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Cooled photoelectron shields on the first mirror of the MAX IV soft x-ray beamlines

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The higher brightness of 4th-generation storage rings comes with smaller beam sizes and narrower radiation cones, which in turn can deposit higher power density in the optical components. Maximizing the stability from the source to the sample via the many optical components depends on good mechanics and dealing effectively with the increased heat load. This paper presents the cooled photoelectron shields recently installed at the soft x-ray beamlines at MAX IV. These shields were developed in order to address observed long thermal stabilization times of the first mirrors in the beamline, and the negative impacts of increased photoelectron generation at the mirror surfaces.

Footnotes

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