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Neoclassical Ion Heat Transport in a Tokamak Pedestal[1] GRIGORY KAGAN, PETER J. CATTO, Massachusetts Institute of Technology — A strong electric field is inherent to a subsonic banana regime pedestal in a tokamak. This field changes the ion trapping condition, thereby modifying the neoclassical heat transport. In conventional theory the main contribution to the collisional heat flux comes from trapped-passing transitions across a boundary that is a cone centered at the origin in velocity space so that these transitions are due only to the pitch-angle scattering component of the collision operator. In the pedestal this boundary is shifted away from the origin and becomes curved due to the strong electric field and finite ion drift departures from flux surfaces [1]. Consequently, a more complete collision operator must be employed that retains the trapped-passing transitions in a transparent manner so that ion neoclassical heat transport can be evaluated in the pedestal with finite orbit effects retained. In this work we employ such a collision operator and apply it to evaluate the banana regime neoclassical ion heat flux in the pedestal region of a tokamak. **References** 1 G. Kagan, P.J. Catto, Plasma Phys. Controlled Fusion 50, 085010 (2008)

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Grigory Kagan
Massachusetts Institute of Technology

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