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Density and Impurity Measurements on the TCSU Experiment
CHRIS DEARDS, GEORGE VLASES, RPPL, University of Washington — TCS-U will have numerous diagnostics for density measurements including Thomson Scattering, Langmuir Probes, and a two-color interferometer. Presently only the two-color interferometer is available. Since temperature is inferred from the magnetic field and interferometer-measured density, the density measurement must be accurate and repeatable. The interferometer system on TCS-U is a two color Mach-Zehnder interferometer with an acoustic modulator to shift the reference beams by 40 MHz. The interferometer setup on TCS-U, as well as data supporting its accuracy and repeatability over a number of shots, will be discussed. Impurity measurements made using the spectrometer system, which includes three monochromators and an intensified CCD camera spectrometer, will also be discussed.

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