Soft X-Ray Diagnostics on the Compact Toroidal Hybrid Experiment\textsuperscript{1} G.J. HARTWELL, J. ECKBERG, J.D. HANSON, S.F. KNOWLTON, Auburn University, K. KAMDIN, University of Chicago — Soft X-Ray (SXR) Diagnostics are used on the Compact Toroidal Hybrid (CTH) torsatron experiment (R = 0.75 m, a \sim 0.2 m, B \leq 0.7 T, n_e \leq 10^{19} m^{-3}, T_e \leq 250 eV) for tomographic reconstruction of the emissivity profile, electron temperature measurement, and as input to a 3D reconstruction code. SXR tomography is performed with three cameras with up to 60 chords viewing a poloidal cross-section. Each camera consists of a 20-channel AXUV-20EL photo-diode array filtered with 500nm Al foil. Electron temperatures are being measured with an Amptek X123-SDD spectrometer. The spectrometer views the Bremsstrahlung emission along a single chord through the plasma in the energy range from 1-10 keV. Signals from the 60 channel tomographic camera system and signals from similar cameras located at other toroidal locations are being incorporated into the V3FIT reconstruction code\cite{1}. \cite{1}. J. D Hanson et. al., Nucl. Fusion \textbf{49}, 075031 (2009)

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