

## LIST OF PUBLICATIONS

M.N. Harakeh

### ARTICLES in journals

### ***Prof.dr. M.N. Harakeh – List of publications***

***September 2009***

- 001 “El transitions in  $^{17}\text{F}$ . I. The low-lying  $T = 3/2$  states”  
M.N. Harakeh, P. Paul and K.A. Snover  
Phys. Rev. C11 (1975) 998-1007
- 002 “El transitions in  $^{17}\text{F}$ . II. The region of the giant resonances”  
M.N. Harakeh, P. Paul and Ph. Gorodetzky  
Phys. Rev. C11 (1975) 1008-1014
- 003 “El excitations in  $A = 15$  nuclei”  
M.N. Harakeh, P. Paul, H.M. Kuan and E.K. Warburton  
Phys. Rev. C12 (1975) 1410-1422
- 004 “A study of the isoscalar giant quadrupole resonance and other collective states in  $^{16}\text{O}$  excited by inelastic alpha scattering at  $E_\alpha = 104$  MeV”  
M.N. Harakeh, A.R. Arends, M.J.A. de Voigt, A.G. Drentje, S.Y. van der Werf and A. van der Woude  
Nucl. Phys. A265 (1976) 189-212; Erratum A280 (1977) 500
- 005 “Excitation of negative parity states ( $1^-, 3^-, T=0$ ) in  $^{16}\text{O}$  in inelastic alpha scattering”  
M.N. Harakeh, J.R. Comfort and A. van der Woude  
Phys. Lett. B62 (1976) 155-158; Erratum B76 (1978) 663
- 006 “Direct evidence for a new giant resonance at  $80 \text{ A}^{-1/3}$  MeV in the lead region”  
M.N. Harakeh, K. van der Borg, T. Ishimatsu, H.P. Morsch, A. van der Woude and F.E. Bertrand  
Phys. Rev. Lett. 38 (1977) 676-679
- 007 “A high resolution study of the giant resonance region in  $^{28}\text{Si}$  by inelastic  $\alpha$ -particle scattering”  
K. van der Borg, M.N. Harakeh, S.Y. van der Werf, A. van der Woude and F.E. Bertrand  
Phys. Lett. B67 (1977) 405-408
- 008 “The  $^{116}\text{Sn}(d,t)^{115}\text{Sn}$  reaction and the investigation of deeply bound hole states in the odd- $A$  tin isotopes”  
S.Y. van der Werf, M.N. Harakeh, L.W. Put, O. Scholten and R.H. Siemssen  
Nucl. Phys. A289 (1977) 141-164
- 009 “Proton hole states in  $^{114}\text{Cd}$  excited in the  $^{115}\text{In}(d, ^3\text{He})^{114}\text{Cd}$  reaction at  $E_d = 50$  MeV”  
D.C.J.M. Hageman, M.N. Harakeh, R.H. Siemssen and S.Y. van der Werf

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Nucl. Phys. A290 (1977) 1-13

- 010 "Giant quadrupole resonance in  $^{24,26}\text{Mg}$ : A comparison of inelastic-scattering and  $\alpha$ -capture experiments"  
F.E. Bertrand, K. van der Borg, A.G. Drentje, M.N. Harakeh, J. van der Plicht  
and A. van der Woude  
Phys. Rev. Lett. 40 (1978) 635-638
- 011 "Proton hole states in  $^{63}\text{Co}$  and  $^{63}\text{Cu}$ "  
O. Hansen, M.N. Harakeh, J.V. Maher, L.W. Put and J.C. Vermeulen  
Nucl. Phys. A313 (1979) 95-108
- 012 "Inhibition of the fission decay channel of the isoscalar giant quadrupole resonance in the actinide region"  
J. van der Plicht, M.N. Harakeh, A. van der Woude, P. David and J. Debrus  
Phys. Rev. Lett. 42 (1979) 1121-1124
- 013 "Excitation of ground and gamma bands in the  $^{24}\text{Mg}(\alpha, \alpha')^{24}\text{Mg}$  reaction at 120 MeV"  
K. van der Borg, M.N. Harakeh and B.S. Nilssøn  
Nucl. Phys. A325 (1979) 31-44
- 014 "Isoscalar excitations in the lead region observed in inelastic  $\alpha$ -scattering at  $E_\alpha = 120$  MeV"  
M.N. Harakeh, B. van Heyst, K. van der Borg and A. van der Woude  
Nucl. Phys. A327 (1979) 373-396
- 015 "The  $^{48}\text{Ca}(^3\text{He}, t)^{48}\text{Sc}$  reaction at 66 and 70 MeV. Reaction mechanism and Gamow-Teller strength"  
C. Gaarde, J.S. Larsen, M.N. Harakeh, S.Y. van der Werf, M. Igarashi and A. Müller-Arnke  
Nucl. Phys. A334 (1980) 248-268
- 016 "Isoscalar giant resonances in  $^{232}\text{Th}$ "  
M.N. Harakeh, H.P. Morsch, K. van der Weg, A. van der Woude and F.E. Bertrand  
Phys. Rev. C21 (1980) 768-771
- 017 "On the excitation of isoscalar dipole strength in the giant resonance region by inelastic electron and hadron scattering"  
M.N. Harakeh  
Phys. Lett. B90 (1980) 13-16
- 018 "On the excitation of isovector dipole strength by inelastic proton scattering in the giant resonance region in light nuclei"  
K. van der Borg, M.N. Harakeh, A. van der Woude and F.E. Bertrand  
Nucl. Phys. A341 (1980) 219-228

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### ARTICLES in journals

- 019 "Strong coupled-channels effects in the  ${}^9\text{Be}(\alpha,t){}^{10}\text{B}$  reaction"  
M.N. Harakeh, J. van Popta, A. Saha and R.H. Siemssen  
Nucl. Phys. A344 (1980) 15-40
- 020 "The study of the  $(\alpha,\alpha'f)$  reaction at 120 MeV on  ${}^{232}\text{Th}$  and  ${}^{238}\text{U}$  (I). Fission probabilities and angular distributions in the region of the giant quadrupole resonance"  
J. van der Plicht, M.N. Harakeh, A. van der Woude, P. David, J. Debrus, H. Janszen and J. Schulze  
Nucl. Phys. A346 (1980) 349-370
- 021 "The  ${}^{54}\text{Fe}({}^3\text{He},t){}^{54}\text{Co}$  reaction at 70 MeV, Gamow-Teller strength"  
C. Gaarde, J.S. Larsen, A.G. Drentje, M.N. Harakeh, S.Y. van der Werf and A. Müller-Arnke  
Nucl. Phys. A346 (1980) 497-509
- 022 "Neutron pickup reactions on the even palladium isotopes and the deeply bound hole state excitation"  
O. Scholten, M.N. Harakeh, J. van der Plicht, L.W. Put, R.H. Siemssen, S.Y. van der Werf and M. Sekiguchi  
Nucl. Phys. A348 (1980) 301-320
- 023 "The supersymmetry scheme and E2 transition rates in the Pt region"  
M.N. Harakeh, P. Goldhoorn, Y. Iwasaki, J. Lukasiak, L.W. Put, S.Y. van der Werf and F. Zwarts  
Phys. Lett. B97 (1980) 21-24
- 024 "Properties of the  $(\alpha,\alpha^*)$  reaction at very forward angles: Coupled-channels effects in single and mutual excitation"  
J. van Driel, M.N. Harakeh, R. Kamermans and R.J. de Meijer  
Phys. Rev. Lett. 46 (1981) 525-528
- 025 "Decay of the giant Gamow-Teller resonance in  ${}^{208}\text{Bi}$ "  
C. Gaarde, J.S. Larsen, A.G. Drentje, M.N. Harakeh and S.Y. van der Werf  
Phys. Rev. Lett. 46 (1981) 902-906
- 026 "Proton excitation of  ${}^{24}\text{Mg}$ ,  ${}^{26}\text{Mg}$ , and  ${}^{32}\text{S}$   $\gamma$  bands"  
R. De Leo, G. D'Erasco, A. Pantaleo, M.N. Harakeh, S. Micheletti and M. Pignanelli  
Phys. Rev. C23 (1981) 1355-1363
- 027 " ${}^{194}\text{Pt}(d,{}^3\text{He}){}^{193}\text{Ir}$  reaction: Spectroscopic factors and supersymmetry predictions"  
Y. Iwasaki, E.H.L. Aarts, M.N. Harakeh, R.H. Siemssen and S.Y. van der Werf  
Phys. Rev. C23 (1981) 1477-1481

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### ARTICLES in journals

- 028 "High angular momentum decay properties of the compound systems  $^{100}\text{Ru}^*$  and  $^{160}\text{Er}^*$  formed in  $^{50}\text{Ti}$ -induced reactions"  
F. Folkman, J.D. Garrett, G.B. Hagemann, M.N. Harakeh, B. Herskind, D.L. Hillis, S. Ogaza, H. Emling, E. Grosse, D. Schwalm, R.S. Simon and P.O. Tjøm  
Nucl. Phys. A361 (1981) 242-274
- 029 "Isoscalar dipole resonance: Form factor and energy weighted sum rule"  
M.N. Harakeh and A.E.L. Dieperink  
Phys. Rev. C23 (1981) 2329-2334
- 030 "The isoscalar strength distribution in  $^{24,26}\text{Mg}$ ,  $^{28}\text{Si}$  and  $^{40}\text{Ca}$  obtained from inelastic alpha scattering at 120 MeV"  
K. van der Borg, M.N. Harakeh and A. van der Woude  
Nucl. Phys. A365 (1981) 243-300
- 031 "Hexadecapole transition moments in strongly deformed nuclei and the validity of the  $sd$ -boson approximation in the IBA"  
P.B. Goldhoorn, M.N. Harakeh, Y. Iwasaki, L.W. Put, F. Zwarts and P. Van Isacker  
Phys. Lett. B103 (1981) 291-296
- 032 "Gamma-decay of the deeply-bound hole states populated in the  $^{102}\text{Pd}(^3\text{He},\alpha)^{101}\text{Pd}$  reaction at 70 MeV"  
H. Sakai, R.K. Bhowmik, K. van Dijk, A.G. Drentje, M.N. Harakeh, Y. Iwasaki, R.H. Siemssen, S.Y. van der Werf and A. van der Woude  
Phys. Lett. B103 (1981) 309-312
- 033 "The study of the  $(\alpha,\alpha'f)$  reaction at 120 MeV on  $^{232}\text{Th}$  and  $^{238}\text{U}$  (II). Fission barrier properties deduced from fission probabilities and angular distributions"  
J. van der Plicht, M.N. Harakeh, A. van der Woude, P. David, J. Debrus, H. Janszen and J. Schulze  
Nucl. Phys. A369 (1981) 51-76
- 034 "Fission probability of the IAR in the actinide region studied via the  $(^3\text{He},tf)$  reaction"  
S.Y. van der Werf, N. Blasi, S. Brandenburg, A.G. Drentje, M.N. Harakeh, W.A. Sterrenburg, B. Visscher, A. van der Woude, R. De Leo and H. Janszen  
Phys. Lett. B105 (1981) 111-115
- 035 "Axial symmetry around the recoil axis for the  $^{238}\text{U}(\alpha,\alpha'f)$  reaction and the fission probability in the giant resonance region"  
R. De Leo, M.N. Harakeh, S. Micheletti, J. van der Plicht, A. van der Woude, P. David and H. Janszen  
Nucl. Phys. A373 (1982) 509-518
- 036 "The study of the  $(\alpha,\alpha'f)$  reaction at 120 MeV on  $^{232}\text{Th}$  (III). Total kinetic energies and mass distributions for excitation energies below 12 MeV"

