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The LCLS-II Project at SLAC[1]

DAVID SCHULTZ, SLAC National Accelerator Laboratory

The Linac Coherent Light Source-II (LCLS-II) Project will add capability and capacity to the LCLS facility. The design of the Project presents interesting challenges. The Project will construct a 4 GeV CW superconducting (SC) linac in the first kilometer of the existing SLAC linac tunnel and a substantial cryogenics plant to supply it. Two new variable gap undulators will be placed in the existing LCLS undulator hall, one optimized as a soft x-ray (200-1,300 eV) source will receive electrons from the new SC linac, the other replacing the existing LCLS undulator will receive electrons either simultaneously from the new SC linac (providing 1-5 keV photons) or the 120 Hz copper linac presently used by LCLS (providing 1-25 keV x-rays). The bright x-ray beams are conditioned before they are delivered to experimental stations. First light from the new facility is expected late in 2019.

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