Canada Foundation for Innovation
Fondation canadienne pour l'innovation

NEWS RELEASE

For immediate release

Canada to Play a Key Role in Biggest Science Experiment in History

OTTAWA, APRIL 18, 2006—The biggest science experiment in history is currently underway at the world-famous CERN labs in Switzerland, and Canada is poised to play a critical role in its success. Thanks to a $10.5 million investment announced today by the Canada Foundation for Innovation (CFI), an ultra-sophisticated computing facility—the ATLAS Data Centre—will be created to support the ATLAS project at CERN's Large Hadron Collider (LHC).

"Our participation in the ATLAS project will further enhance Canada's well-earned reputation as a world-class destination for research and researchers," said Dr. Eliot Phillipson, President and CEO of the CFI. "This investment secures Canada's involvement in the largest international computing grid ever constructed and allows us to remain at the forefront of international physics research."

"Today's announcement by the CFI will ensure that Canada remains a global leader in research," said the Honourable Maxime Bernier, Minister of Industry. "This government believes that increased support of basic and applied research—especially in science and technology—is an essential component of Canada's future economic well-being."

The ATLAS Data Centre to be constructed in Canada will serve to filter, analyze and store data generated by the ATLAS project, a cutting-edge particle physics experiment set to take place at CERN'S LHC once construction is completed in 2007. The LHC will be the most powerful and sophisticated particle accelerator in the world, capable of reproducing 'Big Bang' like conditions by smashing particles together that have been accelerated to velocities just shy of the speed of light. A central part of the LHC facility will be the ATLAS detector, an instrument engineered to measure the after effects of those collisions, information that will allow physicists to study nature at its most fundamental level. With roughly 40 million collisions per second, the detector is set to generate enormous amounts of data—enough data, in fact, to fill 4.5 million CDs a year, a stack that would be ten CN Towers high.

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In order to deal with this tidal wave of data, CERN is leading the creation of a worldwide grid of facilities that will push the boundaries of current computing capabilities. The CFI funding will go towards the construction of a 'Tier 1' computing facility in Canada—a critical hub in an international network of computers that will prove vital to the experiment's success. Simon Fraser University spearheaded the Tier 1 proposal by Canadian universities participating in ATLAS (University of Alberta, University of British Columbia, Carleton University, McGill University, Université de Montréal, Simon Fraser University, University of Toronto, University of Victoria, and York University). The ATLAS Data Centre will be housed at TRIUMF, the national laboratory for particle and nuclear physics in Vancouver owned and operated by a consortium of Canadian universities. Installation will begin this summer, with full-scale testing slated to begin in the early fall.

"The ATLAS-Canada collaboration is delighted by the CFI's approval of the ATLAS Data Centre," said Prof. Michel Vetterli of SFU, coordinator of ATLAS computing in Canada. "This facility will give us the tools to be leaders in the extraction of ground-breaking scientific results from the ATLAS data. It will also make Canada a full participant in the largest deployment of grid computing world-wide. This technology has the potential to impact high-performance computing in a way comparable to how the World-Wide-Web transformed the global sharing of information."

The Canada Foundation for Innovation (CFI) is an independent corporation created by the Government of Canada to fund research infrastructure. The CFI's mandate is to strengthen the capacity of Canadian universities, colleges, research hospitals, and non-profit research institutions to carry out world-class research and technology development that benefits Canadians.

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For more information:

Angus McKinnon
Coordinator, Media Relations
(613) 996-3160
angus.mckinnon@innovation.ca

Susan Jamieson-McLarnon
Director, Media and Public Relations (acting)
Simon Fraser University
(604) 291-3210/3929/5151
susan_jamieson-mclarnon@sfu.ca

Isabelle Fontaine
Office of the Honourable Maxime Bernier
Minister of Industry
(613) 995-9001

Prof. Michel Vetterli
Dept. of Physics
Simon Fraser University
(604) 291-5488
vetterli@sfu.ca