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### ARTICLES in journals

- P. David, J. Debrus, H. Janszen, J. Schulze, M.N. Harakeh, J. van der Plicht and A. van der Woude  
Nucl. Phys. A380 (1982) 27-41
- 037 "Origin of the forward-backward asymmetry in the decay of the giant resonance structures in  $^{24}\text{Mg}$  and  $^{40}\text{Ca}$ "  
F. Zwarts, K. van der Borg, A.G. Drentje, M.N. Harakeh, W.A. Sterrenburg and A. van der Woude  
Phys. Rev. C25 (1982) R2139-R2141
- 038 " $\beta$ -Band excitation in inelastic hadron scattering and the mixing of the breathing mode into the low-lying  $\beta$ -vibrations"  
M.N. Harakeh and R. De Leo  
Phys. Lett. B117 (1982) 377-380
- 039 "Study of the  $^{193}\text{Ir}(\text{He},d)^{194}\text{Pt}$  and  $^{193}\text{Ir}(d,\text{He})^{192}\text{Os}$  reactions: Test of a supersymmetric coupling scheme"  
N. Blasi, R. Bijker, M.N. Harakeh, Y. Iwasaki, W.A. Sterrenburg, S.Y. van der Werf and M. Vergnes  
Nucl. Phys. A388 (1982) 77-92
- 040 "Response to: Comment on decay of Gamow-Teller giant resonance"  
C. Gaarde, J.S. Larsen, A.G. Drentje, M.N. Harakeh and S.Y. van der Werf  
Phys. Rev. Lett. 48 (1982) 1225
- 041 " $^{197}\text{Au}(\text{He},d)^{198}\text{Hg}$  reaction at  $E(\text{He}) = 50 \text{ MeV}$ "  
N. Blasi, S. Brandenburg, M.N. Harakeh, W.A. Sterrenburg and S.Y. van der Werf  
Phys. Rev. C26 (1982) 1893-1898
- 042 "Proton scattering on  $A = 92-116$  nuclei with extended optical models and the Interacting Boson Approximation"  
E. Cereda, M. Pignanelli, S. Micheletti, H.V. von Geramb, M.N. Harakeh, R. De Leo, G. D'Erasco and A. Pantaleo  
Phys. Rev. C26 (1982) 1941-1959
- 043 "Multipole strength distribution in  $^{156}\text{Gd}$  from the  $(p,t)$  reaction at  $E_p=40 \text{ MeV}$ "  
H.J. Riezebos, R. De Leo, P.B. Goldhoorn, M.N. Harakeh, L.W. Put, H. Sakai and R.H. Siemssen  
Phys. Lett. B118 (1982) 287-291
- 044 "Fission decay of the isoscalar giant monopole resonance in  $^{238}\text{U}$ "  
S. Brandenburg, R. De Leo, A.G. Drentje, M.N. Harakeh, H. Janszen and A. van der Woude  
Phys. Rev. Lett. 49 (1982) 1687-1690

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### ARTICLES in journals

- 045 "Hadronic excitation of the octupole bands in deformed nuclei: necessity of the isoscalar dipole degree of freedom?"  
L.W. Put and M.N. Harakeh  
Phys. Lett. B119 (1982) 253-256
- 046 "Isobaric analog states in rare-earth nuclei studied with the ( ${}^3\text{He},t$ ) charge exchange reaction at  $\Theta_L = 0^\circ$ "  
J. Jänecke, E.H.L. Aarts, A.G. Drentje, M.N. Harakeh and C. Gaarde  
Nucl. Phys. A394 (1983) 39-59
- 047 " ${}^{27}\text{Al}(p,\gamma){}^{28}\text{Si}$  and  ${}^{27}\text{Al}({}^3\text{He},d){}^{28}\text{Si}$  to the stretched 11.58 MeV (6 $^-$ ,0) and 14.36 MeV (6 $^-$ ,1) levels"  
K.A. Snover, G. Feldman, M.M. Hindi, E. Kuhlmann, M.N. Harakeh, M. Sasao, M. Noumachi, Y. Fujita, M. Fujiwara and K. Hosono  
Phys. Rev. C27 (1983) 493-505
- 048 "Study of  ${}^{103}\text{Tc}$  and the onset of deformation around  $N=60$ "  
P. De Gelder, D. De Frenne, K. Heyde, N. Kaffrell, A.M. van den Berg, N. Blasi, M.N. Harakeh and W.A. Sterrenburg  
Nucl. Phys. A401 (1983) 397-414
- 049 "The isoscalar quadrupole strength distribution above 10 MeV in  ${}^{40}\text{Ca}$ "  
F. Zwarts, A.G. Drentje, M.N. Harakeh and A. van der Woude  
Phys. Lett. B125 (1983) 123-127
- 050 "Excitation and decay of  $\Delta L=1$  modes in  ${}^{12}\text{N}$  via the  ${}^{12}\text{C}({}^3\text{He},tp)$  reaction"  
W.A. Sterrenburg, M.N. Harakeh, S.Y. van der Werf and A. van der Woude  
Nucl. Phys. A405 (1983) 109-125
- 051 "Experimental determination of monopole strength in  ${}^{40}\text{Ca}$  between 10 and 20 MeV excitation energy"  
S. Brandenburg, R. De Leo, A.G. Drentje, M.N. Harakeh, H. Sakai and A. van der Woude  
Phys. Lett. B130 (1983) 9-13
- 052 "Inelastic proton scattering at 30-40 MeV from  ${}^{12}\text{C}$ "  
R. De Leo, G. D'Erasmo, A. Pantaleo, M.N. Harakeh, E. Cereda, S. Micheletti and M. Pignanelli  
Phys. Rev. C28 (1983) 1443-1454
- 053 "Determination of the  $\alpha$ -induced K-shell ionization cross sections from the measured intensity ratios of K X-rays to  $(2^+ \rightarrow 0^+)$   $\gamma$ -rays in even deformed nuclei"  
Z. Sujkowski, D. Chmielewska and M.N. Harakeh  
Nucl. Instr. Meth. 219 (1984) 111-116
- 054 "Proton scattering on  ${}^{100}\text{Mo}$  and  ${}^{112}\text{Cd}$  and the Interacting Boson Approximation"

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- M. Pignanelli, S. Micheletti, E. Cereda, M.N. Harakeh, S.Y. van der Werf and R. De Leo  
Phys. Rev. C29 (1984) 434-440
- 055 "Study of isovector charge-exchange excitations and their decay via the  $^{16}\text{O}(^3\text{He},tp)$  reaction"  
W.A. Sterrenburg, S. Brandenburg, J.H. van Dijk, A.G. Drentje, M.B. Greenfield,  
M.N. Harakeh, H. Riezebos, H. Sakai, W. Segeth, S.Y. van der Werf and  
A. van der Woude  
Nucl. Phys. A420 (1984) 257-284
- 056 "Time scale for projectile breakup into coincident heavy fragments"  
M.J. Murphy, S. Gil, M.N. Harakeh, A. Ray, A.G. Seamster, R. Vandenbosch and T.C. Awes  
Phys. Rev. Lett. 53 (1984) 1543-1546
- 057 "Spreading width of the IAS in even Pm-isotopes measured via the  $^A\text{Nd}(^3\text{He},t)^A\text{Pm}$  and  
 $^A\text{Nd}(^3\text{He},tp)^{A-1}\text{Nd}$  reactions"  
H.J. Hofmann, S. Brandenburg, P. Grasdijk, M.N. Harakeh, W.A. Sterrenburg and  
S.Y. van der Werf  
Nucl. Phys. A433 (1985) 181-197
- 058 "Coupled channel analysis of proton scattering from  $^{40}\text{Ar}$ "  
R. De Leo, S. Micheletti, M. Pignanelli and M.N. Harakeh  
Phys. Rev. C31 (1985) 362-371
- 059 "Two-step processes in the population of the  $2_2^+$  state via the  $^{197}\text{Au}(d,^3\text{He})^{196}\text{Pt}$  reaction"  
N. Blasi, M.N. Harakeh, W.A. Sterrenburg and S.Y. van der Werf  
Phys. Rev. C31 (1985) 653-655
- 060 "Distributions of  $i_{13/2}$  transfer strength in  $(\tau,\alpha)$ -induced population of odd- $A$  platinum  
isotopes"  
T.F. Thorsteinsen, J.S. Vaagen, G. Løvhøiden, N. Blasi, M.N. Harakeh and S.Y. van der  
Werf  
Nucl. Phys. A435 (1985) 125-151
- 061 "Excitation of hexadecapole transitions in  $^{196}\text{Pt}$  via electron scattering and their interpretation  
in the Interacting Boson Approximation"  
W.T.A. Borghols, N. Blasi, R. Bijker, M.N. Harakeh, S.Y. van der Werf, C.W. de Jager,  
J.B. van der Laan and H. de Vries  
Phys. Lett. B152 (1985) 330-334
- 062 "The decay of isoscalar giant resonances in  $^{24}\text{Mg}$  and  $^{40}\text{Ca}$ "  
F. Zwarts, A.G. Drentje, M.N. Harakeh and A. van der Woude  
Nucl. Phys. A439 (1985) 117-175
- 063 "Reuzenresonanties, grondtonen van de atoomkern"  
M.N. Harakeh and S.Y. van der Werf

