Current Status of PAL-XFEL Project

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PAL-XFEL project is aiming to produce 0.1-nm coherent X-ray laser to photon beam users. In order to produce such photons, there are 10-GeV electron linac based on S-band normal conducting accelerating structures and a 150-m long out-vacuum undulator system. The project is already started in April 2011, and the 1,110-m long building is expected to be completed by November 2014. The injector test facility (ITF) which is the first 139-MeV section of the main linac has been installed and is under commissioning in newly added corner of old PLS linac building. In this talk, I will introduce the project in general, performances of ITF, and domestic developments of subsystems such as 200-MW modulator, high power RF components, precision low power RF systems, and undulators and the vacuum chambers.

Figure

Fig. 1. Artist concept of PAL-XFEL building along with existing PLS facilities

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