

# V PUBLICATIONS

## V.1 Publications and Reports

V.M. Abazov *et al.*, DØ Collaboration:

**Search for pair production of second generation scalar leptoquarks in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Lett. **B636** (2006) 183

V.M. Abazov *et al.*, DØ Collaboration:

**First direct two-sided bound on the  $B_s^0$  oscillation frequency**  
Phys.Rev.Lett. **97** (2006) 21802

V.M. Abazov *et al.*, DØ Collaboration:

**Search for the rare decay  $B_s^0 \rightarrow \phi\mu^+\mu^-$  with the D0 detector.**  
Phys.Rev. **D74** (2006) 31107

V.M. Abazov *et al.*, DØ Collaboration:

**Multivariate searches for single top quark production with the D0 detector**  
e-Print Archive: hep-ex/0604020; Fermilab-Pub-06-069-E, (2006) submitted to Phys.Rev. D

V.M. Abazov *et al.*, DØ Collaboration:

**Search for squarks and gluinos in events with jets and missing transverse energy in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Lett. **B638** (2006) 119

V.M. Abazov *et al.*, DØ Collaboration:

**Search for excited muons in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Rev. **D73** (2006) 111102

V.M. Abazov *et al.*, DØ Collaboration:

**A Precise measurement of the  $B_s^0$  lifetime**  
Phys.Rev.Lett. **97** (2006) 241801

V.M. Abazov *et al.*, DØ Collaboration:

**Search for R-parity violating supersymmetry via the  $LL\bar{E}$  couplings  $\lambda_{121}, \lambda_{122}$  or  $\lambda_{133}$  in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Lett. **B638** (2006) 441

V.M. Abazov *et al.*, DØ Collaboration:

**Search for neutral Higgs bosons decaying to tau pairs in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Rev.Lett. **97** (2006) 121802

V.M. Abazov *et al.*, DØ Collaboration:

**Search for resonant second generation slepton production at the Fermilab Tevatron**  
Phys.Rev.Lett. **97** (2006) 111801

V.M. Abazov *et al.*, DØ Collaboration:

**Search for particles decaying into a Z boson and a photon in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Lett. **B641** (2006) 415

V.M. Abazov *et al.*, DØ Collaboration:

**Search for a heavy resonance decaying into a Z+jet final state in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV using the D0 detector**  
Phys.Rev.D **74** (2006) 11104

V.M. Abazov *et al.*, DØ Collaboration:

**Search for scalar leptoquarks in the acoplanar jet topology in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Lett. **B640** (2006) 230

V.M. Abazov *et al.*, DØ Collaboration:

**Search for the Standard Model Higgs Boson in the  $p\bar{p} \rightarrow ZH \rightarrow \nu\bar{\nu}b\bar{b}$  channel.**  
Phys.Rev.Lett. **97** (2006) 161803

V.M. Abazov *et al.*, DØ Collaboration:

**Search for neutral, long-lived particles decaying into two muons in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV.**  
Phys.Rev.Lett. **97** (2006) 161802

V.M. Abazov *et al.*, DØ Collaboration:

**Search for associated Higgs boson production  $WH \rightarrow WWW^* \rightarrow l^\pm\nu l'^\pm\nu' + X$  in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Rev.Lett. **97** (2006) 151804

V.M. Abazov *et al.*, DØ Collaboration:

**Search for W-prime boson production in the top quark decay channel**  
Phys.Lett. **B641** (2006) 423

V.M. Abazov *et al.*, DØ Collaboration:

**Limits on anomalous trilinear gauge couplings from  $WW \rightarrow e^+e^-$ ,  $WW \rightarrow e^\pm\mu^\mp$ , and  $WW \rightarrow \mu^+\mu^-$  events from  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Rev.D **74** (2006) 57101

V.M. Abazov *et al.*, DØ Collaboration:

**Search for pair production of scalar bottom quarks in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV**  
Phys.Rev.Lett. **97** (2006) 171806

V.M. Abazov *et al.*, DØ Collaboration:

**First determination of the electric charge of the top quark**  
e-Print Archive: hep-ex/0608044; Fermilab-Pub-06-278-E, (2006) submitted to Phys.Rev.Lett.

