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METRO VANCOUVER STUDENTS STUDY BIG BANG IN PHYSICS MASTERCLASS

(Vancouver, BC) -- On Friday March 18, about 40 high school students from Vancouver, Burnaby, Surrey, and Richmond will get their hands on real data from the world's largest subatomic physics experiment to search for exotic particles last seen naturally microseconds after the big bang. Along with over 8,000 other students from 23 countries invited to 130 institutions worldwide, these students are taking part in the Particle Physics Masterclass, a global outreach event where students analyze real data from the Large Hadron Collider (at the CERN laboratory in Geneva, Switzerland) under the watchful eye of their teachers and university research scientists. At day's end, the students will discuss their results through videoconference with other Masterclass students from China, Japan, and the United States. The event is sponsored by TRIUMF, Simon Fraser University (SFU), and the University of British Columbia (UBC), and organized by the Fermi National Accelerator Laboratory "Quarket" initiative in the USA.

The Particle Physics Masterclass began in Europe in 2005, and emulates art masterclasses where students work on a technique under the guidance of a professional. In this case students learn the art of data analysis guided by professional research scientists and tutored by high school teachers. It has spread to around the world through various regional masterclasses throughout March.

This year is the first time that Canada will participate in the Masterclass. It is a full-day event taking place at SFU, led by Professor Dugan O'Neil, and at UBC, led by Professor Colin Gay. They will be assisted at SFU by Vancouver teacher Mike Hengeveld and Surrey teacher Susan Hunter-Jivung, and at UBC by Richmond teacher Philip Freeman. Professor O'Neil explains, "The goal of this Masterclass is to provide the students with a reasonable understanding of what particle physicists do everyday and how particle physicists gather the results by leading the students to act in a way that particle physicists would act." O'Neil also hopes that the students leave the event with an appreciation of how the work is done and the excitement and enthusiasm of particle physics.

The students are led though an intensive full day of lectures, peer and teacher instruction, scientist mentoring, lunch with scientists, and analysis of real data from the ATLAS experiment at the LHC. The highlight comes at the end of the day, when an analysis review videoconference is scheduled with other Masterclass students in the USA, Japan, and China. Closely emulating videoconferences the research scientists attend regularly, the videoconference has proven to be a big hit with students over the years.

TRIUMF Outreach Coordinator Dr. Marcello Pavan is very pleased that the Particle Physics Masterclass has finally taken root in Canada. "Now that ATLAS is taking real data, it seems the time was right for the Masterclass to come together here. We see this year's event as the 'first annual' class, as well as a pilot for possible inter-Canadian Masterclasses with other universities across the country." Pavan is grateful for the ATLAS-Canada collaboration scientists at SFU, UBC, and TRIUMF who are giving freely of their time to inspire the students, and for the school teachers for their invaluable efforts making the Masterclass a success.

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About TRIUMF

TRIUMF is Canada's national laboratory for particle and nuclear physics. Located on the south campus of the University of British Columbia, TRIUMF is owned and operated as a joint venture by a consortium of the following Canadian universities, via a contribution through the National Research Council Canada: University of Alberta, University of British Columbia, University of Calgary, Carleton University, University of Guelph, University of Manitoba, McMaster University, Université de Montréal, Queen's University, University of Regina, Saint Mary's University, Simon Fraser University, University of Toronto, University of Victoria, York University.

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Links

Particle Physics Masterclass	http://www.physicsmasterclasses.org/
2011 Quarknet Masterclass	http://quarknet.us/library/index.php/Masterclass_Library
LHC at CERN	http://public.web.cern.ch/public/en/LHC/LHC-en.html
ATLAS Experiment at LHC	http://atlas.ch
ATLAS-Canada Collaboration	http://www.atlas-canada.ca
TRIUMF Outreach	http://www.triumf.ca/outreach
Simon Fraser University Physics Department	http://www.physics.sfu.ca
University of British Columbia Physics and Astronomy	http://www.physics.ubc.ca