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Stereo Imaging as a Diagnostic in SSPX J.C. ORTIZ, C.A. ROMERO-TALAMAS, Lawrence Livermore National Laboratory, Livermore, CA 94550, SSPX TEAM — A stereoscopic imaging diagnostic to provide three-dimensional information of plasma behavior during spheromak formation is being designed and constructed at SSPX. The diagnostic consists of two convex mirrors, macor/stainless steel mounts, a high-speed camera and a telephoto lens. Using a titanium adhesion layer, a thin gold layer is applied to a stock lens providing greater than 95 percent reflectivity at 650nm and a wide field of view. The mirrors and mounts will be under vacuum while the camera and telephoto lens will be located outside the spheromak chamber. The high-speed camera will view both mirrors in the vacuum chamber and provide two images per plasma shot. Each image will be divided such that each mirror will comprise one image. Software will be used to overlay the images to provide a three-dimensional effect. The depth of objects inside the flux conserver can be found as a function of the overlap of the two images. Work performed under the auspices of the US DOE by University of California Lawrence Livermore National Laboratory under contract W-7405-ENG-48.

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