V.M. Abazov *et al.*, DØ Collaboration:

**Measurement of the ratios of the  $Z/\gamma^* + \geq n$  jet production cross sections to the total inclusive  $Z/\gamma^*$  cross section in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV.**  
e-Print Archive: hep-ex/0608052; Fermilab-Pub-06-283-E, (2006) submitted to Phys.Rev.Lett.

V.M. Abazov *et al.*, DØ Collaboration:

**Measurement of the CP-violation parameter of  $B^0$  mixing and decay with  $p\bar{p} \rightarrow \mu\mu X$  data.**  
Phys.Rev.D **74** (2006) 92001

V.M. Abazov *et al.*, DØ Collaboration:

**Measurement of  $B_d$  mixing using opposite-side flavor tagging**  
e-Print Archive: hep-ex/0609034; Fermilab-Pub-06-341-E, (2006) submitted to Phys.Rev.D

V.M. Abazov *et al.*, DØ Collaboration:

**Measurement of the W boson helicity in top quark decay at DØ.**  
e-Print Archive: hep-ex/0609045; Fermilab-Pub-06-345-E, (2006) submitted to Phys.Rev.Lett.

V.M. Abazov *et al.*, DØ Collaboration:

**Measurement of the top quark mass in the lepton+jets final state with the matrix element method.**  
Phys.Rev.D **74** (2006) 92005

V.M. Abazov *et al.*, DØ Collaboration:

**Measurement of the top quark mass in the dilepton channel**  
e-Print Archive: hep-ex/0609056; Fermilab-Pub-06-354-E, (2006) submitted to Phys.Rev.Lett.

V.M. Abazov *et al.*, DØ Collaboration:

**Measurement of the  $t\bar{t}$  production cross section in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV using secondary vertex  $b$  tagging.**  
Phys.Rev.D **74** (2006) 112004

G. Abbiendi *et al.*, OPAL Collaboration:

**QCD coherence and correlations of particles with restricted momenta in hadronic Z decays.**  
Phys.Lett. **B638** (2006) 30

P. Abbon:

**Fast readout of the COMPASS RICH CsI-MWPC photon chambers**  
Nucl.Inst.Meth. **A567** (2006) 104

P. Abbon:

**Design and status of COMPASS FAST-RICH**  
Nucl.Inst.Meth. **A567** (2006) 114

E.S. Ageev *et al.* and COMPASS collaboration:

**Gluon polarization in the nucleon from quasi-real photoproduction of high- $p_T$  hadron pairs**  
Phys.Lett. **B633** (2006) 25

A. Arazi, T. Faestermann, J.O. Fernández Niello, K. Knie, G. Korschinek, M. Poutivtsev, E. Richter, G. Rugel, and A. Wallner :

**Measurement of  $^{25}\text{Mg}(p,\gamma)^{26}\text{Al}^g$  resonance strengths via accelerator mass spectrometry**  
Phys. Rev. **C74** (2006) 025802-1 – 025802-6

F. Ardellier *et al.*:

**Double Chooz: A search for the neutrino mixing angle  $\Theta_{13}$**   
hep-ex/0606025 (2006)

F. Atchison, B. Blau, M. Daum, P. Fierlinger, P. Geltenbort, R. Henneck, S. Heule, M. Kasprzak, K. Kirch, K. Kohlik, M. Kuźniak, M. Meier, C.-F. Meyer, A. Pichlmaier, C. Plonka, P. Schmidt-Wellenburg, B. Schultrich, Th. Stucky, V. Weihnacht, and O. Zimmer:

