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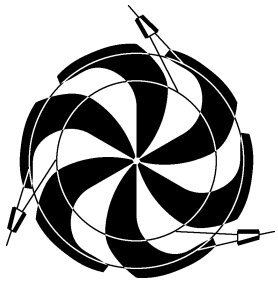

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UNDER A CONTRIBUTION FROM THE
NATIONAL RESEARCH COUNCIL OF CANADA

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The following lists experiment proposals received up to the end of 2000 (missing numbers cover proposals that have been withdrawn or replaced by later versions, rejected, or combined with another proposal).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. Page

497. Measurement of the flavour-conserving hadronic weak interaction [completed data-taking], J. Birchall, J. Bland, J.R. Campbell, A.A. Green, L. Lee, S.A. Page, W.D. Ramsay, S.D. Reitzner, A.M. Sekulovich, V. Sum, W.T.H. van Oers, R.J. Woo *(U. Manitoba)*, C.A. Davis, D.C. Healey, R. Helmer, W. Kellner, R. Laxdal, C.D.P. Levy, P.W. Schmor *(TRIUMF)*, P.W. Green, G. Roy, J. Soukup, T. Stocki, G.M. Stinson *(U. Alberta)*, J.D. Bowman, R.E. Mischke *(Los Alamos Nat. Lab)*, Y. Kuznetsov, N.A. Titov, S. Zadorozhny, A.N. Zelenski *(INR Moscow)*, A.A. Hamian *(U. Washington)*, A.R. Berdoz *(Carnegie Mellon U.)* 5

614. Precise measurement of the ρ, σ and $(P_\mu\xi)$ parameters in muon decay [active], M. Comyn, D.R. Gill, P. Gumplinger, R. Helmer, R. Henderson, J.A. Macdonald, A. Olin, J.-M. Poutissou, R. Poutissou, H.-C. Walter D. Wright *(TRIUMF)*, P. Depommier *(U. Montréal)*, P. Green, P. Kitching, M. Quraan, R. MacDonald, N. Rodning, F. Sobratee, G.M. Stinson *(U. Alberta)*, M. Hasinoff *(UBC)*, E.L. Mathie, R. Tacik *(U. Regina)*, W. Shin *(U. Saskatchewan)*, E. Korkmaz, T. Porcelli *(UNBC)* Y. Davydov *(JINR, Moscow)*, C. Gagliardi, J. Hardy, J. Musser, R. Tribble, M. Vasiliev *(Texas A&M U.)*, D. Koetke, R. Manweiler, P. Nord, S. Stanislaus *(Valparaiso U.)*, Y. Davydov , A. Khruchinsky, V. Selivanov, V. Torokhov *(KIAE, Moscow)* 10

684. μSR spin relaxation studies of small molecules in the gas phase [active], D. Arseneau, J. Pan, *(TRIUMF)*, D. Fleming *(UBC)*, M. Senba *(Dalhousie U.)*, T. Claxton *(U. Leicester)*, S.F.J. Cox *(Rutherford Appleton Lab.)*, U. Himmer, E. Roduner *(U. Stuttgart)* 59

700. Measuring cross sections of long-lived radionuclides produced by 200-500 MeV protons in elements found in meteorites and lunar rocks [active], J. Vincent *(TRIUMF)*, J.M. Sisterson *(Harvard U.)*, K. Kim *(San Jose State U.)*, A.J.T. Jull *(U. Arizona)*, M.W. Caffee *(Lawrence Livermore National Lab)*, R.C. Reedy *(Los Alamos Nat. Lab)*

702. Measurement of kaon-nucleon elastic scattering at 16 MeV [active], G.A. Beer, P. Knowles, G.R. Mason, A. Olin, L.P. Robertson *(U. Victoria)*, P. Amaudruz, D.R. Gill, G. Smith, S. Yen *(TRIUMF)*, L. Lee *(U. Manitoba)*, G. Tagliente *(UBC)*

703. Study of the decay $\pi^+ \to e^+\nu$ phase I – lifetime measurement of the pion [active], D.A. Bryman, T. Numao, A. Olin *(TRIUMF)*

704. Charge symmetry breaking in $np \to d\pi^0$ close to threshold [active], R. Abegg*, P.W. Green, D.A. Hutcheon *(TRIUMF–U. Alberta)*, L.G. Greeniaus *(U. Alberta–TRIUMF)*, R.W. Finlay, A.K. Opper, S.D. Reitzner *(Ohio U.)*, E. Korkmaz, T.A. Porcelli *(UNBC)*, J.A. Niskanen *(U. Helsinki)*, P. Walden *(TRIUMF–UBC)*, S. Yen *(TRIUMF)*, C.A. Davis *(TRIUMF–U. Manitoba)*, D.V. Jordan *(Ohio U.–U. Alberta)*, E. Auld *(UBC)* 35

