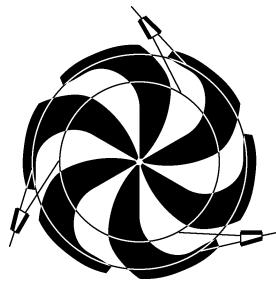


# TRIUMF



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CANADA'S NATIONAL LABORATORY  
FOR PARTICLE AND NUCLEAR PHYSICS

OPERATED AS A JOINT VENTURE

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OCTOBER 2001

*The contributions on individual experiments in this report are outlines intended to demonstrate the extent of scientific activity at TRIUMF during the past year. The outlines are not publications and often contain preliminary results not intended, or not yet ready, for publication. Material from these reports should not be reproduced or quoted without permission from the authors.*

## Appendix D

### EXPERIMENT PROPOSALS

The following lists experiment proposals received up to the end of 2000 (missing numbers cover proposals that have been withdrawn or replaced by later versions, rejected, or combined with another proposal). Experiments 1–699 are omitted from this listing (except for those reporting results in this Annual Report). Please refer to the 1999 Annual Report or see <http://www.triumf.ca/annrep/experiments.html> for a full listing of these earlier experiments. Page numbers are given for those experiments which are included in this Annual Report.

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710. Dynamics of muonium in Ge and GaAs [completed data-taking], R.L. Lichti (*Texas Tech. U.*), S.F.J. Cox (*Rutherford Appleton Lab*), R.F. Kiefl (*UBC*), K.H. Chow (*Lehigh U.*), T.L. Estle (*Rice U.*), B. Hitti (*TRIUMF*), E.A. Davis (*Leicester U.*), C.R. Schwab (*CNRS, Strasbourg*)
712.  $\mu$ SR study of superconducting spin glasses [active], V. McMullen, D.R. Noakes, C.E. Stronach (*Virginia State U.*), E.J. Ansaldi (*U. Saskatchewan*), J.H. Brewer (*UBC*), G. Cao, J.E. Crow (*NHMFL*), S. McCall (*Florida State U.-NHMFL*)
713. Muonium chemistry in supercritical water [active], B. Addison-Jones, J.-C. Brodovitch, K. Ghandi, I. McKenzie, P. Percival (*SFU*), J. Schüth (*U. Bonn*)
714. Atomic PNC in francium: preparations [active], J.A. Behr, L. Buchmann, M. Domsky, P. Jackson, C.D.P. Levy (*TRIUMF*), J.M. D'Auria, P. Dubé, A. Gorelov, D. Melconian, T. Swanson, M. Trinczek (*SFU*), O. Häusser (*SFU-TRIUMF*), U. Giesen (*U. Alberta*), I. Kelson, A.I. Yavin (*Tel Aviv U.*), J. Deutsch (*U. Catholique de Louvain*), J. Dilling (*SFU-Heidelberg*)
715. Weak interaction symmetries in  $\beta^+$  decay of optically trapped  $^{37,38m}\text{K}$  [active], J.M. D'Auria, A. Gorelov, D. Melconian, T. Stocki, M. Trinczek (*SFU*), G. Ball, J.A. Behr, P. Bricault, M. Domsky, K.P. Jackson, B.K. Jennings (*TRIUMF*), U. Giesen (*U. Notre Dame*), W.P. Alford (*U. Western Ontario*), J. Deutsch (*U. Catholique de Louvain*), D.A. Ashery (*Tel Aviv U.*), G. Savard (*Argonne National Lab/U. Chicago*), S. Gu (*UBC*)
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720. Muonium's nucleophilicity [active], G.B. Porter, D.C. Walker (*UBC*), J.M. Stadlbauer\* (*Hood Coll.*), K. Venkateswaran (*Hindustan Lever Ltd.*), M.V. Barnabas (*Proctor & Gamble Ltd.*)
721. The delta nucleon reaction in CHAOS [completed data-taking], F. Farzanpay, P. Hong, E.L. Mathie, N. Mobed (*U. Regina*), R. Tacik (*TRIUMF-U. Regina*), P.A. Amaudruz, L. Felawka, R. Meier, D. Ottewell, G.R. Smith (*TRIUMF*), N. Grion (*INFN, Trieste*), P. Camerini, R. Rui (*U. di Trieste*), E. Gibson (*California State U., Sacramento*), G. Hofman, G. Jones, M. Kermani (*UBC*), M.E. Sevior (*U. Melbourne*), J.T. Brack, R.A. Ristinen (*U. Colorado*)
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724.  $\mu$ SR measurements on spin ladder systems [active], A. Keren, G.M. Luke, Y.J. Uemura, W.D. Wu (*Columbia U.*), K. Kojima (*Columbia U.-U. Tokyo*), M. Takano (*Kyoto U.*), K. Nagamine (*U. Tokyo*)