**Storage of ultracold neutrons in a volume coated with diamondlike carbon**  
Phys.Review **C74** (2006) 055501

H. Back *et al.*:

**CNO and pep neutrino spectroscopy in Borexino: Measurement of the deep-underground production of cosmogenic  $\text{C}^{11}$  in an organic liquid scintillator**  
Phys. Rev. **C74** (2006) 045805-1 – 045805-6

M. Balata *et al.*:

**Search for electron antineutrino interactions with the Borexino counting test facility at Gran Sasso**  
Eur. Phys. J. **C47** (2006) 21 – 30

S. Basu, F.M. Stuart, V. Klemm, G. Korschinek, K. Knie, and J.R. Hein:  
**Helium isotopes in ferromanganese crusts from the central Pacific Ocean**  
Geochimica et Cosmochimica Acta **70** (2006) 3996 – 4006

D. Becirevic, Ph. Boucaud, V. Lubicz, G. Martinelli, F. Mescia, S. Simula, and C. Tarantino:  
**Exploring twisted mass lattice QCD with the clover term**  
Phys. Rev. D **74** (2006) 034501

S. Bilenky *et al.*:  
**Recoilless resonant neutrino capture and basics of neutrino oscillations**  
hep-ph/0611285 (2006)

M. Blanke and A. J. Buras:  
**Lower Bounds on  $\Delta M_{s,d}$  from Constrained Minimal Flavour Violation**  
arXiv:hep-ph/0610037

M. Blanke, A. J. Buras, A. Poschenrieder, C. Tarantino, S. Uhlig, and A. Weiler:  
**Particle antiparticle mixing,  $\epsilon_K, \Delta\Gamma_q, A_{SL}^q, A_{CP}(B_d \rightarrow \psi K_S), A_{CP}(B_s \rightarrow \psi\Phi)$  and  $B \rightarrow X_{s,d}\gamma$  in the littlest Higgs model with T-parity**  
JHEP **0612** (2006) 003

M. Blanke, A. J. Buras, D. Guadagnoli, and C. Tarantino:  
**Minimal Flavour Violation Waiting for Precise Measurements of  $\Delta M_s, S_{\psi\phi}, A_{SL}^s, |V_{ub}|, \gamma$  and  $B_{s,d}^0 \rightarrow \mu^+\mu^-$**   
JHEP **0610** (2006) 003

M. Block, S. Rahaman, D. Ackermann, D. Beck, A. Chaudhuri, S.A. Eliseev, H. Geissel, D. Habs, F. Herfurth, F.P. Heßberger, S. Hofmann, G. Marx, M. Mukherjee, J.B. Neumayr, M. Petrick, W.R. Plaß, W. Quint, C. Rauth, D. Rodriguez, C. Scheidenberger, L. Schweikhard, P.G. Thirolf, and C. Weber:  
**On-line Commissioning of SHIPTRAP**  
Int. Jour. of Mass Spectrometry **251** (2006) 146

B. Borasoy, R. Nißler, and W. Weise:  
**Comment on "Surprises in threshold antikaon-nucleon physics"**  
Phys.Rev.Lett. **96** (2006) 199201

H.G. Börner, P. Mutti, M. Jentschel, N.V. Zamfir, M.A. Caprio, R.F. Casten, E.A. McCutchan, and R. Krücken:  
**Low energy phonon structure of  $^{150}\text{Sm}$**   
Phys. Rev. **C73** (2006) 034314

G. C. Branco, A. J. Buras, S. Jager, S. Uhlig, and A. Weiler:  
**Another Look at Minimal Lepton Flavour Violation,  $l_i \rightarrow l_j\gamma$ , Leptogenesis and the Ratio  $M_\nu/\Lambda_{LFV}$**   
arXiv:hep-ph/0609067

