

7. Списък на публикации и други научни трудове

7.1 Пълен списък на публикациите и други научни трудове

към 25.08.2014

- A. Реферирани публикации в списания;
 - B. Доклади на конференции и публикации в годишници на лаборатории;
 - C. Предложения за експерименти в големи международни лаборатории (оценявани от международни научни съвети);
 - D. Дисертация за придобиване на научното звание „доктор на физическите науки“;
- A1) Physical Review C, submitted – manuscript ID CRJ1057 (2014)
Evolution of quadrupole collectivity in the $N = 80$ isotones towards the $Z = 64$ subshell gap: the $B(E2; 0^+_1 \rightarrow 2^+_1)$ value of ^{142}Sm
R. Stegmann, C. Bauer, **G. Rainovski**, N. Pietralla, S. Bönig, A. Blazhev, A. Damyanova, M. Danchev, K. Gladnishki, R. Lutter, J. Pakarinen, D. Radeck, E. Rapisarda, P. Reiter, M. Scheck, B. Siebeck, T. Stora, P. Thöle, T. Thomas, M. Thürauf, M. J. Vermeulen, D. Voulot, N. Warr, F. Wenander, V. Werner, H. De Witte
- A2) Nuclear Instruments & Methods in Physics Research submitted – manuscript ID D-14-00715 (2014)
Coulex-multipolarimetry with relativistic heavy-ion beams
C. Stahl, N. Pietralla, **G. Rainovski**, M. Reese
- A3) Physical Review C 88, 041302(R) (2014)
Linking partial and quasi dynamical symmetries in rotational nuclei
C. Kremer, J. Beller, A. Leviatan, N. Pietralla, **G. Rainovski**, R. Trippel, P. Van Isacker
- A4) Physical Review C 88, 021302(R) (2013)
Local suppression of collectivity in the $N = 80$ isotones at the $Z = 58$ subshell closure
C. Bauer, **G. Rainovski**, N. Pietralla, D. Bianco, A. Blazhev, T. Bloch, S. Bönig, A. Damyanova, M. Danchev, K. A. Gladnishki, T. Kröll, J. Leske, N. Lo Iudice, T. Möller, K. Moschner, J. Pakarinen, P. Reiter, M. Scheck, M. Seidlitz, B. Siebeck, C. Stahl, R. Stegmann, T. Stora, Ch. Stoyanov, D. Tarpanov, M. J. Vermeulen, D. Voulot, N. Warr, F. Wenander, V. Werner, H. De Witte
- A5) Physical Review C 87, 044317 (2013)
Centrifugal stretching from lifetime measurements in the ^{170}Hf ground state band

M. K. Smith, V. Werner, J. R. Terry, N. Pietralla, P. Petkov, Z. Berant, R. J. Casperson, A. Heinz, G. Henning, R. Lüttke, J. Qian, B. Shoraka, **G. Rainovski**, E. Williams, R. Winkler

A6) Physical Review C 87, 037302 (2013)

Identification of the proton $2p_{1/2} \rightarrow 2p_{3/2}$ M1 spin-flip transition in ^{87}Rb

C. Stahl, J. Leske, N. Pietralla, P.R. John, **G. Rainovski**, J. Gerl, I. Kojouharov, H. Schaffner

A7) Physical Review C 86, 031305(R) (2012)

Absolute β -to-ground band transition strengths in ^{154}Sm

T. Möller, N. Pietralla, **G. Rainovski**, T. Ahn, C. Bauer, M. P. Carpenter, L. Coquard, R. V. F. Janssens, J. Leske, C. J. Lister, E. A. McCutchan, O. Möller, D. Seweryniak, S. Zhu

A8) Physical Review C 86, 014303 (2012)

Identification of the $2^+_{1,ms}$ mixed-symmetry state in ^{136}Ce

T. Ahn, **G. Rainovski**, N. Pietralla, L. Coquard, T. Möller, A. Costin, R. V. F. Janssens, C. J. Lister, M. P. Carpenter, S. Zhu

A9) Physical Review C 86, 054305 (2012)

Triaxial deformation and nuclear shape transition in ^{192}Au

Y. Oktem, D.L. Balabanski, B. Akkus, L. Amon Susam, L. Atanasova, C.W. Beausang, R.B. Cakirli, R.F. Casten, M. Danchev, M. Djongolov, E. Ganioglu, K.A. Gladnishki, J.Tm. Goon, D.J. Hartley, A.A. Hecht, R. Krucken, J.R. Novak, **G. Rainovski**, L.L. Riedinger, T. Venkova, I. Yigitoglu, N.V. Zamfir, O. Zeidan

A10) Physical Review C 85, 044303 (2012)

High-spin structure of ^{104}Pd

D. Sohler, I. Kuti, J. Timar, P. Joshi, J. Molnar, E.S. Paul, K. Starosta, R. Wadsworth, A. Algora, P. Bednarczyk, D. Curien, Zs. Dombradi, G. Duchene, D.B. Fossan, J. Gal, A. Gizon, J. Gizon, D.G. Jenkins, K. Juhasz, G. Kalinka, T. Koike, A. Krasznahorkay, B.M. Nyako, P.M. Raddon, **G. Rainovski**, J.N. Scheurer, A.J. Simons, C. Vaman, A.R. Wilkinson, L. Zolnai

A11) Nuclear Instruments & Methods in Physics Research A 668, 25 (2012)

AGATA-Advanced GAMMA Tracking Array

S. Akkoyun,, **G. Rainovski**,(387 co-authors)

A12) Physical Review C 84, 061306(R) (2011)

One-phonon isovector $2_{1,MS}^+$ state in the neutron-rich nucleus ^{132}Te

M. Danchev, **G. Rainovski**, N. Pietralla, A. Gargano, A. Covello, C. Baktash, J. R. Beene, C. R. Bingham, A. Galindo-Uribarri, K. A. Gladnishki, C. J. Gross, V. Yu.

Ponomarev, D. C. Radford, L. L. Riedinger, M. Scheck, A. E. Stuchbery, J. Wambach, C.-H. Yu, N. V. Zamfir

A13) Physical Review C 84, 034308 (2011)

In-beam conversion-electron spectroscopy of ^{180}Hg

R. D. Page, A. N. Andreyev, D. R. Wiseman, P. A. Butler, T. Grahn, P. T. Greenlees, R.-D. Herzberg, M. Huyse, G. D. Jones, P. M. Jones, D. T. Joss, R. Julin, S. Juutinen, H. Kankaanpää, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, P. Nieminen, P. Rahkila, **G.I. Rainovski**, C. Scholey, J. Uusitalo, K. Van de Vel, P. Van Duppen

A14) Physical Review C 83, 044318 (2011)

O(6)-symmetry breaking in the γ -soft nucleus ^{126}Xe and its evolution in the light stable xenon isotopes

L. Coquard, **G. Rainovski**, N. Pietralla, T. Ahn, L. Bettermann, M.P. Carpenter, R.V.F. Janssens, J. Leske, C.J. Lister, O. Möller, T. Möller, W. Rother, V. Werner, S. Zhu

A15) International Journal of Modern Physics E 20, 520 (2011)

Chirality in the mass 80 region: ^{79}Kr

T. Koike, S. Kinoshita, Y. Ma, Y. Miura, K. Shirotori, H. Tamura, M. Ukai, T. Suzuki, T. Endo, M. Fujita, Y. Miyashita, M. Ohguma, N. Sato, T. Shinozuka, M. Tateoka, T. Wakui, A. Yamazaki, T. Fukuchi, J. Timar, P. Joshi, T. Ahn, **G. Rainovski**, Y.Y. Fu

A16) Physical Review C 82, 037302 (2010)

Search for one-phonon mixed-symmetry states in the radioactive nucleus ^{140}Nd

K.A. Gladnishki, **G. Rainovski**, P. Petkov, J. Jolie, N. Pietralla, A. Blazhev, A. Damyanova, M. Danchev, A. Dewald, C. Fransen, M. Hackstein, D. Karagoyozov, O. Möller, T. Pissulla, M. Reese, W. Rother, R. Topchiyska

A17) Physical Review C 82, 024317 (2010)

Evolution of the mixed-symmetry $2^+_{1,ms}$ quadrupole-phonon excitation from spherical to γ -soft Xe nuclei

L. Coquard, N. Pietralla, **G. Rainovski**, T. Ahn, L. Bettermann, M.P. Carpenter, R.V.F. Janssens, J. Leske, C.J. Lister, O. Möller, W. Rother, V. Werner, S. Zhu

A18) Physics Letters B 683, 11 (2010)

How close to the O(6) symmetry is the nucleus ^{124}Xe ?

