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Japan and Canada to Compete for Top American Researcher

(Vancouver, BC) --- In an unusual alliance between TRIUMF, Canada's national laboratory for nuclear and particle physics, and the Kavli Institute for the Physics and Mathematics of the Universe (Kavli IPMU) in Japan, a long-term joint research position has been created in order to recruit, develop, and support a world-leading scientist in two countries. The catch? After working for the first four years with 75% of his time in Japan and 25% in Canada, the candidate will choose which laboratory's long-term job offer to accept. American physicist Dr. Mark Hartz has been selected for this high-stakes competition and in five years will be choosing his long-term home in Tokyo or Vancouver.

From either side of the Pacific Ocean, there will continue to be a great demand for Hartz. He has been appointed as assistant professor and is expected to carry out the full range of duties of a grant tenure track research scientist at both Kavli IPMU and TRIUMF. Additionally, he will serve on internal committees and represent both institutes at the national and international level. His cross-cultural and cross-laboratory experiences will be a great benefit for both Kavli IPMU and TRIUMF.

Dr. Nigel S. Lockyer, director of TRIUMF, acknowledged the rarity and significance of Hartz's role. Lockyer said, "We need more competitive, cross-border positions like this to enrich and strengthen top talent. I'm delighted that Japan agrees that Hartz is worth fighting for, and yet I'm confident that in the long term Canada is the right place for him and his world-class research ambitions."

Dr. Hitoshi Murayama, director of Kavli IPMU, said, "Mark is a tremendous addition to our team and will help expand our institutional role in the Japanese flagship T2K neutrino experiment. Once he comes to Kavli IPMU and sees our fantastic environment with interdisciplinary interactions with astronomers and mathematicians, I have no doubt that he will settle down here. We already have a great track record of keeping our non-Japanese scientists happy and productive."

In recent years, Hartz experienced the enormous benefits of global collaboration through research at the Tokai to Kamioka (T2K) neutrino experiment—an international investigation into the behaviour of neutrinos as they travel from one location to another, where he led national efforts to develop beamline monitors and analysis specific to the experiment. With his advanced technical and engineering background, Hartz is an ideal candidate for this cross-laboratory role. He will continue to focus his tenure on the T2K collaboration and is expected to build a strong T2K experimental group at Kavli IPMU.

"The T2K experiment is a textbook example of scientists working across borders to drive new discoveries and pursue the best science," said Hartz. "This joint position is a brilliant opportunity to work with research communities and give momentum to those interactions. Although national borders are invisible to the scientist in me, I am curious to see where I'll end up in five years!"

As a post-doctoral fellow at both York University and the University of Toronto, Hartz gained extensive experience with the T2K Optical Transition detector and led both the beam analysis and Near Detector to Far Detector Extrapolation analysis groups. He completed detailed predictions

of neutrino beam properties prior to the neutrino changing its form in a phenomenon called “neutrino oscillation”. Additionally, Hartz developed sophisticated analysis tools to constrain the neutrino beam flux—an important element for analyzing the oscillations of neutrinos.

Kavli IPMU Director Dr. Hitoshi Murayama will be visiting Vancouver on July 12, 2013, to discuss the mysteries of the universe in a public talk hosted by Science World and TRIUMF. More at <http://www.triumf.ca/headlines/current-events/dr-hitoshi-murayama-science-world>.

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About Kavli IPMU

The Kavli Institute for the Physics and Mathematics of the Universe (Kavli IPMU) is an international research institute with English as its official language. The goal of the institute is to discover the fundamental laws of nature and to understand the universe from the synergistic perspectives of mathematics, astronomy, and theoretical and experimental physics. The Institute for the Physics and Mathematics of the Universe (IPMU) is established in October 2007 as one of the World Premier International Research Center Initiative (WPI) of the Ministry of Education, Sports, Science and Technology in Japan with the University of Tokyo as the host institution. IPMU was designated as the first research institute within Todai Institutes for Advanced Study (TODIAS) in January 2011. It received endowment from The Kavli Foundation and was renamed “Kavli Institute for the Physics and Mathematics of the Universe” in April 2012. Kavli IPMU is located on the Kashiwa campus of the University of Tokyo, and more than half of its full-time scientific members come from outside Japan.

About TRIUMF

TRIUMF is Canada’s national laboratory for particle and nuclear physics. Together with its partner AAPS, Inc., TRIUMF also seeks to commercialize its technologies for the benefit of all Canadians. Located on the south campus of the University of British Columbia, TRIUMF receives operating support from the Government of Canada through a contribution agreement via National Research Council Canada; the Government of British Columbia provides capital for new buildings. TRIUMF is owned and operated as a joint venture by a consortium of the following Canadian universities: University of Alberta, University of British Columbia, University of Calgary, Carleton University, University of Guelph, University of Manitoba, McGill University, McMaster University, Université de Montréal, University of Northern British Columbia, Queen’s University, University of Regina, Saint Mary’s University, Simon Fraser University, University of Toronto, University of Victoria, University of Winnipeg, and York University. For more information, please visit us at <http://www.triumf.ca>.

About T2K

T2K is a neutrino experiment designed to investigate how neutrinos change from one flavour to another as they travel ([neutrino oscillations](#)). An intense beam of muon neutrinos is generated at the [J-PARC nuclear physics site](#) on the East coast of Japan and directed across the country to the [Super-Kamiokande](#) neutrino detector in the mountains of western Japan. The beam is measured

once before it leaves the J-PARC site, using the near detector [ND280](#), and again at Super-K: the change in the measured intensity and composition of the beam is used to provide information on the properties of neutrinos.