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A high-intensity electron-positron accelerator as a possible extension of BEPCII

The BEPCII is an electron-positron collider in the tau-charm energy regime built by China. It explores a rich spectrum of physics ranging from precision tau-charm measurements to searches for exotic states and rare or forbidden phenomena in the tau-charm sector of particle physics. Thanks to the high luminosity of the BEPCII (up to 10^{33} /cm²/s), many important physics results with significant impacts have been produced at the BESIII experiment at the BEPCII, including the discovery of Zc(3900). The BEPCII/BESIII has played a leading role in tau-charm physics studies in the world. Part of the BESIII detector has been/is being upgraded to address aging and performance issues. More upgrades on both the accelerator and the detector are being considered. However, to fully explore the tau-charm physics, a high-intensity electron-positron accelerator with a center-of-mass energy ranging from 2 to 7 GeV and a luminosity of up to 10^{35} /cm²/s is deemed necessary. In this seminar, I will discuss the idea of such an electron-positron machine along with its detector as a possible extension of the BEPCII/BESIII after giving an introduction to the BEPCII/BESIII. I will also briefly mention the outcome of the latest discussion on development strategy for accelerator-based high-energy physics in China organised by the High-Energy Physics Association of China.

Salle 101 - Bât. 200, Orsay

Thé et café seront servis 15 mn avant le séminaire

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