725. Pion double charge exchange reactions on  $^{3,4}\text{He}$  in the energy range 50–100 MeV [completed], P. Amaudruz, L. Felawka, R. Meier, D. Ottewell, G. Smith (*TRIUMF*), T. Mathie, R. Tacik, M. Yeomans (*U. Regina*), J. Graeter, G. Wagner (*U. Tübingen*), J. Clark, M. Sevior (*U. Melbourne*), G. Hofman, M. Kermani, P. Tagliente (*UBC*), F. Bonutti, P. Camerini, N. Grion, R. Rui (*U. di Trieste*), J. Brack, R. Ristinen (*U. Colorado*), E. Gibson (*California State U., Sacramento*), O. Patarakin (*Kurchatov Inst.*), E. Friedman (*Hebrew U. Jerusalem*)
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729. Gamow-Teller and spin-dipole strengths from  $^{17,18}\text{O}(n, p)$  [active], D.P. Beatty, H.T. Fortune, P.P. Hui, R.B. Ivie, Z.Q. Mao, M.G. McKinzie, D.A. Smith (*U. Pennsylvania*), W.P. Alford (*U. Western Ontario*), K.P. Jackson, A.G. Ling, C.A. Miller, P. Walden, S. Yen (*TRIUMF*)
730. The solar neutrino problem and a new measurement of  $^7\text{Be}(p, \gamma)^8\text{B}$  [deferred], R.E. Azuma, J.D. King (*U. Toronto*), P. Bricault, L. Buchmann, T. Ruth, H. Schneider, J. Vincent, S. Zeisler (*TRIUMF*), J. D'Auria, R. Korteling (*SFU*), M. Dombsky (*SFU-U. Alberta*), U. Giesen (*TRIUMF-U. Alberta*), C. Iliadis (*TRIUMF-U. Toronto*), G. Roy (*U. Alberta*), M. Wiescher (*U. Notre Dame*)
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732. Quantum impurities in one dimensional spin 1/2 chains [active], I. Affleck, J.H. Brewer, K. Chow, S. Dunsiger, S. Eggert, R.F. Kiefl, A. MacFarlane, J. Sonier (*UBC*), A. Keren, Y.J. Uemura (*Columbia U.*)
733. Probing high  $T_c$  superconductor with “paramagnetic” ( $\mu^-$ O) system [active], H. Kojima, I. Tanaka, E. Torikai (*Yamanashi U.*), K. Nishiyama (*U. Tokyo*), K. Nagamine (*U. Tokyo-RIKEN*), I. Watanabe (*RIKEN*), T.P. Das (*State U. New York*), S. Maekawa (*Nagoya U.*)
734. Radiative muon capture on nickel isotopes [completed], D.S. Armstrong, P. McKenzie (*Coll. of William & Mary*), G. Azuelos, P. Depommier (*U. de Montréal*), P. Bergbusch, P. Gumplinger, M. Hasinoff, E. Saettler (*UBC*), B. Doyle, T.P. Gorringe, R. Sedlar (*U. Kentucky*), M. Blecher, C. Sigler (*Virginia Polytechnic Inst.*), J.A. MacDonald, J.-M. Poutissou, R. Poutissou, D. Wright (*TRIUMF*)
735. Studies of single layer cuprate superconductors [active], G.M. Luke, B. Nachumi, Y.J. Uemura (*Columbia U.*), K. Kojima (*Columbia U.-U. Tokyo*), S. Uchida (*U. Tokyo*), R.H. Heffner, L.P. Le (*Los Alamos Nat. Lab*), R. MacLaughlin (*U. California, Riverside*), M.B. Maple (*U. California, San Diego*)
736. Tests of electro-weak theory using  $^{14}\text{O}$  beam [deferred], M. Bahtacharya, A. Garcia, R. Rutchi, M. Wayne (*U. Notre Dame*), L. Buchmann (*TRIUMF*), C. Iliadis (*TRIUMF-U. Toronto*), B. Fujikawa (*Lawrence Berkeley Lab.*), S.J. Freedman, J. Mortara (*U. California, Berkeley*)
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740. Irradiation of silicon tracker components [active], R. Lipton, L. Spiegel (*Fermilab*), K.F. O'Shaughnessy (*U. California, Santa Cruz*), B. Barnett, J. Cameratta, J. Skarha (*Johns Hopkins U.*), N. Brunner, M. Frautschi, M. Gold, Y. Ling, J. Matthews, S. Seidel (*U. New Mexico*), D. Bortoletto, A. Garfinkel, A. Hardman, K. Hoffman, T. Keaffaber, N.M. Shaw (*Purdue U.*)
741. Beta-delayed proton decay of  $^{17}\text{Ne}$  to  $\alpha$ -emitting states in  $^{16}\text{O}$  [active], R.E. Azuma, J. Chow, J.D. King, A.C. Morton (*U. Toronto*), L. Buchmann, M. Dombsky (*TRIUMF*), U. Giesen (*U. Notre Dame*), T. Davinson, A.C. Shotter (*U. Edinburgh*), R.N. Boyd (*Ohio State U.*), C. Iliadis (*U. North Carolina*), J. Powell (*U. California, Berkeley*),
742. Scattering of muonic hydrogen isotopes [active], V.M. Bystritsky, V.A. Stolupin (*JINR*), R. Jacot-Guillarmod, P.E. Knowles, F. Mulhauser (*U. Fribourg*), G.M. Marshall (*TRIUMF*), M. Filipowicz, J. Wozniak (*Fac. Phys., Nucl. Tech., Krakow*), A. Adamczak (*Inst. Nucl. Physics, Krakow*), A.R. Kunselman (*U. Wyoming*), V.E.

