Capturing Collisional Effects in Drift Kinetics Using Nonclassical Quadrature Weights[1] BRETT L. ADAIR, ERIC D. HELD, J. ANDREW SPENCER, Utah State University — Implementing closures in hybrid fluid/kinetic codes requires accurate evaluation of the collision operator and its moments. Efficient evaluation of the needed TR potentials should address the different resolution requirements for like species, electron-ion, and ion-electron collisions. A method based on nonclassical quadrature weights tailored to these individual responses has been implemented in NIMROD's continuum kinetic coding. Two speed domains are used to capture the large electron Maxwellian/ion background response at low electron speeds, $v \sim v_{Ti}$. In order to highlight the efficiency of this approach, results are presented for the Spitzer conduction and thermalization problems.

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