

Abstract Submitted
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Experimental validation of a novel imaging scheme to eliminate astigmatism¹ S. FIERROZ, Pine Crest High School, Fort Lauderdale, FL, 33334, M. BITTER, L. DELGADO-APARICIO, K. W. HILL, N. PABLANT, S. SCOTT, F. SCOTTI, Princeton Plasma Physics Laboratory, Princeton, NJ, 08543, J.E. RICE, MIT Plasma Science and Fusion Center, Cambridge, MA, 02139 — Recent papers by Bitter et al.^{1–3} have proposed novel imaging schemes to eliminate astigmatism by matched pairs of spherically bent crystals or reflectors. These imaging schemes should allow stigmatic (or point-to point) imaging at arbitrarily large angles of incidence and be applicable to a broad spectrum of the electromagnetic radiation, including microwaves, visible light, EUV radiation, and x-rays, if appropriate spherically bent reflectors are used. This paper presents experimental results from tests of one of these imaging schemes with visible light, which validate the concept of this scheme and show that stigmatic imaging of objects with areas of about 5 mm x 5 mm is possible. ¹M. Bitter et al, Rev Sci. Instrum. **79**, 10E927 (2008); ²M. Bitter et al., J. Xray Sci. Technol. **17**, 153 (2009); ³M. Bitter et al., J. Phys. B: At. Mol. Opt. Phys. **43**, 144011 (2010)

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