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**Laser guiding in a 33mm, 1GeV capillary discharge laser plasma accelerator**[1] BOB NAGLER, KEI NAKAMURA, CSABA TOTH, CAMERON GEDDES, CARL SCHROEDER, ERIC ESAREY, WIM LEEMANS, LBNL, ANTHONY GONSALVES, SIMON HOOKER, Oxford University, LOASIS/LBNL TEAM, OXFORD UNIVERSITY TEAM — Recently, 1 GeV monoenergetic electron beams were generated in a capillary discharge laser plasma wakefield accelerator (LWFA), by using a capillary with a 312 micron diameter and 33 mm length. We will present analysis of the guiding properties of the capillary discharge waveguide, both at low and high (3 $10^{18} W/cm^2$) intensities. Measurements to diagnose the guiding structure will be discussed, including energy transmission, mode profile and transmitted laser spectrum.

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