

LIST OF THE SCIENTIFIC PUBLICATIONS
of Prof. DSc. Dr. Pavel P. Petkov

1) SOME M1 TRANSITION STRENGTHS IN ODD-A NUCLEI AWAY FROM
CLOSED SHELLS

W. Andrejtscheff, L. K. Kostov, L. G. Kostova, P. Petkov, M. Senba, N. Tsoupas,
Z. Z. Ding and C. Tuniz

Nuclear Physics A445 (1985) 515-533

2) TWO-QUASIPROTON AND TWO-QUASINEUTRON EXCITATIONS IN
THE TRANSITIONAL NUCLEI ^{102,104,106}Pd

W. Andrejtscheff, L. K. Kostov, L. G. Kostova, P. Petkov, H. Rotter, W. D.
Fromm, H. Prade and F. Stary

Nuclear Physics A448 (1986) 301-314

3) A MIXED SYMMETRY OR QUASINEUTRON PAIR INTERPRETATION
OF THE $K^\pi = 0_3^+$ LEVEL IN ¹⁷²Yb

W. Andrejtscheff, P. Petkov, Ch. Protochristov, L. K. Kostov, W.D. Hamilton
and F. Hoyler

Journal of Physics G: Nuclear Physics 12 (1986) L151-156

4) LIFETIME MEASUREMENTS AND PARTICLE-CORE COUPLING CAL-
CULATIONS IN ¹⁴⁴Sm

L. K. Kostov, W. Andrejtscheff, L. G. Kostova, P. Petkov, W. Enghardt, H.
Prade, H. Rotter and F. Stary

Zeitschrift fur Physik A: Atoms and Nuclei 325 (1986) 293-297

5) LIFETIME INVESTIGATIONS OF 0⁺ STATES IN SOME A > 100 NUCLEI

W. Andrejtscheff, P. Petkov, Ch. Protochristov, L. K. Kostov, W.D. Hamilton
and F. Hoyler

in: *Nuclear Structure, Reactions and Symmetries*, vol.2, eds. R.A.Meyer and
V.Paar, (World Scientific 1986), p.726-732

6) ABSOLUTE E0, E1 AND E2 TRANSITION RATES IN EVEN-EVEN NU-
CLEI OBTAINED IN THERMAL NEUTRON CAPTURE

P. Petkov, W. Andrejtscheff, Ch. Protochristov, W.D. Hamilton, F. Hoyler and
V.V. Martynov

Journal of Physics G: Nuclear Physics 14 (1988) S97-102

7) *p - n* MULTIPLETS AND BAND-LIKE STRUCTURES IN ¹⁰⁶Ag

W. Andrejtscheff, L.K. Kostov, L.G. Kostova, P. Petkov, A. Dewald, J. Eberth,
K.O. Zell, P. von Brentano, L. Funke and E. Will

Zeitschrift fur Physik A: Atoms and Nuclei 331 (1988) 433-438

8) MULTIPLET STRUCTURES AND CORE-RELATED EFFECTS ON TRAN-
SITION RATES IN ⁸⁷Y AND NEIGHBOURING A ≈ 90 NUCLEI

L.K. Kostov, W. Andrejtscheff, L.G. Kostova, P. Petkov, L. Funke, L.Kaubler and
H. Prade

Zeitschrift fur Physik A: Atoms and Nuclei 330 (1988) 45-50

9) THE ELIMINATION OF PROMPT COMPONENTS IN DELAYED COINCIDENCE TIME DISTRIBUTIONS

P. Petkov, W. Andrejtscheff, L.K. Kostov and L.G. Kostova

Nuclear Instruments and Methods in Physics Research A 271 (1988) 617-623

10) RESONANT AMPLIFICATION OF NEUTRINO TRANSITIONS IN THE SUN: EXACT ANALYTICAL RESULTS

S. Toshev and P. Petkov

in: *5th Force- Neutrino Physics*, eds. O.Fackler and J.Tran Thanh Van, (Editions Frontieres, 1988) 7p.

11) CORE-RELATED EFFECTS ON ELECTROMAGNETIC TRANSITION STRENGTHS IN MEDIUM-MASS NUCLEI

W. Andrejtscheff, L.K. Kostov, P. Petkov and Y. Sy Savane

in: *Nuclear Structure of the Zirconium Region*, eds. J.Eberth, R.A.Meyer and K.Systemich, (Springer Verlag, 1988), p.137-142

12) ELECTRIC QUADRUPOLE TRANSITION STRENGTHS OF THE TYPE $6_1^+ \rightarrow 4_1^+$ IN $^{106-112}\text{Sn}$

W. Andrejtscheff, L.K. Kostov, P. Petkov, Y. Sy Savane, Ch. Stoyanov, P. von Brentano, J. Eberth, R. Reinhardt and K.O. Zell

Nuclear Physics A505 (1989) 397-416

13) RDDS LIFETIME MEASUREMENTS IN THE Xe, Ba AND Ce ISOTOPES AROUND $A = 130$ USING THE DIFFERENTIAL DECAY CURVE METHOD

A. Dewald, P. Petkov, R. Wrzal, G. Siems, P. Sala, G. Böhm, A. Gelberg, K.O. Zell, P. von Brentano, P.J. Nolan, A.J. Kirwan, D.J. Bishop, R. Julin, A. Lampinen and J. Hattula

in: *Proceedings of the XXV Zakopane School on Physics, vol.2: "Selected topics in Nuclear Structure"*, eds. J.Styczen and Z. Stachura, (World Scientific 1990), p.152-179

