

TRIUMF



ANNUAL REPORT SCIENTIFIC ACTIVITIES 1998

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NATIONAL RESEARCH COUNCIL OF CANADA

APRIL 1999

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.

SEMINARS*

The following seminars were presented at TRIUMF this year.

- 12/01 *More Penguin Sightings? Rare B Decays at CLEO*, Jean Roy, U. Colorado.
- 13/01 *What is the Difference Between Low-Energy Pion-Nucleus Inelastic and High-Energy Quark-Quark Two-Body Scattering?*, Harry C.S. Lam, McGill U.
- 16/01 *Orthopositronium Decay Puzzle*, I.B. Khriplovich, Budker Institute for Nuclear Physics.
- 20/01 *$\pi - \pi$ Scattering at Low Energies*, Jurg Gasser, U. Berne.
- 22/01 *Neutrino Interactions and Heavy Element Synthesis*, Gail McLaughlin, U. Washington.
- 03/02 *The Role of Freezeout and Neutrinos in r-Process Nucleosynthesis*, Rebecca Surman, U. North Carolina.
- 05/02 *Muon Catalyzed Fusion in Solid Hydrogen*, Glen Marshall, TRIUMF.
- 09/02 *Gluonic Excitations in the Presence of a Static $q - \bar{q}$ Pair*, Jimmy Juge, U. California, San Diego.
- 17/02 *Isospin Breaking in Chiral Perturbation Theory — Selected Applications*, Carl Wolfe, York U.
- 19/02 *Pseudoscalar Mesons at Zero and Finite Temperature*, Pieter Maris, ANL.
- 23/02 *W Boson Physics with the OPAL Experiment at LEP*, Carla Sabarra, UBC.
- 24/02 *Prospects for the Observation of Supersymmetry at the Tevatron and the LHC*, Kwok-Lung Chan, Northeastern U.
- 25/02 *Selective Laser Ion Sources at ISOLDE*, V.I. Mishin, Inst. of Spectroscopy, Russian Academy of Sciences.
- 26/02 *Direct Capture Astrophysical S Factors at Low Energy*, Byron Jennings, TRIUMF.
- 02/03 *Polarizabilities of Pions and Nucleons*, Stefan Scherer, Johannes Gutenberg U., Mainz.
- 05/03 *Light Front Nuclear Physics*, Jerry Miller, U. Washington.
- 06/03 *Applications of Random Matrix Theory in QCD*, Adam Halasz, SUNY at Stony Brook.
- 13/03 *Constraints on a Parity Conserving/Time-Reversal-Invariance Breaking Interaction and N-N Scattering*, Willem T.H. van Oers, U. Manitoba.
- 20/03 *Strange Baryon Production in e^+e^- Collisions at LEP*, Andre Joly, U. Montréal.
- 23/03 *$K^+ \rightarrow \pi^+\pi^0$ Decay on and off the Lattice*, Ka Chun Leung, Washington U. in St. Louis.
- 25/03 *Progress in Heavy Quark Physics on the Lattice*, Christine Davies, Glasgow U. and U. California, Santa Barbara.
- 26/03 *Positron Production by Laser Light*, Kirk Macdonald, Princeton U.
- 27/03 *The Muon Collider: Physics Opportunities and Technology Challenges*, Kirk Macdonald, Princeton U.
- 02/04 *The Status of the BaBar Experiment*, Chris Hearty, UBC.
- 08/04 *Status of the SNO Experiment*, Rich Helmer, TRIUMF.
- 09/04 *Fusion Enhancement with Neutron-Rich Radioactive Beams*, Kristiana Zyromski, Oregon State U.
- 14/04 *Super-Kamioka*, Jeff George, U. Washington.
- 16/04 *Pion Production Mechanism in Nucleon-Nucleon Collisions*, Keisuke Tamura, RCNP, Osaka U.
- 17/04 *Single Top-Quark Production at Hadron Colliders*, Z. Sullivan, U. Illinois.
- 23/04 *HyperCP: Finding CP Violation in Hyperon Decays*, Kam-Biu Luk, LBNL.
- 29/04 *Simultaneous Solution to Baryogenesis and Dark Matter Problem*, B. Khriplovich, INR, RAS, Moscow.
- 30/04 *Nuclear Astrophysics*, Nicholas Bateman, TRIUMF.
- 07/05 *Recent Results from HERMES*, Mike Vetterli, TRIUMF.
- 14/05 *Hyperfine Anomalies, a Handle on the Radial Neutron Distribution in Francium*, Gene Spruce, SUNY at Stony Brook.
- 19/05 *Bound-State Methodology in QCD and a Proof of Confinement*, Jan Greben, CISR, South Africa.
- 21/05 *Canada and the ATLAS Experiment*, Michel Lefebvre, U. Victoria.
- 28/05 *Decommissioning of Nuclear Power Reactors in Germany*, Martin Kueckes, TUEV Rheinland/Berlin-Brandenburg.
- 08/06 *The ${}^9\text{Be}({}^9\text{Be}, {}^8\text{B}){}^{10}\text{Li}$ Reaction with the S800 Spectrograph at Michigan State University*, Jac Caggiano, NSCL, Michigan State U.
- 02/07 *Measuring ξ'' in Polarized Muon Decay*, Paul Knowles, Fribourg U.
- 03/07 *Acceleration of Radioactive Ions at REX-ISOLDE*, Friedhelm Ames, CERN.
- 09/07 *The Physics Program at LEAR (1983–1996)*, Chris Batty, RAL.
- 16/07 *Pion Nucleon Scattering and QCD: Recent Results and Future Prospects*, Marcello Pavan, MIT.
- 04/08 *Search for Neutron EDM Using Crystal Techniques and Interference Experiments for Cold Neutrons*, Yoshie Otake, Coherent X-Ray Optics Lab, RIKEN, and C. Zeyen, ILL.
- 13/08 *Photon Correlations in Cavity QED*, Luis A. Orozco, SUNY at Stony Brook.
- 07/09 *Description of Deep Inelastic Electron Scattering on Nuclei*, Avraham Rinat, Weizmann Institute of Science.
- 17/09 *Real Physics at TISOL and ISAC*, Lothar Buchmann, TRIUMF.
- 23/09 *Revisit of Gamow-Teller Quenching Problem via the ${}^{90}\text{Zr}(\bar{p}, \bar{n})$ Measurements at 300 MeV*, Hide Sakai, U. Tokyo.