G. Rainovski, N. Pietralla, T. Ahn, L. Coquard, C.J. Lister, R.V.F. Janssens, M.P. Carpenter, S. Zhu, L. Bettermann, J. Jolie, W. Rother, R.V. Jolos, V. Werner

A19) Physical Review C 80, 061304 (2009)

Robust test of E(5) symmetry in ^{128}Xe

L. Coquard, N. Pietralla, T. Ahn, **G. Rainovski**, L. Bettermann, M.P. Carpenter, R.V.F. Janssens, J. Leske, C.J. Lister, O. Moller, W. Rother, V. Werner, S. Zhu

A20) Physics Letters B 679, 19 (2009) (Erratum Phys.Lett. B 682, 490 (2010))

Evolution of the one-phonon $2^+_{1,ms}$ mixed-symmetry state in $N=80$ isotones as a local measure for the proton-neutron quadrupole interaction

T. Ahn, L. Coquard, N. Pietralla, **G. Rainovski**, A. Costin, R.V.F. Janssens, C.J. Lister, M. Carpenter, S. Zhu, K. Heyde

A21) Physical Review C 80, 044305 (2009)

Magnetic dipole sequences in ^{83}Rb

R. Schwengner, **G. Rainovski**, H. Schnare, A. Wagner, S. Frauendorf, F. Donau, A. Jungclauss, M. Hausmann, O. Yordanov, K.P. Lieb, D.R. Napoli, G.de Angelis, M. Axiotis, N. Marginean, F. Brandolini, C. Rossi Alvarez

A22) Physical Review C 79, 024307 (2009)

Centrifugal stretching along the ground state band of ^{168}Hf

A. Costin, M. Reese, H. Ai, R.F. Casten, K. Dusling, C.R. Fitzpatrick, G. Gurdal, A. Heinz, E.A. McCutchan, D.A. Meyer, O. Moller, P. Petkov, N. Pietralla, J. Qian, **G. Rainovski**, V. Werner

A23) Physics Letters B 669, 19 (2008)

Yrast and non-yrast 2^+ states of ^{134}Ce and ^{136}Nd populated in relativistic Coulomb excitation

T.R. Saito, N. Saito, K. Starosta, J. Beller, N. Pietralla, H.J. Wollersheim, D.L. Balabanski, A. Banu, R.A. Bark, T. Beck, F. Becker, P. Bednarczyk, K.-H. Behr, G. Benzoni, P.G. Bizzeti, C. Boiano, A. Bracco, S. Brambilla, A. Brunle, A. Burger, L. Caceres, F. Camera, F.C.L. Crespi, P. Doornenbal, A.B. Garnsworthy, H. Geissel, J. Gerl, M. Gorska, J. Grebosz, G. Hagemann, J. Jolie, M. Kavatsyuk, O. Kavatsyuk, T. Koike, I. Kojouharov, N. Kurz, J. Leske, G.Lo Bianco, A. Maj, S. Mallion, S. Mandal, M. Maliage, T. Otsuka, C.M. Petrache, Zs. Podolyak, W. Prokopowicz, **G. Rainovski**, P. Reiter, A. Richard, H. Schaffner, S. Schielke, G. Sletten, N.J. Thompson, D. Tonev, J. Walker, N. Warr, O. Wieland, Q. Zhong

A24) Physical Review C 78, 031302 (2008)

Lifetime measurement of candidate chiral doublet bands in the $^{103,104}\text{Rh}$ isotopes with the recoil-distance Doppler-shift method in inverse kinematics

T. Suzuki, **G. Rainovski**, T. Koike, T. Ahn, M.P. Carpenter, A. Costin, M. Danchev, A. Dewald, R.V.F. Janssens, P. Joshi, C.J. Lister, O. Moller, N. Pietralla, T. Shinozuka, J. Timar, R. Wadsworth, C. Vaman, S. Zhu

A25) Nuclear Instruments & Methods in Physics Research A 590, 69 (2008)

Boron foils for RDDS experiment

A.R. Lipski, **G. Rainovski**, N. Pietralla, A. Dewald

- A26) Physical Review C 77, 052501 (2008)
Polarization and relaxation rates of radon
 E.R. Tardiff, J.A. Behr, T.E. Chupp, K. Gulyuz, R.S. Lefferts, W. Lorenzon, S.R. Nuss-Warren, M.R. Pearson, N. Pietralla, **G. Rainovski**, J.F. Sell, G.D. Sprouse
- A27) Physical Review Letters 100, 112502 (2008)
Interplay between Single-Particle and Collective Effects in the Odd-A Cu Isotopes beyond $N = 40$
 I. Stefanescu, G. Georgiev, D.L. Balabanski, N. Blasi, A. Blazhev, N. Bree, J. Cederkall, T.E. Cocolios, T. Davinson, J. Diriken, J. Eberth, A. Ekstrom, D. Fedorov, V.N. Fedosseev, L.M. Fraile, S. Franchoo, K. Gladnishki, M. Huysse, O. Ivanov, V. Ivanov, J. Iwanicki, J. Jolie, T. Konstantinopoulos, Th. Kroll, R. Krucken, U. Koster, A. Lagoyannis, G. Lo Bianco, P. Maierbeck, B.A. Marsh, P. Napiorkowski, N. Patronis, D. Pauwels, **G. Rainovski**, P. Reiter, K. Riisager, M. Seliverstov, G. Sletten, J. Van de Walle, P. Van Duppen, D. Voulot, N. Warr, F. Wenander, K. Wrzosek
- A28) Physical Review C 76, 064302 (2007)
Intrinsic state lifetimes in ^{103}Pd and $^{106, 107}\text{Cd}$
 S.F. Ashley, P.H. Regan, K. Andgren, E.A. McCutchan, N.V. Zamfir, L. Amon, R.B. Cakirli, R.F. Casten, R.M. Clark, W. Gelletly, G. Gurdal, K.L. Keyes, D.A. Meyer, M.N. Erduran, A. Papenberg, N. Pietralla, C. Plettner, **G. Rainovski**, R.V. Ribas, N.J. Thomas, J. Vinson, D.D. Warner, V. Werner, E. Williams, H.L. Liu, F.R. Xu
- A29) Physical Review C 76, 044315 (2007) (Erratum Phys. Rev. C 78, 069904(2008))
High-spin states in $^{191, 193}\text{Au}$ and ^{192}Pt : Evidence for oblate deformation and triaxial shapes
 Y. Oktem, D. L. Balabanski, B. Akkus, C. W. Beausang, M. Bostan, R. B. Cakirli, R. F. Casten, M. Danchev, M. Djongolov, M. N. Erduran, S. Erturk, K. A. Gladniski, G. Gurdal, J. Tm. Goon, D. J. Hartley, A. A. Hecht, R. Krücken, N. Nikolov, J. R. Novak, **G. Rainovski**, L. L. Riedinger, I. Yigitoglu, N. V. Zamfir, O. Zeidan5
- A30) Physical Review C 76, 034325 (2007)
 Microscopic restoration of proton-neutron mixed symmetry in weakly collective nuclei
 J.D. Holt, N. Pietralla, J.W. Holt, T.T.S. Kuo, **G. Rainovski**
- A31) Nuclear Instruments & Methods in Physics Research A 579, 472(2007)
Polarization and relaxation of ^{209}Rn

E.R. Tardiff, T.E. Chupp, W. Lorenzon, S.R. Nuss-Warren, J.A. Behr, M.R. Pearson, K. Gulyuz, R.S. Lefferts, N. Pietralla, **G. Rainovski**, J.F. Sell, G.D. Sprouse

A32) Physical Review C 76, 024307 (2007)

High-spin structure of ^{105}Ag : Search for chiral doublet bands

J. Timar, T. Koike, N. Pietralla, **G. Rainovski**, D. Sohler, T. Ahn, G. Berek, A. Costin, K. Dusling, T.C. Li, E.S. Paul, K. Starosta, C. Vaman

A33) Nuclear Physics A 788, 85 (2007)

Isovector Quadrupole Excitations in the Valence Shell studied in Projectile Coulomb Excitation

N. Pietralla, **G. Rainovski**, T. Ahn, A. Costin

A35) Physical Review Letters 98, 102501 (2007)

Effect of γ -softness on the stability of chiral geometry: spectroscopy of ^{106}Ag

P. Joshi, M. P. Carpenter, D. B. Fossan, T. Koike, E. S. Paul, G. Rainovski, K. Starosta, C. Vaman, R. Wadsworth

A36) Physical Review C 75, 014313 (2007)

