PhotonMEADOW 2023

Contribution ID: 28

Type: Oral

Next Generation of Mirror Benders at LCLS

Tuesday, September 12, 2023 3:00 PM (20 minutes)

The ongoing upgrades of the Linac Coherent Light Source (LCLS) at SLAC aim to further expand the capabilities of X-ray free electron lasers by delivering photon energies up to 20 keV at 1 MHz repetition rates. To support these advancements, significant improvements are being made to the beamlines, particularly through the implementation of new bendable mirror systems capable of operating under these extreme conditions. The design of these upgraded benders builds upon the success of previous generation systems at LCLS, improving aspects such as cooling, mounting and kinematics, twist correction, stability, and overall performance. This talk will provide an overview of the upgrade efforts and highlight the key features and advancements of the new mirror bender systems.

Journal of Synchrotron Radiation Special Issue: will you submit your contribution?

no

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Session Classification: X-ray optics design, realization and metrology