705. Development of modular gas microstrip chambers as in-target tracking devices for an experiment to detect $\Lambda\Lambda$ hypernuclei at the BNL AGS (BNL885) [completed data-taking], C.A. Davis *(TRIUMF–U. Manitoba)*, B. Bassalleck, R. Stotzer *(U. New Mexico)*, A.R. Berdoz, A. Biglan, D.S. Carman, G.B. Franklin, P. Khaustov, P. Koran, R. Magahiz, R. McCrady, C.A. Meyer, K. Paschke, B. Quinn, R.A. Schumacher, *(Carnegie-Mellon U.)*, J. Birchall, L. Gan, M.R. Landry, L. Lee, S.A. Page, W.D. Ramsay, W.T.H. van Oers *(U. Manitoba)*, T. Bürger, H. Fischer, J. Franz, H. Schmitt *(U. Freiburg)*, D.E. Alburger, R.E. Chrien, M. May, P.H. Pile, A. Rusek, R. Sawafta, R. Sutter *(Brookhaven National Lab)*, A. Ichikawa, K. Imai, Y. Kondo, K. Yamamoto, M. Yosoi *(Kyoto U.)*, F. Takeutchi *(Kyoto Sangyo U.)*, V.J. Zeps *(U. Kentucky)*, P.D. Barnes, F. Merrill *(Los Alamos Nat. Lab)*, V.J. Zeps *(U. Kentucky)*, T. Iijima *(KEK)*, J. Lowe *(U. Birmingham)*

706. μSR studies of spin fluctuations in $CePt_2Sn_2$ and other Kondo spin systems [active], A. Keren, K. Kojima, G.M. Luke, Y.J. Uemura, W.D. Wu *(Columbia U.)*, K. Andres, G.M. Kalvius *(Tech. U. Munich)*, H. Fujii, G. Nakamoto, T. Takabatake, H. Tanaka *(Hiroshima U.)*, M. Ishikawa *(ISSP, U. Tokyo)*, B. Andraka *(U. Florida)*, D.L. Cox *(Ohio State U.)*

707. μSR measurements on two-dimensional site-diluted antiferromagnets [active], K. Kojima *(Columbia U.–U. Tokyo)*, A. Keren, G.M. Luke, Y.J. Uemura, W.D. Wu *(Columbia U.)*, H. Ikeda *(KEK–KENS)*, R.J. Birgeneau *(MIT)*, K. Nagamine *(U. Tokyo)*

708. The spin relaxation and chemical reactivity of muonium-substituted organic radicals in the gas phase [active], D.G. Fleming, J.J. Pan, M. Shelley *(UBC)*, D.J. Arseneau *(TRIUMF–UBC)*, M. Senba *(TRIUMF)*, J.C. Brodovitch, P.W. Percival *(SFU)*, H. Dilger, E. Roduner *(U. Zürich)*, S.F.J. Cox *(Rutherford Appleton Lab)*

709. ^{90,92,94,96}Zr$(n,p)^{90,92,94,96}$Y reaction at 200 MeV [active], A.G. Ling, P.L. Walden *(TRIUMF)*, J. Rapaport *(Ohio U.)*, D.A. Cooper, D.L. Prout, E.R. Sugarbaker *(Ohio State U.)*, M. Halbert *(Oak Ridge National Lab)*, D. Mercer *(U. Colorado)*, J. Campbell *(U. Manitoba–TRIUMF)*, M. Hartig *(U. Muenster)*

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. μSR study of superconducting spin glasses [active], V. McMullen, D.R. Noakes , C.E. Stronach *(Virginia State U.)*, E.J. Ansaldo *(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. Dombsky, 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 β^+ decay of optically trapped ^{37,38m}K [active], J.M. D'Auria, A. Gorelov, D. Melconian, T. Stocki, M. Trinczek *(SFU)*, G. Ball, J.A. Behr, P. Bricault, M. Dombsky, 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)* 39

716. Complete beta-delayed particle emission study of ^{31}Ar [deferred], J. Cerny, D.M. Moltz, T. Ognibene, M.W. Rowe, R.J. Tighe *(Lawrence Berkeley Lab)*, L. Buchmann *(TRIUMF)*, J. D'Auria *(SFU)*, M. Dombsky *(SFU–U. Alberta)*, G. Roy *(U. Alberta)*