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### ARTICLES in journals

- Ned. Tijd. Nat. A51 (1985) 55-59
- 064 "Study of the fission decay of the isoscalar monopole resonance via the  $^{238}\text{U}(\alpha,\alpha')$  reaction at 0°"  
R. De Leo, S. Brandenburg, A.G. Drentje, M.N. Harakeh, H. Janszen and A. van der Woude  
Nucl. Phys. A441 (1985) 591-616
- 065 "γ-decay of the deeply-bound hole states in  $^{101}\text{Pd}$ ,  $^{105}\text{Pd}$ ,  $^{107}\text{Pd}$ ,  $^{111}\text{Sn}$  and  $^{117}\text{Sn}$  observed in the ( $^3\text{He},\alpha\gamma$ ) reaction at 70 MeV"  
H. Sakai, R.K. Bhowmik, S. Brandenburg, J.H. van Dijk, A.G. Drentje, M.N. Harakeh,  
Y. Iwasaki, R.H. Siemssen, S.Y. van der Werf and A. van der Woude  
Nucl. Phys. A441 (1985) 640-675
- 066 "Quadrupole boson structure form factors for proton scattering from the IBA model and electron scattering"  
R. De Leo, M. Pignanelli, W.T.A. Borghols, S. Brandenburg, M.N. Harakeh, H.J. Lu,  
S.Y. van der Werf, C.W. de Jager, J.B. van der Laan and H. de Vries  
Phys. Lett. B162 (1985) 1-6
- 067 "Low-lying octupole strength in  $^{112}\text{Cd}$ "  
R. De Leo, M. Pignanelli, W.T.A. Borghols, S. Brandenburg, M.N. Harakeh, H.J. Lu and  
S.Y. van der Werf  
Phys. Lett. B165 (1985) 30-34; Erratum B166 (1986) 492
- 068 "Nuclear matter density effects in monopole transitions"  
M. Pignanelli, S. Micheletti, R. De Leo, S. Brandenburg and M.N. Harakeh  
Phys. Rev. C33 (1986) 40-49
- 069 "High-spin lp-lh configurations in  $^{116}\text{Sn}$  and their fragmentation as seen in the reactions  $^{116}\text{Sn}(p,p')$ ,  $^{118}\text{Sn}(e,e')$ ,  $^{115}\text{In}(^3\text{He},d)$  and  $^{115}\text{In}(\alpha,t)$ "  
S.Y. van der Werf, N. Blasi, M.N. Harakeh, G. Wenes, A.D. Bacher, G.T. Emery,  
C.W. Glover, W.P. Jones, H.J. Karwowski, H. Nann, C. Olmer, P. den Heijer, C.W. de Jager,  
H. de Vries, J. Ryckebusch and M. Waroquier  
Phys. Lett. B166 (1986) 372-378
- 070 "Isoscalar monopole and dipole strength between 10 and 20 MeV in  $^{24}\text{Mg}$  from inelastic α scattering at and around 0°"  
H.J. Lu, S. Brandenburg, R. De Leo, M.N. Harakeh, T.D. Poelhekken and A. van der Woude  
Phys. Rev. C33 (1986) R1116-R1119
- 071 "Excitation of the  $2_1^+$  and  $2_2^+$  states in the  $^{88}\text{Sr}(p,p')$  reaction at 25 and 31 MeV: a look behind the nuclear surface"  
L.R. Kouw, H.P. Blok, M. Pignanelli, R. De Leo and M.N. Harakeh  
Phys. Lett. B174 (1986) 137-141

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### ARTICLES in journals

- 072 "Fission decay of the isoscalar giant quadrupole resonance in  $^{24}\text{Mg}$ "  
S. Lawitzki, D. Pade, B. Gonsior, C.D. Uhlhorn, S. Brandenburg, M.N. Harakeh  
and H.W. Wilschut  
Phys. Lett. B174 (1986) 246-250
- 073 "Role of isospin in the statistical decay of the giant dipole resonance built on excited states"  
M.N. Harakeh, D.H. Dowell, G. Feldman, E.F. Garman, R. Loveman, J.L. Osborne and  
K.A. Snover  
Phys. Lett. B176 (1986) 297-301
- 074 "Levels in  $^{107}\text{Rh}$ "  
N. Kaffrell, P. Hill, J. Rogowski, H. Tetzlaff, N. Trautmann, E. Jacobs, P. De Geler,  
D. De Frenne, K. Heyde, G. Skarnemark, J. Alstad, N. Blasi, M.N. Harakeh,  
W.A. Sterrenburg and K. Wolfsberg  
Nucl. Phys. A460 (1986) 437-454
- 075 "Spreading width of isobaric analog states and the isovector giant monopole resonance"  
J. Jänecke, M.N. Harakeh and S.Y. van der Werf  
Nucl. Phys. A463 (1987) 571-596
- 076 "Decay of the isoscalar giant monopole resonance in  $^{208}\text{Pb}$ "  
S. Brandenburg, W.T.A. Borghols, A.G. Drentje, L.P. Ekström, M.N. Harakeh,  
A. van der Woude, A. Håkansson, L. Nilsson, N. Olsson, R. De Leo and M. Pignanelli  
Nucl. Phys. A466 (1987) 29-69
- 077 "Comment on "Compression modulus of nuclear matter and charge-distribution differences"""  
A. van der Woude, W.T.A. Borghols, S. Brandenburg, M.M. Sharma and M.N. Harakeh  
Phys. Rev. Lett. 58 (1987) 2383
- 078 "Levels in  $^{109}\text{Rh}$ "  
N. Kaffrell, P. Hill, J. Rogowski, H. Tetzlaff, N. Trautmann, E. Jacobs, P. De Geler,  
D. De Frenne, K. Heyde, S. Börjesson, G. Skarnemark, J. Alstad, N. Blasi, M.N. Harakeh,  
W.A. Sterrenburg and K. Wolfsberg  
Nucl. Phys. A470 (1987) 141-160
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Proceedings of the 17<sup>th</sup> International IUPAP Conference on Few-Body Problems in Physics, Durham, North Carolina, U.S.A., 5 - 10 June (2003)
- 129 "Investigation of isovector excitations via the ( $t, {}^3\text{He}$ ) reaction at  $E_t=43$  MeV/u on  ${}^{58}\text{Ni}$  and  ${}^{48}\text{Ca}$  targets: microscopic interpretation"  
J. Guillot, C. Bäumer, D. Beaumel, A.M. van den Berg, S. Brandenburg, G. Colò, B. Davids, S. Fortier, D. Frekers, E.-W. Grewe, M. Fujiwara, S. Galès, P. Haefner, M.N. Harakeh, M. Hunyadi, M. de Huu, B.C. Junk, E. Rich, N. Van Giai, S.Y. van der Werf and H.J. Wörtche  
Proceedings of the International Nuclear Physics Conference "INPC 2004", Göteborg, Sweden, 27 June - 2 July (2004)  
Nucl. Phys. A752 (2005) 349c-352c
- 130 "Measurement of the effective analyzing power of graphite sheet as a function of energy"  
H.R. Amir-Ahmadi, J.C.S. Bacelar, A. van den Berg, R. Castelijns, E.D. van Garderen, M.N. Harakeh, M. Hunyadi, N. Kalantar-Nayestanaki, M. Kiš, H. Löhner, M. Mahjour-Shafiei, S.V. Shende, J.G. Messchendorp and H.J. Wörtche,  
Proceedings of the 19<sup>th</sup> European Conference on Few-Body Problems in Physics, Groningen, The Netherlands, 23-27 August (2004)  
AIP Conf. Proc. 768 (2005) 69-70
- 131 "Proton-proton bremsstrahlung towards the elastic limit"  
M. Mahjour-Shafiei, H.R. Amir-Ahmadi, J.C.S. Bacelar, R. Castelijns, K. Ermisch, E. van Garderen, I. Gašparić, M.N. Harakeh, N. Kalantar-Nayestanaki, M. Kiš and H. Löhner,  
Proceedings of the 19<sup>th</sup> European Conference on Few-Body Problems in Physics, Groningen, The Netherlands, 23-27 August (2004)  
AIP Conf. Proc. 768 (2005) 135-137
- 132 "Virtual bremsstrahlung in proton-proton scattering at 190 MeV"  
M. Kiš, J.C.S. Bacelar, R. Castelijns, R. Čaplar, I. Gašparić, M.N. Harakeh, N. Kalantar-Nayestanaki, H. Löhner, M. Mahjour-Shafiei and J.G. Messchendorp,  
Proceedings of the 19<sup>th</sup> European Conference on Few-Body Problems in Physics, Groningen, The Netherlands, 23-27 August (2004)  
AIP Conf. Proc. 768 (2005) 145-146
- 133 "Strategic plan for nuclear physics research in Europe"  
Muhsin N. Harakeh  
Proceedings of the International Symposium on Exotic Nuclear Systems (ENS'05), Debrecen, Hungary, 20-25 June 2005  
AIP Conf. Proc. 802 (2005) 1-5
- 134 "Hyperdeformed rotational bands observed in the actinide region"

## LIST OF PUBLICATIONS

M.N. Harakeh

### ARTICLES in books, proceedings and internal reports

A. Krasznahorkay, M. Csatlós, Y. Eisermann, T. Faestermann, G. Graw, J. Gulyás, D. Habs, M.N. Harakeh, R. Hertenberger, M. Hunyadi, H.J. Maier, Z. Máté, O. Schaile, P.G. Thirolf and H.J. Wirth