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743. Gamow-Teller strength in  $^{64,66,68}\text{Zn}$  and  $^{63,65}\text{Cu}(n, p)$  [active], W.P. Alford (*U. Western Ontario*), D. Beatty, H.T. Fortune, P.P. Hui, R.B. Ivie, Z. Mao, M.G. McKinzie, D.A. Smith (*U. Pennsylvania*), S. Yen (*TRIUMF*)
744. Hadronic weak and electromagnetic form factors via  $\pi^- p \rightarrow e^+ e^- n$  [active], D. Armstrong (*Coll. of William & Mary*), P. Gumplinger, M.D. Hasinoff, D.H. Wright (*UBC*), M. Blecher (*Virginia Polytech. Inst. & State U.*), E. Christy, B.C. Doyle, T.P. Gorringe, M.A. Kovash (*U. Kentucky*), J.A. Macdonald (*TRIUMF*)
745.  $\mu^-$ SR measurements on one-dimensional spin systems [active], K. Kojima (*Columbia U.-U. Tokyo*), K. Nagamine, K. Nishiyama, S. Uchida (*U. Tokyo*), G.M. Luke, B. Nachumi, Y.J. Uemura (*Columbia U.*), I. Affleck, S. Dunsiger, S. Eggert, R.F. Kiefl (*UBC*)
746. Muonium dynamics in Si, Ge and GaAs studied by RF- $\mu$ SR and  $\mu$ W- $\mu$ SR [active], S.R. Kreitzman (*TRIUMF*), T.L. Estle, B. Hitti (*Rice U.*), R. Lichti (*Texas Tech.*), K. Chow (*UBC*), S.F.J. Cox (*Rutherford Appleton Lab*), E.A. Davis (*Leicester U.*), C. Schwab (*CRN Strasbourg*)
747.  $\mu$ SR study of re-entrant spin glasses a-FeMn, AuFe, and Fe<sub>70</sub>Al<sub>30</sub> [active], I.A. Campbell (*U. Paris Sud Orsay*), S. Dunsiger, R.F. Kiefl (*UBC*), M.J.P. Gingras (*TRIUMF*), M. Hennion, I. Mirebeau (*Saclay, LLB*), K. Kojima, G.M. Luke, B. Nachumi, Y.J. Uemura, W.D. Wu (*Columbia U.*)
749. Muonium-substituted free radicals [active], B. Addison-Jones, J.C. Brodovitch, K. Ghandi, I. McKenzie, P.W. Percival (*SFU*), J. Schüth (*U. Bonn*)
750. Liquid chemistry  $\mu$ SR [active], G.B. Porter, D.C. Walker (*UBC*), J.M. Stadlbauer\* (*Hood Coll.*), K. Venkateswaran (*Lever Hindustan Ltd.*), M.V. Barnabas *Procter & Gamble Ltd.*)
751. Tests in preparation for  $\mu$ SR measurements of off-axis internal magnetic fields in anisotropic superconductors [active], E. Csomortani, W.J. Kossler, X. Wan (*Coll. of William & Mary*), D.R. Harshman (*Physikon Research Inc.*), A. Greer (*Gonzaga U.*), E. Koster, D.L. Williams (*UBC*), C.E. Stronach (*Virginia State U.*)
752. Muonium centres in Si and GaAs [active], K.H. Chow (*Oxford U.*), S.F.J. Cox (*Rutherford Appleton Lab*), E.A. Davis (*Leicester U.*), S. Dunsiger, R.F. Kiefl, W.A. MacFarlane (*UBC*), T.L. Estle (*Rice U.*), B. Hitti (*TRIUMF*), R.L. Lichti (*Texas Tech.*), C. Schwab (*CRN Strasbourg*)
753. Studies of magnetic correlations in planar oxides [active], K. Kojima (*Columbia U.-U. Tokyo*), M. Larkin, G.M. Luke, J. Merrin, B. Nachumi, Y.J. Uemura (*Columbia U.*), B.J. Sternlieb (*Brookhaven Nat. Lab.*), S. Uchida (*U. Tokyo*)
754. A search for the muonium substituted hydroxyl radical [deferred], T.A. Claxton, G. Marston (*Leicester U.*), S.F.J. Cox (*Rutherford Appleton Lab*), D. Arseneau, D. Fleming, M. Senba, P. Wassell (*UBC*), J.-C. Brodovitch, P.W. Percival (*SFU*)
755. Muonium formation in Zn-spinels [deferred], G.M. Kalvius, A. Kratzer, W. Potzel (*Tech. U. Munich*), R. Wäppeling (*U. Uppsala*), D.R. Noakes (*Virginia State U.*), S.R. Kreitzman (*TRIUMF*), A. Martin (*U. Jena*), M.K. Krause (*U. Leipzig*)
756. Mu+NO spin relaxation: electron exchange or paramagnetism? [deferred], D.G. Fleming, J.J. Pan, M. Senba, M. Shelley (*UBC*), D.J. Arseneau (*TRIUMF*), E. Roduner (*U. Zürich*)
757. Study of muon dynamics in ferroelectric materials and proton ionic conductors – comparison with proton dynamics [active], W.K. Dawson, K. Nishiyama, S. Ohira, K. Shimomura (*U. Tokyo*), K. Nagamine (*U. Tokyo-RIKEN*), S. Ikeda (*KEK*), S. Shin (*U. Tokyo -ISSP*), N. Sata (*Tohoku U.*)
758. Electronic structure of muonium and muonium-lithium complexes in graphite and related compounds [active], J. Brewer, J. Chakhalian, S. Dunsiger, R.F. Kiefl, W.A. MacFarlane, R. Miller, J. Sonier (*UBC*), J. Dahn (*Dalhousie U.*), J. Fischer (*U. Pennsylvania*), B. Hitti, S.R. Kreitzman (*TRIUMF*)
759. Study of the isotropic hyperfine coupling constant of muonium at high temperature and under uniaxial pressure [active], W.K. Dawson, K. Nishiyama, S. Ohira, K. Shimomura (*U. Tokyo*), K. Nagamine (*U. Tokyo-RIKEN*), T.P. Das (*U. New York, Albany*)
761. Parity violation in  $p - p$  scattering at 450 MeV [active], J. Birchall, E. Gamroth, D.A. Horning, L. Lee, S.A. Page, W.D. Ramsay, A.W. Rauf, G. Rutledge, W.T.H. van Oers (*U. Manitoba*), C.A. Davis, J. Doornbos, R. Helmer, R. Laxdal, C.D.P. Levy (*TRIUMF*), P.W. Green, G. Roy, G.M. Stinson (*U. Alberta*), N.A. Titov, S. Zadorozhny, A.N. Zelenski (*INR, Moscow*), J.D. Bowman, R.E. Mischke, W.S. Wilburn (*Los Alamos Nat. Lab*), N.T. Okumusoglu (*Karadeniz Tech. U.*), E. Korkmaz, (*UNBC*), A.A. Hamian (*U. Washington*)