14) ELECTROMAGNETIC PROPERTIES OF SOME ODD-ODD NUCLEI IN THE $A \approx 100$ REGION AND IBFFM DESCRIPTION OF ^{106}Ag

W. Andrejtscheff, L.K. Kostov, P. Petkov, S. Brant, V. Paar, V. Lopac, G. Böhm, J. Eberth, R. Wirowski and K.O. Zell

Nuclear Physics A516 (1990) 157-188

15) E1 AND M1 TRANSITION STRENGTHS FROM TWO-QUASIPARTICLE STRUCTURES IN ^{168}Er

P. Petkov, W. Andrejtscheff, J. Copnell and S. Robinson

Nuclear Physics A533 (1991) 49-70

16) NUCLEAR STRUCTURE OF ^{176}Lu AND ITS ASTROPHYSICAL CONSEQUENCES. I. LEVEL SCHEME OF ^{176}Lu

N. Klay, F. Käppeler, H. Beer, G. Schatz, H. Börner, F. Hoyler, S.J. Robinson, K. Srekenbach, B. Krusche, U. Mayerhofer, G. Hlawatsch, H. Lindner, T. von Egidy, W. Andrejtscheff and P. Petkov

Physical Review C44 (1991) 2801-2838

17) PICOSECOND LIFETIME MEASUREMENTS AND COLLECTIVE TRANSITION STRENGTHS IN ^{128}Ba

P. Petkov, S. Harissopulos, A. Dewald, M. Stolzenwald, G. Böhm, P. Sala, K. Schiffer, A. Gelberg, K.O. Zell, P. von Brentano and W. Andrejtscheff

Nuclear Physics A543 (1992) 589-612

18) COMPLEX TIME DISTRIBUTIONS FROM ISOMERS IN CASCADE: A CASE IN ^{176}Lu

P. Petkov, W. Andrejtscheff and S. Avramov

Nuclear Instruments and Methods in Physics Research A 321 (1992) 259-264

19) TRANSITION PROBABILITIES IN TRANSITIONAL NUCLEI IN THE $A=130$ REGION

A. Dewald, G. Böhm, P. Sala, R. Wrzal, J. Altmann, G. Siems, S. Harissopulos, D. Lieberz, R. Wirowski, K.O. Zell, A. Gelberg, P. von Brentano, P. Petkov, W. Andrejtscheff, P.J. Nolan, A.J. Kirwan, D.J. Thornley, R. Julin and A. Lampinen

in: *New Nuclear Physics With Advanced Techniques*, Eds. F.A. Beck, S. Kassionides and C.A. Kalfas, (World Scientific, 1992) 19 p.

20) ELECTROMAGNETIC TRANSITION STRENGTHS IN THE TRANSITIONAL DOUBLY ODD NUCLEUS ^{198}Au

P. Petkov, W. Andrejtscheff, S.J. Robinson, U. Mayerhofer, T. von Egidy, S. Brant, V. Paar and V. Lopac

Nuclear Physics A554 (1993) 189-208

21) THE DIFFERENTIAL DECAY CURVE METHOD FOR THE ANALYSIS OF DOPPLER SHIFT TIMING EXPERIMENTS

G. Böhm, A. Dewald, P. Petkov and P. von Brentano

Nuclear Instruments and Methods in Physics Research A 329 (1993) 248-261

22) ASYMMETRY VERSUS SYMMETRIC QUADRUPOLE DEFORMATION IN EVEN-EVEN NUCLEI WITH $94 \leq A \leq 192$

W. Andrejtscheff and P. Petkov

Physical Review C 48 (1993) 2531-2533

23) RDDS MEASUREMENTS OF COLLECTIVE E2 TRANSITION STRENGTHS IN ^{122}Xe

P. Petkov, R. Krücken, A. Dewald, P. Sala, G. Böhm, A. Gelberg, P. von Brentano, R.V. Jolos and W. Andrejtscheff,

Nuclear Physics A568 (1994) 572-600

24) EVIDENCE FOR STRONG GROUND-STATE SHAPE ASYMMETRY IN EVEN GERMANIUM AND SELENIUM ISOTOPES

W. Andrejtscheff and P. Petkov

Physics Letters B 329 (1994) 1-4

25) ERRORS ARISING FROM NUCLEAR HYPERFINE INTERACTIONS ON LIFETIMES DETERMINED BY THE RECOIL DISTANCE DOPPLER SHIFT METHOD

P.Petkov

Nuclear Instruments and Methods in Physics Research A 349 (1994) 289-291

26) NEW ISOMERS AND TRANSITION STRENGTHS IN ^{177}Lu

W.Andrejscheff, P.Petkov, H.Börner and S.Robinson

in *Proc. 8th International Symposium on Capture Gamma-Ray Spectroscopy and Related topics*, Ed. J.Kern, (World Scientific, 1994) pp.352-354

27) EVOLUTION OF THE TRIAXIAL ASYMMETRY AT VARIATION OF THE SYMMETRIC QUADRUPOLE DEFORMATION

W.Andrejscheff, P.Petkov and N.V.Zamfir

in *Perspectives for the Interacting Boson Model* Eds. R.F.Casten et al., (World Scientific, 1994) pp.405-408

28) THE NUCLEAR DEORIENTATION EFFECT IN ^{122}Xe AND ^{128}Ba

P.Petkov, A.Dewald, A.Gelberg, G.Böhm, P.Sala, P. von Brentano and W.Andrejscheff