Proceedings of the 12<sup>th</sup> International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, Notre Dame, Indiana, U.S.A., 4-9 September (2005)  
AIP Conf. Proc. 819 (2006) 439-446

- 135 "The photoresponse of atomic nuclei: collective excitations and photodissociation"  
A. Zilges, M. Babilon, A.M. van den Berg, D. Galaviz, J. Hasper, M.N. Harakeh, K. Lindenberg, S. Müller, K. Ramspeck, D. Savran, K. Sonnabend, S. Volz, H.J. Wörtche and M. Zarza  
Proceedings of Frontiers in Nuclear Structure, Astrophysics and Reactions (FINUSTAR), Kos, Greece, 12-17 September (2005)  
AIP Conf. Proc. 831 (2006) 147-151
- 136 "Microscopic structure of the dipole compression mode in heavy nuclei"  
M.N. Harakeh  
Proceedings of the International Conference on "Frontiers of Nuclear Structure", Shanghai, China, 12-17 June (2006)  
International Journal of Modern Physics E15 (2006) 1357-1370
- 137 "The giant monopole resonance in the Sn isotope: Why is tin so "fluffy"?"  
U. Garg, T. Li, S. Okumura, H. Akimune, M. Fujiwara, M.N. Harakeh, H. Hashimoto, M. Itoh, Y. Iwao, T. Kawabata, K. Kawase, Y. Liu, R. Marks, T. Murakami, K. Nakanishi, B.K. Nayak, P.V. Madhusudhana Rao, H. Sakaguchi, Y. Terashima, M. Uchida, Y. Yasuda, M. Yosoi and J. Zenihiro  
Proceedings of the International Conference on "Collective Motion in Nuclei under Extreme Conditions (COMEX2)", Sankt Goar, Germany, 20-23 June (2006)  
Nucl. Phys. A788 (2007) 36c-43c
- 138 "Investigation of the Pygmy Dipole Resonance in  $(\alpha, \alpha'\gamma)$  coincidence experiments"  
D. Savran, M. Babilon, A.M. van den Berg, M.N. Harakeh, J. Hasper, H.J. Wörtche and A. Zilges  
Proceedings of the International Conference on "Collective Motion in Nuclei under Extreme Conditions (COMEX2)", Sankt Goar, Germany, 20-23 June (2006)  
Nucl. Phys. A788 (2007) 165c-170c
- 139 "Giant resonance overtones: Compression modes of the nucleus"  
Mátyás Hunyadi and M.N. Harakeh  
Nuclear Physics News International, 18 (2008) 10-16

## **LIST OF PUBLICATIONS**

M.N. Harakeh

### ARTICLES in books, proceedings and internal reports

- 140 "Study of the Pygmy Dipole Resonance in  $^{124}\text{Sn}$  by means of the  $(\alpha, \alpha'\gamma)$  reaction"  
J. Endres, A. Zilges, N. Pietralla, D. Savran, K. Sonnabend, M.N. Harakeh, V. Stoica,  
H. Wörtche, P. Butler, R.D. Herzberg, M. Scheck, R. Krücken, L. Popescu, S. Harissopoulos  
and A. Lagoyannis  
Proceedings of the 13<sup>th</sup> International Conference on Capture Gamma-Ray Spectroscopy and  
Related Topics (CGS13), Cologne, Germany, 25-29 August (2008);  
AIP Conf. Proc. 1090 (2009) 357-361.
- 141 "Direct proton decay from the isoscalar giant dipole resonance in  $^{58}\text{Ni}$  studied via the  $(\alpha, \alpha'p)$   
coincidence measurement"  
H. Hashimoto, M. Hunyadi, H. Akimune, M. Fujiwara, Z. Gácsi, U. Garg, K. Hara,  
M.N. Harakeh, J. Hoffman, M. Itoh, T. Li, T. Murakami, K. Nakanishi, B.K. Nayak,  
S. Okumura, H. Sakaguchi, S. Terashima, M. Uchida, Y. Yasuda and M. Yosoi  
Proceedings of the International conference on Nuclear Structure and Related Topics  
(NSRT2009), Dubna, Russia, 30 June - 4 July (2009)

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## SEMINARS AND INVITED TALKS

M.N. Harakeh

- 001 "Dipole Excitations in light Nuclei"  
Seminar, S.U.N.Y. at Stony Brook, Stony Brook, N.Y., U.S.A. (October, 1974)
- 002 "Dipole Excitations in light Nuclei"  
Seminar, Argonne National Lab, Argonne, Illinois, U.S.A. (October, 1974)
- 003 "Dipole Excitations in light Nuclei"  
Seminar, KVI, Groningen, The Netherlands (February 18, 1975)
- 004 "Giant quadrupole (isoscalar) excitations observed by inelastic alpha scattering from  $^{16}\text{O}$ "  
*Invited Talk* at the International Winter Meeting on Nuclear Physics  
Bormio, Italy (January, 1976)
- 005 "Excitation of negative parity states in  $^{16}\text{O}$  by inelastic alpha scattering"  
Seminar, KVI, Groningen, The Netherlands (April 20, 1976)
- 006 "Giant resonances in  $^{16}\text{O}$ "  
Seminar, MPI, Heidelberg, W. Germany (June 17, 1976)
- 007 "Experimental survey of giant resonances"  
*Invited Talk* at the Miniconference on Giant Resonances  
KVI, Groningen, The Netherlands (December 16, 1977)
- 008 "Isoscalar dipole excitations in inelastic proton scattering"  
Seminar, NBI, Copenhagen, Denmark (1978)
- 009 "Recent experimental results on giant resonance decay in sd-shell nuclei"  
Seminar, Pittsburgh University, Pittsburgh, Pennsylvania, U.S.A. (October 29, 1979)
- 010 "Some aspects of giant resonance decay"  
Seminar, Indiana University, Bloomington, Indiana, U.S.A. (November 6, 1979)
- 011 "The spectrograph focal plane detection system at the KVI: present and future"  
Seminar, Kernforschungszentrum, Karlsruhe, W. Germany (January 16, 1980)
- 012 "Angular Correlations"  
Seminar, KVI, Groningen, The Netherlands (February 5, 1980)
- 013 "Fission decay of the isoscalar giant resonances in the actinide region"  
*Invited Talk* at the RCNP International Symposium on Highly Excited States in Nuclear Reactions  
Osaka, Japan (May 12 - 16, 1980)
- 014 "Recent experimental results on decay of the giant resonances in the actinide region"  
Seminar, Kyushu University, Fukuoka, Japan (May 19, 1980)

## SEMINARS AND INVITED TALKS

M.N. Harakeh

- 015 "Recent experimental results on decay of the giant resonances in the actinide region"  
Seminar, Institute of Nuclear Studies, Tokyo, Japan (May 30, 1980)
- 016 "Recent experimental results on decay of the giant resonances in the actinide region"  
Seminar, Tohoku University, Sendai, Japan (June 3, 1980)
- 017 "Recent experimental results on decay of the giant resonances in the sd-shell region"  
Seminar, Osaka University, Osaka, Japan (May 23, 1980)
- 018 "Recent experimental results on decay of the giant resonances in the sd-shell region"  
Seminar, University of Tokyo, Hongo Campus, Japan (May 26, 1980)
- 019 "Recent experimental results on decay of the giant resonances in the sd-shell region"  
Seminar, Institute of Physical and Chemical Research, Saitama, Japan (May 27, 1980)
- 020 "Recent experimental results on decay of the giant resonances in the sd-shell region"  
Seminar, University of Tokyo, College of General Education, Tokyo, Japan (May 28, 1980)
- 021 "Recent experimental results on decay of the giant resonances in the sd-shell region"  
Seminar, Tokyo Institute of Technology, Tokyo, Japan (May 29, 1980)
- 022 "Recent experimental results on decay of the giant resonances in the sd-shell region"  
Seminar, Cyclotron Lab., Tohoku University, Sendai, Japan (June 4, 1980)
- 023 "Fission decay of the isoscalar giant resonances in the actinide region"  
Seminar, NBI, Copenhagen, Denmark (November 3, 1980)
- 024 "Fission decay of the isoscalar giant resonances in the actinide region"  
Seminar, Istituto de Scienze Fisiche, Milan, Italy (December 5, 1980)
- 025 "Giant resonance decay studies at the KVI"  
Seminar, NIKHEF-K, Amsterdam, The Netherlands (January 29, 1981)
- 026 "Fission induced by  $\alpha$ - and proton scattering: barrier and GR region"  
Seminar, KVI, Groningen, The Netherlands (April 7, 1981)
- 027 "Fission decay of giant resonances in the actinide region"  
Seminar, University of Ghent, Ghent, Belgium (April 13, 1981)
- 028 "Giant resonances decay studies at the KVI"  
Seminar, University of Bonn, Bonn, W. Germany (June 4, 1981)
- 029 "Giant resonances decay studies at the KVI"  
Seminar, Kernforschungsanlage, Jülich, W. Germany (June 5, 1981)
- 030 "Fission decay as a measure of statistical equilibration of coherent collective modes"  
***Invited Talk*** at the International Symposium on Nuclear Fission and Related Collective

## SEMINARS AND INVITED TALKS

M.N. Harakeh

Phenomena and Properties of Heavy Nuclei  
Bad Honnef, W. Germany (October 26 - 29, 1981)

