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Development progress of high-level applications for the HEPS

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The High Energy Photon Source (HEPS) is a 6 GeV, 1.3 km, 4th generation storage ring light source being built in Beijing, China. The HEPS storage ring is designed with an ultralow emittance of a few tens of pm rad. The development of high-level applications (HLAs) for HEPS started in early 2021. A new framework named PYthon-based Accelerator Physics Application Set (Pyapas) was developed for building HLAs. Based on Pyapas, the application development for Linac was completed in June 2022. And then the joint test with hardware system was performed, all the applications worked well in the Linac control room. Beam commissioning for the Linac began in March 9 of this year, and all the HLAs for the Linac are functioning well. The application development for the three transfer lines and the booster are essentially complete, with all the applications passing testing with virtual accelerator. Development of the HLAs for the storage ring began in November 2022. This paper will present a detailed progress on the development progress of HLAs for HEPS.

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