Nuclear Physics A589 (1995) 341-362

29) LOW-LYING COLLECTIVE STATES IN $^{124-132}\text{Ba}$ IN THE FRAMEWORK OF THE GENERAL COLLECTIVE MODEL

P.Petkov, A.Dewald and W.Andrejscheff

Physical Review C 51 (1995) 2511-2529

30) LEVEL SCHEME AND ELECTROMAGNETIC TRANSITION STRENGTHS IN ^{177}Lu

P.Petkov, W.Andrejscheff, H.G.Börner, S.J.Robinson, N.Klay and S.Yamada

Nuclear Physics A599 (1996) 505-544

31) DYNAMIC SHAPE ASYMMETRY IN SOFT NUCLEI

W.Andrejscheff, P.Petkov, A.Dewald, G.Böhm and P. von Brentano

Physical Review C53 (1996) 1606-1612

32) LOWEST FOUR-QUASIPARTICLE MAGNETIC DIPOLE BAND IN ^{128}Ba

O.Vogel, A.Dewald, P. von Brentano, J.Gableske, R.Krücken, N.Nicolay, A.Gelberg, P.Petkov, A.Gizon, J.Gizon, D.Bazzacco, C.Rossi-Alvarez, S.Lunardi, P.Pavan, D.R.Napoli, S.Frauendorf and F.Dönau

Physical Review C56 (1997) 1338-1343

33) DETAILED ANGULAR CORRELATION ANALYSIS WITH 4π SPECTROMETERS: SPIN DETERMINATIONS AND MULTIPOLARITY MIXING MEASUREMENTS IN ^{128}Ba

I.Wiedenhöver, O.Vogel, H.Klein, A.Dewald, P. von Brentano, J.Gableske, R.Krücken, N.Nicolay, A.Gelberg, P.Petkov, A.Gizon, J.Gizon, D.Bazzacco, C.Rossi-Alvarez, G. de Angelis, S.Lunardi, P.Pavan, D.R.Napoli, S.Frauendorf, F.Dönau, R.V.F.Janssens and M.P.Carpenter

Physical Review C58 (1998) 721-728

34) IN-BAND M1 AND E2 TRANSITION RATES AND COLLECTIVE STRUCTURES IN ^{128}Ba

P.Petkov, J.Gableske, O.Vogel, A.Dewald, P. von Brentano, R.Krücken, R.Peusquens, N.Nicolay, A.Gizon, J.Gizon, D.Bazzacco, C.Rossi-Alvarez, S.Lunardi, P.Pavan, D.R.Napoli, W.Andrejscheff and R.V.Jolos

Nuclear Physics A640 (1998) 293-321

35) ON THE LINESHAPE IN THE RECOIL DISTANCE METHOD

D.Tonev, P.Petkov, J.Gableske, S.Schell, R.Kühn, A.Dewald, P. von Brentano and W.Andrejscheff

Balkan Physics Letters, Special Issue 1998, 273-276

36) COLLECTIVITY AND SHAPES AT LOW SPIN

W.Andrejscheff and P.Petkov

Balkan Physics Letters, Special Issue 1998, 107-122

37) HIGH SPIN STATES IN ^{128}Ba

O.Vogel, R.S.Chakrawarthy, A.Dewald, P.Petkov, K.Jessen, J.Gableske, P. von Brentano, D.Bazzacco, A.Gizon, J.Gizon, S.Lunardi, D.R.Napoli, P.Pavan, C.Rossi-Alvarez and I.Wiedenhöver

European Physical Journal A4 (1999) 323-325

38) MAGNETIC DIPOLE BAND IN ^{124}Xe

I.Schneider, R.S.Chakrawarthy, I.Wiedenhöver, A.Schmidt, H.Meise, P.Petkov, A.Dewald, P. von Brentano, O.Stuch, K.Jessen, D.Weisshaar, C.Schumacher, O.Vogel, G.Sletten, B.Herskind, M.Bergström and J.Wrzesinski

Physical Review C60 (1999) 014312

39) LIFETIME MEASUREMENTS FOR ^{134}Nd AND NEIGHBORING NUCLEI WITH THE COINCIDENCE-PLUNGER TECHNIQUE

T.Klemme, A.Fitzler, A.Dewald, S.Schell, S.Kasemann, R.Kühn, O.Stuch, H.Tiesler, K.O.Zell, P. von Brentano, D.Bazzacco, F.Brandolini, S.Lunardi, C.M.Petrache, C.Rossi-Alvarez, G. de Angelis, P.Petkov and R.Wyss

Physical Review C60 (1999) 034301

40) ON THE LINE-SHAPE AND LIFETIME DETERMINATION IN RECOIL DISTANCE DOPPLER-SHIFT MEASUREMENTS

P.Petkov, D.Tonev, J.Gableske, A.Dewald, T.Klemme and P. von Brentano

Nuclear Instruments and Methods in Physics Research A431 (1999) 208-223

41) LIFETIME ANALYSIS USING THE DOPPLER-SHIFT ATTENUATION METHOD WITH A GATE ON FEEDING TRANSITION

P.Petkov, D.Tonev, J.Gableske, A.Dewald and P. von Brentano

Nuclear Instruments and Methods in Physics Research A437 (1999) 274-281

42) HIGH-SPIN STRUCTURE OF THE NEUTRON-RICH $^{107,109}_{45}\text{Rh}$ ISOTOPES: THE ROLE OF TRIAXIALITY

Ts.Venkova, M.-G.Porquet, I.Deloncle, B.J.P.Gall, H. De Witte, P.Petkov, A.Bauchet, T.Kutsarova, E.Gueorgieva, J.Duprat, C.Gautherin, F.Hoellinger, R.Lucas, A.Minkova, N.Schulz, H.Sergolle, E.A.Stefanova and A.Wilson

