

December 1999

Seminar held at Weizmann Institute of Science, Israel, **invited by the lab CEO, Prof.**

Michael Hass

Output from my experiments at TANDEM, Romania and from RIKEN, Japan

C. Bordeanu

2000-2002

Weizmann Institute of Science (WIS), Israel, **seminars held as asked by the lab CEO, Prof. Michael Hass**

3 seminars in which I presented the preparations for the experiments and the results; one seminar summarized my activity at WIS

C. Bordeanu

2000

17th International Radiocarbon Conference, Judeah Hills, Israel, June 18-23 2000

Plutonium Isotopes in Deep-Sea Sediment

A.Valenta, I.Ahmad, D.Berkovits, C. Bordeanu, Y.Hashimoto, A.Hershkowitz, S.Jiang, W.Kutschera, T.Nakanishi, M.Paul, K.Sakamoto

The 22nd ERICE School on Radioactive Beams in Nuclear and Astrophysics, Erice 16-24 Sept. 2000, Sicily, Italy, Published in PROGRESS IN PARTICLE AND NUCLEAR PHYSICS, Volume 46, pages 97-98, 2001

Towards a measurement of the cross section for $^3\text{He}(^4\text{He},\gamma)^7\text{Be}$ with Accelerator Mass Spectroscopy (AMS)

C. Bordeanu, D.Berkovits, E.Boaretto, M.Hass, S.Jiang, M.Paul

2001

Particle and Nuclear Physics 46 (2001), 97

Towards a measurement of the cross section for $^3\text{He}(^4\text{He},\gamma)^7\text{Be}$ with Accelerator Mass Spectroscopy (AMS)

C. Bordeanu, D.Berkovits, E.Boaretto, M.Hass, S.Jiang, M.Paul

Astrophysics J. 558 (2) L133-L135, part 2 sep.10 2001

Experimental limit to interstellar ^{244}Pu abundance

M.Paul, A.Valenta, I.Ahmad, D.Berkovits, C. Bordeanu, S.Ghelberg, Y.Hashimoto, A.Hershkowitz, S.Jiang, T.Nakanishi, K.Sakamoto

Destruction of ${}^7\text{Li}$ and ${}^7\text{Be}$ in the stellar and cosmological environments

C.Przybycien, J.E.McDonald, M.Gai, R.H.France III, L.T.Baby, C. Bordeanu, M.Hass, Th.Delbar

HAW01 Meeting, October 17-20, Hawaii, USA, 2001

INPC 2001, International Nuclear Physics Conference, Nuclear Physics in the 21st Century, University of California, Berkeley, July 30, August 3, USA

Direct determination of radioactive nuclide production in astrophysical reaction by Accelerator Mass Spectrometry (AMS)

D.Berkovits, E.Boaretto, C. Bordeanu, S.Gelberg, M.Hass, A.Hershkowitz, S.K.Hui, M.Paul

ENAM 2001, 3rd International Conference on Exotic Nuclei and Atomic Masses, 2-7 July 2001, Hameenlinna, Finland

Direct determination of radioactive nuclide production in astrophysical reaction by Accelerator Mass Spectrometry (AMS)

D.Berkovits, E.Boaretto, C. Bordeanu, S.Gelberg, M.Hass, A.Hershkowitz, S.K.Hui, M.Paul

1st European School on Experimental Nuclear Astrophysics, September 2001, Santa Tecla, Italy (submitted at Nucl. Phys. A)

Next steps on the cross section measurement for the fusion reaction ${}^4\text{He}({}^3\text{He},\gamma){}^7\text{Be}$

C. Bordeanu, E.Boaretto, M.Hass, M.Paul, D.Berkovits, L.T.Baby

http://arxiv.org/PS_cache/astro-ph/pdf/0106/0106205v3.pdf

Experimental Limit to Interstellar ${}^{244}\text{Pu}$ Abundance

M. Paul , A. Valenta , I. Ahmad, D. Berkovits, C. Bordeanu, S. Ghelberg , Y.Hashimoto, A. Hershkowitz, S. Jiang, T. Nakanishi and K. Sakamoto

Destruction of ${}^7\text{Li}$ and ${}^7\text{Be}$ in stellar and cosmological environments

R.H. France III, B. Zhao, M. Gai; C. Przybycien, J.A. Dooley, J.E. McDonald ; L.T. Baby;M. Hass, C. Bordeanu; Th. Delbar, A. Ninane