γ -ray multipolarimetry between low-spin states of ^{136}Ce : Search for the $2^+_{1,ms}$ one-phonon mixed-symmetry state

T. Ahn, N. Pietralla, **G. Rainovski**, A. Costin, K. Dusling, T. C. Li, A. Linnemann, S. Pontillo

A37) Physical Review C 74, 067301 (2006)

Lifetime measurement for the 2^+_1 state of ^{170}Hf

A. Costin, T. Ahn, B. Bochev, K. Dusling, T. C. Li, N. Pietralla, **G. Rainovski**, W. Rother

A38) International Journal of Modern Physics E15, 1735 (2006)

Evidence for $X(5)$ critical point symmetry in ^{128}Ce

D.L.Balabanski, K.A.Gladnishki, G.Lo Bianco, A.Saltarelli, N.V.Zamfir, E.A.McCutchan, H.Ai, R.F.Casten, A.Heinz, D.A.Meyer, C.Plettner, J.Qian, V.Werner, E.Williams, B.Akkus, L.Amon, R.B.Cakirli, M.N.Erduran, Y.Oktem, S.F.Ashley, P.H.Regan, **G.Rainovski**

A39) Physical Review C 74, 034309 (2006)

Quadrupole moment of the 8^+ yrast state in ^{84}Kr

R. Schwengner, D. L. Balabanski, G. Neyens, N. Benouaret, D. Borremans, N. Coulier, M. De Rydt, G. Georgiev, S. Mallion, **G. Rainovski**, G. Rusev, S. Teughels, K. Vyvey

A40) Physica Scripta T125, 108 (2006)

Charged particle feeding of hyperdeformed nuclei in the A=118–126 region

B. Herskind, G.B. Hagemann, G. Sletten, Th. Døssing, C. Rønn Hansen, N. Schunck, S. Ødegård, H. Hübel, P. Bringel, A. Bürger, A. Neusser, A.K. Singh, A. Al-Khatib, S.B. Patel, A. Bracco, S. Leoni, F. Camera, G. Benzoni, P. Mason, A. Paleni, B. Million, O. Wieland, P. Bednarczyk, F. Azaiez, Th. Byrski, D. Curien, O. Dakov, G. Duchene, F. Khalfallah, B. Gall, L. Piqueras, J. Robin, J. Dudek, N. Rowley, B.M. Nyak'oo, A. Algora, Z. Dombradi, J. Gal, G. Kalinka, D. Sohler, J. Molnár, J. Timár, L. Zolnai, K. Juhász, N. Redon, F. Hannachi, J.N. Scheurer, J.N. Wilson, A. Lopez-Martens, A. Korichi, K. Hauschild, J. Roccoz, S. Siem, P. Fallon, I.Y. Lee, A. Görgen, A. Maj, M. Kmiecik, M. Brekiesz, J. Styczen, K. Zuber, J.C. Lisle, B. Cederwall, K. Lagergren, A.O. Evans, **G. Rainovski**, G. De Angelis, G. La Rana, R. Moro, W. Gast, R.M. Lieder, E. Podsvirova, H. Jäger, C.M. Petrache, D. Petrache

A41) Physical Review C 74, 014305 (2006)

Competition between collective and noncollective excitation modes at high spin in ^{124}Ba

A. Al-Khatib, A.K. Singh, H. Hubel, P. Bringel, A. Burger, J. Domscheit, A. Neusser-Neffgen, G. Schonwasser, G.B. Hagemann, C.R. Hansen, B. Herskind, G. Sletten, J.N. Wilson, J. Timar, A. Algora, Zs. Dombradi, J. Gal, G. Kalinka, J. Molnar, B.M. Nyako, D. Sohler, L. Zolnai, R.M. Clark, M. Cromaz, P. Fallon, I.Y. Lee, A.O. Macchiavelli, D. Ward, H. Amro, W.C. Ma, M. Kmiecik, A. Maj, J. Styczen, K. Zuber, K. Hauschild, A. Korichi, A. Lopez-Martens, J. Roccoz, S. Siem, F. Hannachi, J.N. Scheurer, P. Bednarczyk, Th. Byrski, D. Curien, O. Dorvaux, G. Duchene, B. Gall, F. Khalfallah, I. Piqueras, J. Robin, A. Gorgen, K. Juhasz, S.B. Patel, A.O. Evans, **G. Rainovski**, G. Benzoni, A. Bracco, F. Camera, S. Leoni, P. Mason, B. Million, A. Paleni, R. Sacchi, O. Wieland, C.M. Petrache, D. Petrache, G. La Rana, R. Moro, G.De Angelis, J.C. Lisle, B. Cederwall, K. Lagergren, R.M. Lieder, E. Podsvirova, W. Gast, H. Jager, N. Redon

A42) Physical Review C 73, 054306 (2006)

First evidence for spin-flip M1 strength in ^{40}Ar

T.C. Li, N. Pietralla, A.P. Tonchev, M.W. Ahmed, T. Ahn, C. Angell, M.A. Blackston, A. Costin, K.J. Keeter, J. Li, A. Lisetskiy, S. Mikhailov, Y. Parpottas, B.A. Perdue, **G. Rainovski**, W. Tornow, H.R. Weller, Y.K. Wu

A43) Physical Review Letters 96, 122501 (2006)

Stabilization of nuclear isovector valence-shell excitations

G. Rainovski, N. Pietralla, T. Ahn, C.J. Lister, R.V.F. Janssens, M.P. Carpenter, S. Zhu, C.J. Barton III

A44) The European Physical Journal A. 27, 201 (2006)

Study of fission fragments produced by $^{14}\text{N} + ^{235}\text{U}$ reaction

M. Yalcinkaya, E. Ganioglu, M.N. Erduran, B. Akkus, M. Bostan, G. Gurdal, S. Erturk, D. Balabanski, **G. Rainovski**, M. Danchev, R. Dragomirova, A. Minkova, K. Vyvey, R. Beetge, R.W. Fearick, G.K. Mabala, D.G. Roux, W. Whittaker, B.R.S. Babu, J.J. Lawrie, S. Naguleswaran, R.T. Newman, C. Rigolet, J.V. Pilcher, F.D. Smith, J.F. Sharpey-Schafer

A45) Physical Review C 73, 014317 (2006)

Medium-spin γ -ray spectroscopy of transitional nucleus ^{160}Er

K. Dusling, N. Pietralla, **G. Rainovski**, T. Ahn, B. Bochev, A. Costin, T. Koike, T. C. Li, A. Linnemann, S. Pontillo, and C. Vaman

A46) Physica Scripta T125, 115 (2006)

The highest spin discrete levels in $^{131,132}\text{Ce}$

E.S.Paul, P.T.W.Choy, C.Andreoiu, A.J.Boston, A.O.Evans, C.Fox, S.Gros, P.J.Nolan, **G.Rainovski**, J.A.Sampson, H.C.Scraggs, A.Walker, D.E.Appelbe, D.T.Joss, J.Simpson, J.Gizon, A.Astier, N.Buform, A.Prevost, N.Redon, O.Stezowski, B.M.Nyako, D.Sohler, J.Timar, L.Zolnai, D.Bazzacco, S.Lunardi, C.M.Petrache, P.Bednarczyk, D.Curien, N.Kintz, I.Ragnarsson

A47) Physical Review C 72, 064315 (2005)

Evidence for octupole correlations in $^{124,125}\text{Ba}$

P. Mason, G. Benzoni, A. Bracco, F. Camera, B. Million, O. Wieland, S. Leoni, A. K. Singh, A. Al-Khatib, H. Hübel, P. Bringel, A. Bürger, A. Neusser, G. Schönwasser, B. M. Nyakó, J. Timár, A. Algora, Zs. Dombrádi, J. Gál, G. Kalinka, J. Molnár, D. Sohler, L. Zolnai, K. Johász, G. B. Hagemann, C. R. Hansen, B. Herskind, B. Sletten, M. Kmiecik, A. Maj, J. Styczen, K. Zuber, F. Azaiez, K. Hauschild, A. Korichi, A. Lopez-Martens, J. Roccaz, S. Siem, F. Hannachi, J. N. Scheurer, P. Bednarczyk, Th. Byrski, D. Curien, O. Dorvaux, G. Duchêne, B. Gall, F. Khalfallah, I. Piqueras, J. Robin, S. B. Patel, O. A. Evans, **G. Rainovski**, C. M. Petrache, D. Petrache, G. La Rana, R. Moro, G. De Angelis, P. Fallon, I.-Y. Lee, J. C. Lisle, B. Cederwall, K. Lagergen, R. M. Lieder, E. Podsvirova, W. Gast, H. Jäger, N. Redon, and A. Görgen