European Physical Journal A6 (1999) 405-413

43) COINCIDENCE RECOIL-DISTANCE DOPPLER-SHIFT LIFETIME MEASUREMENTS IN $^{129,130}\text{Ba}$ WITH EUROBALL Ge CLUSTER DETECTORS

O.Stuch, K.Jessen, R.S.Chakrawarthy, A.Dewald, R.Kühn, R.Krücken, P.Petkov, R.Peusquens, H.Tiesler, D.Weil, I.Wiedenhöver, K.O.Zell, P. von Brentano, C.Ender, T.Härtlein, F.Köck, O.Koschorrek and P.Reiter

Physical Review C61 (2000) 044325

44) ON THE TWO-QUASINEUTRON ROTATIONAL BAND IN ^{128}Ba

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Nuclear Physics A674 (2000) 357-376

45) COINCIDENCE RECOIL-DISTANCE DOPPLER-SHIFT LIFETIME MEASUREMENTS IN ^{128}Ba

P.Petkov, A.Dewald, R.Kühn, R.Peusquens, D.Tonev, S.Kasemann, K.O.Zell, P. von Brentano, D.Bazzacco, C.Rossi-Alvarez, G. de Angelis, S.Lunardi, P.Pavan and D.R.Napoli

Physical Review C62 (2000) 014314

46) NEW METHODS FOR LIFETIME ANALYSIS IN DOPPLER-SHIFT MEASUREMENTS

D.Tonev, P.Petkov, A.Dewald, J.Gableske and P. von Brentano

Balkan Physics Letters, Special Issue 2000, 283-292

47) GATING ON THE FEEDING OR ON THE DEPOPULATING TRANSITION IN COINCIDENCE RECOIL-DISTANCE DOPPLER-SHIFT LIFETIME MEASUREMENTS

P.Petkov, A.Dewald and P. von Brentano

Nuclear Instruments and Methods in Physics Research A457 (2001) 527

48) LOW-LYING BANDS WITH DIFFERENT QUADRUPOLE DEFORMATION IN ^{133}Nd

P.Petkov, A.Dewald, R.Peusquens, S.Kasemann, R.Krücken, K.O.Zell, P. von Brentano, S.Lunardi, D.Bazzacco, F.Brandolini, N.H.Medina, P.Pavan, C.M.Petrache, C.Rossi-Alvarez, G. de Angelis, M. de Poli and D.R.Napoli

Physical Review C63 (2001) 014304

49) COLLECTIVITY OF THE INTRUDER BANDS IN ^{114}Sn

J.Gableske, A.Dewald, H.Tiesler, M.Wilhelm, T.Klemme, O.Vogel, I.Schneider, R.Peusquens, S.Kasemann, K.O.Zell, P.von Brentano, P.Petkov, D.Bazzacco, C.Rossi Alvarez, S.Lunardi, G.de Angelis, M.de Poli and C.Fahlander

Nuclear Physics A691 (2001) 551-576

50) TRANSITION RATES AND NUCLEAR STRUCTURE CHANGES IN THE MIRROR NUCLEI ^{47}Cr AND ^{47}V

D.Tonev, P.Petkov, A.Dewald, T.Klug, P. von Brentano, W.Andrejscheff, S.M.Lenzi, D.R.Napoli, N.Marginean, F.Brandolini, C.A.Ur, M. Axiotis, P.G.Bizzeti-Sona

Physical Review C65 (2002) 034314

51) HIGH PRECISION QUADRUPOLE MOMENT MEASUREMENTS OF STATES UP TO $I = 20$ IN THE YRAST BAND OF ^{158}Er

S.L.Shepherd, J.Simpson, A.Dewald, P.Petkov, P.J.Nolan, M.A.Riley, A.J.Boston, T.B.Brown, R.M.Clark, P.Fallon, D.J.Hartley, S.Kasemann, R.Krücken, P. von Brentano, R.W.Laird, E.S.Paul and R.Peusquens

Physical Review C65 (2002) 034320

52) COHERENT PROTON-NEUTRON CONTRIBUTION TO OCTUPOLE CORRELATIONS IN THE NEUTRON-DEFICIENT ^{114}Xe NUCLEUS

G. de Angelis, A.Gadea, E.Farnea, R.Isocrate, P.Petkov, N.Marginean, D.R.Napoli, A.Dewald, M.Bellato, A.Bracco, F.Camera, D.Curien, M. De Poli, E.Fioretto, A.Fitzler, S.Kasemann, N.Kintz, T.Klug, S.Lenzi, S.Lunardi, R.Menegazzo, P.Pavan, J.L.Pedroza, V.Pucknell, C.Ring, J.Simpson and R.Wyss

Physics Letters B 535 (2002) 93-102

53) LIFETIME ANALYSIS USING THE DOPPLER-SHIFT ATTENUATION METHOD WITH A GATE ON DEPOPULATING TRANSITION

P.Petkov, D.Tonev, A.Dewald and P. von Brentano

Nuclear Instruments and Methods in Physics Research A488 (2002) 555-561

54) INVESTIGATION OF NUCLEAR STRUCTURES USING TRANSITION PROBABILITIES

A.Dewald, O.Möller, R.Peusquens, B.Saha, K.Jessen, A.Fitzler, T.Klug, D.Tonev, P. von Brentano, P.Petkov, I.Wiedenhöver, C.Carpenter, A.Heinz, R.V.Janssens, Kh. Abu Saleem, B.J.P. Gall, J.R.Cooper, C.J.Barton, R.Krücken, A.M.Oros-Peusquens, U.Garg and S.Zhu

