

TRIUMF



ANNUAL REPORT SCIENTIFIC ACTIVITIES 1998

CANADA'S NATIONAL MESON FACILITY
OPERATED AS A JOINT VENTURE BY:

MEMBERS:

UNIVERSITY OF ALBERTA
SIMON FRASER UNIVERSITY
UNIVERSITY OF VICTORIA
UNIVERSITY OF BRITISH COLUMBIA

ASSOCIATE MEMBERS:

UNIVERSITY OF MANITOBA
UNIVERSITÉ DE MONTRÉAL
UNIVERSITY OF TORONTO
UNIVERSITY OF REGINA
CARLETON UNIVERSITY
QUEEN'S UNIVERSITY

UNDER A CONTRIBUTION FROM THE
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.

ORGANIZATION

Board of Management

The Board of Management of TRIUMF manages the business of the facility and has equal representation from each of the four founding universities. At the end of 1998 the Board comprised:

University of Alberta	Dr. P. Kitching Dr. W.J. McDonald Dr. A. Noujaim	
Simon Fraser University	Dr. B.P. Clayman Dean C.H.W. Jones Dr. R.G. Korteling	Chairman
University of Victoria	Ms. G. Gabel Dr. T. Gough Dr. M. Taylor	
University of British Columbia	Dr. B. Bressler Dr. C. Eaves Dr. D.F. Measday	
Non-voting members:	Ms. J. Verrett Dr. D.G. Stairs Dr. A. Astbury Dr. J.-M. Poutissou Mr. J. Hanlon	National Research Council McGill University Director, TRIUMF Associate Director, TRIUMF TRIUMF Recording Secretary

Towards the end of 1987, Board membership was expanded in anticipation of a broadening of the TRIUMF joint venture to include a more national representation of Canadian universities long associated with the TRIUMF experimental program. The University of Manitoba and Université de Montréal became associate members, and the University of Toronto joined as an observer. At the end of 1988, University of Toronto status changed from that of observer to associate member. In March, 1989 the University of Regina became an associate member. In December, 1998 Carleton University and Queen's University became associate members. Associate membership at year-end:

Associate members:	Dr. J. Keselman M.A. Caillé Dr. P. Sinervo Dr. K. Denford Dr. P.J.S. Watson D.A. McDonald	University of Manitoba Université de Montréal University of Toronto University of Regina Carleton University Queen's University
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The following changes occurred in Board membership in 1998: Drs. W.J. McDonald and A. Noujaim replaced Drs. E.W. Brooker and B. Kratochvil as University of Alberta members; Dr. D. Rowlatt replaced Dr. A. McAuley as University of Victoria member until June; Dr. M. Taylor then replaced Dr. D. Rowlatt; Ms. J. Verrett replaced Dr. N. Sherman as National Research Council member; Mr. J. Hanlon replaced Mr. M. La Brooy as recording secretary. The board met 5 times during the year.

Administration

Under the directorship of Dr. A. Astbury, TRIUMF personnel were grouped into divisions, with division heads as follows:

Division Head, Science Division	J.-M. Poutissou
Division Head, Accelerator Technology Division	E.W. Blackmore
Division Head, Cyclotron Operations Division	G.G. Dutto
Division Head, Technology Transfer Division	P.L. Gardner
Division Head, Administration Division	I.M. Thorson
ISAC Project Leader	P.W. Schmor

Operating Committee

The Operating Committee of TRIUMF is responsible for the operation of the facility. It reports to the Board of Management through its chairman, the Director, Dr. A. Astbury. The Operating Committee consists of one voting member from each of the four universities, two voting members representing the interests of external users and one representing TRIUMF staff. The Associate Director is a non-voting member. Members of the committee (alternate members in parentheses) at the end of 1998 were:

Dr. A. Astbury	Chairman	Director	
Dr. J.-M. Poutissou	(<i>ex officio</i>)	Associate Director	
Dr. N. Rodning		University of Alberta	(Dr. L.G. Greeniaus)
Dr. P. Percival		Simon Fraser University	(Dr. K.P. Jackson)
Dr. M. Lefebvre		University of Victoria	(Dr. M. Roney)
Dr. M.D. Hasinoff		University of British Columbia	(Dr. C. Hearty)
Dr. W.T.H. van Oers		Users	(Dr. E. Mathie)
Dr. J. Rogers		Users	(Dr. J. Vincent)
Mr. J. Yandon		TRIUMF	(Dr. T.J. Ruth)
Mr. J. Hanlon	Recording Secretary	TRIUMF	
Ms. J. Verrett	(<i>ex officio</i>)	National Research Council	

Changes in 1998: Dr. P. Percival replaced Dr. M. Vetterli as the Simon Fraser University member with Dr. K.P. Jackson as alternate; Dr. M. Lefebvre replaced Dr. R. Keeler as the University of Victoria member with Dr. M. Roney as alternate; Ms. J. Verrett replaced Dr. N. Sherman as the National Research Council member. The Operating Committee met 11 times in 1998.