A48) Physical Review C 72, 054305 (2005)

Subnanosecond lifetime measurement for the $T=0,3$ state of odd-odd $N = Z$ ^{58}Cu

A. Costin, N. Pietralla, T. Koike, C. Vaman, T. Ahn, and **G. Rainovski**

A49) Journal of Physics G 31, S1563 (2005)

RDM lifetime measurements in ^{107}Cd

K Andgren, S F Ashley, P H Regan, E A McCutchan, N V Zamfir, L Amon, R B Cakirli, R F Casten, R M Clark, G Gürdal, K L Keyes, D A Meyer, M N Erduran, A Papenberg, N Pietralla, C Plettner, **G Rainovski**, R V Ribas, N J Thomas, J Vinson, D D Warner, V Werner and E Williams

- A50) Journal of Physics G 31, S1895 (2005)
Evidence for a new region of chirality around A ~ 104
P. Joshi, S. Finnigan, D.B. Fossan, T. Koike, E.S. Paul, **G. Rainovski**, K. Starosta, C. Vaman, R. Wadsworth
- A51) Journal of Physics G 31, S1741 (2005)
Recent progress on the investigation of spontaneous formation of chirality in rotating nuclei
T. Koike, K. Starosta, P. Joshi, **G. Rainovski**, J. Timár, C. Vaman and R. Wadsworth
- A52) Journal of Physics G 31, S1729 (2005)
Octupole signatures in $^{124, 125}\text{Ba}$
P.Mason, G.Benzoni, A.Bracco, F.Camera, B.Million, O.Wieland, S.Leoni, A.K.Singh, A.Al-Khatib, H.Hubel, P.Bringel, A.Burger, A.Neusser, G.Schonwasser, G.B.Hagemann, C.R.Hansen, B.Herskind, G.Sletten, A.Algora, Zs.Dombradi, J.Gal, G.Kalinka, J.Molnar, B.M.Nyako, D.Sohler, J.Timar, L.Zolnai, M.Kmiecik, A.Maj, J.Styczen, K.Zuber, F.Azaiez, K.Hauschild, A.Korichi, A.Lopez-Martens, J.Roccaz, S.Siem, F.Hannachi, J.N.Scheurer, P.Bednarczyk, Th.Byrski, D.Curien, O.Dorvaux, G.Duchene, B.Gall, F.Khalfallah, I.Piqueras, J.Robin, K.Juhasz, S.B.Patel, A.O.Evans, **G.Rainovski**, C.M.Petrache, D.Petrache, G.La Rana, R.Moro, G.De Angelis, P.Fallon, I.-Y.Lee, J.C.Lisle, B.Cederwall, K.Lagergren, R.M.Lieder, E.Podsvirova, W.Gast, H.Jager, N.Redon, A.Gorgen
- A53) Physical Review C 72, 029801 (2005)
Comment on "Probing nuclear structure of ^{124}Xe "
G. Rainovski, D. L. Balabanski, and V. I. Dimitrov
- A54) Physical Review C 71, 064302 (2005)
High-spin structure of ^{102}Ru
D. Sohler, J. Timár, **G. Rainovski**, P. Joshi, K. Starosta, D. B. Fossan, J. Molnár, R. Wadsworth, A. Algora, P. Bednarczyk, D. Curien, Zs. Dombrádi, G. Duchene, A. Gizon, J. Gizon, D. G. Jenkins, T. Koike, A. Krasznahorkay, E. S. Paul, P. M. Raddon, J. N. Scheurer, A. J. Simons, C. Vaman, A. R. Wilkinson, L. Zolnai
- A55) Physical Review 71, 054309 (2005)
Highest spin discrete levels in $^{131,132}\text{Ce}$: Spin generation near the mesoscopic limit
E.S. Paul, P.T. W. Choy, C. Andreoiu, A.J. Boston, A.O. Evans, C. Fox, S. Gros, P.J. Nolan, **G. Rainovski**, J.A. Sampson, H.C. Scraggs, A. Walker, D.E. Appelbe, D.T. Joss, J. Simpson, J. Gizon, A. Astier, N. Buforn, A. Prevost, N. Redon, O. Stezowski, B.M. Nyako, D. Sohler, J. Timar, L. Zolnai, D. Bazzacco, S. Lunardi, C.M. Petrache, P. Bednarczyk, D. Curien, N. Kintz, I. Ragnarsson
- A56) The European Physical Journal A 24, 23 (2005)

First evidence for chirality in Tc isotopes: Spectroscopy of ^{100}Tc

P. Joshi, A.R. Wilkinson, T. Koike, D.B. Fossan, S. Finnigan, E.S. Paul, P.M. Raddon, **G. Rainovski**, K. Starosta, A.J. Simons, C. Vaman, R. Wadsworth

A57) Acta Physica Polonica B 36, 1033 (2005)

Search for hyperdeformation in light Xe nuclei

B.M. Nyako, F. Papp, J. Gal, J. Molnar, J. Timar, A. Algora, Zs. Dombradi, G. Kalinka, L. olnai, K. Juhasz, A.K. Singh, H. Hubel, A. Al-Khatib, P. Bringel, A. Burger, A. Neusser, G. Schonwasser, B. Herskind, G.B. Hagemann, C.R. Hansen, G. Sletten, J.N. Scheurer, F. Hannachi, M. Kmiecik, A. Maj, J. Styczen, K. Zuber, K. Hauschild, A. Korichi, A. Lopez-Martens, J. Roccoz, S. Siem, P. Bednarczyk, Th. Byrski, D. Curien, O. Dorvaux, G. Duchene, B. Gall, F. Khalfallah, I. Piqueras, J. Robin, S.B. Patel, A.O. Evans, **G. Rainovski**, A. Airoidi, G. Benzoni, A. Bracco, F. Camera, B. Million, P. Mason, A. Paleni, R. Sacchi, O. Wieland, G.La Rana, R. Moro, C.M. Petrache, D. Petrache, G. De Angelis, P. Fallon, I.-Y. Lee, J.C. Lisle, B. Cederwall, K. Lagergren, R.M. Lieder, E. Podsvirova, W. Gast, H. Jager, N. Redon, A. Gorgen

A58) Acta Physica Polonica B36, 1029 (2005)

High-spin states in ^{124}Ba

A. Al-Khatib, A.K. Singh, H. Hubel, P. Bringel, A. Burger, A. Neusser, G. choenwasser, G.B. Hagemann, C.R. Hansen, B. Herskind, G. Sohler, J. Timar, L. Zolnai, M. Kmiecik, A. Maj, J. Styczen, K. Zuber, K. Hauschild, A. Korichi, A. Lopez-Martens, J. Roccoz, S. Siem, F. Hannachi, J.N. Scheurer, P. Bednarczyk, Th. Byrski, D. Curien, O. Dorvaux, G. Duchene, B. Gall, F. Khalfallah, I. Piqueras, J. Robin, K. Juhasz, S.B. Patel, A.O. Evans, **G. Rainovski**, A. Airoidi, G. Benzoni, A. Bracco, F. Camera, B. Million, P. Mason, A. Paleni, R. Sacchi, O. Wieland, C.M. Petrache, D. Petrache, G. La Rana, R. Moro, G. De Angelis, P. Fallon, I.-Y. Lee, J.C. Lisle, B. Cederwall, K. Lagergren, R.M. Lieder, E. Podsvirova, W. Gast, H. Jaeger, N. Redon, A. Gorgen

A59) Physical Review C 71, 044318 (2005)

One-phonon $2^+_{1,ms}$ mixed-symmetry state of ^{148}Sm observed in nuclear resonance fluorescence

T.C. Li, N. Pietralla, C. Fransen, H. von Garrel, U. Kneissl, C. Kohstall, A. Linnemann, H.H. Pitz, **G. Rainovski**, A. Richter, M. Scheck, F. Stedile, P. von Brentano, P. von Neumann-Cosel, V. Werner

A60) Physical Review C 71, 034318(2005)

Quasi- γ band and odd-even staggering effect in ^{102}Ru

S. Lalkovski, **G. Rainovski**, K. Starosta, M. P. Carpenter, D. B. Fossan, S. Finnigan, S. Ilieva, P. Joshi, T. Koike, E. S. Paul, N. Pietralla, C. Vaman, and R. Wadsworth

A61) Physics Letters B 598, 178 (2004)