BgNS Transactions 7, No.1 (2002) 81-88

55) NEW DEVELOPMENTS IN THE ANALYSIS OF DOPPLER-SHIFT TIMING EXPERIMENTS USING REACTIONS INDUCED BY HEAVY IONS

P.Petkov, D.Tonev, A.Dewald, J.Gableske, T.Klemme, B.Saha and P. von Brentano

BgNS Transactions 7, No.1 (2002) 89-93

56) HIGH-SPIN STRUCTURE OF THE NEUTRON-RICH ODD-ODD $^{106,108}_{45}\text{Rh}$ AND $^{110,112}_{47}\text{Ag}$ ISOTOPES

M.-G.Porquet, Ts.Venkova, P.Petkov, A.Bauchet, I.Deloncle, A.Astier, N.Buforn, J.Duprat, B.J.P.Gall, C.Gautherin, E.Gueorguieva, F.Hoellinger, T.Kutsarova, R.Lucas, M.Meyer, A.Minkova, N.Redon, N.Schulz, H.Sergolle and A.Wilson

European Physical Journal A15 (2002) 463-470

57) LIFETIME DETERMINATION IN DELAYED-COINCIDENCE EXPERIMENTS USING THE DIFFERENTIAL DECAY-CURVE APPROACH

P.Petkov, O.Möller, D.Tonev, A.Dewald and P. von Brentano

Nuclear Instruments and Methods in Physics Research A 500 (2003) 379-385

58) ELECTROMAGNETIC B(E2) TRANSITION STRENGTHS ALONG THE YRAST NEGATIVE-PARITY BAND OF ^{113}I

P.Petkov, A.Dewald, A.Fitzler, T.Klug, G. de Angelis, E.Farnea, A.Gadea, R.Isocrate, N.Marginean, D.R.Napoli, D.Curien, N.Kintz, S.Lenzi, S.Lunardi, R.Menegazzo, V.Pucknell and C.Ring

Physical Review C67 (2003) 054306

59) COLLECTIVITY AT HIGH SPINS IN ^{156}Dy

P.Petkov, A.Dewald, O.Möller, B.Saha, A.Fitzler, K.Jessen, D.Tonev, T.Klug, S.Heinze, J.Jolie, P. von Brentano, D.Bazzacco, C.Ur, E.Farnea, M.Axiotis, S.Lunardi, C.Rossi-Alvarez, G. de Angelis, D.R. Napoli, N. Marginean, T. Martinez, M.Caprio and R.F.Casten

Physical Review C68 (2003) 034328

60) RECOIL-GATED PLUNGER LIFETIME MEASUREMENTS IN ^{188}Pb

A.Dewald, R.Peusquens, B.Saha, P. von Brentano, A.Fitzler, T.Klug, I.Wiedenhöfer, M.P.Carpenter, A.Heinz, R.V.F.Janssens, F.G. Kondev, C.J. Lister, D. Seweryniak, K. Abu Saleem, R. Krücken, J.R.Cooper, C.J.Barton, K.Zyromski, C.W.Beausang, Z.Wang, P.Petkov, A.M.Oros-Peusquens, U.Garg and S.Zhu

Physical Review C68 (2003) 034314

61) TRANSITION PROBABILITIES IN ^{154}Gd : EVIDENCE FOR X(5) CRITICAL POINT SYMMETRY

D.Tonev, A.Dewald, T.Klug, P.Petkov, J.Jolie, A.Fitzler, O. Möller, S.Heinze, P. von Brentano and R.F.Casten

Physical Review C69 (2004) 034334

62) SHAPE CHANGES AND TEST OF THE CRITICAL-POINT SYMMETRY X(5) IN N=90 NUCLEI

A.Dewald, O.Möller, D.Tonev, A.Fitzler, B.Saha, K.Jessen, S.Heinze, A.Linnemann, J.Jolie, K.O.Zell, P. von Brentano, P.Petkov, R.F.Casten, M.Caprio, J.R.Cooper, R.Krücken, V.Zamfir, D.Bazzacco, S.Lunardi, C.Rossi Alvarez, F.Brandolini, C.Ur, G. De Angelis, D.R.Napoli, E.Farnea, N.Marginean, T.Martinez and M.Axiotis

European Physical Journal A20 (2004) 173-178

63) TEST OF ISOSPIN PURITY IN THE A = 42 ISOBARIC ANALOGS

J.N.Orce, P.Petkov, C.J.McKay, S.N.Choudry, S.R.Lesher, M.Mynk, D.Bandyopadhyay, S.W.Yates, and M.T.McEllistrem