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762. Gamow-Teller and spin-flip dipole strengths near  $A=90$  [active], W.P. Alford (*U. Western Ontario*), D.P. Beaty, H.T. Fortune, P.P. Hui, R.B. Ivie, D. Koltenuk, J. Yu (*U. Pennsylvania*), A. Ling, S. Yen (*TRIUMF*), S. El-Kateb (*King Fahd U.*)
763. Muon cooling and acceleration in an undulating crystal channel [deferred], S.A. Bogacz, D.B. Cline, D.A. Sanders (*UCLA*), L.M. Cremaldi, B. Denardo, Q. Jie, D.J. Summers (*U. Mississippi-Oxford*), G.M. Marshall (*TRIUMF*)
764. Calibration of a segmented neutron detector [active], E. Korkmaz, G. O’Rielly (*UNBC*), D.A. Hutcheon (*TRIUMF*), A.K. Opper (*U. Alberta*), G. Feldman, N.R. Kolb (*U. Saskatchewan*)
766. The ortho-para transition rate in muonic molecular hydrogen [completed data-taking], D.S. Armstrong, J.H.D. Clark, P. King (*Coll. of William & Mary*), T.P. Gorringe, S. Tripathi, P.A. Żołnierczuk (*U. Kentucky*), M.D. Hasinoff, T. Stocki (*UBC*), D.H. Wright (*TRIUMF*)
767. Direct measurement of sticking in muon catalyzed  $d - t$  fusion [active], J.M. Bailey (*Chester Technology, UK*), G.A. Beer, M. Maier, G.R. Mason, T.A. Porcelli (*U. Victoria*), K.M. Crowe, P. Kammler (*U. California, Berkeley-LBL*), M.C. Fujiwara, E. Gete, T.J. Stocki (*UBC*), T.M. Huber (*Gustavus Adolphus Coll.*), S.K. Kim (*Jeonbuk National U.*), A.R. Kunselman (*U. Wyoming*), G.M. Marshall, A. Olin (*TRIUMF*), C.J. Martoff (*Temple U.*), V.S. Melezhik (*JINR, Dubna*), F. Mulhauser (*U. Fribourg*), C. Petitjean (*PSI*), J. Zmeskal (*IMEP Vienna*)
768. Generalized Fulde-Ferrell-Larkin-Ovchinnikov state in heavy fermion and intermediate valence systems [active], J. Akimitsu, K. Oishi, H. Takagiwa, T. Yokoo (*Aoyama Gakuin U.*), W. Higemoto, R. Kadono, A. Koda (*KEK-IMSS*), M. Nohara (*U. Tokyo*), M. Hedo (*Ryukyu U.*), Y. Onuki (*Osaka U.*)
769. Effects of uniaxial stress on muonium in semiconductors [active], K.H. Chow (*Oxford*), B. Hitti (*TRIUMF*), R.F. Kiefl (*UBC*), T.L. Estle (*Rice U.*), R. Lichti (*Texas Tech. U.*)
770.  $\mu$ SR studies of organic conductors:  $(BEDT-TTF)_2X$  and  $(TMTTF)_2Br$  [active], K. Kojima, M. Larkin, G.M. Luke, J. Merrin, B. Nachumi, Y.J. Uemura (*Columbia U.*), P.M. Chaikin (*Princeton U.*), G. Saito (*Kyoto U.*)
771.  $\mu$ SR studies of geometrically frustrated  $S = 1/2$  spin systems [active], K. Kojima, M. Larkin, G.M. Luke, J. Merrin, B. Nachumi, Y.J. Uemura (*Columbia U.*), M.J.P. Gingras (*TRIUMF*), S. Dunsiger, R.F. Kiefl (*UBC*), D.C. Johnston, S. Kondo (*Iowa State U.*), S. Uchida (*U. Tokyo*), R.J. Cava (*AT&T Bell Labs*)
772. Search for the  $\Delta - \Delta$  dibaryon [active], R. Abegg\*, C.A. Miller, P. Walden, S. Yen (*TRIUMF*), R. Bent (*Indiana U.*), T.Y. Chen, F. Wang, C.H. Ye (*Nanjing U.*), W. Falk (*U. Manitoba*), D. Frekers, M. Hartig (*U. Muenster*), T. Goldman (*Los Alamos Nat. Lab*), M. Heyrat, C.W. Wong (*UCLA*), G. Jones (*UBC*), E. Korkmaz, G. O’Rielly (*UNBC*), C. Rangacharyulu (*U. Saskatchewan*), I. Strakovsky (*Virginia Tech. Inst.*), Z.X. Sun, J.C. Xu (*Inst. Atomic Energy, China*), T. Walton (*Cariboo U. Coll.*)
773. Muon-electron interaction in  $n$ -type silicon [active], D. Arseneau, B. Hitti, S.R. Kreitzman (*TRIUMF*), J.H. Brewer, R.F. Kiefl, G. Morris (*UBC*), K. Chow (*Oxford U.*), S.F.J. Cox (*Rutherford Appleton Lab*), D.G. Eshchenko (*INR, Moscow*), T.L. Estle (*Rice U.*), R. Lichti (*Texas Tech. U.*), V.G. Storchak, (*Kurchatov Inst.*)
774. Muonium dynamics in GaAs studied by rf and  $\mu$ -wave  $\mu$ SR [active], B. Hitti, S.R. Kreitzman (*TRIUMF*), T.L. Estle (*Rice U.*), R. Lichti (*Texas Tech. U.*)
775. Electron transport in insulators, semiconductors and magnetic materials [active], J.H. Brewer, A. Izadi, D.M.C. Liu, K.M. Nichol, S. Sivanandam, A.T. Warkentin (*UBC*), G.D. Morris (*TRIUMF*), V.G. Storchak (*Kurchatov Inst.*), D.G. Eshchenko (*INR, Moscow*), J.D. Brewer (*SFU*)
776. Rare earth materials with disordered spin structures [completed data-taking], J.H. Brewer (*UBC*), K. Fukamichi (*Tohoku U.*), G.M. Kalvius (*Tech. U. Munich*), D.R. Noakes, C.E. Stronach, M.F. White, Jr. (*Virginia State U.*), R. Wäplling (*Uppsala U.*)
777. Vortex state of  $s$ -wave superconductors investigated by muon spin rotation [active], J.C. Chakhalian, K. Chow, R. Miller, A.N. Price (*UBC*), J.H. Brewer, R.F. Kiefl (*UBC/TRIUMF*), G.M. Luke (*McMaster U.*), J.E. Sonier (*SFU*)
778.  $\pi^\pm p$  differential cross sections in the Coulomb-nuclear interference region [active], P. Amaudruz, G. Hofman, D. Ottewell, M. Pavan, K. Raywood (*TRIUMF*), P. Camerini, E. Fragiacomo, N. Grion, S. Piano, R. Rui (*U. di Trieste*), K. Babcock, E. Mathie, R. Tacik, M. Yeomans (*U. Regina*), J. Breitschopf, H. Denz, R. Meier, F. von Wochoem, G. Wagner (*U. Tübingen*), G. Moloney, M. Sevior (*U. Melbourne*), J. Brack, J. Patterson, R. Ristinen (*U. Colorado*), E. Gibson (*California State U., Sacramento*), O. Patarakin (*Kurchatov Inst.*), G. Smith (*Jefferson Lab*)

