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Silicon optics for ETpathfinder

ETpathfinder is a testbed for interferometry at cryogenic temperatures. Following the design of ET-LF, ETpathfinder's arm cavities will consist of silicon mirrors at an operating temperature of around 18K. In our field, silicon is a new material for high-precision, low-loss optics, with many open questions on material properties and manufacturing capabilities. Here we will give an overview of the current state of our silicon mirrors, the measurements performed, and the lessons that we have learned on the way.

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