^3\text{He}+^4\text{He}$  experiment at Seattle*

C. Bordeanu

7<sup>th</sup> March 2006 Ruhr University, RUBION, Bochum, Germany, **invited by the CEO lab,**

**Prof. Claus Rolfs**

*Achievements on the preparations for the  $^3\text{He}+^4\text{He}$  experiment at Seattle*

C. Bordeanu

Eur.Phys.J. A 27, s01,(2006) 217

*Can the neutron –capture cross sections be measured with Coulomb dissociation?*

A.Horvarth, K.Ieki, A.Kiss, A.Galonski, M.Thoennessen, T.Baumann, D.Bazin, C.A.Bertulani, C. Bordeanu, N.Carlin, M.Csanad, F.Deak, P.DeYoung, N.Frank, T.Fukuchi, Zs.Fulop, A.Gade, D.Galaviz, C.Hoffman, R.Izsak, W.A.Peters, H.Schelin, A.Schiller, R.Sugo, Z.Seres, G.I.Verés

T. A. D. Brown, C. Bordeanu, K. A. Snover, D. W. Storm, D. Melconian, A. L. Sallaska, S. K. L. Sjue, and S. Triambak

$^3\text{He} + ^4\text{He} \rightarrow ^7\text{Be}$  astrophysical S factor  
PHYSICAL REVIEW C 76, 055801 (2007)

Israel, Weizmann Institute of Science, 4-7 June 2006, Workshop on Nuclear Structure and Nuclear Astrophysics with radioactive beams  
*Achievements on the preparation for the  $^3\text{He} + ^4\text{He} \rightarrow ^7\text{Be} + \gamma$  experiment at Seattle*  
C. Bordeanu

2006 Annual Meeting of the Nuclear Physics Division of the APS October 25-28, 2006, Meeting ID: DNP06 Nashville, Tennessee  
*Analyzing sources of uncertainty in a precision measurement  $^3\text{He}(^4\text{He}, \gamma)^7\text{Be}$*   
A.M.Crisp, T.A.D.Brown, C. Bordeanu, K.A.Snover, D.W.Storm

IX International Conference on Nucleus Nucleus Collisions NN2006, 28 August- 1 September 2006, Rio de Janeiro, Brasil  
*Study of Coulomb and nuclear dissociation for astrophysical neutron capture cross sections*  
Horvath, K.Ieki, A.Kiss, A.Galonsky, M.Thoennessen, T.Baumann, D.Bazin, C.A.Bertulani, C. Bordeanu, N.Carlin, M.Csanad, F.Deak, P.DeYoung, N.Frank, T.Fukuchi, Zs.Fulop, A.Gade, D.R.Galaviz, C.Hoffman, R.Iszak, W.A.Peters, H.Schelin, A.Schiller, R.Sugo, Z.Seres, G.I.Verés

*Can the neutron-capture cross sections be measured with Coulomb dissociation?*  
Horvath A; Ieki K; Kiss A; Galonsky A; Thoennessen M; Baumann T; Bazin D; Bertulani CA; Bordeanu C; Carlin N; Csanad M; Deak F; DeYoung P; Frank N; Fukuchi T; Fulop Z; Gade A; Galaviz D; Hoffman C; Izsak R; Peters WA; Schelin H; Schiller A; Sugo R; Seres Z; Verés G  
2ND INTERNATIONAL CONFERENCE ON NUCLEAR PHYSICS IN ASTROPHYSICS Pages: 217-220 2006

*Measurement of the  $\gamma$  branches in the  $\beta$  decay of  $^{32}\text{Cl}$*   
Dan Melconian , C. Bordeanu , A. Garcia , J.C. Hardy , V.E. Iacob , N. Nica , H.I. Park , G. Tabacaru , L. Trache , S. Triambak , R.E. Tribble , Y. Zhai  
2006 Division of Nuclear Physics Annual Meeting , Wednesday–Saturday, October 25–28, 2006; Nashville, Tennessee

## 2007

*A precision measurement of the  $^3\text{He}(\alpha, \gamma)^7\text{Be}$  astrophysical S-factor*  
T.A.D. Brown, K.A. Snover, D.W. Storm, C. Bordeanu, D. Melconian, A.L. Sallaska, S.K.L. Sjøe, S. Triambak, A.M. Crisp, J.D. Lowrey, K. Michnicki, P. Peplowski, J. Sibille  
2007 Annual Meeting of the Division of Nuclear Physics, Wednesday–Saturday, October

10–13, 2007; Newport News, Virginia

2007 Annual Reports NPL-CENPA pg.62

*Measurement of the absolute  $\gamma$  branches in the decay of  $^{32}\text{Cl}$*

C. Bordeanu, A. García, J.C. Hardy, V. E. Iacob, D. Melconian, N. Nica, H. I. Park, G. Tabacaru, L. Trache, S. Triambak, R.E. Tribble and Y. Zhai

nucle.ex 0711.4095

*The  $^3\text{He} + ^4\text{He} \rightarrow ^7\text{Be}$  Astrophysical S-factor*

T. A. D. Brown, C. Bordeanu, K. A. Snover, D. W. Storm, D. Melconian, A. L. Sallaska, S. K. L. Sjue, S. Triambak

*A precision measurement of the  $^3\text{He}(\alpha,\gamma)^7\text{Be}$  astrophysical S-factor*

T.A.D. Brown, K.A. Snover, D.W. Storm, C. Bordeanu, D. Melconian, A.L. Sallaska, S.K.L.

Sjue, S. Triambak, A.M. Crisp, J.D. Lowrey, K. Michnicki, P. Peplowski, J. Sibille

2007 Annual Meeting of the Division of Nuclear Physics, October 10-13, 2007; Newport News, Virginia

## 2011

*Experimental Validation of the Largest Calculated Isospin-Symmetry-Breaking Effect in a Superallowed Fermi Decay*

Melconian D; Triambak S; Bordeanu C; Garcia A; Hardy JC; Iacob VE; Nica N; Park HI; Tabacaru G; Trache L; Towner IS; Tribble RE; Zhai Y

PHYS REV LETT Phys. Rev. Lett. OCT 27 (2011) 107 18 182301

*The beta Decay of  $^{32}\text{Cl}$ : Precision gamma-Ray Spectroscopy and a Measurement of Isospin-Symmetry Breaking*

D. Melconian, S. Triambak, C. Bordeanu, A. García, J. C. Hardy, V. E. Iacob, N. Nica, H. I. Park, G. Tabacaru, L. Trache, I. S. Towner, R. E. Tribble, Y. Zhai

arXiv:1112.2748

*Experimental Validation of the Largest Calculated Isospin-Symmetry-Breaking Effect in a Superallowed Fermi Decay*

D. Melconian, S. Triambak, C. Bordeanu, A. García, J. C. Hardy, V. E. Iacob, N. Nica, H. I. Park, G. Tabacaru, L. Trache, I. S. Towner, R. E. Tribble, Y. Zhai

arXiv:1108.5312

## 2012

*beta decay of Cl-32: Precision gamma-ray spectroscopy and a measurement of isospin-symmetry breaking*

Melconian D; Triambak S; Bordeanu C; Garcia A; Hardy JC; Iacob VE; Nica N; Park HI;  
Tabacaru G; Trache L; Towner IS; Tribble RE; Zhai Y  
Phys. Rev. C FEB 9 (2012) 85 2 025501