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779. Accelerator mass spectrometry experiments at ISAC [active], S. Calvert, A. Glass, R.R. Johnson, T. Petersen (*UBC*), Z. Gelbart, D. Ottewell (*TRIUMF*), R. Schubank (*unaffiliated*), C.S. Wong (*Inst. of Ocean Sciences*), J. Clague (*Geological Survey Canada*), M. Paul (*Hebrew U. Jerusalem*)
780. Deeply bound pionic states through  $^{208}\text{Pb}(p, ^3\text{He})^{206}\text{Pb} \otimes \pi^-$  [completed], D. Frekers, W. Garske, K. Grewer, M. Hartig, H. Wörtche (*U. Muenster*), H. Machner (*KFA, Jülich*), D. Hutcheon, P. Walden, S. Yen (*TRIUMF*), A. Opper (*U. Ohio*)
781. Investigations of the  $\pi\pi$  invariant mass distributions of nuclear ( $\pi^+, \pi^-\pi^+$ ) reactions with the CHAOS detector [completed data-taking], J. Clark, G. Moloney, M.E. Sevior (*U. Melbourne*), G. Hofman (*UBC-U. Colorado*), M. Kermani, S. McFarland, K. Raywood (*UBC*), P. Amaudruz, L. Felawka, D.F. Ottewell, G.R. Smith (*TRIUMF*), R. Meier (*TRIUMF-U. Tübingen*), F. Bonutti, P. Camerini, E. Fragiocomo, R. Rui (*INFN, Trieste-U. Trieste*), N. Grion (*INFN, Trieste*), E.L. Mathie, R. Tacik, (*U. Regina*), J. Brack (*TRIUMF-U. Colorado*), R.A. Ristinen (*U. Colorado*), E. Gibson (*California State U., Sacramento*), J. Graeter, G. Wagner (*U. Tübingen*), V. Mayorov, O. Patarakin, V. Tikhonov (*Kurchatov Inst.*)
782. Non-fermi-liquid behaviour and other novel phenomena in heavy-fermion alloys [active], D.E. MacLaughlin (*U. California, Riverside*), R.H. Heffner (*Los Alamos Nat. Lab*), Y.J. Uemura (*Columbia U.*), G.J. Nieuwenhuys (*U. Leiden*), M.B. Maple (*U. California, San Diego*), O.O. Bernal (*Cal. State U., Los Angeles*), G.M. Luke (*McMaster U.*), J.E. Sonier (*SFU*), B. Andraka (*U. Florida*)
783. Paramagnetic frequency shifts in unconventional superconductors [active], R.H. Heffner, J.L. Smith (*Los Alamos Nat. Lab*), D.E. MacLaughlin (*U. California, Riverside*), G.J. Nieuwenhuys (*U. Leiden*), O.O. Bernal (*Cal. State U., Los Angeles*), J.E. Sonier (*SFU*)
784.  $\mu$ SR studies of spin singlet states in oxides [active], A. Fukaya, I. Gat, M. Larkin, A. Savici, Y.J. Uemura (*Columbia U.*), T. Ito (*Columbia U./ETL*), H. Kageyama, K. Ueda, Y. Ueda (*U. Tokyo*), P.P. Kyriakou, G.M. Luke, M.T. Rovers (*McMaster U.*)
785. Pion double charge exchange on  $^3\text{He}$  with CHAOS [completed data-taking], R. Tacik (*TRIUMF-U. Regina*), E.L. Mathie, M. Yeomans (*U. Regina*), H. Clement, J. Graeter, R. Meier, J. Petzold, G.J. Wagner (*U. Tübingen*), E. Friedman (*Hebrew U. Jerusalem*), N. Grion (*INFN Trieste*), P. Camerini, E. Fragiocomo, R. Rui (*U. Trieste*), L. Felawka, D. Ottewell, K. Raywood, G.R. Smith (*TRIUMF*), G. Hofman, B. Jamieson, G. Tagliente (*UBC*), J. Clark, G. Molony, M.E. Sevior (*U. Melbourne*), E. Gibson (*California State U. Sacramento*), H. Staudenmeyer (*U. Karlsruhe*), S. Filippov, Y. Gavrilov, T. Karavicheva (*Moscow Meson Factory*)
786. Low energy structures in the  $\beta$ -delayed particle decays of  $^9\text{C}$ ,  $^{12}\text{N}$  and  $^{17}\text{Ne}$  [active], N. Bateman (*TRIUMF-SFU-U. Toronto*), L. Buchmann, K.P. Jackson, T. Shoppa (*TRIUMF*), J. Chow, J.D. King, C. Mortin (*U. Toronto*), T. Davison, A. Ostrowski, A. Shotter (*U. Edinburgh*), J. D'Auria (*SFU*), E. Gete, D. Measday (*UBC*), U. Giesen (*U. Alberta*)
788. Nuclear and atomic physics with the CPT spectrometer [active], B. Barber, K.S. Sharma (*U. Manitoba*), X. Feng (*U. Manitoba-McGill U.*), F. Buchinger, J. Crawford, S. Gulick, J. Lee, B. Moore (*McGill U.*), E. Hagberg, J. Hardy, V. Koslowsky, G. Savard (*Chalk River Nuclear Lab*)
789.  $\mu$ SR studies of magnetic fluctuations in hydronium jarosites, model Kagomé antiferromagnets [active], A. Harrison, A.S. Wills (*U. Edinburgh*), Y. Fudamoto, K. Kojima, M. Larkin, G.M. Luke, J. Merrin, B. Nachumi, Y.J. Uemura (*Columbia U.*), T. Mason (*U. Toronto*)
790.  $\mu$ SR studies of stripe order in  $\text{La}_{1.6-x}\text{Sr}_x\text{Nd}_{0.4}\text{CuO}_4$  modified cuprate superconductors [active], Y. Fudamoto, K. Kojima, M. Larkin, G.M. Luke, J. Merrin, B. Nachumi, Y.J. Uemura (*Columbia U.*), M. Crawford (*Du Pont*), A. Moodenbaugh (*Brookhaven National Lab*), S. Uchida (*U. Tokyo*)
791. Electronic structure and dynamics of charged muonium and muonium-dopant centers in semiconductors [active], K.H. Chow (*Oxford U.*), R.F. Kiefl (*UBC*), B. Hitti (*TRIUMF*), T.L. Estle (*Rice U.*), R. Lichten (*Texas Tech. U.*), S.F.J. Cox (*Rutherford Appleton Lab*), C. Schwab (*CRN, Strasbourg*)
792. Muonium in III-V semiconductors: identification of states and transitions [active], K.H. Chow (*Oxford U.*), S.F.J. Cox (*Rutherford Appleton Lab*), B. Hitti (*TRIUMF*), T.L. Estle (*Rice U.*), R.L. Lichten (*Texas Tech. U.*), C. Schwab (*CRN, Strasbourg*)
793. Production of an intense  $^{15}\text{O}$  beam for ISAC [completed], J. D'Auria, R. Lange (*SFU*), M. Dombsky, T. Ruth, J. Vincent (*TRIUMF*), K. Carter (*Oak Ridge National Lab*), B. Zhuikov (*INR, Moscow*)
794.  $\mu^+$ SR study on the magnetic properties of  $\text{LaCoO}_3$  and  $\text{La}_{1-x}\text{Sr}_x\text{CoO}_3$  [active], V.V. Krishnamurthy, I. Watanabe (*RIKEN*), K. Asai, N. Yamada (*U. Electro-communications*), K. Nagamine (*U. Tokyo-RIKEN*)
795.  $\mu$ SR study on non fermi liquid behaviour [active], Y. Miyako, Y. Yamamoto (*Osaka U.*), S. Murayama (*Muroran Inst. Tech.*), K. Nagamine (*U. Tokyo*), K. Nishiyama (*U. Tokyo-RIKEN*)