- 031 "Fission decay as a measure of statistical equilibration of coherent collective modes"  
General Colloquium, LAN, Groningen, The Netherlands (January 14, 1982)
- 032 "Fission decay as a measure of statistical equilibration of coherent collective modes"  
Seminar, R.J. van de Graaff Laboratorium, University of Utrecht, Utrecht, The Netherlands  
(February 5, 1982)
- 033 "Excitation and decay of isospin and spin-isospin giant resonances in light nuclei"  
Seminar, Oxford University, Oxford, Great Britain (May 11, 1982)
- 034 "Excitation and decay of isospin and spin-isospin giant resonances in light nuclei"  
Seminar, Birmingham University, Birmingham, Great Britain (May 12, 1982)
- 035 "Excitation and decay of isospin and spin-isospin giant resonances in light nuclei"  
Seminar, Daresbury Lab., Daresbury, Warrington, Great Britain (May 13, 1982)
- 036 "Excitation and decay of isospin and spin-isospin giant resonances in light nuclei"  
Seminar, University of Bari, Bari, Italy (September 24, 1982)
- 037 "Excitation and decay of isospin and spin-isospin giant resonances in light nuclei"  
Seminar, University of Milano, Milano, Italy (October 1, 1982)
- 038 "Fission decay of the isoscalar giant resonances in the actinide region"  
Seminar, NPL, University of Washington, Seattle, Washington, U.S.A. (February 15, 1983)
- 039 "Excitation of low-lying collective bands in inelastic hadron scattering"  
**Invited Talk** at the RCNP International Symposium on Light Ion Reaction Mechanism  
Osaka, Japan (May 16 - 20, 1983)
- 040 "Form factors and coupled channel analysis of inelastic excitations of low-lying collective  
bands in rotational nuclei"  
**Invited Lectures** at the RCNP-Kikuchi Summer School  
Kyoto, Japan (May 23 - 27, 1983)
- 041 "Charge exchange reactions and the excitation of isospin and spin-isospin giant resonance  
modes"  
Seminar, NPL, University of Washington, Seattle, Washington, U.S.A. (July 12, 1983)
- 042 "A review of the fission decay of the giant resonances in the actinide region"  
**Invited Talk** at the International Symposium on Highly Excited States and Nuclear Structure  
Orsay, France, (September 5 - 8, 1983)
- 043 "Excitation and decay of isospin and spin-isospin giant resonance modes in light nuclei"

## SEMINARS AND INVITED TALKS

M.N. Harakeh

Seminar, University of Michigan, Ann Arbor, Michigan, U.S.A. (October 4, 1983)

044 "Excitation and decay of isospin and spin-isospin giant resonance modes in light nuclei"  
Seminar, Michigan State University, East Lansing, Michigan, U.S.A. (October 5, 1983)

045 "Excitation and decay of isospin and spin-isospin giant resonance modes in light nuclei"  
Seminar, IUCF, Bloomington, Indiana, U.S.A. (October 7, 1983)

046 "Fission decay of the isoscalar giant resonances in the actinide region: an update"  
Seminar, University of Illinois, Urbana, Illinois, U.S.A. (October 10, 1983)

047 "Fission decay of the isoscalar giant resonances in the actinide region: an update"  
Seminar, ANL, Chicago, Illinois, U.S.A. (October 11, 1983)

048 "Angular correlation measurements"  
Seminar, NPL, University of Washington, Seattle, Washington, U.S.A. (November 17, 1983)

049 "Role of isospin in the  $\gamma$ -decay of GDR built on excited states"  
Seminar, KVI, Groningen, The Netherlands, (March 13, 1984)

050 "Studies of giant resonances: Present and future prospects"  
Seminar, Vrije Universiteit, Amsterdam, The Netherlands (May 14, 1984)

051 "Excitation and decay of giant resonances"  
Seminar, Vrije Universiteit, Amsterdam, The Netherlands (February 11, 1985)

052 "Studies of giant resonances: recent developments"  
Seminar, NIKHEF-K, Amsterdam, The Netherlands (April 11, 1985)

053 "Spreading width of IAS in heavy nuclei: experimental determination and mechanism"  
***Invited Talk*** at the 4<sup>th</sup> International Conference on Nuclear Reaction Mechanisms  
Varenna, Italy (June 10 - 15, 1985)

054 "Excitation and decay of isoscalar and isovector (charge-exchange) giant resonances"  
***Invited Series of Three Lectures*** at the XVII Masurian International Summer School on  
Nuclear Physics  
Mikołajki, Poland (September 2 - 14, 1985)

055 "Decay of the giant monopole resonance in heavy nuclei: statistical versus semi-direct decay"  
Seminar, Jagiellonian University, Cracow, Poland (September 18, 1985)

056 ***Organizer of Workshop*** on Nuclear Structure and Future Research Prospects  
BEEKBERGEN, The Netherlands (February 12 - 14, 1987)

057 "Decay properties and systematics of the isoscalar giant monopole resonance from inelastic

## SEMINARS AND INVITED TALKS

M.N. Harakeh

$\alpha$ -scattering measurements at  $0^\circ$ "

**Invited Contribution** for plenary session presentation at the DPG-NNV Spring Meeting Groningen, The Netherlands (March 23 - 27, 1987)

- 058 "Decay properties and systematics of the isoscalar giant monopole resonance from inelastic  $\alpha$ -scattering measurements at  $0^\circ$ "  
Seminar, Laboratory of Nuclear Reactions, Joint Institute of Nuclear Research, Dubna, U.S.S.R. (April 13, 1987)
- 059 "Giant resonances built on excited states: a means to probe an excited nucleus"  
Seminar, R.J. van de Graaff Laboratorium, University of Utrecht, Utrecht, The Netherlands (June 5, 1987)
- 060 "Nature of the neutron decay of the giant monopole resonance in medium to heavy nuclei"  
Seminar, Physics Department, University of Notre Dame, Notre Dame, Indiana, U.S.A. (January 12, 1988)
- 061 "Latest results on the decay of the giant monopole resonance"  
**Invited Talk** at the 5<sup>th</sup> International Conference on Nuclear Reaction Mechanisms Varenna, Italy (June 13 - 18, 1988)
- 062 "Study of giant resonance de-excitation by  $(\alpha, \alpha'\gamma)$  and  $(\alpha, \alpha'n)$  reactions" and  
**Invited Talk** at the Fifth International Symposium on Nucleon Induced Reactions Smolenice Castle, Czechoslovakia (June 20 - 25, 1988)
- 063 "Experimental summary talk"  
**Invited Talk** at the Fifth International Symposium on Nucleon Induced Reactions Smolenice Castle, Czechoslovakia (June 20 - 25, 1988)
- 064 "Neutron and gamma decay of giant resonances excited by inelastic  $\alpha$ -scattering at  $0^\circ$ "  
**Invited Talk** at the 2ème Foire aux Decroissances IPN Orsay, France (July 4 - 5, 1988)
- 065 "Gamma and neutron decay of giant resonances induced by inelastic  $\alpha$ -scattering at  $0^\circ$ "  
Seminar, Beschleunigerlaboratorium, Ludwig-Maximilians-Universität München, Garching, W. Germany (October 12, 1988)
- 066 "Excitation of electric dipole strength in inelastic  $\alpha$ -scattering at (and near to)  $0^\circ$ "  
Seminar, IUCF, Bloomington, Indiana, U.S.A. (February 27, 1989)
- 067 "Neutron decay of the isoscalar giant monopole resonance excited via  $0^\circ$  inelastic  $\alpha$ -scattering"  
Seminar, Graduate student seminar, IUCF, Bloomington, Indiana, U.S.A. (March 1, 1989)
- 068 "Concluding remarks"  
**Concluding Talk** at the International Conference on Selected Topics in Nuclear Structure

## SEMINARS AND INVITED TALKS

M.N. Harakeh

Dubna, U.S.S.R. (June 20 - 24, 1989)

- 069 “Excitation of electric dipole strength at (and around)  $0^\circ$  in inelastic  $\alpha$ -scattering at  $E_\alpha=120$  MeV”

Seminar, Physics department, University of Notre Dame, Notre Dame, Indiana, U.S.A. (July 3, 1990)

- 070 “Shape transition in the Nd-isotopes investigated via electron scattering”

**Invited Talk** at the Sixth International Conference on Nuclear Reaction Mechanisms Varenna, Italy (June 10 - 15, 1991)

- 071 “Excitation and decay of collective modes in charge-exchange reactions”

**Invited Lectures** at the XXII Mazurian Lake Summer School on Nuclear Physics Piaski, Poland (August 26 - September 5, 1991)

- 072 “Mechanisms of high-energy  $\gamma$ -ray production in heavy-ion collisions”

Seminar, Nuclear Physics Institute, Rez (near Prague), Czechoslovakia (September 9, 1991)

- 073 “Isoscalar giant resonances: prospects for future research”

**Invited Talk** at the Notre Dame Workshop on Giant Resonances and Related Phenomena Notre Dame, Indiana, U.S.A. (October 21 - 23, 1991)

- 074 “Excitation of dipole (E1,M1) and mixed-symmetry states with hadronic probes: mechanism and structure”

**Invited Talk** at the Workshop on Dipole Excitations in Nuclei Gent, Belgium (November 11 - 12, 1991)

- 075 “Collective motion in nuclei”

Lectures at the aio/oio Study Week in Zeist, The Netherlands (December 16 - 19, 1991)

- 076 “Dipole excitations in inelastic  $\alpha$ -scattering”

Seminar, RIKEN, Tokyo, Japan (November 6, 1992)

- 077 “Fermi and Gamow-Teller excitations; collectivity and microscopic structure”

**Invited Lectures** at the RCNP-Kikuchi School on Spin Physics at Intermediate energies Osaka, Japan (November 16 - 19, 1992)

- 078 “GDR Excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”

**Invited Talk** at Peter Paul’s Symposium

Stony Brook, New York, U.S.A. (March 6, 1993)

- 079 “Giant resonances: a means to probe nuclei and nuclear matter”

**Invited Talk** at the NNV Spring Meeting

Utrecht, The Netherlands (April 6, 1993)

- 080 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”

## SEMINARS AND INVITED TALKS

M.N. Harakeh

Seminar, The Svedberg Laboratory, Uppsala, Sweden (May 7, 1993)