Physical Review C70 (2004) 014314

64) A NEW METHOD FOR ANALYZING DELAYED COINCIDENCE DATA

P.Petkov, O.Möller, D.Tonev, A.Dewald, and P. von Brentano

BgNS Transactions 9, No.1 (2004) 207-213

- 65) PROBING NUCLEAR STRUCTURE OF ^{124}Xe
 B.Saha, A.Dewald, O.Möller, R.Peusquens, K.Jessen, A.Fitzler, T.Klug, D.Tonev,
 P. von Brentano, B.J.P.Gall and P.Petkov
Physical Review C70 (2004) 034313
- 66) LIFETIMES OF THE FIRST EXCITED 2^+ STATES IN $^{176,178,180}\text{Os}$
 O.Möller, P.Petkov, B.Melon, A.Dewald, A.Fitzler, J.Jolie, D.Tonev, S.Christen,
 B.Saha, K.O.Zell and M.Heidemann
Physical Review C72 (2005) 034306
- 67) TRANSITION PROBABILITIES AND CHIRAL SYMMETRY IN ^{134}Pr
 D.Tonev, G. de Angelis, P.Petkov, A.Dewald, A.Gadea, P.Pejovic, D.Balabanski,
 P.Bednarczyk, F.Camera, A.Fitzler, M.Axiotis, D.Bazzacco, E.Farnea, S.Lenzi, S.Lunardi,
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 G.Prete, B.R.Behera, C.Rusu, C.Ur, K.O.Zell and Y.H.Zhang
 in *Nuclei at the Limits*, Eds. D.Seweryniak and T.L.Khoo, (American Institute
 of Physics Conf. Proc. 764, 2005) pp.93-98
- 68) DECAY-OUT OF THE HIGHLY DEFORMED BAND IN ^{133}Nd
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Nuclear Physics A 877 (2012) 19-34

115) AGATA - Advanced GAMMA Tracking Array

S. Akkoyun, A. Algora, B. Alikhani, F. Ameil, G. de Angelis, L. Arnold, A. Astier, A. Ata, Y. Aubert, C. Aufranc, A. Austin, S. Aydin, F. Azaiez, S. Badoer, D.L. Balabanski, D. Barrientos, G. Baulieu, R. Baumann, D. Bazzacco, F.A. Beck, T. Beck, P. Bednarczyk, M. Bellato, M.A. Bentley, G. Benzoni, R. Berthier, L. Berti, R. Beunard, G. Lo Bianco, B. Birkenbach, P.G. Bizzeti, A.M. Bizzeti-Sona, F. Le Blanc, J.M. Blasco, N. Blasi, D. Bloor, C. Boiano, M. Borsato, D. Bortolato, A.J. Boston, H.C. Boston, P. Bourgault, P. Boutachkov, A. Bouty, A. Bracco, S. Brambilla, I.P. Brawn, A. Brondi, S. Broussard, B. Bruyneel, D. Bucurescu, I. Burrows, A. Bürger, S. Cabaret, B. Cahan, E. Calore, F. Camera, A. Capsoni, F. Carrio, G. Casati, M. Castoldi, B. Cederwall, J.-L. Cercus, V. Chambert, M. El Chambit, R. Chapman, L. Charles, J. Chavas, E. Clement, P. Cocconi, S. Coelli, P.J. Coleman-Smith, A. Colombo, S. Colosimo, C. Commeaux, D. Conventi, R.J. Cooper, A. Corsi, A. Cortesi, L. Costa, F.C.L. Crespi, J.R. Cresswell, D.M. Cullen, D. Curien, A. Czermak, D. Delbourg, R. Depalo, T. Descombes, P. Desesquelles, P. Detistov, C. Diarra, F. Didierjean, M.R. Dimmock, Q.T. Doan, C. Domingo-Pardo, M. Doncel, F. Dorangeville, N. Dosme, Y. Drouen, G. Duchene, B. Dulny, J. Eberth, P. Edelbruck, J. Egea, T. Engert, M.N. Erduran, S. Ertürk, C. Fanin, S. Fantinel, E. Farnea, T. Faul, M. Filliger, F. Filmer, Ch. Finck, G. de France, A. Gadea, W. Gast, A. Geraci, J. Gerl, R. Gernhäuser, A. Giannatiempo, A. Giaz, L. Gibelin, A. Givechev, N. Goel, V. Gonzalez, A. Gottardo, X. Grave, J. Grebosz, R. Griffiths, A.N. Grint, P. Gros, L. Guevara, M. Gulmini, A. Görgen, H.T.M. Ha, T. Habermann, L.J. Harkness, H. Harroch, K. Hauschild, C. He, A. Hernandez-Prieto, B. Hervieu, H. Hess, T. Hüyük, E. Ince, R. Isocrate, G. Jaworski, A. Johnson, J. Jolie, P. Jones, B. Jonson, P. Joshi, D.S. Judson, A. Jungclaus, M. Kaci, N. Karkour, M. Karolak, A. Kaskas, M. Kebbiri, R.S. Kempley, A. Khaplanov, S. Klupp, M. Kogimtzis, I. Kojouharov, A. Korichi, W. Korten, Th. Kröll, R. Krücken, N. Kurz, B.Y. Ky, M. Labiche, X. Lafay, L. Lavergne, I.H. Lazarus, S. Leboutelier, F. Lefebvre, E. Legay, L. Legeard, F. Lelli, S.M. Lenzi, S. Leoni, A. Lermitege, D. Lersch, J. Leske, S.C. Letts, S. Lhenoret, R.M. Lieder, D. Linget, J. Ljungvall, A. Lopez-Martens, A. Lotode, S. Lunardi, A. Maj, J. van der Marel, Y. Mariette, N. Marginean, R. Marginean, G. Maron, A.R. Mather, W. Meczynski, V. Mendez, P. Medina, B. Melon, R. Menegazzo, D. Mengoni, E. Merchan, L. Mihailescu, C. Michelagnoli, J. Mierzejewski, L. Milechina, B. Million, K. Mitev, P. Molini, D. Montanari, S. Moon, F. Morbiducci, R. Moro, P.S. Morrall, O. Möller, A. Nannini, D.R. Napoli, L. Nelson, M. Nespolo, V.L. Ngo, M. Nicoletto, R. Nicolini, Y. Le Noa, P.J. Nolan, M. Norman, J. Nyberg, A. Obertelli, A. Olariu, R. Orlandi, D.C. Oxley, C. Özben, M. Ozille, C. Oziol, E. Pachoud, M. Palacz, J. Palin, J. Pancin, C. Parisel, P. Pariset, G. Pascovici, R. Peghin, L. Pellegrini, A. Perego, S. Perrier, M. Petcu, P. Petkov, C. Petrache, E. Pierre, N. Pietralla, S. Pietri, M. Pignanelli,

