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ALS-U accumulator ring raft and dipole installation

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The ALS-U project is an upgrade to the Advanced Light Source (ALS) at the Lawrence Berkeley National Laboratory that aims to deliver diffraction-limited x-ray beams with an increased beam brightness of two orders of magnitude for soft x-rays compared to the current ALS facility. A nine-bend achromat lattice Storage Ring (SR) and a three-bend achromat Accumulator Ring (AR) will be installed in the facility in two phases. The AR is currently being installed in the ALS facility during its regularly planned shutdowns while the SR upgrade will follow during a 12 months shutdown. AR rafts and dipoles are being installed with ground based tooling and overhead crane lifting methods. This paper focuses on the AR installation. In particular we will describe the engineering design, prototyping and testing of the customized ground based installation tooling, which led to a successful installation of the first AR production rafts and dipoles in the ALS tunnel.

Footnotes

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Primary author: GRIESEMER, Tobias (Lawrence Berkeley National Laboratory)

Co-authors: LODGE, Andrew (Lawrence Berkeley National Laboratory); BULLOCK, Christopher (Lawrence Berkeley National Laboratory); LEITNER, Daniela (Lawrence Berkeley National Laboratory); FULLER, Douglas (Lawrence Berkeley National Laboratory); LEE, Elizabeth (Lawrence Berkeley National Laboratory); NEWMAN, Elliot (Lawrence Berkeley National Laboratory); CADDICK, Jordan (Lawrence Berkeley National Laboratory); MC-COMBS, Kyle (Lawrence Berkeley National Laboratory); QUIOGUE, Marty (Lawrence Berkeley National Laboratory); GUPTA, Priyanka (Lawrence Berkeley National Laboratory); STITT, Rachel (Lawrence Berkeley National Laboratory); SPILLANE, Sean (Lawrence Berkeley National Laboratory)

Presenter: LEE, Elizabeth (Lawrence Berkeley National Laboratory)

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