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SINBAD - The accelerator R&D facility under construction at DESY

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The SINBAD facility (Short INnovative Bunches and Accelerators at DESY) is a long-term dedicated accelerator research and development facility currently under construction at DESY. It will be located in the premises of the old DORIS accelerator complex and host multiple independent experiments cost-effectively accessing the same central infrastructure like a central high power laser. With the removal of the old DORIS accelerator being finished, the refurbishment of the technical infrastructure is currently starting up.

The presently ongoing conversion of the area into the SINBAD facility and the currently foreseen layout is described. The first experiment will use a compact S-band linac for the production of ultra-short bunches at hundred MeV. Once established, one of the main usages will be to externally inject electrons into a laser-driven plasma wakefield accelerator to boost the energy to GeV-level while maintaining a usable beam quality, ultimately aiming to drive a FEL. The second experiment already under planning is the setup of an attosecond radiation source with advanced technology. Further usage of the available space and infrastructure is revised and national and international collaborations are being established.

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