- 081 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”  
Seminar, RCNP, Osaka, Japan (June 10, 1993)
- 082 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”  
Seminar, Physics Department, University of Tokyo, Tokyo, Japan (June 21, 1993)
- 083 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”  
Seminar, Physics Department, Kyushu University, Fukuoka, Japan (July 2, 1993)
- 084 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”  
Seminar, RIKEN, Tokyo, Japan (July 12, 1993)
- 085 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”  
Seminar, INS, Tokyo, Japan (July 16, 1993)
- 086 “Giant resonances: Fundamental modes of excitation of the nucleus”  
Seminar, Division of Natural science, International Christian University, Tokyo, Japan  
(June 14, 1993)
- 087 “Giant resonances: Fundamental modes of excitation of the nucleus”  
Seminar, Physics Department, University of Tokyo, Tokyo, Japan (July 9, 1993)
- 088 **Director of NATO Advanced Study Institute/Chairman of Organizing Committee** of the  
International Summer School on “Perspectives in the Structure of Hadronic Systems”  
Dronen, The Netherlands (August 1 - 14, 1993)
- 089 “Charge-exchange modes: collectivity and microscopic structure”  
Seminar, Institute of Nuclear Research, Hungarian Academy of Sciences, Debrecen, Hungary  
(September 30, 1993)
- 090 “The ( ${}^3\text{He},tp$ ) reaction: a means to study the microscopic structure of spin-isospin modes”  
**Invited Talk** at the International Symposium on Spin-Isospin responses and Weak Processes  
in Hadrons and Nuclei  
Osaka, Japan (March 8 - 10, 1994)
- 091 “Giant resonances: Fundamental modes of excitation of the nucleus”  
Seminar, INFN, Laboratori Nazionale del Sud, Catania, Italy (June 22, 1994)
- 092 “GDR built on highly excited states”  
Seminar, INFN, Laboratori Nazionale del Sud, Catania, Italy (June 23, 1994)
- 093 “Neutron decay of GMR excited via  $0^\circ$  inelastic  $\alpha$ -scattering”  
Seminar, INFN, Laboratori Nazionale del Sud, Catania, Italy (June 24, 1994)

## SEMINARS AND INVITED TALKS

M.N. Harakeh

- 094 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”  
Seminar, INFN, Laboratori Nazionale del Sud, Catania, Italy (June 24, 1994)
- 095 “Microscopic structure of the Gamow-Teller resonance in  $^{208}\text{Bi}$ ”  
***Invited Talk*** at the International Conference on Selected Topics in Nuclear Structure  
Dubna, Russia (July 5 - 9, 1994)
- 096 “Experimental study of the microscopic structure of spin-isospin resonances from proton-decay measurements”  
***Invited Talk*** at the Tours Symposium on Nuclear Physics II  
Tours, France (August 31 -September 2, 1994)
- 097 “Experimental study of the microscopic structure of spin-isospin modes”  
***Invited Talk*** at the International Workshop on Physics with Recoil Separators & Detector Arrays  
New Delhi, India (January 30 - February 2, 1995)
- 098 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”  
Seminar, Department of physics, Punjab University, Chandigarh, India (February 6, 1995)
- 099 “GDR excitation in  $\alpha$ -scattering as a means to probe neutron-skin thickness in nuclei”  
Seminar, GANIL, Caen, France (March 6, 1995)
- 100 “AGOR facility: a versatile tool for studies with light and heavy ions in the low and intermediate energy regimes”  
***Invited Talk*** at the DPG/NNV Meeting  
Köln, Germany (March 13-17, 1995)
- 101 ***Chairman of Organizing Committee*** of the Groningen Conference on Giant Resonances  
Groningen, The Netherlands (June 28 - July 1, 1995)
- 102 “Excitation and decay of giant resonances”  
Seminar, Department of Physics, Osaka University (Toyonaka), Osaka, Japan  
(October 9, 1995)
- 103 “Particle and  $\gamma$ -decay of charge-exchange giant resonances: probing the spin-isospin microscopic structure”  
***Invited talk*** at the XIV RCNP International Symposium on Nuclear Reaction Dynamics of Nucleon-Hadron Many-body System  
RCNP, Osaka, Japan (December 6-9, 1995)
- 104 ***Director of NATO Advanced Study Institute/Chairman of Organizing Committee*** of International Summer School on Correlations and Clustering Phenomena in Subatomic

## SEMINARS AND INVITED TALKS

M.N. Harakeh

Physics

Dronten, The Netherlands (August 5-16, 1996)

- 105 "Particle and  $\gamma$ -decay of spin-isospin modes"  
*Invited talk* at the Workshop on Giant Resonances  
ECT\*, Trento, Italy (December 9-20, 1996)
- 106 "The AGOR facility: A versatile tool for Nuclear Physics research in the low and intermediate energy regions"  
*Invited presentation* at the International Collaboration Network Meeting  
RCNP, Osaka, Japan (March 14, 1997)
- 107 "GDR excitation by isoscalar probes: a means to determine neutron-skin thickness"  
*Invited talk* at the International Symposium on Exotic Nuclear Shapes  
Debrecen, Hungary (May 12-17, 1997)
- 108 Member of the Organizing Committee of the KVI International Conference on Few Body Problems in Physics (FBIV)  
Groningen, The Netherlands (July 22-26, 1997)
- 109 "Excitation and microscopic structure of spin-isospin modes in nuclei"  
Seminar, Cyclotron Institute, Texas A&M, College Station, Texas, U.S.A. (August 15, 1997)
- 110 "What can we learn from particle- and gamma-decay of charge-exchange giant resonances?"  
*Invited talk* at the International Symposium on New Facets of Spin Giant Resonances in Nuclei  
Tokyo, Japan (November 17-20, 1997)
- 111 Member of the Organizing Committee of the DPG/NNV/BNV/SBP Nuclear Physics Spring Meeting  
Seminar, Bochum, Germany (March 16-20, 1998)
- 112 "AGOR: A versatile facility for Nuclear Physics research at low and intermediate energies"  
Seminar, Institut de Physique Nucléaire, Louvain-la-Neuve, Belgium (May 14, 1998)
- 113 "Microscopic structure of charge-exchange spin-isospin modes through decay measurements"  
*Invited talk* at the NATO Advanced Research Workshop on The Structure of Mesons, Baryons and Nuclei  
Seminar, Cracow, Poland (May 26-30, 1998)
- 114 "AGOR: A versatile facility for Nuclear Physics research at low and intermediate energies"  
Seminar, NIKHEF, Amsterdam, The Netherlands (June 19, 1998)
- 115 "The AGOR facility: equipment and program"

## SEMINARS AND INVITED TALKS

M.N. Harakeh

Seminar, Russian Federal Nuclear Center - All-Russia Scientific Research Institute of Experimental Physics (RFNC-VNIIEF), Sarov, Russia (September 17, 1998)

- 116 “Recent results from AGOR”  
Seminar, FZ, COSY, Jülich, Germany (September 28, 1998)
- 117 “Recent results from AGOR”  
Seminar, RIKEN, Tokyo, Japan (November 24, 1998)
- 118 “Search for the isovector monopole resonance in the ( ${}^3\text{He},t$ ) reaction”  
*Invited talk* at the RCNP International Mini Symposium on Nuclear Response and Medium Effects (MEDIUM '98)  
Osaka, Japan (November 26-28, 1998)
- 119 “AGOR: facility and first results”  
Seminar, NSCL, MSU, East Lansing, Michigan, U.S.A. (January 28, 1999)
- 120 “Isospin and spin-isospin mode in nuclei”  
*Invited talk* at the International Symposium on Nuclear Electro-Weak Spectroscopy (NEWS99) for Symmetries and Electro-Weak Nuclear Processes  
Osaka, Japan (March 9-12, 1999)
- 121 “Saturation of the width of GDR at high temperature”  
*Invited talk* at the RIKEN Symposium and Workshop on Selected Topics in Nuclear Collective Excitations  
Saitama, Tokyo, Japan (March 20-24, 1999)
- 122 “Summary of the symposium”  
*Invited summary talk* at the RIKEN Symposium and Workshop on Selected Topics in Nuclear Collective Excitations  
Saitama, Tokyo, Japan (March 20-24, 1999)
- 123 “Microscopic structure of isospin and spin-isospin modes in charge-exchange reactions”  
*Invited talk* at the International Conference on Experimental Nuclear Physics in Europe: Facing the Next Millennium  
Sevilla, Spain (June 21-26, 1999)
- 124 “Summary of the symposium”  
*Invited summary talk* at the International Symposium on Exotic Nuclear Structures (ENS2000)  
Debrecen, Hungary (May 15-20, 2000)
- 125 “Isospin and spin-isospin modes in charge-exchange reactions: excitation and decay”  
Seminar, Department of Physics and Astronomy, Basel, Switzerland (May 25, 2000)
- 126 “Excitation and decay of giant resonances – Achievements and perspectives”

## SEMINARS AND INVITED TALKS

M.N. Harakeh

***Invited talk*** at the International Conference on Giant Resonances (GR2000)  
Osaka, Japan (June 12-15, 2000)

- 127 ***Co-chairperson (with H. Sakai) of Organizing Committee*** of the International Symposium  
on Strong Correlations in Many-Body Systems  
Tokyo/Mount Nikko, Japan (June 26-30, 2000)
- 128 “Isospin and spin-isospin modes in charge-exchange reactions”  
Seminar, NSCL, MSU, East Lansing, Michigan, U.S.A. (October 19, 2000)
- 129 “Giant-resonance studies with radioactive beams: Perspectives”  
***Invited talk*** at the International Symposium on Perspectives in Physics with Radioactive  
Isotope Beams 2000 (RIB00)  
Hayama, Japan (November 13-16, 2000)
- 130 “Excitation of GT Strength in  $(p,n)$  -like reactions”  
Seminar, Department of Physics, University of Tokyo, Tokyo, Japan (November 5, 2002)
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- 131 “Excitation of isospin and spin-isospin modes in the  $\beta^+$ -direction”  
***Invited talk*** at the International Symposium on “Frontiers of Collective Motions (CM2002)”  
Aizu-Wakamatsu, Fukushima, Japan (November 6-9, 2002)
- 132 “Giant-resonance studies at KVI: Recent results”  
Seminar, RCNP, Osaka, Japan (November 12, 2002)
- 133 “Nuclear structure studies at KVI: present status and future perspectives”  
***Invited talk*** at the Seminar on “Symmetries in Nuclear Structure”  
Erice - Sicily, Italy (March 23-30, 2003)
- 134 “Giant resonance research: present interest and future perspectives”  
***Invited talk*** (concluding remarks) at the International Conference on “Collective Motion in  
Nuclei under Extreme Conditions (COMEX1)”  
Paris, France (June 10-13, 2003)
- 135 “NuPECC Long-range plan”  
***Invited talk*** at the VIII International Conference on “Nucleus-nucleus collisions”  
Moscow, Russia (June 17-21, 2003)
- 136 “Microscopic and macroscopic properties of the ISGDR from particle decay studies”  
***Invited talk*** at the ECT\* International Workshop on “Nuclear Response under Extreme  
Conditions”  
Trento, Italy (October 20-24, 2003)
- 137 “Physics with a multi-MW proton source: Nuclear physics aspects”