I.I.S.N. U.C.L.-Louvain-la-Neuve, CYCLONE, Rapport d'activité 2001

Bull. Amer. Phys. Soc. 46 (2001) 105

Destruction of ${}^7\text{Li}$ and ${}^7\text{Be}$ in the stellar and cosmological environments

C.Przybycien, J.E.McDonald, M.Gai, R.H.France III, L.T.Baby, C. Bordeanu, M.Hass, Th.Delbar

HAW01 Meeting, October 17-20, Hawaii, USA, 2001

Direct determination of radioactive nuclide production in astrophysical reactions by Accelerator Mass spectrometry (AMS)

Berkovits D; Boaretto E; Bordeanu C; Baby LT; Ghelberg S; Hass M; Hershkowitz A; Hui SK; Paul M

NUCLEAR PHYSICS IN THE 21ST CENTURY , International Nuclear Physics Conference
UNIV CALIF BERKELEY, BERKELEY, CALIFORNIA, JUL 30-AUG 03, 2001, Book Series: AIP
CONFERENCE PROCEEDINGS Volume: 610 Pages: 456-460

2002

Nuclei in the Cosmos VII, The Seventh International Symposium on Nuclei in the
Cosmos, Fuji-Yoshida, Japan, 8-12 July 2002

*A New Precision Measurement of the ${}^7\text{Be}(p,\gamma){}^8\text{B}$ Cross section with an implanted ${}^7\text{Be}$
Target*

L.T.Baby, C. Bordeanu, G.Goldring, M.Hass, V.N.Fedoseyev, U.Koster, L.Weissman, Y.Nir-
El, G.Haquin, M.Argentini, H.W.Gaggeler, R.Weinreich and ISOLDE collaboration

Nuclei in the Cosmos VII, The Seventh International Symposium on Nuclei in the
Cosmos, Fuji-Yoshida, Japan, 8-12 July 2002

Counting ${}^{44}\text{Ti}$ Nuclei from the ${}^{40}\text{Ca}(\alpha,\gamma){}^{44}\text{Ti}$ Reaction

M.Paul, C.Feldstein, I.Ahmad, D.Berkovits, C. Bordeanu, J.Caggiano, J.Goerres, J.Green,
M.Hass, A.Heinz, D.Henderson, S.K.Hui, R.V.F.Janssens, C.L.Jiang, R.C.Pardo,
T.Pennington, K.E.Rehm, G.Savaed, G.Verri, R.Vondrasek, I.Wiendenhover, M.Wiescher

Nuclei in the Cosmos VII, The Seventh International Symposium on Nuclei in the
Cosmos, Fuji-Yoshida, Japan, 8-12 July 2002

Radionuclide Signatures of Interstellar Matter

M.Paul, C.Feldstein, A.Valenta, I.Ahmad, Y.Bendov, D.Berkovits, C. Bordeanu, S.Gelberg,
Y.Hashimoto, S.Jiang, T.Nakanishi, K.Sakamoto

Nuclei in the Cosmos VII, The Seventh International Symposium on Nuclei in the
Cosmos, Fuji-Yoshida, Japan, 8-12 July 2002

Destruction of ${}^7\text{Li}$ and ${}^7\text{Be}$ in Astrophysical Environments

R.H.France III, L.T.Baby, C. Bordeanu, Th.Delbar, J.A.Dooley, M.Gai, M.Hass,
J.E.McDonald, A.Ninane, C.M.Przybycien

Goldschmidt 2002, Davos, Switzerland, 18-23 August 2002

${}^{10}\text{Be}$ measurements on Neolithic and Paleolithic tools from Israel

G.Verri, E.Boaretto, C. Bordeanu, M.Hass, M.Paul, S.Weiner

4th International Workshop on Personal Computers and Particle Accelerator Controls,
14-17 October 2002, Frascati (RM), Italy

Upgrading the Control System at the Weizmann Accelerator Lab.

