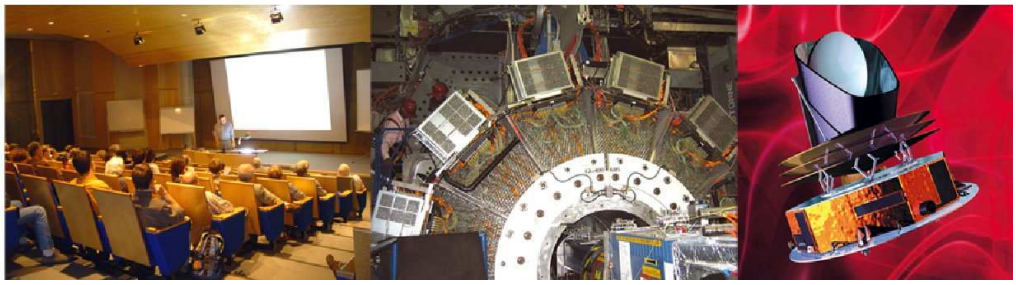
LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE



Séminaire du Laboratoire de l'Accélérateur Linéaire

Marco Pedrozzi

Paul Scherrer Institut

Vendredi 29 Avril 2016 à 11 :00

SwissFEL Injector Test Facility - Mission, commissioning experience and results

The SwissFEL Injector Test Facility (SITF) was operated between 2010 and 2014 serving as a pilot plant and testbed towards SwissFEL, the X-ray Free-Electron Laser facility presently in construction at the Paul Scherrer Institute. The test facility consisted of a laser-driven RF electron gun followed by an S-band booster linac, a magnetic bunch compression chicane and a diagnostic section including a transverse deflecting RF cavity. It delivered electron bunches of up to 200 pC charge and up to 250 MeV beam energy at a repetition rate of 10 Hz. In particular the injector was designed in order to achieve and surpass the challenging electron beam brightness required by SwissFEL and to develop and consolidate the instrumentation and acceleration infrastructure required for a stable operation of a user facility. In this presentation we give an overview of the commissioning experience and the remarkable beam physics measurements performed during the operation of the test facility.

Salle 101 du LAL - Bât. 200, Orsay

Thé et café seront servis 5 mn avant le séminaire

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