- 05/10 *New Directions in Strangeness -2 Physics*, Avraham Gal, Hebrew U.
 21/10 *Physics of ISAC-2*, Rick Casten, Yale U.
 23/10 *$\bar{K}N$ Interaction in Free Space and in the Medium*, Angels Ramos, U. Barcelona.
 03/11 *$^{22}\text{Ne}(p, \gamma)$ and Na-O Anti-Correlations in Globular Cluster Red Giants*, Steven Hale, U. North Carolina.
 12/11 *Magnetic Dipole Moment Measurements of Beta-Unstable Nuclei*, Paul Mantica, NSCL, Michigan State U.
 19/11 *Setting up an Outreach Program at the UBC Physics Department*, Chris Waltham, UBC.
 26/11 *Where We Go with LSO*, Joel Rogers, TRIUMF.
 02/12 *Update on the Production of PET Radionuclides on the He-3 RFQ at Fermilab*, Jeanne Link, U. Washington.
 09/12 *Gauge Mediated SUSY Breaking Models and Signatures*, M. Dutta, Texas A&M U.
 09/12 *GT Strength in Odd-A Nuclei: New Results from (\vec{p}, \vec{n})* , John Watson, Kent State U.
 14/12 *Search for Relic Galactic Halo Axions*, Dennis M. Moltz, LBNL.

* All matters concerning TRIUMF seminars should be referred via E-mail to SEMINAR (seminar@triumf.ca).

You can see the latest listing of TRIUMF seminars by the following methods.

On the TRIUMF VAX cluster:	Type SEMinars (SEM is sufficient)
Via DECNET:	COPY LIB1:[PUBLIC.ANONYMOUS.SEMINAR]SEMINARS.TXT
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