G. C. Branco, A. J. Buras, S. Jager, S. Uhlig, and A. Weiler:  
**Another Look at Minimal Lepton Flavour Violation,  $l_i \rightarrow l_j\gamma$ , Leptogenesis and the Ratio  $M_\nu/\Lambda_{LFV}$**   
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D. Bucurescu, G. Graw, R. Hertenberger, H.-F. Wirth, N. Lo Iudice, A. V. Sushkov, N. Yu. Shirikova, Y. Sun, T. Faestermann, R. Krücken, M. Mahgoub, J. Jolie, P. von Brentano, N. Braun, S. Heinze, O. Möller, D. Mächer, C. Schöll, R.F. Casten, and D.A. Meyer:  
**High-resolution study of  $0^+$  and  $2^+$  excitations in  $^{168}\text{Er}$  with the (p,t) reaction**  
Phys.Rev. **C73** (2006) 064309

A. J. Buras, A. Poschenrieder, S. Uhlig, and W. A. Bardeen:  
**Rare  $K$  and  $B$  decays in the littlest Higgs model without T-parity**  
JHEP **0611** (2006) 062

A. J. Buras, M. Gorbahn, U. Haisch, and U. Nierste:  
**Charm quark contribution to  $K^+ \rightarrow \pi^+ \nu \bar{\nu}$  at next-to-next-to-leading order**  
JHEP **0611** (2006) 002

M. Bussmann, U. Schramm, D. Habs, V.S. Kolhinen, and J.Szerypo:  
**Stopping highly charged ions in a laser-cooled one component plasma of  $^{24}\text{Mg}^+$  ions**  
Int. J. Mass Spectr. **251** (2006) 179

M. Bussmann, U. Schramm, and D. Habs:  
**Simulating strongly coupled plasmas at low temperatures**  
AIP Conf. Proceedings **862** (2006) 221

V.N. Bychkov, N. Dedek, W. Dünnweber, M. Faessler, H. Fischer, J. Franz, R. Geyer, Yu.V. Gousakov,  
A. Grünemaier, F.H. Heinsius, *et al.*:  
**The large size straw drift chambers of the COMPASS experiment**  
Nucl.Instr.Meth. **A556** (2006) 66

COMPASS Collaboration:  
**Gluon polarization in the nucleon from quasi-real photoproduction of high- $p_T$  hadron pairs**  
Phys. Lett. **B633** (2006) 25

CRYSTAL BARREL Collaboration:  
**Study of  $K\bar{K}$  resonances in  $\bar{p}p \rightarrow K^+K^-\pi^0$  at 900 and 1640 MeV/c**  
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M. Ciuchini, E. Franco, D. Guadagnoli, V. Lubicz, V. Porretti, and L. Silvestrini:  
**Next-to-leading order strong interaction corrections to the  $\Delta F = 2$  effective Hamiltonian in the MSSM**  
JHEP **0609** (2006) 013

R.M. Clark, A.O. Macchiavelli, L. Fortunato, and R. Krücken:  
**Critical-Point Description of the Transition from Vibrational to Rotational Regimes in the Pairing Phase**  
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Ch. Coppi, F.v. Feilitzsch, Ch. Isaila, T. Jagemann, J. König, T. Lachenmaier, J.-C. Lanfranchi, W. Potzel, W. Rau,  
M. Stark, D. Wernicke, and W. Westphal:  
**Quenching factor measurement for  $\text{CaWO}_4$  by neutron scattering**  
Nucl. Instrum. Meth. **A 559** (2006) 396 – 398