717. Muon hyperfine transition rates in light nuclei [completed], J.H. Brewer, E. Gete, M.C. Fujiwara, J. Lange, D.F. Measday, B.A. Moftah, M.A. Saliba, T. Stocki *(UBC)*, T.P. Gorringe *(U. Kentucky)*

718. Superconductivity and magnetism in quaternary boron carbides [active], A. Keren, G.M. Luke, Y.J. Uemura, W.D. Wu *(Columbia U.)*, K. Kojima *(Columbia U.–U. Tokyo)*, S. Uchida *(U. Tokyo)*

719. ^{4}He(π^+,π^-pp) invariant mass measurement with CHAOS [completed data-taking], P. Amaudruz, L. Felawka, D. Ottewell, G. Smith *(TRIUMF)*, E.T. Mathie, R. Tacik, D.M. Yeomans *(U. Regina)*, H. Clement, J. Gräter, R. Meier, G.J. Wagner *(U. Tübingen)*, J. Clark, M. Sevior *(U. Melbourne)*, A. Ambardar, G.J. Hofman, M. Kermani, G. 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)*, M. Schepkin *(ITEP Moscow)*

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)*

722. Pion initial state interactions in the ^{12}C(π^+,ppp) reaction [completed data-taking], T. Mathie, R. Tacik *(U. Regina)*, P.A. Amaudruz, L. Felawka, D. Ottewell, K. Raywood, G.R. Smith *(TRIUMF)* M. Kermani, S. McFarland *(UBC)*, F. Bonutti, P. Camerini, R. Rui *(U. di Trieste)*, N. Grion *(INFN, Trieste)*, E.F. Gibson *(California State U., Sacramento)*, M. Sevior *(U. Melbourne)*, J. Brack, G. Hofman *(U. Colorado)*, R. Meier *(U. Tübingen)*

723. Study of pion-nucleus double-scattering reactions [completed data-taking], R. Tacik *(TRIUMF–U. Regina)*, T. Mathie *(U. Regina)*, P. Amaudruz, L. Felawka, D. Ottewell, K. Raywood, G. Smith *(TRIUMF)*, M. Kermani, S. McFarland *(UBC)*, F. Bonutti, P. Camerini, R. Rui *(U. di Trieste)*, N. Grion *(INFN, Trieste)*, J. Brack, G. Hofman *(U. Colorado)*, R. Meier *(U. Tübingen)*, M. Sevior *(U. Melbourne)*, E. Gibson *(California State U. Sacramento)*

724. μSR 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}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)*

726. Beta-delayed proton and γ-decay of ^{65}Se, ^{69}Kr and ^{73}Sr [active], D. Anthony, J. D'Auria, M. Trinczek *(SFU)*, R.E. Azuma, J.D. King *(U. Toronto)*, L. Buchmann, K.P. Jackson, J. Vincent *(TRIUMF)*, M. Dombsky *(SFU–U. Alberta)*, U. Giesen *(TRIUMF–U. Alberta)*, J. Görres, H. Schatz, M. Wiescher *(U. Notre Dame)*, C. Iliadis *(TRIUMF–U. Toronto)*, G. Roy *(U. Alberta)*

728. Search for population and de-excitation of low-spin superdeformed states in Po-Hg region via β^+ and α decays [active], Y.A. Akovali, M. Brinkman *(Oak Ridge National Lab)*, J.M. D'Auria *(TRIUMF–SFU)*, J.A. Becker, E.A. Henry *(Lawrence Livermore National Lab)*, M. Dombsky *(SFU)*, P.F. Mantica *(UNISOR)*, W. Nazarewicz *(Joint Inst. for Heavy Ion)*, J. Rikovska, N.J. Stone *(Oxford U.)*, M.A. Stoyer *(Lawrence Berkeley National Lab)*, R.A. Wyss *(MSI, Sweden)*

729. Gamow-Teller and spin-dipole strengths from ^{17,18}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}Be$(p,\gamma)^8$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)*

731. Investigation of spin-polarized muonium in metallic semiconductors [active], K.H. Chow, S. Dunsiger, R.F. Kiefl, W.A. MacFarlane, J. Sonier *(UBC)*, S.F.J. Cox *(Rutherford Appleton Lab)*, E.A. Davis, A. Singh *(Leicester U.)*, T.L. Estle, B. Hitti *(Rice U.)*, R.L. Lichti *(Texas Tech. U.)*, P. Mendels *(Orsay U.)*, C. Schwab *(CRN, Strasbourg)*

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" (μ^-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}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)*

737. Magnetic and superconducting behaviour in selected oxide materials [active], R.H. Heffner, L.P. Le *(Los Alamos Nat. Lab)*, D.E. Maclaughlin *(U. California, Riverside)*, G. Luke, B. Nachuma, Y.J. Uemura *(Columbia U.)*, K. Kojima *(Columbia U.–U. Tokyo)*

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}Ne to α-emitting states in ^{16}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)*, 43

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.

