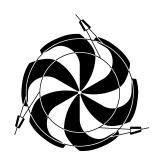
TRIUMF



ANNUAL REPORT SCIENTIFIC ACTIVITIES 1999

ISSN 1492-417X

CANADA'S NATIONAL LABORATORY FOR PARTICLE AND NUCLEAR PHYSICS

OPERATED AS A JOINT VENTURE MEMBERS:

THE UNIVERSITY OF ALBERTA SIMON FRASER UNIVERSITY THE UNIVERSITY OF VICTORIA THE UNIVERSITY OF BRITISH COLUMBIA ASSOCIATE MEMBERS:
CARLETON UNIVERSITY
THE UNIVERSITY OF MANITOBA
L'UNIVERSITÉ DE MONTRÉAL
QUEEN'S UNIVERSITY
THE UNIVERSITY OF REGINA
THE UNIVERSITY OF TORONTO

UNDER A CONTRIBUTION FROM THE NATIONAL RESEARCH COUNCIL OF CANADA

JULY 2000

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.

- 07/01 ALTA Project, James Pinfold, U. Alberta.
- 12/01 Inhomogeneous Nucleosynthesis at Finite Temperature, In-Saeng Suh, U. Notre Dame.
- 19/01 Proton Proton Scattering and Fusion in Effective Field Theory, Xinwei Kong, U. Oslo.
- 28/01 Calculation of Atmospheric Neutrino Fluxes, Yaroslav Tserkovnyak, UBC.
- 29/01 Tau Physics and the Charged-Current Weak Interaction, Steven Robertson, U. Victoria.
- 02/02 Leptonic Phenomenology of a Complete Theory of Supersymmetry Without R-Parity, Otto Kong, Rochester U.
- 09/02 Next-to-Leading Order Associated Production of Gluinos with Gauginos at Hadron Colliders, Tim Tait, MSU.
- 11/02 Renormalization and Bound States in Light-Front Field Theory, with Applications to QCD, Brent Allen, Ohio S.U.
- 23/02 Signals of DCC Formation and Psuedo Bound States, James Hormuzdiar, Yale U.
- 25/02 Tau Decays Involving Kaons at ALEPH and the Strange Quark Mass, Shaomin Chen, TRIUMF.
- 26/02 $\,$ $Results\; from\; Jefferson\; Lab,\; John\; Calarco,\; U.\; New Hampshire.$
- 02/03 $\Delta I = 3/2$ Decays of Hyperons in Chiral Perturbation Theory, Jusak Tandean, Iowa State U.
- 04/03 Isospin Violation, Ulf Meissner, Jülich.
- 05/03 Nucleon-Nucleon Interaction and Effective Field Theory, Jambul Gegelia, Flinders U.
- 15/03 Rotational Model of Neutrino Capture and Other Topics in Light Nuclei, Larry Zamik, Rutgers U.
- 17/03 Experimental Facility for Nuclear Astrophysics in RCNP Present Status and Its Perspective, Takahisa Itahashi, RCNP, Osaka U.
- 18/03 A Sensitive Detector Using Pb for Supernova and Meson Facility Neutrinos, Cliff Hargrove, CRPP, Carleton U.
- 25/03 BTeV Getting to the Bottom of CP Violation, Scott Menary, York U.
- 26/03 Antiproton Proton Annihilation, Eberhard Klempt, U. Bonn.
- 26/03 KTeV Results on ϵ'/ϵ and $\pi\pi ee$ T-Violating Asymmetry, Yee Bob Hsiung, Fermilab.
- 29/03 Relativistic Corrections to the Sunyaev-Zeldovich Effects for Clusters of Galaxies, Naoki Ito, Sophia U.
- 08/04 The Discovery of Gauge Bosons, Alan Astbury, TRIUMF.
- 09/04 The Phenomenology of Large Extra Dimensions, Joe Lykken, Fermilab.
- 15/04 Measurements of $BR(b \to \nu \tau X)$ and $BR(b \to D^* \nu \tau X)$ and Upper Limits on $BR(b \to \nu \tau)$ and $BR(b \to s \nu \nu)$, Pascal Perrodo, LAPP, Annecy.
- 22/04 The Accelerators for ISAC-I and ISAC-II, Bob Laxdal, TRIUMF.
- 29/04 Supernova Neutrinos and the r-Process, Gail McLaughlin, TRIUMF.
- 30/04 Collectivity in $A \sim 60$ Nuclei, Carl Svensson, LBNL.
- 06/05 Symplectic Shell Model and Multi- $\hbar\omega$ Predictions for Electron Scattering Form Factors, Jutta Escher, Hebrew U.
- 07/05 Evidence for Non-Zero Neutrino Mass, Chang Kee Jung, SUNY at Stony Brook.
- 10/05 Superconducting Linac Development at Legnaro, Alberto Facco, INFN-LNL.
- 11/05 The πNNN Scattering Problem Revisited, Thomas Melde, U. Manitoba.
- 17/05 Finite Energy Sum Rules From the Ground Up, Kim Maltman, U. Adelaide.
- 18/05 Machine Commissioning and Background Studies at PEP-II, Tom Mattison, SLAC.
- 19/05 Coldest Fusion with Hottest Atom: Muon Catalyzed Fusion with Muonic Tritium Beam, Makoto Fujiwara, UBC.
- 20/05 Radioactive Beam Studies, Sherry Yenello, Texas A&M U.
- 25/05 Recent Results from MSU, Don Anthony, MSU.
- 14/06 The SNO Experiment and Aspects of Detector Calibration, Andre Hamer, Queen's U.
- 28/06 The HRIBF Recoil Mass Spectrometer Performance and Selected Results, Tom Ginter, ORNL.
- 29/06 A New Limit of T-Violation in $K^+ \to \mu^+ \pi^0 \nu$ Decay the First Result of KEK-PS E246, Gei-Youb Lim, KEK.
- 02/07 Rapid Cycling Proton Accelerator and Phase Rotation Ring for Low Energy Muon Beams, Yoshiharu Mori, KEK.
- 08/07 Evidently Neutrinos Have Small Masses. So What?, John Ng, TRIUMF.
- 09/07 Isotope Trace-Detection and Spectroscopy by Resonance Ionization Mass Spectrometry (RIMS), Jens Lassen, Texas A&M U.
- 12/07 Electric Dipole Moment Measurements with Laser Polarized Noble Gas Isotopes, Timothy Chupp, U. Michigan.
- 14/07 Recent Results of the Search for the Neutrino Mass and Anomalous Effects in the Tritium Beta Decay, Vladimir Lobashev, INR, Moscow.
- 15/07 Tests of the Standard Model from Nuclear Beta Decay Studies at ISAC, Gordon Ball, TRIUMF.
- $16/07 \quad \textit{Recent Results from the ATLAS Fragment Mass Analyzer}, \textit{Carry Davids}, \textit{ANL}.$
- 22/07 Discovery of New Heavy Elements 114, 116 & 118, Victor Ninov, LBNL.
- 29/07 LSND and mini-BooNE, Bill Louis, LANL.
- 19/08 Core Polarization Contribution to the Nuclear Anapole Moment, Naftali Auerbach, Tel Aviv U.

