

Abstract Submitted
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Thin quartz in x-ray reflection optics¹ NINO PEREIRA, Ecopulse, Inc, 7844 Vervain Ct, Springfield, Va 22152, AL MACRANDER, Advanced Photon Source, Argonne National Laboratory, Argonne, IL, 60439 USA, ELENA BARONOVA, National Research Center Kurchatov Institute, Kurchatov Sq. 1, Moscow 123182, Russia — Thin crystals bent into some desirable shape for monochromatic x-ray imaging of plasmas are rarely the same in the images they give, even when they are made by the same people the same way. Here the crystal of interest is quartz cut along the $(10\bar{1}1)$ crystal plane. Highly detailed measurements have shows that nominally identical samples of thin wafers that could be bent, but held flat for ease of measurement still reflect x-rays differently from each other, and much less uniformly than thick crystals. When bent, such thin crystals should differ from each other in their x-ray reflection as well and be consistent with a performance difference between monochromatic imagers. This paper is to discuss any progress we may have made in obtaining better thin quartz crystals, and to demonstrate their x-ray reflection with any measurements we may have made in the interim, on flat or bent versions of these crystals.

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