

IPMU starts moving: its first international workshop

Institute for the Physics and Mathematics of the Universe
Embargo until Dec 17, 2007

The first international workshop of the Institute for the Physics and Mathematics of the Universe (IPMU) opens today. IPMU was founded as one of the World Premier International Research Centers in October earlier this year. It aims to become a “visible center in the world” for research in fundamental science addressing the big mysteries about the universe: How did the universe start? What is it made of? Why do we exist? The IPMU researchers believe that one of the critical experiments that address these profound questions is the Large Hadron Collider (LHC) experiment that is scheduled to start data taking next year in Geneva, Switzerland. Japan is one of the major participants in this international experiment, which is arguably the biggest science experiment ever in human history. This week’s workshop will involve twenty scientists from around the world to discuss how we will be able to use a huge amount of data coming out from LHC to understand the inner workings of the universe.

Mihoko Nojiri, a professor of KEK, is the principal organizer of this workshop, and is internationally known for her work on LHC physics. She is especially interested in how the LHC data may reveal the nature of mysterious dark matter that binds our galaxy together. “There is a lot of work to be done before we can effectively use many Petabytes of data coming out from the LHC,” she says. The format of the workshop, dubbed “focus week,” allows participants to have informal discussions, essential for the scientists to exchange ideas and move the science forward.

Director of IPMU, Hitoshi Murayama from University of California, Berkeley, came up with this new format of workshops. “Traditional workshops don’t leave participants to have discussions with meat,” he says. The focus week intentionally leaves a large amount of time with no talks scheduled, and limits the number of speakers to the bare minimum. The next focus week is scheduled in March, addressing the elusive mass of neutrinos from laboratory experiments, astronomical observations, and theoretical considerations.