DESY Seminar

Tuesday, 27.11.2007, 17h

DESY Hörsaal

Precise measurement of the muon lifetime with the FAST experiment - first results -

Chiara Casella
(University Geneva)

The goal of the FAST experiment, at the Paul Sherrer Institute (PSI), is the measurement of the muon lifetime to a precision of about 4 ps (2 ppm), one order of magnitude improvement on the present world average. After including all experimental and theoretical errors, this represents a precision measurement of the Fermi coupling constant G_F, one of the fundamental parameters of the Standard Model, that has to be fixed for it to become predictive. The experiment will be described, and its first physics results will be presented, based on few 10^{10} events collected in December 2006, providing a new measurement of the muon lifetime and G_F that is competitive with the current world average.

- **Tea and cookies will be served at 16.45h in the lobby**
- **After the seminar there is a chance for private discussions with the speaker over wine and pretzels**