NRC Advisory Committee on TRIUMF

Dr. D.G. Stairs	Chairman	McGill University
Dr. D. Santry	Secretary	National Research Council
Dr. P.-G. Hansen		Michigan State University
Dr. J.C. Hardy		Atomic Energy of Canada Ltd.
Dr. J.G. Martel		National Research Council
Dr. D. Perkins		Oxford University
Dr. B. Peters		unaffiliated
Prof. V. Soergel		Werner-Heisenberg Inst.
Dr. R. Taylor		SLAC
Prof. R. Carnegie	(<i>ex officio</i>)	Carleton University
Dr. C.H.W. Jones	(<i>ex officio</i>)	Simon Fraser University
Dr. P. Kalyniak	(<i>ex officio</i>)	Carleton University

Changes in 1998: Dr. D. Santry replaced Dr. N. Sherman as secretary; Prof. M. Stott stepped down; Dr. P. Kalyniak replaced Dr. P. Sinervo as an *ex officio* member.

Agency Committee on TRIUMF

Dr. A.J. Carty	Chairman	President, National Research Council
Dr. T. Brzustowski		President, Natural Sciences and Engineering Research Council
Mr. K. Lynch		Deputy Minister, Industry Canada
Mr. J. McLure		Deputy Minister, Western Economic Diversification
Ms. J. Verrett	Secretary	National Research Council

Changes in 1998: Ms. J. Verrett replaced Dr. N. Sherman as secretary.

TRIUMF Safety-Management Committee

Dr. A. Astbury	Director, TRIUMF
Dr. E.W. Blackmore	Head, Accelerator Technology Division
Dr. G.G. Dutto	Head, Cyclotron Operations Division
Mr. P.L. Gardner	Head, Technology Transfer Division
Dr. J.-M. Poutissou	Associate Director/Head, Science Division
Mr. I.M. Thorson	Head, Administration Division
Dr. P.W. Schmor	ISAC Project Leader
Mr. J. Drozdoff	Head, TRIUMF Safety Group
Mr. M. Stenning	Head, Operations Group
Dr. M. Adam	TAPC Chairman
Mr. G. Wood	Industrial Safety Officer
Mr. J. Hanlon	Manager, Human Resources & Administrative Services
Dr. N. Stevenson	Head, Applied Technology Group
Mrs. K. Gildert	Recording Secretary

Experiments Evaluation Committee

Subatomic Committee:

Dr. K. Langanke	Chairman	Aarhus University
Dr. J.-M. Poutissou	Associate Director / (<i>ex officio</i>)	TRIUMF
Dr. H. Fearing	Secretary	TRIUMF
Dr. C. Batty		Rutherford Appleton Laboratory
Dr. P.-G. Hansen		NSCL – Michigan State University
Dr. L. Buchmann		TUEC/TRIUMF
Dr. W.C. Haxton		University of Washington
Dr. B.R. Holstein		University of Massachusetts
Dr. A. Richter		Technische Universität Darmstadt
Dr. M.D. Hasinoff		TUEC Past Chair/University of British Columbia
Dr. I.S. Towner		Queen's University
Dr. M.C.T. Wiescher		University of Notre Dame

μ SR Committee:

Dr. M. Thewalt	Chairman	Simon Fraser University
Dr. J.-M. Poutissou	Associate Director / (<i>ex officio</i>)	TRIUMF
Dr. P.W. Percival	Secretary / (<i>ex officio</i>)	TRIUMF
Dr. I.K. Affleck		University of British Columbia
Dr. D.K. Bohme		York University
Dr. R.E. Wasylshen		Dalhousie University
Dr. S. Roorda		Université de Montréal

In July, 1994 the Experiments Evaluation Committee was formally split into two committees representing subatomic physics and μ SR physics. Changes in membership during the year were: Dr. L. Buchmann joined as TUEC chairman, and Dr. M. Hasinoff replaced Dr. G. Roy as TUEC past chairman (Subatomic); Dr. L. Taillefer completed his term (μ SR). The committee welcomed Dr. S. Roorda (μ SR).

Life Sciences Project Evaluation Committee

Dr. T. Lewellen	Chairman	University of Washington
Dr. J.-M. Poutissou	Associate Director	TRIUMF
Dr. L.P. Robertson	Secretary	University of Victoria
Dr. D.A. Axen		University of British Columbia
Dr. T. Budinger		Lawrence Berkeley National Laboratory
Dr. R. Finn		Memorial Sloan-Kettering Cancer Center
Dr. R. Flocchini		Crocker Laboratory, University of California
Dr. J. Fowler		Brookhaven National Laboratory

Biomedical Experiments Evaluation Committee

Dr. L.D. Skarsgard	Chairman	British Columbia Cancer Research Centre
Dr. J.M. Cameron		EEC/IUCF
Dr. D.A. Axen		EEC/University of British Columbia
Dr. M.J. Ashwood-Smith		University of Victoria
Dr. A. Astbury		TRIUMF
Dr. R.R. Johnson		University of British Columbia
Dr. T.R. Overton		University of Alberta
Dr. D.C. Walker		University of British Columbia
Dr. G.F. Whitmore		University of Toronto