3rd European Advanced Accelerator Concepts Workshop



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Status and Objectives of the Dedicated Accelerator R&D Facility "SINBAD" at DESY

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We present an status update on the dedicated R&D facility SINBAD which is currently under construction at DESY. The facility will host multiple independent experiments on the acceleration of ultra-short electron bunches and novel, high gradient acceleration methods. The first experiment is the ARES-experiment with a normal conducting 100MeV S-band linac at its core. We present the objectives of this experiment ranging from the study of compression techniques to sub-fs level to its application as injector for various advanced acceleration schemes e.g. the plans to use ARES as a test-site for DLA experiments in the context of the ACHIP collaboration. The timeline including the planned extension with laser driven plasma-wakefield acceleration is presented. The second initial experiment is AXSIS which aims to accelerate fs-electron bunches to 15 MeV in a THz driven dielectric structure and subsequently create X-rays by inverse Compton scattering.

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