

Abstract Submitted
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Status of the proposed Helmholtz International Beamline for Extreme Fields (HIBEF) at the European XFEL THOMAS COWAN, Helmholtz-Zentrum Dresden-Rossendorf & TU Dresden, HIBEF COLLABORATION — HIBEF will establish multi-purpose high-power and ultra-intense lasers, as well as high-field magnets, at the HED end-station of the European XFEL. This will significantly extend the scope of research that can be carried out at the European XFEL in the areas of strong-field physics, high energy density science, relativistic laser-plasma physics, ultra high-pressure planetary and astrophysics, dynamic materials research, and magnetic phenomena in condensed matter. The proposed laser systems include: an ultra-intense PW-class Ti:Sapphire laser operating with full energy at 1 Hz, and at 200 TW at 10 Hz; high-energy few ns-pulse (shaped) lasers operating at 100 J with Hz rep-rate, upgradable to kJ-class; and a 1.5 MJ pulse generator to drive pulsed high-field magnets (50 T, \sim 1ms) for condensed matter and magnetized HED-plasma research. HIBEF is an international, multi-institution initiative, with primary funding applied for from the German Helmholtz Association, within the scope of an European XFEL User Consortium. Present status and future plans will be presented. [see, www.hzdr.de/hgfbeamline]

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