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Design and implementation of a Thomson scattering diagnostic for the Compact Toroidal Hybrid[1] PETER TRAVERSO, DAVID MAURER, GREGORY HARTWELL, STEPHEN KNOWLTON, MATTHEW MILLER, Auburn University — The Compact Toroidal Hybrid (CTH) experiment is investigating the avoidance of disruptions in ohmically driven torsaton plasmas in which the ratio of vacuum or external coil transform to the total transform generated by the plasma current and external coils can be lower than 10%. To aid in the characterization and equilibrium reconstruction of these current-carrying CTH plasmas a new Thomson scattering system is under development. Details of the Thomson scattering system design and implementation will be discussed including choice of laser scattering geometry, laser wavelength, stray laser light rejection strategy, collections optics, and spectrometer design.

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