Experimental evidence for chirality in the odd-A ^{105}Rh

J. Timár, P. Joshi, K. Starosta, V.I. Dimitrov, D.B. Fossan, S. Frauendorf, J. Molnár, D. Sohler, R. Wadsworth, A. Algora, P. Bednarczyk, D. Curien, Zs. Dombrádi, G. Duchene, J. Gizon, A. Gizon, D. Jenkins, T. Koike, A. Krasznahorkay, E.S. Paul, P. Raddon, **G. Rainovski**, J.N. Scheurer, A. Simons, C. Vaman, T. Wilkinson, L. Zolnai

A62) Physical Review C 70, 034305 (2004)

Quadrupole moments and g factors for high-spin neutron isomers in ^{193}Pb

M. Ionescu-Bujor, A. Iordachescu, D.L. Balabanski, S. Chmel, G. Neyens, G. Baldsiefen, D. Bazzacco, F. Brandolini, D. Bucurescu, M. Danchev, M. De Poli, G. Georgiev, A. Gorgen, H. Haas, H. Hubel, G. Ilie, N. Marginean, R. Menegazzo, P. Pavan, **G. Rainovski**, R.V. Ribas, C. Rossi Alvarez, C.A. Ur, K. Vyvey, S. Frauendorf

A63) Physics Letters B 595, 135 (2004)

Stability of chiral geometry in the odd-odd Rh isotopes: Spectroscopy of ^{106}Rh

P. Joshi, D.G. Jenkins, P.M. Raddon, A.J. Simons, R. Wadsworth, A.R. Wilkinson, D.B. Fossan, T. Koike, K. Starosta, C. Vaman, J. Timár, Zs. Dombrádi, A. Krasznahorkay, J. Molnár, D. Sohler, L. Zolnai, A. Algora, E.S. Paul, **G. Rainovski**, J. Gizon, A. Gizon, P. Bednarczyk, D. Curien, G. Duchene, J.N. Scheurer

A64) European Physics Journal A 20, 191 (2004)

Spectroscopic quadrupole moments of high-spin isomers in ^{193}Pb

D.L. Balabanski, M. Ionescu-Bujor, A. Iordachescu, D. Bazzacco, F. Brandolini, D. Bucurescu, S. Chmel, M. Danchev, M. De Poli, G. Georgiev, H. Haas, H. Hubel, N. Marginean, R. Menegazzo, G. Neyens, P. Pavan, **G. Rainovski**, C. Rossi Alvarez, C.A. Ur, K. Vyvey, S. Frauendorf

A65) Journal of Physics G: Nucl. Part. Phys. 29, 2763 (2003)

Planar and aplanar tilted bands in the odd-odd nucleus ^{132}Cs

G. Rainovski, E.S. Paul, H.J. Chantler, P.J. Nolan, D.G. Jenkins, R. Wadsworth, P. Raddon, A. Simons, D.B. Fossan, T. Koike, K. Starosta, C. Vaman, E. Farnea, A. Gadea, Th. Kröll, R. Isocrate, G. de Angelis, D. Curien, V.I. Dimitrov

A66) Physical Review C 68, 024318 (2003)

Candidate chiral twin bands in the odd-odd nucleus ^{132}Cs : Exploring the limits of chirality in the mass $A \approx 130$ region

G. Rainovski, E.S. Paul, H.J. Chantler, P.J. Nolan, D.G. Jenkins, R. Wadsworth, P. Raddon, A. Simons, D.B. Fossan, T. Koike, K. Starosta, C. Vaman, E. Farnea, A. Gadea, Th. Kröll, R. Isocrate, G. de Angelis, D. Curien, V.I. Dimitrov

- A67) Physical Review C 68, 054307 (2003)
Delayed backbanding in $\pi h_{9/2}$ band of ^{187}Ir
M. Danchev, D.L. Balabanski, I. Yigitoglu, B. Akus, C.W. Beausnag, M. Bostan, R.F. Casten, M. Djongolov, N.M. Erduran, S. Erturk, K.A. Gladnishki, G. Gurdal, J. TM. Goon, D.J. Hartley, A.A. Hecht, R. Krücken, J.R. Novak, Y. Oktem, **G. Rainovski**, L.L. Riedinger, N.V. Zamfir, O. Zeidan
- A68) Nuclear Physics A 708, 167 (2002)
Beta Decay of Medium and High Spin Isomers in ^{94}Ag
M.La Commara, K. Schmidt, H. Grawe, J. Doring, R. Borcea, S. Galanopoulos, M. Gorska, S. Harissopulos, M. Hellstrom, Z. Janas, R. Kirchner, C. Mazzocchi, A.N. Ostrowski, C. Plettner, **G. Rainovski**, E. Roeckl
- A69) Journal of Physics G 28, 2617 (2002)
Shape coexistence at high spin in the $N=Z+2$ nucleus ^{70}Se
G. Rainovski, H. Schnare, R. Schwengner, C. Plettner, L. Kaubler, F. Döna, I. Ragnarsson, J. Eberth, T. Steinhardt, O. Thelen, M. Hausmann, A. Jungclaus, K.P. Lieb, A. Muller, G.de Angelis, A. Gadea, D.R. Napoli, A. Algora, D.G. Jenkins, R. Wadsworth, A. Wilson, W. Andrejtscheff, V.I. Dimitrov
- A70) Physical Review C 66, 024310 (2002)
Magnetic rotation in ^{82}Rb and ^{84}Rb
R. Schwengner, **G. Rainovski**, H. Schnare, A. Wagner, F. Donau, A. Jungclaus, M. Hausmann, O. Iordanov, K.P. Lieb, D.R. Napoli, G.de Angelis, M. Axiotis, N. Marginean, F. Brandolini, C. Rossi Alvarez
- A71) Physical Review C 66, 014308 (2002)
Tilted Dipole Bands in $^{123, 124}\text{Xe}$
G. Rainovski, D.L. Balabanski, G. Roussev, G.Lo Bianco, G. Falconi, N. Blasi, D. Bazzacco, G.de Angelis, D.R. Napoli, F. Döna, V.I. Dimitrov
- A72) Physical Review C 65, 044327 (2002)
High-Spin Structure of the Spherical Nucleus ^{90}Y
G. Rainovski, R. Schwengner, K.D. Schilling, A. Wagner, A. Jungclaus, E. Galindo, O. Thelen, D.R. Napoli, C.A. Ur, G.de Angelis, M. Axiotis, A. Gadea, N. Marginean, T. Martinez, Th. Kröll
- A73) Physical Review C 63, 064315 (2001)
Structure of High-Spin States in ^{89}Sr and ^{90}Sr
E.A. Stefanova, R. Schwengner, **G. Rainovski**, K.D. Schilling, A. Wagner, F. Döna, E. Galindo, A. Jungclaus, K.P. Lieb, O. Thelen, J. Eberth, D.R. Napoli, C.A. Ur, G.de Angelis, M. Axiotis, A. Gadea, N. Marginean, T. Martinez, Th. Kröll, T. Kutsarova

- A74) Acta Physica Hungarica N.S. 12, 211 (2000)
Tilted Three-Quasiparticle Band in ^{123}Xe
G. Rainovski, G.Lo Bianco, D.L. Balabanski, G. Roussev, G. Falconi, N. Blasi, D. Bazzacco, G.de Angelis, D.R. Napoli, M.A. Cardona, A.J. Kreiner, H. Somacal, V.I. Dimitrov, J.-Y. Zhang, F. Dönau
- A75) Reports of Bulgarian Academy of Science 3, 12 (2000)
Is there a Coexistence of Low-K Prolate and High-K Oblate $\pi h_{11/2}$ Orbitals in ^{123}I ?
G. Rainovski, D.L. Balabanski, G. Lo Bianco, G. Falconi, N. Blasi D. Bazzacco, G. de Angelis, D.R. Napoli, M.A. Cardona, A.J. Kreiner, H. Somacal
- A76) The European Physical Journal A 8, 303 (2000)
Beta Decay of ^{93}Pd
K. Schmidt, C. Mazzocchi, R. Borcea, J. Döring, S. Galanopoulos, M. Gorska, H. Grawe, S. Harissopulos, M. Hellstrom, Z. Janas, R. Kirchner, G. Kriembardis, M.La Commara, A. Ostrowski, **G. Rainovski**, E. Roeckl
- A77) Physical Review C 56, 1629 (1997)
Band Termination in ^{123}I
D. L. Balabanski, **G. Rainovski**, N. Blasi, G. Falconi, G. Lo Bianco, S. Signorelli, D. Bazzacco, G. de Angelis, D. R. Napoli, M. A. Cardona, A. J. Kreiner, H. Somacal
-
- B1) Journal of Physics: Conference Series 445, 012030 (2013)
Exotic ideas on mixed proton-neutron symmetry and their manifestation in heavy nuclei
N Pietralla, C Bauer, J Leske, O Möller, T Möller, P von Neumann-Cosel, **G Rainovski**, A Scheikh-Obeid, C Walz
- B2) Journal of Physics: Conference Series 381, 012047 (2012)
On the origin of low-lying $M1$ strength in even-even nuclei
G. Rainovski, M. Danchev, N. Pietralla, A. Gargano, A. Covello, C. Baktash, J. R. Beene, C. R. Bingham, A. Galindo-Uribarri, K. A. Gladnishki, C. J. Gross, V. Yu. Ponomarev, D. C. Radford, L. L. Riedinger, M. Scheck, A. E. Stuchbery, J. Wambach, C.-H. Yu, and N. V. Zamfir
- B3) EPJ Web of Conferences 38, 10003 (2012)
Level lifetimes and quadrupole moments from Coulomb excitation in the Ba chain and the $N = 80$ isotones
C. Bauer, G. Guastalla, J. Leske, O. Möller, T. Möller, J. Pakarinen, N. Pietralla, **G. Rainovski**, E. Rapisarda, D. Seweryniak, C. Stahl, R. Stegmann, J. Wiederhold, S. Zhu⁵