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796.  $\mu$ SR studies in ionic crystals doped with either colour centres or impurity [deferred], Y. Miyake, K. Nagamine, K. Nishiyama, K. Shimomura (*U. Tokyo*), A. Matsusita (*RIKEN*)
797. Magnetic correlations in the ternary equiatomic Ce compounds CeTSn [completed], G. Grosse, G.M. Kalvius A. Kratzer (*Tech. U. Munich*), R. Wäppling (*U. Uppsala*), T. Takabatake (*Hiroshima U.*), D.R. Noakes, C.R. Stronach (*Virginia State U.*), Y. Echizen (*Hiroshima U.*), H. Nakotte (*New Mexico State U.*), H.v. Löhneysen (*U. Karlsruhe*)
798.  $\mu$ SR studies on the competition of RKKY exchange and Kondo effect in CeT<sub>2</sub>X<sub>2</sub> compounds (T=transition metal, X=Si,Ge) [active], H.-H. Klauss, W. Kopmann, F.J. Litterst, W. Wagener, H. Walf (*Tech. U. Braunschweig*), E. Baggio Saitovitch, M.B. Fontes (*CBPF Rio de Janeiro*), A. Krimmel, A. Loidl (*U. Augsburg*)
799. Hyperfine structure and site determination of ( $\mu^-$ O) system in LaSuCuO high  $T_c$  superconductors [active], H. Kojima, I. Tanaka, E. Torikai (*Yamanashi U.*), K. Nishiyama (*U. Tokyo-RIKEN*), K. Nagamine, K. Shimomura (*U. Tokyo*), I. Watanabe (*RIKEN*), T.P. Das (*State U. New York*)
801. Studies of multi-phonon states via  $\beta$ -decay [active], C.J. Barton, M.A. Caprio, R.F. Casten, N.V. Zamfir (*Yale U.*), D.S. Brenner (*Clark U.*), R.L. Gill (*Brookhaven National Lab*), G.C. Ball, K.P. Jackson (*TRIUMF*)
802. Superdeformation and smooth band termination on and near the  $N = Z$  line: Part 1 <sup>60</sup>Zn [active], J.A. Cameron, S. Flibotte, D.S. Haslip, J. Nieminen, C. Svensson, J.C. Waddington, J.N. Wilson (*McMaster U.*), G. Ball (*TRIUMF*), A. Galindo-Uribarri, D.C. Radford (*Oak Ridge National Lab*), D. Ward (*Lawrence Berkeley National Lab*)
803. Experimental studies of interaction and properties of neutron-rich nuclei at ISAC [active], A.S. Iljinov, A.V. Klyachko, E.S. Konobeevsky, M.V. Morodovskoy, M.A. Prohvatilov, A.I. Reshetin, Yu.V. Ryabov, K.A. Shileev, V.A. Simonov, V.M. Skorkin, S.V. Zuyev (*INR, Moscow*)
804. Muonium in gallium nitride [active], R.L. Lichti, S.K.L. Sjue (*Texas Tech. U.*), K.H. Chow, B. Hitti (*TRIUMF*), S.F.J. Cox (*Rutherford Appleton Lab*), C. Schwab (*CRN Strasbourg*), E.A. Davis (*Leicester U.*)
805. A study of the <sup>13</sup>N( $p, \gamma$ )<sup>14</sup>O reaction with a <sup>13</sup>N beam [active], R.E. Azuma, J. Chow, J.D. King, A.C. Morton (*U. Toronto*), N. Bateman (*TRIUMF-Toronto*), L. Buchmann, K.P. Jackson, T. Shoppa (*TRIUMF*), J.M. D'Auria (*SFU*), U. Giesen (*SFU-TRIUMF*), G. Roy (*U. Alberta*), W. Galster (*U. Catholique de Louvain*), A.C. Shotter (*U. Edinburgh*), R.N. Boyd (*Ohio State U.*), U. Greife, C. Rolfs, F. Strieder, H.-P. Trautvetter (*Ruhr U. Bochum*)
