**Main idea:** Do N-body simulations of dark matter structures match the particle-interactionless NFW profile? Simulations converging to the NFW profile may occur because non-physical (purely numerical) particle interactions are driving the evolution of the system to a pseudo-stable NFW solution. How do we quantify how much particle interactions truly affect the convergence of a simulation?

**Abstract:** They address only the most relevant background information. They describe a problem in the field, and the origins of the problem. Further, they discuss the consequences and interpretations of solution.

**Introduction**: The intro does a very good job of explaining what the core vs cusp problem is and why we should care about it. The authors describe the general idea behind N-body simulations and some of their limitations and strengths. Then they address their specific concern (particle interactions leading to a falsely shorter relaxation timescale) with N-body simulations, they describe where their concern originates from and what the possible consequences are. The authors then highlight the importance of particle collisions and how they could affect the simulations convergence.

**Calculations:** They begin by deriving an expression for the number of particle of a given momentum p. Then they derive an expression for the collision timescale in terms of the relaxation timescale and comment on its importance. These seem easy to follow and re-derive myself. They included all the references they used so I can follow their paper-trail.

**Conclusions:** The simulation arriving at a (quasi)stationary solution does NOT necessarily mean that the system has reached a physical configuration, this solution could be a purely mathematical consequence. They explain why these simulations eventually MUST reach an NFW profile, which strengthens their argument that these results are due to mathematical simulations and not physical processes. Section 3.3 is very unclear to me. It is not obvious what they are trying to communicate. It sounds like they want to test the validity of simulation results and suggest ways of doing so and provide possible factors, both physical and unphysical, which affect simulation results. Then, they present a way of estimating how much the unphysical process affects their simulation in real-time.