I. Piqueras, Z. Podolyak, P. Le Pouhalec, J. Pouthas, D. Pugnere, V.F.E. Pucknell, A. Pullia, B. Quintana, R. Raine, G. Rainovski, L. Ramina, G. Rampazzo, G. La Rana, M. Rebeschini, F. Recchia, N. Redon, M. Reese, P. Reiter, P.H. Regan, S. Riboldi, M. Richer, M. Rigato, S. Rigby, G. Ripamonti, A.P. Robinson, J. Robin, J. Roccaz, J.-A. Ropert, B. Rosse, C. Rossi Alvarez, D. Rosso, B. Rubio, D. Rudolph, F. Saillant, E. Sahin, F. Salomon, M.-D. Salsac, J. Salt, G. Salvato, J. Sampson, E. Sanchis, C. Santos, H. Schaffner, M. Schlarb, D.P. Scraggs, D. Seddon, M. Senyigi, M.-H. Sigward, G. Simpson, J. Simpson, M. Slee, J.F. Smith, P. Sona, B. Sowicki, P. Spolaore, C. Stahl, T. Stanios, E. Stefanova, O. Stezowski, J. Strachan, G. Suliman, P.-A. Söderström, J.L. Tain, S. Tanguy, S. Tashenov, Ch. Theisen, J. Thornhill, F. Tomasi, N. Toniolo, R. Touzery, B. Travers, A. Triossi, M. Tripon, K.M.M. Tun-Lanoë, M. Turcato, C. Unsworth, C.A. Ur, J.J. Valiente-Dobon, V. Vandone, E. Vardaci, R. Venturelli, F. Veronese, Ch. Veyssiere, E. Viscione, R. Wadsworth, P.M. Walker, N. Warr, C. Weber, D. Weisshaar, D. Wells, O. Wieland, A. Wiens, G. Wittwer, H.J. Wollersheim, F. Zocca, N.V. Zamfir, M. Zieblinski, A. Zucchiatti

Nuclear Instruments and Methods in Physics Research A 668 (2012) 26-58

116) DEVELOPING THE RECOIL DISTANCE DOPPLER-SHIFT TECHNIQUE TOWARDS A VERSATILE TOOL FOR LIFETIME MEASUREMENTS OF EXCITED NUCLEAR STATES

A.Dewald, O.Möller and P.Petkov

Progress in Particle and Nuclear Physics 67 (2012) 786-839

117) 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 and W.Rother

Journal of Physics: Conference Series 366 (2012) 012020

118) LEVEL SCHEME INVESTIGATION OF ^{102}Rh

N.Goutev, M.S.Yavahchova, D.Tonev, G. de Angelis, P.Petkov, R.K.Bhowmik, R.P.Singh, S.Muralithar, N.Madhavan, R.Kumar, M.Kumar Raju, J.Kaur, G.Mahanto, A.Singh, N.Kaur, R.Garg, A.Sukla, Ts.K.Marinov and S.Brant

Journal of Physics: Conference Series 366 (2012) 012021

119) ^{182}Pt AS A POSSIBLE CANDIDATE FOR X(5) SYMMETRY

P.Petkov, K.A.Gladnshki, A.Dewald, C.Fransen, M.Hackstein, J.Jolie, Th.Pissulla, W.Rother and K.O.Zell

Journal of Physics: Conference Series 366 (2012) 012036

120) FAST-TIMING MEASUREMENTS PERFORMED AT ALTO ON $^{137,139}\text{Cs}$

B.Roussière, M.A.Cardona, I.Deloncle, D.Hojman, J.Kiener, P.Petkov, D.Tonev, Ts.Venkova and the ALTO collaboration

Journal of Physics: Conference Series 366 (2012) 012038

121) ELECTROMAGNETIC TRANSITION STRENGTHS IN ^{155}Dy

M.S.Yavahchova, P.Petkov, A.Dewald, O.Möller, B.Saha, A.Fitzler, K.Jessen, D.Tonev, N.Gutev, T.Klug, S.Heinze, J.Jolie, P. von Brentano, D.Bazzacco, C.A.Ur, E.Farnea, M.Axiotis, S.Lunardi, C.Rossi-Alvarez, G. de Angelis, D.R.Napoli, N.Marginean, T.Martinez and M.Caprio

Journal of Physics: Conference Series 366 (2012) 012050

122) CHECK FOR CHIRALITY IN ^{102}Rh

D. Tonev, N. Goutev, M.S. Yavahchova, P. Petkov, G. de Angelis, R.K. Bhowmik, R.P. Singh, S. Muralithar, N. Madhavan, R. Kumar, M. Kumar Raju, J. Kaur, G. Mahanto, A. Singh, N. Kaur, R. Garg, A. Sukla, Ts.K. Marinov, and S. Brant

