

COMET Phase II

Friday, 29 August 2014 16:30 (30 minutes)

The COMET experiment aims to search for muon to electron conversion with a sensitivity of $< 10^{-17}$. The experiment will be built in two phases, with Phase-I aiming at a sensitivity of $< 10^{-15}$ using a cylindrical drift chamber. The design of COMET Phase-II has a longer beam line to improve the quality of the muon beam and perform momentum selection of electrons. The detector system will include a straw tracker and a calorimeter, which will be prototyped and tested at Phase-I.

Staging the experiment is very important as this allows important measurements of the beam that will lead to a better understanding of backgrounds and the muon yield. These measurements can then be used to optimise the design of COMET Phase-II and will provide an improved estimate of the sensitivity of the experiment. The construction of Phase-I already underway and data taking will start in 2016 and Phase-II is scheduled to start data taking in 2019.

WG3: Accelerator Physics (Yes/No)

No

WG2: Neutrino Scattering Physics (Yes/No)

No

WG4: Muon Physics (Yes/No)

Yes

WG1: Neutrino Oscillation Physics (Yes/No)

No

Type of presentation

Oral presentation

Primary author: KURUP, Ajit (Imperial College London)

Presenter: KURUP, Ajit (Imperial College Sci., Tech. & Med. (GB))

Session Classification: WG4: Muon Physics and High Intensity applications