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## The Belle II Experiment at the SuperKEKB e+e- Collider

*Thursday, 18 June 2015 09:45 (30 minutes)*

Belle II will probe the 'flavour sector' of particle physics at the high-luminosity SuperKEKB e+e- collider, located at the KEK laboratory in Japan. Accelerator commissioning will start in 2016, with the goal of collecting 50 inverse attobarns of data by 2024, which is thirty times the combined integrated luminosity of the two previous generation B-factories, PEP-II at SLAC and KEKB at KEK. This precision-frontier facility will open an exciting window on new energy scales beyond the reach of existing colliders, including the LHC, by virtue of quantum loops corrections that are sensitive to very massive, and as yet undiscovered, particles. These hypothesized particles manifest themselves in precision measurements of processes involving bottom and charm

quarks and tau leptons, such as CP violation and other asymmetries, rare decays, and processes that are forbidden within our current understanding of physics. This presentation will provide an overview of the physics and status of the Belle II/SuperKEKB project with a focus on the Canadian contributions.

**Primary authors:** WARBURTON, Andreas (McGill University (CA)); KOWALEWSKI, Bob (University of Victoria (CA)); HEARTY, Christopher (University of British Columbia); MCKENNA, Janis (University of British Columbia); MARTIN, Jean-Pierre (Unknown); RONEY, Michael (University of Victoria); TARAS, Paul (Université de Montréal); Dr SOBIE, Randy (University of Victoria (CA)); MATTISON, Thomas (University of British Columbia)

**Presenter:** RONEY, Michael (University of Victoria)

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