## SEMINARS AND INVITED TALKS

M.N. Harakeh

***Invited talk*** at the Workshop on “Physics with a Multi-MW Proton Source”  
CERN, Geneva, Switzerland (May 25-27, 2004)

- 138 “Research at AGOR: 1996 - 2004”  
Seminar, IPN, Orsay, France (May 28, 2004)
- 139 “Nuclear physics in the coming decade: A European perspective”  
***Invited talk*** at the “10\*30 Anniversary Symposium on Cyclotron Research at JYFL”  
Jyväskylä, Finland (June 18, 2004)
- 140 “Planned and under construction international facilities in Europe”  
***Invited talk*** at “The First Meeting of the C12 International Committee on Cooperation in Nuclear Physics”  
Göteborg, Sweden (June 27, 2004)
- 141 “Table ronde: Contexte et perspectives en Europe”  
***Invited talk*** at “Journées de Prospectives DSM/DAPHNIA-IN2P3”  
Le Colle sur Loup (Nice), France (October 13, 2004)
- 142 “NuPECC: Mission, Structure and Forward Look”  
***Invited talk*** at the PESC/ESF Standing Committee Meeting  
Limassol, Cyprus (October 21-22, 2004)
- 143 “Determination of GT<sup>+</sup> strength and its astrophysical implications”  
***Invited talk*** at the International Symposium on “Correlation Dynamics in Nuclei”  
Tokyo, Japan (January 31 - February 4, 2005)
- 144 “NuPECC Long Range Plan and preparations for EU-FP7”  
***Invited talk*** at EURONS General Assembly Meeting  
Madeira, Portugal (February 7-8, 2005)
- 145 “Future of Nuclear Physics in Europe”  
Seminar, NIPNE, Bucharest, Romania (May 13, 2005)
- 146 “Strategic plan for nuclear physics research in Europe”  
***Invited talk*** at the International Symposium on Exotic Nuclear Systems (ENS'05)  
Debrecen, Hungary (June 20-25, 2005)
- 147 “Collective modes investigated by inelastic scattering and charge-exchange reactions with magnetic spectrometers”  
***Invited lectures*** (3 lectures) at the 4<sup>th</sup> CNS International Summer School (CISS05)  
Wakoshi, Tokyo, Japan (August 18-23, 2005)
- 148 “Experimental studies of neutrino nuclear responses: Nuclear probes”  
***Invited talk*** at NNR05 Workshop on “Neutrino Nuclear Responses in Double Beta Decays and Low-energy Astro-neutrinos”  
SPring-8, Hyogo, Japan (December 2-4, 2005)

## SEMINARS AND INVITED TALKS

M.N. Harakeh

- 149 "Microscopic structure of the dipole compression mode in heavy nuclei"  
*Invited talk* at the International Conference on Nuclear structure Physics (NSP06)  
Shanghai, P.R. of China (June 12-17, 2006)
- 150 "Charge-exchange Reactions: Probing Modes of Astrophysical Interest"  
Seminar, Department of Physics, Shanghai Jiao Tong University, Shanghai, P.R. of China  
(June 20, 2006)
- 151 "Compression modes in (medium-) heavy nuclei: excitation and microscopic structure"  
Seminar, RCNP, Osaka, Japan (July 4, 2006)
- 152 "Compression modes in (medium-) heavy nuclei: excitation and microscopic structure"  
Seminar, CNS-RIKEN, Wakoshi, Tokyo, Japan (July 20, 2006)
- 153 "High-resolution measurements of charge-exchange reactions: spectroscopic tools for spin-isospin modes"  
*Invited talk* at the RCNP Mini-workshop on Physics with Light-Ion Induced High-Resolution Experiments  
RCNP, Osaka, Japan (July 27, 2006)
- 154 "NuPECC: The founding fathers and their legacy"  
*Invited talk* at the Symposium on Subatomic Physics - Highlights and Perspectives, in Honour of Paul Kienle "Wie kommt man auf einfaches Neues?"  
Vienna, Austria (September 1, 2006)
- 155 "Investigation of isoscalar and isovector collective modes of astrophysical interest"  
*Invited (three) lectures* at the 5<sup>th</sup> International Balkan School on Nuclear Physics with Radioactive Beams  
Brasov, Romania (September 7-14, 2006)
- 156 "NuPECC's strategic position regarding nuclear physics research in Europe"  
*Invited talk* at the ESF General Assembly Meeting  
Strasbourg, France (November 30 - December 1, 2006)
- 157 "SPIRAL2: A broad scientific programme with an evolving roadmap"  
*Invited talk* at the NuSTAR Annual Meeting  
GSI, Darmstadt, Germany (March 21-23, 2007)
- 158 **Co-organizer (with P. Van Isacker)** of the ECT\* Doctoral Training Programme on Nuclear Structure and Reactions  
Trento, Italy (March 8 – June 1, 2007)
- 159 "Study of spin-isospin modes and their influence on astrophysical processes"  
*Invited talk* at the 22<sup>nd</sup> Carpathian Summer School of Physics 2007 (CSSP07) on Exotic Nuclei and Nuclear Particle Astrophysics (II)  
Sinaia, Romania (August 20-31, 2007)

## SEMINARS AND INVITED TALKS

M.N. Harakeh

- 160 “Nuclear Physics at KVI: achievements and perspectives”  
*Invited talk* at the Symposium on “Trends in heavy ion physics research”  
Dubna, Russian Federation (May 21-25, 2008)
- 161 “NuPECC evolving roadmap for RIB large scale facilities”  
*Invited talk* at EURORIB’08, Giens, France (June 9-13, 2008)
- 162 “Study of spin-isospin modes and their influence on astrophysical processes”  
Seminar, Institute of Nuclear Physics, Polish Academy of Sciences (IFJ PAN), Krakow,  
Poland (October 20, 2008)
- 163 “Nuclear physics programs at KVI: achievements and perspectives”  
Seminar, Hadron Physics Research Center, Krakow, Poland (October 21, 2008)
- 164 “Nuclear energy: Transition and sustainability”  
*Invited talk* at the Workshop Japan-Netherlands on Energy Transition  
Groningen, The Netherlands (November 17-19, 2008)
- 165 “Nuclear energy: Transition and sustainability”  
*Invited lecture* at the Course “Social Systems Analysis of Technological Innovation” at  
Faculty of Economics and Business  
Groningen, The Netherlands (December 5, 2008)
- 166 “Collective nuclear excitations: low and high, cold and hot”  
*Invited talk* at the Symposium in honour of Marcello Pignanelli “Marcello and half century  
of Research in Nuclear Physics”  
Milano, Italy (May 11, 2009)
- 167 “Gamow-Teller transitions: Implications for supernova scenarios and double- $\beta$  decay”  
*Invited talk* at the International conference on Nuclear Structure and Related Topics  
(NSRT2009)  
Dubna, Russia (June 30 – July 4, 2009)
- 168 Member of the Organizing Committee of the XVIth Colloque GANIL  
Giens, France (September 6-11, 2009)
- 169 “Gamow-Teller transitions: Implications for supernova scenarios and double- $\beta$  decay”  
Seminar, Nuclear Physics division SPhN, IRFU, CEA, Saclay, France (September 18, 2009)
- 170 “Gamow-Teller transitions: Implications for supernova scenarios and double- $\beta$  decay”  
Seminar, GANIL, Caen, France (September 23, 2009)
- 171 “Compression modes: Nuclear compressibility and microscopic structure”  
*Invited talk* at the International Symposium on Exotic Nuclei (EXON-2009)  
Sochi, Russia (September 28 – October 2, 2009)

## SEMINARS AND INVITED TALKS

M.N. Harakeh

- 172 “European Nuclear Science and Applications Research (ENSAR)”  
*Invited talk* at the Scoping Workshop of the NuPECC Long Range Plan 2010  
FIAS, Frankfurt, Germany (October 12-13, 2009)
- 173 “Concluding remarks”  
*Invited talk* at the UK-French Collaboration Meeting  
Liverpool, United Kingdom (October 26-27, 2009)
- 174 “SPIRAL2: The mid-term and long-range plans”  
*Invited talk* at the JS70 Symposium in honour of the 70th anniversary of Prof. J. Styczen  
Krakow, Poland (November 6, 2009)
- 175 “Compression modes: Nuclear compressibility and microscopic structure”  
Seminar, GANIL, Caen, France (November 20, 2009)
- 176 Member of the Organizing Committee of the SPIRAL2 Week  
Caen, France (January 25-28, 2010)
- 177 “The elusive and not so elusive giant resonances: Dreams and reality”  
*Invited talk* at the Cracow Symposium  
Krakow, Poland (February 12, 2010)
- 178 “Gamow-Teller transitions: Implications for supernova scenarios and double- $\beta$  decay”  
Seminar, IPNO, Orsay, France (February 15, 2010)
- 179 “Gamow-Teller transitions: Implications for supernova scenarios and double- $\beta$  decay”  
*Invited talk* at the ICHOR-EFES International Symposium on New Facet of Spin-Isospin  
Responses (SIR2010)  
Tokyo, Japan (February 18-21, 2010)