- B4) EPJ Web of Conferences 38, 10001 (2012)
Progress on the study of nuclear states with mixed proton-neutron symmetry
 N. Pietralla, Th. Möller, T. Ahn, Ch. Bauer, L. Coquard, M. Danchev, K.A. Gladnishki, A. Krugmann, J. Leske, O. Möller, P. von Neumann-Cosel, V.Yu. Ponomarev, **G. Rainovski**, A. Scheikh Obeid, M. Scheck, Ch. Walz, J. Wambach
- B5) AIP Conference Proceedings. 1488, 53 (2012)
The beauty of good data: Unveiling the traces of mixed symmetry
 N. Pietralla, T. Ahn, C. Bauer, L. Coquard, J. Leske, O. Möller, T. Möller, P. von Neumann-Cosel, **G. Rainovski**, C. Walz
- B6) Journal of Physics: Conference Series 366, 012008 (2012)
One-phonon isovector $2^+_{1,MS}$ state in the neutron rich nucleus ^{132}Te
 M Danchev, **G Rainovski**, N Pietralla, A Gargano, A Covello, C Baktash, J R Beene, C R Bingham, A Galindo-Uribarri, K A Gladnishki, C J Gross, V Yu Ponomarev, D C Radford, L L Riedinger, M Scheck, A E Stuchbery, J Wambach, C -H Yu, N V Zamfir
- B7) Journal of Physics: Conference Series 366, 012020 (2012)
Search for one-phonon mixed-symmetry states in the radioactive nucleus ^{140}Nd
 K A Gladnishki, **G Rainovski**, P Petkov, J Jolie, N Pietralla, A Blazhev, A Damyanova, M Danchev, A Dewald, C Fransen, M Hackstein, O Möller, T Pissulla, M Reese, W Rother
- B8) ATOMKI 2010 Ann.Rept., p.40 (2010)
Observation of γ -band structure in ^{104}Pd
 D.Sohler, J.Timar, I.Kuti, J.Molnar, A.Algora, Zs.Dombradi, J.Gal, A.Krasznahorkay, L.Zolnai, P.Joshi, K.Starosta, D.B.Fossan, R.Wadsworth, P.Bednarczyk, D.Curien, G.Duchene, A.Gizon, J.Gizon, D.G.Jenkins, T.Koike, E.S.Paul, P.M.Raddon, **G.Rainovski**, J.N.Scheurer, A.J.Simons, C.Vaman, A.R.Wilkinson
- B9) AIP Conference Proceedings 1231, 207 (2010)
 $O(6)$ -symmetry breaking in the ^{126}Xe nucleus
 L. Coquard, N. Pietralla, T. Ahn, M. Carpenter, R. V. F. Janssens, K. Lister, J. Leske, O. Möller, T. Möller, **G. Rainovski**, W. Rother and S. Zhu
- B10) Journal of Physics: Conference Series 205, 012039 (2010)
Experimental studies of proton-neutron mixed symmetry states in the mass $A \approx 130$ region
G. Rainovski, N. Pietralla, J. Leske, T. Ahn, L. Coquard, C. Bauer, Th. Möller, K. Gladnishki, M. Danchev, A. Damyanova, D.Karagyozov, R. Topchiyska, C.J. Lister, R.V.F. Janssens, M.P. Carpenter, S. Zhu

- B11) Proceedings of the 28th International Workshop on Nuclear Theory, 21 – 26 June, 2009, Bulgaria, Editor S. Dimitrova, page 105, (2010) (ISSN 1313-2822)
Evolution and shell stabilization of proton-neutron mixed symmetry states in the mass $A \approx 130$ region
G. Rainovski, N. Pietralla, T. Ahn, C. Bauer, M.P. Carpenter, L. Coquard, A. Damyanova, M. Danchev, K. Gladnishki, R.V.F. Janssens, D. Karagiozov, J. Leske, C.J. Lister, Th. Möller, R. Topchiiska, S. Zhu
- B12) Proc.of the 12th Internat. Conf. on Nuclear Reaction Mechanisms, Varenna, Italy, June 15-19, 2009, F.Cerutti, A.Ferrari Eds., Vol.1, p.173 (2010)
Symmetries of Quadrupole-Collective Vibrational Motion in Transitional Even-Even $^{124-134}\text{Xe}$ Nuclei
N. Pietralla, L. Coquard, **G. Rainovski**, T. Ahn, C. Bauer, J. Leske, O. Moller, T. Moller
- B13) AIP Conference Proceedings 1090, 263 (2009)(ISBN 978-0-7354-0623-0 / ISSN 0094-243X), Proceedings of the 13th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, Cologne, Germany, August 25-29, 2008
Off-yrast collectivity of the $O(6)$ like nucleus ^{124}Xe
G. Rainovski, N. Pietralla, T. Ahn, L. Coquard, C.J. Lister, R.V.F. Janssens, M.P. Carpenter, S. Zhu, L. Bettermann, W. Rother, J. Jolie.
- B14) AIP Conf. Proc. 1090, 140 (2009)(ISBN 978-0-7354-0623-0 / ISSN 0094-243X), Proceedings of the 13th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, Cologne, Germany, August 25-29, 2008
Evolution of the one-phonon mixed-symmetry $2^+_{1,ms}$ state in even-even Xe isotopes from inverse-kinematics Coulomb excitation
L. Coquard, T. Ahn, **G. Rainovski**, N. Pietralla, J. Leske, O. Moller, T. Moller, M. Carpenter, R.V.F. Janssens, C.J. Lister, S. Zhu, L. Bettermann, W. Rother
- B15) AIP Conf. Proc. 1090, 524 (2009)(ISBN 978-0-7354-0623-0 / ISSN 0094-243X), Proceedings of the 13th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, Cologne, Germany, August 25-29, 2008
Evidence for the Importance of Soft Deformation Potentials in Strongly Deformed Nuclei
N. Pietralla, A. Costin, J. Bonnet, J. Beller, A. Krugmann, O. Moller, H. Ai, R.F. Casten, A. Heinz, E.A. McCutchan, J. Qian, V. Werner, **G. Rainovski**, K. Dusling
- B16) AIP Conf. Proc. 1090, 587 (2009)(ISBN 978-0-7354-0623-0 / ISSN 0094-243X), Proceedings of the 13th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, Cologne, Germany, August 25-29, 2008
Shell Structure and Shape Changes in Neutron Rich Krypton Isotopes
D. Mucher, J. Iwanicki, J. Jolie, I. Stefanescu, J. Van de Walle, F. Becker, U. Bergmann, A. Blazhev, E. Bouchez, P. Butler, J. Cederkall, T. Czosnyka, T.