O.Heber, S.Gelberg, Y.Ben-Dov, D.Berkovits, C. Bordeanu, G.Galitz, M.Hass, M.Paul,
Y.Shahar, G.Verri

The 17th Nuclear Physics Divisional Conference of European Physical Society, Debrecen, Hungary, sept. 30- Oct. 4, 2002

A Window on Nucleosynthesis through Detection of Short-Lived Radionuclides

M.Paul, A.Valenta, I.Ahmad, D.Berkovits, C.Bordeanu, S.Ghelberg, Y.Hashimoto, A.Hershkowitz, S.Jiang, T.Nakanishi, K.Sakamoto

AMS-9 in 2002, Nagoya, September 9-13 2002, Japan

Upgrading the AMS Facility at the Weizmann 14UD Pelletron Accelerator

D.Berkovits, M.Paul, Y.Ben-Dov, C. Bordeanu, S.Ghelberg, O.Haber, M.Hass, Y.Shahar, G.Verri

GEOCHIMICA ET COSMOCHIMICA ACTA 66 (15A): A805-A805 Suppl. 1 AUG 2002

Be-10 measurements on Neolithic and Paleolithic flint tools from Israel

Verri G, Barkai R, Ben-Dov Y, Boaretto E, Bordeanu C, Gopher A, Hass M, Paul M, Weiner S

GEOCHIMICA ET COSMOCHIMICA ACTA 66 (15A): A583-A583 Suppl. 1 AUG 2002

An insight into Pu-244 abundance in interstellar matter

Paul M, Feldstein C, Valenta A, Ahmad I, Ben-Dov Y, Berkovits D, Bordeanu C, Ghelberg S, Hashimoto Y, Jiang S, Nakanishi T, Sakamoto K, Verri G

nucl-ex/0208005, 8/11/2002 (2002)

L.T.Baby, C. Bordeanu, G.Goldring, M.Hass, L.Weissman, V.N.Fedoseyev, U.Koster, Y.Nir-El, G.Haquin, H.W.Gaggeler, R.Weinreich, and the ISOLDE Collaboration

A New Precision Measurement of the ${}^7\text{Be}(p,g){}^8\text{B}$ Cross Section with an Implanted ${}^7\text{Be}$ Target

ANL-02/15 (Physics Division Ann.Rept., 2001), p.9 (2002)

Ahmad, J.Caggiano, J.Greene, A.Heinz, D.Henderson, R.V.F.Janssens, C.L.Jiang, R.C.Pardo, T.Pennington, K.E.Rehm, G.Savard, R.Vondrasek, I.Wiedenhov, M.Paul, C.Feldstein, D.Berkovits, C. Bordeanu, J.Goerres, M.Hass, S.K.Hui, S.Jiang, G.Verri, M.Wiescher

The ${}^{40}\text{Ca}(a,g){}^{44}\text{Ti}$ Reaction Measured by Counting of ${}^{44}\text{Ti}$ Residual Nuclei

Direct determination of radioactive nuclide production in astrophysical reactions by Accelerator Mass spectrometry (AMS)

Berkovits D; Boaretto E; Bordeanu C; Baby LT; Ghelberg S; Hass M; Hershkowitz A; Hui SK; Paul M

NUCLEAR PHYSICS IN THE 21ST CENTURY , International Nuclear Physics Conference UNIV CALIF BERKELEY, BERKELEY, CALIFORNIA, JUL 30-AUG 03, 2001, Book Series: AIP CONFERENCE PROCEEDINGS Volume: 610 Pages: 456-460 2002

http://arxiv.org/PS_cache/nucl-ex/pdf/0208/0208005v3.pdf

A New Precision Measurement of the ${}^7\text{Be}(p,\gamma){}^8\text{B}$ Cross section with an Implanted ${}^7\text{Be}$ Target

L.T. Baby, C. Bordeanu, G. Goldring, M. Hass, L. Weissman, V.N. Fedoseyev, U. Koester, Y. Nir-El, G. Haquin, H.W. Gaggeler, R. Weinreich, the ISOLDE collaboration

http://arxiv.org/PS_cache/nucl-ex/pdf/0212/0212011v3.pdf

A New Measurement of the Proton Capture Rate on ${}^7\text{Be}$ and the $S_{17}(0)$ Factor

L.T. Baby, C. Bordeanu, G. Goldring, M. Hass, L. Weissman, V.N. Fedoseyev, U. Koester, Y. Nir-El, G. Haquin, H.W. Gaggeler, R. Weinreich, the ISOLDE Collaboration

2003

Physics Review C PHYS REV C 67 (6): Art. No. 065805 JUN 2003

A new measurement of the proton capture rate on ${}^7\text{Be}$ and the $S_{17}(0)$ factor

L.T. Baby, C. Bordeanu, G. Goldring, M. Hass, L. Weissman, V.N. Fedoseyev, U. Koester, Y. Nir-El, G. Haquin, H.W. Gaggeler, R. Weinreich and ISOLDE collaboration