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## PROMOTIONS

M.N. Harakeh

- 001 F. Zwarts  
“Decay of isoscalar giant resonances in  $^{24}\text{Mg}$  and  $^{40}\text{Ca}$ ”  
Rijksuniversiteit Groningen, Groningen, March 1983  
Promotor: A. van der Woude; referents: R.H. Siemssen and M.N. Harakeh
- 002 S. Brandenburg  
“Decay of the giant monopole resonance in heavy nuclei”  
Rijksuniversiteit Groningen, Groningen, August 1985  
Promotor: A. van der Woude; referent: M.N. Harakeh
- 003 R. Kouw  
“Microscopic description of inelastic proton scattering from  $^{88}\text{Sr}$ ”  
Vrije Universiteit, Amsterdam, February 1987  
Promotor: J. Blok; co-promotor: H.P. Blok; referent: M.N. Harakeh
- 004 P. Grasdijk  
“The reaction mechanism of the ( $^3\text{He},t$ ) reaction and applications to nuclear structure”  
Rijksuniversiteit Groningen, Groningen, September 1986  
Promotors: A. van der Woude and M.N. Harakeh; referent: S.Y. van der Werf
- 005 A. Stolk  
“Study of the giant dipole resonance built on highly excited states in Sn and Dy nuclei”  
Vrije Universiteit, Amsterdam, May 1988  
Promotors: H. Verheul and M.N. Harakeh; co-promotor: W.H.A. Hesselink
- 006 W.T.A. Borghols  
“Damping of the giant monopole resonance in  $^{90}\text{Zr}$  and  $^{124}\text{Sn}$ ”  
Rijksuniversiteit Groningen, Groningen, July 1988  
Promotors: A. van der Woude and M.N. Harakeh
- 007 R. Ent  
“Investigation of correlations in nuclei with the ( $e,e'X$ ) reaction”  
Vrije Universiteit, Amsterdam, November 1989  
Promotor: M.N. Harakeh; co-promotor: H.P. Blok
- 008 T.D. Poelhekken  
“Isoscalar and isovector collective dipole states: An experimental study of the  $1\hbar\omega$  dipole strength using the ( $\alpha,\alpha'\gamma$ ) reaction at  $0^\circ$ ”  
Rijksuniversiteit Groningen, Groningen, November 1989  
Promotors: M.N. Harakeh and A. van der Woude
- 009 A. Hogenbirk  
“The structure of  $^{36}\text{S}$  and  $^{196,200,202,204}\text{Hg}$  studied by means of the ( $p,p'$ ) reaction”

## PROMOTIONS

M.N. Harakeh

Vrije Universiteit, Amsterdam, November 1989  
Promotor: M.N. Harakeh; co-promotor: H.P. Blok

- 010 J.J.A. Zalmstra  
“Coupled-channels analysis of inelastic proton scattering off  $^{28}\text{Si}$ ”  
Vrije Universiteit, Amsterdam, January 1990  
Promotor: M.N. Harakeh; co-promotor: J.F.A. van Hienen
- 011 J. Makjanić  
“Carbon in chondrites: Distribution and structure”  
Vrije Universiteit, Amsterdam, September 1990  
Promotors: M.N. Harakeh and J.L.R. Touret; co-promotors: J.W. Hovenier and R.D. Vis
- 012 R.K.J. Sandor  
“Shape transition in the Nd-isotopes: An electron scattering study”  
Vrije Universiteit, Amsterdam, February 1991  
Promotor: M.N. Harakeh; co-promotor: C.W. de Jager
- 013 H.J. Hofmann  
“Mechanisms of high energy gamma-ray production in nuclear collisions”  
Rijksuniversiteit Groningen, Groningen, April 1991  
Promotors: A. van der Woude and M.N. Harakeh
- 014 D.E.J. Riedeman  
“Quasi-particle excitations in the  $fp$  shell nuclei  $^{65}\text{Cu}$  and  $^{71}\text{Ga}$ : An electron-scattering study”  
Vrije Universiteit, Amsterdam, June 1991  
Promotor: M.N. Harakeh; co-promotors: H. de Vries and C.W. de Jager
- 015 J. Wesseling  
“Electron scattering studies of nuclear structure in light and medium-heavy nuclei”  
Vrije Universiteit, Amsterdam, May 1992  
Promotor: M.N. Harakeh; co-promotors: C.W. de Jager and H. de Vries
- 016 J.P.S. van Schagen  
“The angular momentum and temperature dependence of the GDR in Dy nuclei”  
Vrije Universiteit, Amsterdam, May 1992  
Promotor: M.N. Harakeh; co-promotor: W.H.A. Hesselink
- 017 G. Tros  
“Quantitative microanalysis by means of a proton microbeam: The effect of fluoride on mineralisation in neonatal hamster tooth germs”  
Vrije Universiteit, Amsterdam, September 1992  
Promotor: M.N. Harakeh; co-promotor: R.D. Vis

## PROMOTIONS

M.N. Harakeh

- 018 A.J.M. Plomp  
“Collective and quasiparticle excitations in light Pb isotopes”  
Vrije Universiteit, Amsterdam, May 1993  
Promotor: M.N. Harakeh; co-promotor: W.H.A. Hesselink
- 019 J. Lác  
“Electron scattering: study of internal target effects and of the  $^{209}\text{Bi}(e,e'p)$  reaction”  
Vrije Universiteit, Amsterdam, December 1993  
Promotor: M.N. Harakeh; co-promotor: C.W. de Jager
- 020 H.B. van den Brink  
“Pion production on the proton and  $^{13}\text{C}$ ”  
Vrije Universiteit, Amsterdam, February 1995  
Promotor: M.N. Harakeh; co-promotor: H.P. Blok
- 021 G. van 't Hof  
“Experimental studies on shapes and viscosity of the nucleus  $^{156}\text{Dy}$ ”  
Vrije Universiteit, Amsterdam, April 1995  
Promotor: M.N. Harakeh; co-promotor: N. Kalantar-Nayestanaki
- 022 J.L.J.M. Kramer  
“Quantitative microdistributions of volatile trace elements in pristine meteorites”  
Vrije Universiteit, Amsterdam, March 1996  
Promotors: M.N. Harakeh and J.L.R. Touret; co-promotors: J.W. Hovenier and R.D. Vis
- 023 A. Pellegrino  
“Deuteron electrodisintegration in the  $\Delta$ -resonance region”  
Vrije Universiteit, Amsterdam, April 1996  
Promotor: M.N. Harakeh; co-promotor: W.H.A. Hesselink
- 024 J.A. van Kan  
“PIXE and RBS analysis on flat surfaces using glancing incident MeV ions”  
Vrije Universiteit, Amsterdam, October 1996  
Promotor: M.N. Harakeh; co-promotor: R.D. Vis
- 025 A. Bakker  
“MWPCs for SALAD: Design, manufacturing and test of a MWPC with a central hole”  
Two-year Research Training Certificate  
Rijksuniversiteit Groningen, Groningen, April 1997  
Promotor: M.N. Harakeh; co-promotor: N. Kalantar-Nayestanaki
- 026 C.M. Spaltrö  
“Determination of the various structure functions in electron-induced deuteron knockout

## PROMOTIONS

M.N. Harakeh

from  $^3\text{He}$  and  $^4\text{He}$ ”

Vrije Universiteit, Amsterdam, June 1997

Promotor: M.N. Harakeh; co-promotor: H.P. Blok

- 027 K. van der Schaaf  
“The Plastic Ball: a plug-and-play dilepton spectrometer?”  
Two-year Research Training Certificate  
Rijksuniversiteit Groningen, Groningen, February 1999  
Promotor: M.N. Harakeh; co-promotor: J.C.S. Bacelar
- 028 R.G.T. Zegers  
“Search for isovector giant monopole resonances”  
Rijksuniversiteit Groningen, Groningen, November 1999  
Promotor: M.N. Harakeh; referents: S. Brandenburg and A.M. van den Berg
- 029 H.K.T. van der Molen  
“An experimental study of population and damping mechanisms of high-lying proton states”  
Rijksuniversiteit Groningen, Groningen, November 1999  
Promotor: M.N. Harakeh; referent: A.M. van den Berg
- 030 H. Huisman  
“High-precision measurements of proton-proton bremsstrahlung at 190 MeV”  
Rijksuniversiteit Groningen, Groningen, December 1999  
Promotor: M.N. Harakeh; referent: N. Kalantar-Nayestanaki
031. V.M. Hannen  
“A high-precision study of polarized proton scattering to low-lying states in  $^{11}\text{B}$ ”  
Rijksuniversiteit Groningen, Groningen, September 2001  
Promotor: M.N. Harakeh; co-promotor: A.M. van den Berg
- 032 M. Volkerts  
“A comprehensive study of proton-deuteron bremsstrahlung”  
Rijksuniversiteit Groningen, Groningen, November 2001  
Promotor: M.N. Harakeh; co-promotor: N. Kalantar-Nayestanaki
- 033 F. Fleurot  
“ $^{16}\text{O}$  Coulomb dissociation: a means to determine  $^{12}\text{C}+\alpha$  fusion rate in stars”  
Rijksuniversiteit Groningen, Groningen, September 2002  
Promotor: M.N. Harakeh; co-promotor: H.W.E.M. Wilschut; referent: J. Kiener
- 034 K. Ermisch  
“Search for three-nucleon force effects in proton-deuteron elastic scattering”  
Rijksuniversiteit Groningen, Groningen, February 2003  
Promotor: M.N. Harakeh; co-promotor: N. Kalantar-Nayestanaki
- 035 P. van Luijk

## **PROMOTIONS**

M.N. Harakeh

“Dose-volume effects in the rat spiral cord”

Rijksuniversiteit Groningen, Groningen, November 2003

Promotors: M.N. Harakeh, A.W.T. Konings; referent: J.M. Schippers

036 M.A. de Huu

“Experimental determination of the  $J^\pi$  components of the spin-dipole resonance in  $^{12}\text{B}$ ”

Rijksuniversiteit Groningen, Groningen, January 2004

Promotor: M.N. Harakeh; co-promotors: A.M. van den Berg and H.J. Wörtche

037 M. Mahjour-Shafiei

“Study of proton-proton bremsstrahlung towards the elastic limit”

Rijksuniversiteit Groningen, Groningen, June 2004

Promotors: N. Kalantar-Nayestanaki, M.N. Harakeh

038 Andrija Matić

“High precision ( $p,t$ ) reactions to determine reaction rates of explosive stellar processes”

Rijksuniversiteit Groningen, Groningen, June 2007

Promotor: M.N. Harakeh; co-promotor: A.M. van den Berg

039 Hossein Moeini

Promotors: N. Kalantar-Nayestanaki, M.N. Harakeh

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## **ABSTRACTS**

M.N. Harakeh