

## Road Map for Discoveries at Hadron Colliders

*Saturday, August 21, 2010 9:15 AM (1 hour)*

Particle physics at the high energy frontier is dominated by experiments at hadron colliders. The Tevatron Collider at Chicago, USA, with its successful exploitation and many searches for new physics is now being followed by the Large Hadron Collider (LHC) at Geneva, Switzerland, which will explore a new territory of physics in the coming decades. The LHC will allow us to study, in a laboratory, for the first time fundamental physics phenomena as they occurred very shortly after the Big Bang. The experiments address questions like: why have particles mass, what is the mysterious non-visible dark matter in the Universe, are there more than four dimensions in Nature, what are the smallest building blocks of matter? South African teams are part of the challenging LHC experiments. Results and expectations from both projects will be discussed.

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