Markushin, C. Petitjean *(PSI)*, T.M. Huber *(Gustavus Adolphus Coll.)*, G.A. Beer, M. Maier, A. Olin, T.A. Porcelli *(U. Victoria)*, P. Kammel *(U. California, Berkeley)*, M.C. Fujiwara *(UBC)*, J. Zmeskal *(IMEP Vienna)*, S.K. Kim *(Jeonbuk National U.)*

743. Gamow-Teller strength in ^{64,66,68}Zn and ^{63,65}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 $\pi^- p \to e^+ e^- n$ [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. μ^-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-μSR and μW-μSR [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. μSR study of re-entrant spin glasses a-FeMn, AuFe, and $Fe_{70}Al_{30}$ [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)* 59

750. Liquid chemistry μSR [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 μSR 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. Wäppling *(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)* 14

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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. Kammel *(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.)* 60

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770. μSR studies of organic conductors: (BEDT-TTF)$_{2-}$X and (TMTTF)$_2$Br [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. μSR 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 μ-wave μSR [active], B. Hitti, S.R. Kreitzman *(TRIUMF)*, T.L. Estle *(Rice U.)*, R. Lichti *(Texas Tech. U.)* 61

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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. Wäppling *(Uppsala U.)* 62

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780. Deeply bound pionic states through ^{208}Pb(p,^{3}He)^{206}Pb$\bigotimes\pi^-$ [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. Fragiacomo, 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)* 64

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784. μSR 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.)* 67

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786. Low energy structures in the β-delayed particle decays of ^{9}C, ^{12}N and ^{17}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. μSR 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. μSR studies of stripe order in $La_{1.6-x}Sr_xNd_{0.4}CuO_4$ 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. Lichti *(Texas Tech. U.)*, S.F.J. Cox *(Rutherford Appleton Lab)*, C. Schwab *(CRN, Strasbourg)* 68

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793. Production of an intense ^{15}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. μ^+SR study on the magnetic properties of $LaCoO_3$ and $La_{1-x}Sr_xCoO_3$ [active], V.V. Krishnamurthy, I. Watanabe *(RIKEN)*, K. Asai, N. Yamada *(U. Electro-communications)*, K. Nagamine *(U. Tokyo–RIKEN)*

795. μSR 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)*

796. μSR 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. μSR studies on the competition of RKKY exchange and Kondo effect in CeT_2X_2 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 (μ^-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 β-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)* 47

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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.)* 69

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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)*

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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 ^{23}Mg$(p,\gamma)^{24}$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 ^{19}Ne$(p,\gamma)^{20}$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)*

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814. μSR studies of unconventional superconductivity in Sr_2RuO_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.)* 71

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818. μ^+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. μ^+SR studies of the antiferromagnetic instability and metastable state in colossal magnetoresistance system $(Nd_{1-y}Sm_y)_{1/2}Sr_{1/2}MnO_3$ ($y = 0.875$) [active], W. Higemoto, I. Watanabe *(RIKEN)*, K. Nishiyama *(KEK)*, K. Nagamine *(RIKEN–KEK)*, A. Asamitsu, H. Kuwahara, Y. Tokura *(JRCAT, U. Tokyo)*

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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)*

823. Pure fermi decay in medium mass nuclei [active], G.C. Ball, R. Beaton, P. Bricault, P. Klages, J.A. Macdonald, E. Vandervoort *(TRIUMF)*, J. Cerny, D.M. Moltz, J. Powell *(Lawrence Berkeley Lab)*, G. Savard *(Argonne National Lab)*, J.C. Hardy, V. Iacob *(Texas A&M U.)*, S. Bishop, J. D'Auria *(SFU)*, J.R. Leslie, H.-B. Mak, I.S. Towner *(Queen's U.)*, J.L. Wood *(Georgia Inst. Tech.)*, E.F. Zganjar, A. Piechaczek *(Louisiana State U.)* 49

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903. Spectroscopic study of ^{11}Be with polarized ^{11}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}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}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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