

FOR IMMEDIATE RELEASE

Quest University Canada's Robert Knop Part of Nobel Prize-Winning Physics Team

SQUAMISH, BC, January 3, 2012 – When the 2011 Nobel Prizes were handed out in Stockholm, Sweden on December 11, Quest University Canada's physical science tutor Dr. Robert Knop was there. Knop attended the event to celebrate the awarding of the 2011 Nobel Prize in Physics "*for the discovery of the accelerating expansion of the Universe through observations of distant supernovae*". One half of the prize went to Berkeley scientist Saul Perlmutter with whom Knop worked closely in Berkeley during the final analysis that led to the discovery. Brian P. Schmidt and Adam G. Riess shared the other half of the prize.

"Watching Saul being given that Nobel Prize is one of those life events I wouldn't want to have missed," says Knop. "It was perhaps unusual for a group this large to come out to the Nobel Prize Ceremony. Brian, Adam, and Saul may be the ones with the glory, they may be the ones that history will remember, but they did a good job of sharing some part of the glory with us, and made it clear that there are a lot of people who share the credit for this discovery."

Knop was deeply involved in the Supernova Cosmology Project (SCP) with Perlmutter from 1996 through 2005, and had multiple roles in the team. Primarily, he was one of the leaders of the massive task of maintaining and updating the software used for the data reduction pipeline during searches for the crucial kind of exploding star called a Type Ia supernova.

"That was always a frantic time," recalls Knop, "for we were getting in data on these supernovae that would fade within weeks. We had to figure out from our search where any new supernovae were, so that we could get other telescopes, including the Hubble Space Telescope, the 10m Keck telescope, and a range of others, targeted for follow-up observations."

His second role was to take all of the images received from this wide range of telescopes, and process them to generate the supernova lightcurves. A lightcurve is a plot of brightness versus time. The maximum brightness of the supernova was what was used to measure the distance to the galaxy in which the event occurred, so was of key importance. "A lot of what I was doing were cross-checks, making sure that we really were doing everything right to ensure the results that ultimately led to the discovery were accurate," Knop says.

During his Nobel Lecture prior to the Prize Ceremony, Perlmutter described Knop as being a critical part of the Berkeley team, and someone who "thinks, types and programs faster than I talk. The popular image of the lone scientist in the laboratory looks nothing like our experience... This particular work was the product of an amazing community of scientists," concluded Perlmutter.

More...

With a PhD from Caltech, Knop was at Lawrence Berkeley Lab with Perimutter until 2001, then spent the next six years as an assistant professor of Physics and Astronomy at Vanderbilt University, while continuing to work with the SCP until 2005. He led an analysis of supernovae observed with the Hubble Space Telescope that confirmed the accelerating Universe result and ruled out dust in the supernova host galaxies as a possible confusing factor. That work was published in *The Astrophysical Journal* in 2003 (volume 598, page 102). Knop joined Quest in 2010 and teaches an array of physical science and computer courses.

For further information about the Nobel Prize-winning project, visit:

<http://www.nobelprize.org/mediaplayer/index.php?id=1725&view=5>

<http://365daysofastronomy.org/2011/10/12/october-12th-the-discovery-of-the-accelerating-universe/>

About Quest University Canada:

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Photo Caption: (Some of the) people who were in Berkeley during the 1997 push to complete the analysis that led to the discovery of the accelerating Universe. Front, L to R: Patricia Castro, Rob Knop, Saul Perlmutter, Nelson Nunes. Back, L to R: Peter Nugent, Sebastien Fabbro, Robert Quimby, and Greg Aldering.

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