Davinson, J. Eberth, T. Faestermann, S. Franchoo, C. Fransen, J. Gerl, R. Gernhauser, D. Habs, R.-D. Herzberg, M. Huyse, D. Jenkins, G. Jones, O. Kester, W. Korten, J. Kownacki, T. Kroll, R. Krucken, Z. Liu, S. Mandal, P. Napiorkowski, T. Nilsson, N. Pietralla, **G. Rainovski**, H. Scheit, A. Scherillo, D. Schwalm, T. Sieber, Ch. Theisen, P. Van Duppen, N. Warr, D. Weisshaar, F. Wenander, B. Wolf, P. Woods, M. Zielinska

B17) AIP Conference Proceedings 1165, 225 (2009), Proc. Intern. Conf. on Nuclear Structure and Dynamics, Dubrovnik, Croatia, 4-8 May, 2009

Isovector Quadrupole Excitations in the Valence Shell of Vibrational Nuclei

N. Pietralla, T. Ahn, M. Carpenter, L. Coquard, R.V.F. Janssens, K. Heyde, K. Lister, J. Leske, **G. Rainovski**, S. Zhu

B18) Proceedings of the International Conference Nuclear Structure and Related Topics, June 30 - July 4, 2009 Dubna, Russia, Editors A.I. Vdovin, V.V. Voronov, R.V. Jolos, vol. II, page 90 (2009) (ISBN 978-5-9530-0235-6)

Evolution and shell stabilization of proton-neutron mixed symmetry states in the mass $A \approx 130$ region

G. Rainovski, N. Pietralla, J. Leske, T. Ahn, L. Coquard, C. Bauer, Th. Möller, C.J. Lister, R.V.F. Janssens, M.P. Carpenter, S. Zhu

B19) BgNS Transactions 13, 145 (2009) (ISSN 1310-8727), Proceedings of the 17th International School on Nuclear Physics, Neutron Physics and Nuclear Energy, Varna, Bulgaria, September 24-30, 2007)

Isovector quadrupole excitations in the valence shell of vibrational nuclei

N. Pietralla, T. Ahn, O. Burda, **G. Rainovski**

B20) BgNS Transactions 13, 154 (2009) (ISSN 1310-8727), Proceedings of the 17th International School on Nuclear Physics, Neutron Physics and Nuclear Energy, Varna, Bulgaria, September 24-30, 2007

Test of nuclear chirality in 104Rh – lifetime measurements using RDDS method in inverse kinematics

G. Rainovski, T. Suzuki, T. Koike, N. Pietralla, A. Costin, T. Ahn, C. Vaman, P. Joshi, R. Wadsworth, J. Timar, M. Danchev, A. Dewald, O. Möller, R.V.F. Janssens, M.P. Carpenter, C.J. Lister, S. Zhu

B21) BgNS Transactions 10, 299 (2005) (ISSN 1310-8727), Proceedings of the 16th International School on Nuclear Physics, Neutron Physics and Nuclear Energy, Varna, Bulgaria, September 19-26, 2005

Identification of 2^+_{ms} mixed symmetry state in ^{138}Ce

G. Rainovski, N. Pietralla, T. Ahn, C. Lister, R.V.F. Janssens, M.P. Carpenter, S. Zhu

B22) Atomki 2007 Ann.Rept., p.26 (2007)

Study of the band structures in ^{104}Pd

D.Sohler, G.Berek, J.Timar, J.Molnar, A.Algora, Zs.Dombradi, J.Gal, A.Krasznahorkay, L.Zolnai, P.Joshi, K.Starosta, D.B.Fossan, R.Wadsworth, P.Bednarczyk, D.Curien, G.Duchene, A.Gizon, J.Gizon, D.G.Jenkins, T.Koike, E.S.Paul, P.M.Raddon, **G.Rainovski**, J.N.Scheurer, A.J.Simons, C.Vaman, A.R.Wilkinson

B23) AIP Conference Proceedings 819, 11 (2006), Proc. 12th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics Location: Univ Notre Dame, Notre Dame, IN Date: SEP 04-09, 2005

In-beam gamma-spectroscopy of low-spin mixed-symmetry states of Ce-138 with gammasphere in singles-mode

N. Pietralla, **G. Rainovski**, T. Ahn, M.P. Carpenter, R.V.F. Janssens, C.J. Lister, S. Zhu

B24) AIP Conference Proceedings 802, 206 (2005), Proc. International Symposium on Exotic Nuclear Systems Location: Debrecen, HUNGARY Date: JUN 20-25, 2005

Composite chiral bands in the A similar to 105 mass region

J. Timar, C. Vaman, K. Starosta, R. Joshi, V.I. Dimitrov D.B. Fossan, T. Koike, D. Sohler, J. Molnar, R. Wadsworth, A. Algora, P. Bednarczyk, D. Curien, Z. Dombradi, G. Duchene, A. Gizon, J. Gizon, D.G. Jenkins, A. Krasznahorkay, I.Y. Lee, A.O. Macchiavelli, E.S. Paul, P.M. Raddon, **G. Rainovski**, J.N. Scheurer, A.J. Simons, A.R. Wilkinson, L. Zolnai, S. Frauendorf

B25) Triangle University Nuclear Laboratory, Annual Report, p.186 (2005); TUNL-XLIV (2005)

Search for Magnetic Dipole Excitation Strength in ⁴⁰Ar

M.W.Ahmed, T.Ahn, C.Angell, M.Blackston, A.Costin, K.Keeter, J.Li, T.C.Li, S.Mikhailov, N.Pietralla, **G.Rainovski**, Y.Parpottas, B.Perdue, W.Tornow, A.P.Tonchev, H.R.Weller, Y.K.Wu

B26) AIP Conference Proceedings 701, 303 (2004) International Conference on the Labyrinth in Nuclear Structure Location: Iraklion, GREECE Date: JUL 13-19, 2003

Hyperdeformed shapes and Jacobi transitions in Ba-126

B. Herskind, G. B. Hagemann, G. Sletten, Th. Dossing, C. Ronn Hansen, S. Odegård, H. Hübel, P. Bringel, A. Bürger, A. Neusser, A. K. Singh, A. Al-Khatib, S. B. Patel, A. Bracco, S. Leoni, F. Camera, G. Benzoni, P. Mason, A. Paleni, B. Million, O. Wieland, P. Bednarczyk, F. Azaiez, Th. Byrski, D. Curien, O. Dakov, G. Duchene, F. Khalfallah, B. Gall, I. Piqueras, J. Robin, J. Dudek, N. Rowley, N. Redon, F. Hannachi, J. N. Scheurer, J. N. Wilson, A. Lopez-Martens, A. Korichi, K. Hauschild, J. Roccoz, S. Siem, P. Fallon, I.-Y. Lee, A. Goergen, B. M. Nyakó, A. Algora, Zs. Dombrádi, J. Gál, G. Kalinka, D. Sohler, J. Molnár, J. Timár, L. Zolnai, K. Juhász, A. Maj, M. Kmiecik, M. Brekiesz, J. Styczen, K. Zuber, J. C. Lisle, B. Cederwall, K. Lagergren, A. O. Evans, **G. Rainovski**, G. de Angelis, G. La Rana, R.

Moro, W. Gast, R. M. Lieder, E. Podsvirova, H. Jäger, C. M. Petrache and D. Petrache

B27) AIP Conference Proceedings 701, 383 (2004) International Conference on the Labyrinth in Nuclear Structure Location: Iraklion, GREECE Date: JUL 13-19, 2003

Chirality in the $A \sim 100$ region

P. Joshi, D. G. Jenkins, P. M. Raddon, A. J. Simons, R. Wadsworth, T. Wilkinson, D. B. Fossan, K. Starosta, C. Vaman, J. Timár, Zs. Dombrádi, A. Krasznahorkay, J. Molnár, D. Sohler, L. Zolnai, A. Algora, E. S. Paul, **G. Rainovski**, J. Gizon, A. Gizon, P. Bednarczyk, D. Curien, G. Duchene, N. Fotiades and J. N. Scheurer

B28) AIP Conference Proceedings 701, 208 (2004) International Conference on the Labyrinth in Nuclear Structure Location: Iraklion, GREECE Date: JUL 13-19, 2003

Deformation of the very neutron-deficient rare-earth nuclei produced with the SPIRAL 76Kr radioactive beam and studied with EXOGAM + DIAMANT

N. Redon, A. Prévost, D. Guinet, Ph. Laitesse, M. Meyer, B. Rossé, O. Stézowski, P. J. Nolan, C. Andreoiu, A. J. Boston, M. Descovich, A. O. Evans, S. Gros, J. Norman, R. D. Page, E. S. Paul, **G. Rainovski**, J. Sampson, G. de France, J. M. Casandjian, Ch. Theisen, J. N. Scheurer, B. M. Nyakó, J. Gál, G. Kalinka, J. Molnár, Zs. Dombrádi, J. Timár, L. Zolnai, K. Juhász, A. Astier, I. Deloncle, M. G. Porquet, R. Wadsworth, P. Raddon, Y. Lee, A. Wilkinson, P. Joshi, J. Simpson, D. Appelbe, D. Joss, R. Lemmon, J. Smith, D. Cullen, A. Brondi, G. La Rana, R. Moro, E. Vardacci and M. Girod