806. Excitation of high-spin isomeric states and compound nucleus formation by intermediate energy protons and stopped pions [active], A.S. Iljinov, V.M. Kokhanyuk, B.L. Zhuikov (*INR, Moscow*), I. Liu, J. Vincent, A.Z. Zyuzin (*TRIUMF*)
808. Spin glass order in magnets frustrated by competing ferro- and antiferromagnetic exchange [active], G.M. Kalvius, A. Kratzer, E. Schreier (*Techn. U. Munich*), R. Wäppling (*U. Uppsala*), D.R. Noakes (*Virginia State U.*), J. Gal (*Beer Sheva U.*), W. Schäfer (*Bonn U.*)
809. Quantum diffusion of muonium in crystals with orientational degrees of freedom [active], D. Arseneau, B. Hitti, S.R. Kreitzman (*TRIUMF*), J.H. Brewer, A. Izadi, G.D. Morris (*UBC*), D.G. Eshchenko (*INR, Moscow*), V.G. Storchak (*Kurchatov Inst.*), J.D. Brewer (*SFU*)
810. First direct study of the <sup>23</sup>Mg( $p, \gamma$ )<sup>24</sup>Al reaction with a recoil mass separator (DRAGON) [active], N.P.T. Bateman, J.M. D'Auria, D. Hunter, R. Korteling (*SFU*), R.N. Boyd (*Ohio State U.*), L. Buchmann, R. Helmer, D. Hutcheon, K.P. Jackson, A. Olin, J. Rogers (*TRIUMF*), U. Giesen, G. Roy (*U. Alberta*), L. Gialanella, U. Greife, C. Rolfs, F. Strieder, H.-P. Trautvetter (*Ruhr U. Bochum*), A. Hussein (*UNBC*), M. Junker (*INFN Gran Sasso*), J.D. King (*U. Toronto*), P.D. Parker (*Yale U.*), A. Shotter (*U. Edinburgh*), M. Wiescher (*U. Notre Dame*)
811. A direct study of the <sup>19</sup>Ne( $p, \gamma$ )<sup>20</sup>Na reaction with a recoil mass separator (DRAGON) [active], N.P.T. Bateman, J.M. D'Auria, D. Hunter, R. Korteling (*SFU*), R.N. Boyd (*Ohio State U.*), L. Buchmann, R. Helmer, D. Hutcheon, K.P. Jackson, A. Olin, J. Rogers (*TRIUMF*), U. Giesen, G. Roy (*U. Alberta*), L. Gialanella, U. Greife, C. Rolfs, F. Strieder, H.-P. Trautvetter (*Ruhr U. Bochum*), A. Hussein (*UNBC*), M. Junker (*INFN Gran Sasso*), J.D. King (*U. Toronto*), P.D. Parker (*Yale U.*), A. Shotter (*U. Edinburgh*), M. Wiescher (*U. Notre Dame*)
812. Proposed study of the <sup>8</sup>Li( $\alpha, n$ )<sup>11</sup>B reaction [active], R.N. Boyd, A. Murphy, L. Sahin, E. Smith, M. Zahar (*Ohio State U.*), L. Buchmann, P. Walden (*TRIUMF*), J.M. D'Auria (*SFU*), J.D. King (*U. Toronto*), M. Nishimura, S. Nishimura, I. Tanihata (*RIKEN*)
813. A study of the <sup>15</sup>O( $\alpha, \gamma$ )<sup>19</sup>Ne reaction at the astrophysically important energy [active], N.P.T. Bateman, J.M. D'Auria, D. Hunter, R. Korteling (*SFU*), R.N. Boyd (*Ohio State U.*), L. Buchmann, R. Helmer, D. Hutcheon, K.P. Jackson, A. Olin, J. Rogers (*TRIUMF*), U. Giesen, G. Roy (*U. Alberta*), U. Greife, C. Rolfs, F. Strieder, H.-P. Trautvetter (*Ruhr U. Bochum*), A. Hussein (*UNBC*), J.D. King (*U. Toronto*), P.D. Parker (*Yale U.*), A. Shotter (*U. Edinburgh*), M. Wiescher (*U. Notre Dame*)