A. Covello, A. Gargano, B. F. Bayman, G. Graw, H.-F. Wirth, L. Zetta, M. Jaskóla, P. Guazzoni, and  
R. Hertenberger:  
**Spectroscopy of  $^{110}\text{Sn}$  via the high-resolution  $^{112}\text{Sn}(p,t)^{110}\text{Sn}$  reaction**  
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G. Dollinger, A. Bergmaier, A. Hauptner, S. Dietzel, G.A. Drexler, C. Greubel, V. Hable, P. Reichart, R. Krücken,  
T. Cremer, and A.A. Friedl:  
**Hydrogen Microscopy and Analysis of DNA Repair using Focused High Energy Ion Beams**  
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J. Dvorak, W. Brüche, M. Chelnokov, R. Dressler, Ch.E. Düllmann, K. Eberhardt, V. Gorshkov, E. Jäger, R. Krücken, A. Kuznetsov, Y. Nagame, F. Nebel, Z. Novackova, Z. Qin, M. Schädel, B. Schausten, E. Schimpf, A. Semchenkov, P. Thörle, A. Türler, M. Wegrzecki, B. Wierczinski, A. Yakushev, and A. Yeremin:  
**Doubly magic Nucleus  ${}_{108}^{270}\text{Hs}_{162}$**   
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T. von Egidy:  
**Erratum: Systematics of nuclear level density parameters**  
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**Complete (n,  $\gamma$ ) level scheme of  ${}^{124}\text{Te}$**   
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G. Ferini , T. Gaitanos , M. Colonna , M. Di Toro , and H.H. Wolter:  
**Isospin effects on subthreshold kaon production**  
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P. Finelli, N. Kaiser, D. Vretenar, and W. Weise:  
**Relativistic nuclear energy density functional constrained by low-energy QCD**  
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**First observation of high-spin states in  ${}^{83}\text{Se}$**   
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A.A. Friedl, G.A. Drexler, M. Deutsch, H. Strickfaden, S. Dietzel, T. Cremer, A. Hauptner, R. Krücken, C. Greubel, V. Hable, and G. Dollinger:  
**Radiobiological Experiments at the Munich Microprobe SNAKE**  
Radiation Research **166** (2006) 668

C. Fuchs and H.H. Wolter:  
**Modelization of the EOS**  
Eur.Phys.J **A30** (2006) 5

T.A. Gail and T.R. Hemmert:  
**Signatures of chiral dynamics in the nucleon to delta transition**  
Eur.Phys.J. **A28** (2006) 91

T. Grahn, A. Dewald, O. Möller, R. Julin, C. W. Beausang, S. Christen, I. G. Darby, S. Eeckhaudt, P. T. Greenlees, A. Gørgen, K. Helariutta, J. Jolie, P. Jones, S. Juutinen, H. Kettunen, Th. Kröll, R. Krücken, Y. Le Coz, M. Leino, A.-P. Leppänen, P. Maierbeck, D. A. Meyer, B. Melon, P. Nieminen, M. Nyman, R. D. Page, J. Pakarinen, P. Petkov, P. Rähkila, B. Saha, M. Sandzelius, J. Sarén, C. Scholey, and J. Uusitalo:  
**Collectivity and Configuration Mixing in  ${}^{186,188}\text{Pb}$  and  ${}^{194}\text{Po}$**   
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C. Greubel, V. Hable, G. Dollinger, A. Hauptner, R. Krücken, H. Strickfaden, S. Dietzel, T. Cremer, G.A. Drexler, M. Deutsch, and A.A. Friedl:  
**The Munich Microprobe SNAKE, a Single-Ion Cell Irradiation Facility**  
Radiation Research **166** (2006) 654

H.W. Griefhammer:

**How to classify 3-body forces — and why**

Few Body Syst. **38** (2006) 67

F. Grüner and F. Bell:

**First-principles-simulation of both charge state and stopping power of swift heavy ions in solids**

Nucl.Instr.Meth. **B245** (2006) 15

V. Hable, G. Dollinger, C. Greubel, A. Hauptner, R. Krücken, S. Dietzel, T. Cremer, G.A. Drexler, A.A. Friedl, and R. Löwe:

**Methods for Quantitative Evaluation of dynamics of Repair Proteins within Irradiated Cells**

Nucl. Instr. and Meth. **B 245** (2006) 298

V. Hable, G. Dollinger, C. Greubel, A. Hauptner, R. Krücken, S. Dietzel, T. Cremer, G.A. Drexler, and A.A. Friedl:

**Dynamics of DNA Repair Proteins after Directed Heavy-Ion Cell Irradiation**

Radiation Research **166** (2006) 676

Ph. Hägler *et al.*:

**The nucleon axial charge in full lattice QCD**

Phys.Rev.Lett. **96** (2006) 052001

Ph. Hägler *et al.*:

**Axial coupling constant of the nucleon for two flavours of dynamical quarks in finite and infinite volume**

Phys.Rev. **D74** (2006) 094508

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**The axial charge of the nucleon: lattice results compared with chiral perturbation theory**

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U. Hager, T. Eronen, J. Hakala, A. Jokinen, S. Kopecky, I. Moore, A. Nieminen, S. Rinta-Antila, J. Äystö, V.S. Kolhinen, J. Szerypo, and M. Oinonen:

**First accurate mass measurements of refractory fission fragments**

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**DNA-Repair Protein Distribution along the Tracks of Energetic Ions**

Radiation Protection Dosimetry doi:10.1093/rpd/ncl420 (2006)

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**Spatial Distribution of DNA Double-Strand Breaks from Ion Tracks**

Ion Beam Science: Solved and Unsolved Problems. Matematisk-fysiske Meddelelser 52, Royal Danish Academy of Sciences and Letters, Copenhagen (2006) 59-85

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**Irradiation of Living Cells with Single Ions at the Ion Microprobe SNAKE**

Acta Physica Polonica **A 109** (2006) 273

A. Heusler, G. Graw, R. Hertenberger, F. Riess, H.-F. Wirth, T. Faestermann, R. Krücken, J. Jolie, D. Mücher, N. Pietralla, and P. von Brentano:

**The  $i_{11/2}f_{5/2}$  and  $i_{11/2}p_{3/2}$  neutron particle-hole multiplets in  $^{208}\text{Pb}$**

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Ch. Hinke, R. Krücken, R.F. Casten, V. Werner, and N.V. Zamfir:  
**Structural evolution of the gamma-band in well-deformed rare earth nuclei**  
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K. Hochmuth *et al.*:  
**Probing the Earth's interior with the LENA detector**  
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Ch. Hollerith *et al.*:  
**Energy calibration of superconducting transition edge sensors for x-ray detection using pulse analysis**  
Rev. Sci. Instrum. **77** (2006) 053105-1–053105-6

R. Holzmann HADES Collaboration:  
**Measurement of the di-electron mass spectrum in  $^{12}\text{C} + ^{12}\text{C}$  collisions at 2-A-GeV by HADES**  
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Ch. Isaila *et al.*:  
**Scintillation light detectors with Neganov-Luke amplification**  
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T. Jagemann *et al.*:  
**Measurement of nuclear recoil quenching factors in  $\text{CaWO}_4$**   
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T. Jagemann *et al.*:  
**Measurement of the scintillation light quenching at room temperature of Na recoils in  $\text{NaI(Tl)}$  and hydrogen recoils in NE213 by the scattering of neutrons**  
Nucl. Instr. Meth. **A564** (2006) 549–558

N. Kaiser:  
**Quasi-particle interaction in nuclear matter from chiral pion-nucleon dynamics**  
Nucl.Phys **A768** (2006) 99

N. Kaiser:  
**Pion-photon exchange nucleon-nucleon potentials**  
Phys.Rev. **C73** (2006) 044001

N. Kaiser:  
**Twice-iterated boson-exchange scattering amplitudes**  
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**Dominant two-pion gamma-exchange nucleon-nucleon interaction: Spin-spin and tensor potentials**  
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**Beta decay of the proton-rich nuclei  $^{102}\text{Sn}$  and  $^{104}\text{Sn}$**   
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**Gamow-Teller beta decay of  $^{105}\text{Sn}$**

European Physical Journal **28A** (2006) 183

B. Ketzer:

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