

**Abstract Submitted for the 53rd Annual Meeting  
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Category Number and Subject: 5.7.0, Magnetic Confinement Diagnostics

Theory      Experiment

**Restoring Transmission of Irradiated Image Fiber Bundles,\*** C. Chrobak, R.A. Moyer, J.H. Yu, *University of California San Diego*; M.A. Van Zeeland, *General Atomics* — Image fiber bundles are employed in fusion experiments and other high radiation environments where they are used to transmit an image from an unprotected objective lens to a radiation shielded camera. Due to their exposure to neutron and gamma radiation the transmission of these expensive image fiber bundles can rapidly degrade, especially at the shorter visible wavelengths, and require costly replacement. A cost-effective, non-destructive heat treatment process can recover the spectral transmission lost due to the radiation damage of the fiber bundle. The results and the apparatus used for the first successful restoration of the transmission of an image fiber bundle across its entire wavelength band will be presented.

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