B29) ATOMKI 2003 Ann.Rept., p.9 (2004)

Chiral twin bands in the $^{105, 106}Rh$ nuclei

J. Timar, D. Sohler, J. Molnar, A. Algora, Zs. Dombradi, A. Krasznahorkay, L. Zolnai, P. Joshi, D. G. Jenkins, P. M. Raddon, A. J. Simons, R. Wadsworth, A. R. Wilkinson, K. Starosta, D. B. Fossan, C. Vaman, E. S. Paul, **G. Rainovski**, J. Gizon, A. Gizon, P. Bednarczyk, D. Curien, G. Duchene, J. N. Scheurer

B30) International Symposium on Nuclear Structure Physics (NP 2001), University of Göttingen Germany, MAR 05-08, 2001

Transition strengths in magnetic dipole bands in ^{82}Rb , ^{83}Rb and ^{84}Rb

R. Schwengner, **G. Rainovski**, H. Schnare, A. Wagner, F. Donau, M. Hausmann, O. Iordanov, A. Jungclaus, K. P. Lieb, D. R. Napoli, G. De Angelis, M. Axiotis, N. Marginean, F. Brandolini, C. R. Alvarez

C1) CERN – HIE-ISOLDE proposal INTC-P-339 (experiment IS546) (2012)

“Study of the effect of shell stabilization of the collective isovector valence-shell excitations along the $N=80$ isotonic chain”

C. Bauer, N. Pietralla (spokeperson), S. Bönig, S. Illeva, Th. Kröll, O. Möller, T. Möller, M. Scheck, C. Stahl, R. Stegmann, M. Thürauf, **G. Rainovski (co-**

spokesperson), M. Danchev, K. Gladnishki, V. Karayonchev, A. Blazhev, H. Duckwitz, C. Fransen, J. Jolie, N. Warr, D. Mucher

42 shifts approved as the experiment is expected to run in 2015

- C2) GSI experiment S426 (approved by G-PAC February 2012, completed March 2014)

Relativistic Coulomb M1 excitation of neutron-rich ^{85}Br

N. Pietralla (spokesperson), **G. Rainovski (co-spokesperson)**, M. Reese, C. Stahl, P. Boutachkov, M. Danchev, J. Gerl, K. Gladnishki, M. Gorska, G. Guastella, P. R. John, J. Leske, E. Merchan, O. Moller, T. Moller, S. Pietri, H.-J. Wollersheim, D. Jenkins

- C3) Argonne National Laboratory – ATLAS proposal #1352 (approved 2011, amended 2012, completed 2013)

Study of the origin of the low-lying M1 strength: search for the one-phonon mixed-symmetry $2^+_{1,ms}$ state of ^{204}Hg in an inverse-kinematics Coulomb excitation experiment

G. Rainovski (spokesperson), N. Pietralla, M. Scheck, T. Moller, O. Moller, R.V.F. Janssens, C.J. Lister, M. Carpenter, and S. Zhu

- C4) CERN – ISOLDE proposal INTC-P-268 (experiment IS496) (approved 2009, completed 2012)

Study of the effect of shell stabilization of the collective isovector valence-shell excitations along the $N=80$ isotonic chain

N. Pietralla (spokesperson), J. Leske, L. Coquard, O. Moller, T. Moller, Th. Kroll, **G. Rainovski (co-spokesperson)**, M. Danchev, K. Gladnishki, D. Karagyoov, R. Topchiyska, A. Damyanova, J. Jolie, A. Blazhev, D. Mucher, C. Fransen, N. Warr, D. Jenkins, R. Wadsworth, C. Barton, and R. Krucken

- C5) GSI experiment U242 (approved by G-PAC 2009, completed 2010)

Properties of the one-phonon MSS in ^{140}Ba from an α -transfer reaction

G. Rainovski (spokesperson), J. Leske (co-spokesperson), C. Bauer, L. Coquard, A. Damyanova, M. Danchev, K. Gladnishki, I. Kojouharov, Th. Kroll, N. Pietralla, S. Pietri, H. Schaffner

- C6) Argonne National Laboratory – ATLAS proposal #1309 (approved 2010, completed 2010)

Is $O(6)$ algebraic symmetry exhibited in real nuclei?

C.J. Lister (spokesperson), E.A. McCutchan, M.P. Carpenter, R.V.F. Janssens, T.L. Khoo, T. Lauritsen, D. Seweryniak, S. Zhu, G. Gurdal, **G. Rainovski (co-spokesperson)**, N. Pietralla, L. Coquard, J. Leske, O. Moller, Th. Moller, J. Jolie, W. Rother, L. Betterman, V. Werner, T. Ahn, I. Y Lee, A.O. Macchiavelli, M. Cromaz, R. Clark, P. Fallon

C7) Argonne National Laboratory – ATLAS proposal #1237 (approved 2008, completed 2009)

Inverse-kinematics two-step Coulomb excitation of two-phonon mixed-symmetry states of ^{94}Mo and ^{96}Ru – part I

N. Pietralla (spokeperson), C. Bauer, L. Coquard, J. Leske, **G. Rainovski (co-spokeperson)**, M. Carpenter, R.V.F. Janssens, T. Lauritsen, K. Lister, E.A. McCutchan, S. Zhu, R.C. Vondrasek

C8) Argonne National Laboratory – ATLAS proposal #1163-2 (approved 2007, completed 2008)

Evolution of the one-phonon mixed-symmetry $2^+_{1,ms}$ state in the spherical-to-axially-deformed shape phase transition in Sm isotopes from inverse-kinematics Coulomb excitation

T. Ahn (spokesperson), M. Carpenter, L. Coquard, A. Costin, R.V.F. Janssens, T. Lauritsen, J. Leske, K. Lister, O. Möller, T. Möller, N. Pietralla, **G. Rainovski (co-spokesperson)**, R.C. Vondrasek, S. Zhu

C9) Argonne National Laboratory – ATLAS proposal #1085 (approved 2005, completed 2005)

Identification of the mixed-symmetry one-phonon $2^+_{1,ms}$ state of ^{136}Ce and ^{134}Xe in inverse-kinematics Coulomb excitation

T. Ahn (spokesperson), N. Pietralla, **G. Rainovski (co-spokesperson)**, M. Carpenter, R.V.F. Janssens, T. Lauritsen, K. Lister, S. Zhu, R.C. Vondrasek

C10) Argonne National Laboratory – ATLAS proposal #1096 (approved 2005, completed 2005)

Test of nuclear chirality in ^{104}Rh - study of electromagnetic transitions and the chiral selection rules via lifetime measurements using the recoil distance method in inverse kinematics

G. Rainovski (spokesperson), N. Pietralla (co-spokesperson), A. Costin, T. Koike, C. Vaman, P. Joshi, R. Wadsworth, P. Davies, F. Johnston-Theasby, J. Timár, E.S. Paul, M. Danchev, M. Djongolov, D.L. Balabanski, K. Gladnishki, A. Dewald, O. Möller, Barbara Melon, R.V.F. Janssens, M. Carpenter, C. Lister, and S. Zhu

C11) VIVITRON experiment EB-02114 (approved 2002, completed 2002)

'Search for Magnetic Dipole Bands and Chiral Twin Bands in ^{132}Cs

G.I. Rainovski (spokesperson), P.J. Nolan, E.S. Paul (co-spokesperson), D.G. Jenkins, A.O. Evans, J. Norman, R. Wadsworth, A. Simons, P. Raddon, D.B. Fossan, T. Koike, K. Starosta, C. Vaman, E. Farnea, G. de Angelis, A. Gadea

D1) Дисертация за придобиване на научната степен „доктор на науките“ по 4.1 Физически науки (Ядрена физика) (виж приложеното CD)

An experimental study of low-energy M1 collective excitations in atomic nuclei
Защитена на ДД.ММ.2012 в СУ Св. Климент Охридски

- D2) Дисертация за придобиване на научната и образователна степен „доктор“ по Ядрена физика (стар шифър 01.03.04)
Колективни и едночастични възбуждания в преходните ядра $^{123,124}\text{I}$ и ^{124}Xe
Защитена на 23.10.2001 пред специализирания съвет на ВАК по Ядрена физика, Ядрена енергетика и Астрономия.

/доц. дфзн Георги Райновски/