Physics Review Letters 90 (2): Art. No. 022501 JAN 17 2003

Precision measurement of the ${}^7\text{Be}(p,\gamma){}^8\text{B}$ cross section with an implanted ${}^7\text{Be}$ target

L.T. Baby, C. Bordeanu, G. Goldring, M. Hass, V.N. Fedoseyev, U. Koester, L. Weissman, Y. Nir-El, G. Haquin, M. Argentini, H.W. Gaggeler, R. Weinreich and ISOLDE collaboration

NUCLEAR PHYSICS A 718: 487C-489C MAY 5 2003

A new measurement of the proton capture rate on Be-7

Baby LT, Bordeanu C, Goldring G, Hass M, Weissman L, Fedoseyev VN, Koester U, Nir-El Y, Haquin G, Gaggeler HW, Weinreich R

NUCLEAR PHYSICS A 718: 398C-400C MAY 5 2003

Destruction of Li-7 and Be-7 in astrophysical environments

France RH, Baby LT, Bordeanu C, Delbar T, Dooley JA, Gai M, Hass M, McDonald JE, Ninane A, Przybycien CM

NUCLEAR PHYSICS A 718: 239C-242C MAY 5 2003

Counting Ti-44 nuclei from the $\text{Ca-40}(\alpha,\gamma)\text{Ti-44}$ reaction

Paul M, Feldstein C, Ahmad I, Berkovits D, Bordeanu C, Caggiano J, Ghelberg S, Goerres J, Greene J, Hass M, Heinz A, Henderson D, Hui SK, Janssens RVF, Jiang CL, Jiang S, Nirel Y, Pardo RC, Pennington T, Rehm KE, Savard G, Verri G, Vondrasek R, Wiedenhover I, Wiescher M

NUCLEAR PHYSICS A 719: 29C-36C MAY 19 2003

A window on nucleosynthesis through detection of short-lived radionuclides

Paul M, Valenta A, Ahmad I, Berkovits D, Bordeanu C, Ghelberg S, Hashimoto Y, Hershkowitz A, Jiang S, Nakanishi T, Sakamoto K

2004

PHYSICAL REVIEW C 69 (1): Art. No. 019902 JAN 2004

New measurement of the proton capture rate on Be-7 and the S-17(0) factor (vol C 67, art no 065805, 2003)

Baby LT, Bordeanu C, Goldring G, Hass M, Weissman L, Fedoseyev VN, Koster U, Nir-El Y, Haquin G, Gaggeler HW, Weinreich R

PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 101 (21): 7880-7884 MAY 25 2004

Flint mining in prehistory recorded by in situ-produced cosmogenic Be-10

Verri G, Barkai R, Bordeanu C, Gopher A, Hass M, Kaufman A, Kubik P, Montanari E, Paul M, Ronen A, Weiner S, Boaretto E

NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS 223-24: 233-236 AUG 2004

Magnet saturation and relativistic effects in accelerator-mass-spectrometry systems

Berkovits D, Ben-Dov Y, Berkovits I, Bordeanu C, Paul M

NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS 223-24: 161-167 AUG 2004

Upgrading of the AMS facility at the Koffler 14UD Pelletron accelerator

Berkovits D, Paul M, Ben-Dov Y, Bordeanu C, Ghelberg S, Heber O, Hass M, Shahar Y, Verri G

JOURNAL OF PHYSICS G-NUCLEAR AND PARTICLE PHYSICS 30 (4): 519-524 APR 2004

Magnetic moment of Ne-17 using beta-NMR and tilted foil polarization

Baby LT, Bordeanu C, Hass M, et al.

PHYSICAL REVIEW LETTERS 92 (2), ART. NO.029901

Precision measurement of the Be-7 (p,gamma)B-8 cross section with an implanted Be-7 target

Baby LT, Bordeanu C, Goldring G, Hass M, Weissman L, Fedoseyev VN, Koster U, Nir-El Y, Haquin G, Gaggeler HW, Weinreich R

2007

Paul M , Valenta A , Ahmad I , Berkovits D , Bordeanu C , Ghelberg S , Hashimoto Y ,
Hershkowitz A , Jiang S , Nakanishi T , Sakamoto K

*An upper limit to interstellar Pu-244 abundance as deduced from radiochemical search in
deep-sea sediment: An account*

JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY 272 (2): 243-245 MAY 2007