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Inter-ELM Edge Transport Evolution in DIII-D H-mode Plasmas,* J.P. Floyd, W.M. Stacey, S.M. Mellard, *Georgia Tech*; R.J. Groebner, *General Atomics* – This study examines the time evolution and pedestal recovery dynamics of ion transport in the edge pedestal between ELMs on DIII-D. Three plasmas from a DIII-D H-mode current scan are analyzed: discharges (I_p = 0.5 MA), (I_p = 1.0 MA) and (I_p = 1.5 MA). The profile evolution during these shots is interpreted to infer thermal diffusivities, ion diffusion coefficients, ion pinch velocities, and other important transport properties constructed using the momentum balance framework of Ref. [1]. The evolution of these computed properties is examined alongside the evolution of measured quantities, such as the densities, temperatures, rotation velocities, and radial electric field strength, in order to gain insight about the mechanisms of edge transport and pedestal recovery after Type-I ELMs. Both diffusive and non-diffusive (e.g. ion orbit loss) edge transport processes are quantified using the aforementioned framework and the GTEDGE code developed for DIII-D data interpretation. The analysis is focused on maximizing the time resolution of the profile evolutions.

[1] W.M. Stacey and R.J. Groebner, *Nucl. Fusion* **51**, 063024 (2011).

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