- 07/09 Water Cerenkov Detectors for the Auger Project, Thomas Kutter, U. Chicago.
- 09/09 EDM Measurements, Mike Romalis, U. Washington.
- 15/09 Optically Pumped Polarized H⁻ Ion Source for Precision Experiments and High Energy Colliders, Anatoli Zelenski, TRIUMF.
- 16/09 LTNO Startup at ISAC, Paul Delheij, TRIUMF.
- 23/09 Space Radiation Effects from Protons, Ewart Blackmore, TRIUMF.
- 27/09 TRIUMF Parity-Violation Experiment, Rhett Woo, U. Manitoba.
- 07/10 Status and First Data from the BaBar Experiment at SLAC, Janis McKenna, UBC.
- 14/10 $\beta-\nu$ Correlations in Laser Traps, John Behr, TRIUMF.
- 21/10 The Hermes RICH Detector, Ralf Kaiser, DESY.
- $28/10 \quad \textit{Some Aspects of Strange Matter: Stars and Strangelets}, \, \text{Sanjay K. Ghosh, TRIUMF.}$
- 29/10 Fabrication Techniques of High Performance, Low Cost Superconducting Cavities for CERN, TESLA and Legnaro, Vincenzo Palmieri, INFN-LNL.
- 04/11 PET in Humans and Parkinson's Disease, Jon Stoessl, UBC.
- 09/11 Why Off-Shell Amplitudes are not Measurable in Nucleon-Nucleon Bremsstrahlung (or Anywhere Else), Harold Fearing, TRIUMF.
- 15/11 Recent Results on Muon Capture on Hydrogen, Tim Gorringe, U. Kentucky.
- 22/11 Parity Violating Measurements of Neutron Densities, Charles Horowitz, Indiana U.
- 02/12 Relativistic Theory of Particle Polarization: Applications, Louis Michel, IHES, Bures-sur-Yvette.
- 15/12 Multiple-Charge Beam Dynamics in an Ion Linac, Petr Ostroumov, ANL.
- 16/12 Searching for the Galactic Dark Matter, Harvey Richer, UBC.

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

Via Anonymous FTP to FTP.TRIUMF.CA: GET the file SEMINARS.TXT in the directory SEMINAR On the WWW: See TRIUMF Seminars Schedule under the section General on the

TRIUMF – Around the Laboratory page

Document URL: http://www.triumf.ca/seminars.txt

^{*} All matters concerning TRIUMF seminars should be referred via E-mail to seminar@triumf.ca