American Institute of Physics Conf. Proc. 1491 (2012) 166

123) STUDY OF VIBRATIONAL SIGNATURES IN ^{102}Ru

H.Duckwitz, M.Pfeiffer, M.Albers, C.Bernards, C.Fransen, J.Jolie, P.Petkov, D.Radeck, T.Thomas and K.O.Zell

Nuclear Physics A 903 (2013) 18-39

124) A NEW VERSION OF THE DIFFERENTIAL DECAY CURVE METHOD FOR DOPPLER-SHIFT ATTENUATION LIFETIME MEASUREMENTS

P.Petkov, M.Yavahchova, D.Tonev, N.Goutev and A.Dewald

Nuclear Instruments and Methods in Physics Research A 711 (2013) 96-100

125) PLUNGER LIFETIMES AND ELECTROMAGNETIC TRANSITION STRENGTHS IN ODD ^{167}Yb

K.A.Gladnishki, P.Petkov, A.Dewald, O.Möller, I.Deloncle, D.Tonev, M.Reese, C.Fransen, M.Hackstein, J.Jolie, Th.Pissulla, W.Rother, and K.O.Zell

Nuclear Physics A 903 (2013) 1-17

126) 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.Luttke, J.Qian, B.Shoraka, G.Rainovski, E.Williams, R.Winkler

Physical Review C 87 (2013) 044317

127) SUBMICROSECOND ISOMER IN $^{117}_{45}\text{Rh}_{72}$ AND THE ROLE OF TRIAXIALITY IN ITS ELECTROMAGNETIC DECAY RATE

S.Lalkovski, A.M.Bruce, A.M. Denis Bacelar, M.Gorska, S.Pietri, Zs.Podolyak, P.Bednarczyk, L.Caceres, E.Casarejos, I.J.Cullen, P.Doornenbal, G.F.Farrelly, A.B.Garnsworthy, H.Geissel, W.Gelletly, J.Gerl, J.Grebosz, C.Hinke, G.Ilie, D.Ivanova, G.Jaworski, S.Kisyov, I.Kojouharov, N.Kurz, N.Minkov, S.Myalski, M.Palacz, P.Petkov, W.Prokopowicz, P.H.Regan, H.Schaffner, S.Steer, S.Tashenov, P.M.Walker, and H.J.Wollersheim

Physical Review C 88 (2013) 024302

128) LIFETIMES AND ELECTROMAGNETIC TRANSITION STRENGTHS IN ^{155}Dy

P.Petkov, M.S.Yavahchova, O.Möller, A. Dewald, D.Tonev, B.Saha, A.Fitzler, K.Jessen, T.Klug, S.Heinze, J.Jolie, P. von Brentano, N.Goutev, D.Bazzacco, C.A.Ur,

E.Farnea, M.Axiotis, S.Lunardi, G. de Angelis, D.R.Napoli, N.Marginean, T.Martinez, and M.A.Caprio

Physical Review C 88 (2013) 034323

129) EVIDENCE FOR SHAPE COEXISTENCE IN ^{98}Mo

T.Thomas, K.Nomura, V.Werner, T.Ahn, N.Cooper, H.Duckwitz, M.Hinton, G.Ilie, J.Jolie, P.Petkov, and D.Radeck

Physical Review C 88 (2013) 044305

130) TEST OF THE $\pi g_{7/2}$ SUBSHELL CLOSURE AT $Z = 58$

F. Naqvi, V. Werner, P. Petkov, T. Ahn, N. Cooper, G. Ilie, D. Radeck, C. Bernards, M. P. Carpenter, C. J. Chiara, R. V. F. Janssens, F. G. Kondev, T. Lauritsen, D. Seweryniak, Ch. Stoyanov, and S. Zhu

Physics Letters B 728 (2014) 303

131) CANDIDATES FOR TWIN CHIRAL BANDS IN ^{102}Rh

D. Tonev, M. S. Yavahchova, N. Goutev, G. de Angelis, P. Petkov, R.K. Bhowmik, R.P. Singh, S. Muralithar, N. Madhavan, R. Kumar, M. Kumar Raju, J. Kaur, G. Mohanto, A. Singh, N. Kaur, R. Garg, A. Sukla, Ts. K. Marinov, and S. Brant

Physical Review Letters 112 (2014) 052501

132) SIMULATION OF THE FISSION FRAGMENTS SPATIAL DISTRIBUTION IN THE Zr-ALLOY CLADDING OF THE FUEL ELEMENTS

P.Petkov, Ts.Marinov, D.Tonev, L.Georgiev, Z.Peshev, N.Goutev, M.S.Yavahchova, Z.Nikolaeva, P.Krustev, G.Gavrilov and B.Dimitrov

in *Proceedings of the 10-th International Conference WWER Fuel Performance, Modelling and Experimental Support*, 7-14 September 2013, Sandanski, Bulgaria, INRNE, BAS, 2013, pp.538-540, ISSN 1313-4531

133) COEXISTING STRUCTURES IN ^{105}Ru

S.Lalkovski, D.Ivanova, E.A.Stefanova, A.Korichi, P.Petkov, J.Kownacki, T.Kutsarova, A.Minkova, D.Bazzacco, M.Bergstrom, A.Gorgen, B.Herskind, H.Hubel, A.Jansen, S.Kisyov, T.L.Khoo, F.G.Kondev, A.Lopez-Martens, Zs.Podolyak, G.Schonwasser, O.Yordanov

Physical Review C 89 (2014) 064312