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814.  $\mu$ SR studies of unconventional superconductivity in  $\text{Sr}_2\text{RuO}_4$  [active], Y. Fudamoto, K.M. Kojima, M. Larkin, G.M. Luke, J. Merrin, B. Nachumi, Y.J. Uemura (*Columbia U.*), Y. Maeno (*Kyoto U.*), R.J. Cava (*Princeton U.*)

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815.  $\beta$ -NMR investigation of magnetic multilayers and giant magnetoresistance [active], J.C. Chakhalian, S. Dunsiger, W.A. MacFarlane, R. Miller, J. Pond, J. Sonier, B. Turrell (*UBC*), R.F. Kiefl (*UBC-TRIUMF*), B.D. Gaulin (*McMaster U.*), M. Gingras (*U. Waterloo*), R. Heffner (*Los Alamos Nat. Lab*), B. Heinrich (*SFU*), B. Ittermann (*U. Marburg*)

816. Semiconductor quantum wells investigated by  $\beta$ -NMR [active], J.H. Brewer, J.C. Chakhalian, S. Dunsiger, R. Miller, T. Tiedje (*UBC*), M. Gingras (*U. Waterloo*), B. Ittermann (*U. Marburg*), B. Hitti, P. Levy, S.R. Kreitzman, A. Zelenski (*TRIUMF*), R.F. Kiefl (*TRIUMF-UBC*)

817.  $\beta$ -NMR investigation of type II superconductors [active], D. Bonn, J.H. Brewer, J.C. Chakhalian, S. Dunsiger, W. Hardy, R. Liang, R.F. Kiefl, W.A. MacFarlane, R. Miller, J. Sonier (*UBC*), M. Gingras (*U. Waterloo*), R. Heffner (*Los Alamos Nat. Lab*), B. Ittermann (*U. Marburg*), B. Hitti, P. Levy, S.R. Kreitzman, A. Zelenski (*TRIUMF*), G.M. Luke (*Columbia U.*), J.W. Brill (*U. Kentucky*)

818.  $\mu^+$ SR study of magnetic ordering in the one-dimensional spin-1/2 antiferromagnet copper benzoate [active], J.C. Chakhalian, S. Dunsiger, R.F. Kiefl, W.A. MacFarlane, R. Miller, J. Sonier (*UBC*), C. Broholm, D.C. Dender, P. Hammar, D. Reich (*Johns-Hopkins U.*), G. Luke, T. Uemura (*Columbia U.*)

819.  $\mu^+$ SR studies of the antiferromagnetic instability and metastable state in colossal magnetoresistance system ( $\text{Nd}_{1-y}\text{Sm}_y)_{1/2}\text{Sr}_{1/2}\text{MnO}_3$  ( $y = 0.875$ ) [active], W. Higemoto, I. Watanabe (*RIKEN*), K. Nishiyama (*KEK*), K. Nagamine (*RIKEN-KEK*), A. Asamitsu, H. Kuwahara, Y. Tokura (*JRCAT, U. Tokyo*)

821. Shape coexistence and shape mixing in neutron-deficient platinum isotopes: on-line nuclear orientation studies of the decays of  $^{182}\text{Au}$  and  $^{186}\text{Au}$  [active], K.S. Krane (*Oregon State U.*), J.L. Wood (*Georgia Inst. Tech.*), J. D'Auria (*SFU*)

822. Effect of disorder on quantum spin liquid state [active], J. Akimitsu, K. Ishii, K. Oishi, T. Yokoo (*Aoyama Gakuin U.*), R. Kadono, K. Nagamine (*RIKEN*), K. Nishiyama (*KEK*)

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898. MULTI development with applications in superconductors and semiconductors [active], P. Amadruz, D. Arsenau, S. Chan, K.H. Chow, B. Hitti, G. Morris, R. Poutissou (*TRIUMF*), J. Chakhalian, S. Dunsiger, R.F. Kiefl, R. Miller (*UBC*)
900. A determination of the  $\alpha + {}^{15}\text{O}$  radiative capture rate by a measurement of the  ${}^{15}\text{O}({}^6\text{Li}, d) {}^{19}\text{Ne}$  reaction [active], B.R. Fulton, B. Greenhalgh, J. Pearson, D.L. Watson (*U. York*), N.M. Clarke (*U. Birmingham*), T. Davinson, N. Farrington, P. Monroe, C. Ruiz, F. Sarazin, K. Schmidt, A.C. Shotter, P.J. Woods (*U. Edinburgh*), L. Buchmann, P. Walden (*TRIUMF*), J. D'Auria (*SFU*)
902. Muon capture on  ${}^{45}\text{Sc}$ ,  ${}^{51}\text{V}$ ,  ${}^{55}\text{Mn}$  and  ${}^{59}\text{Co}$  [active], D.F. Measday (*UBC*), T.P. Gorringe (*U. Kentucky*)
903. Spectroscopic study of  ${}^{11}\text{Be}$  with polarized  ${}^{11}\text{Li}$  beam [active], Y. Hirayama, H. Izumi, M. Kawabata, K. Matsuta, K. Minamisono, T. Minamisono, S. Shimizu, T. Shimoda (*Osaka U.*), H. Ishiyama, S.C. Jeong, H. Miyatake (*IPNS, KEK*), K.P. Jackson, C.D.P. Levy (*TRIUMF*)
907. Improving  $S_{E1}(300)$ : the  $\beta - \alpha$  branching ratio of  ${}^{16}\text{N}$  [deferred] R.E. Azuma, J.D. King (*U. Toronto*), L. Buchmann (*TRIUMF*)
909. Isospin symmetry breaking in superallowed Fermi beta decays [active], C.E. Svensson (*Guelph U.*), R.A.E. Austin, J.A. Cameron, J.C. Waddington (*McMaster U.*), G.C. Ball, P. Bricault, N. Kintz, J.A. Macdonald (*TRIUMF*), J.C. Hardy, V. Iacob (*TAMU*), J.R. Leslie (*Queen's U.*), D.M. Moltz (*Lawrence Berkeley National Lab*), G. Savard (*Argonne National Lab/U. Chicago*)
910. Study of the ground state proton emitter  ${}^{73}\text{Rb}$  and implications for the astrophysical rp-process [active], A. Piechaczek, E.F. Zganjar (*Louisiana State U.*), G.C. Ball (*TRIUMF*), J.C. Batchelder (*Oak Ridge Assoc. U.*), D. Kulp, B.D. MacDonald, J.L. Wood (*Georgia Inst. Tech.*)

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