

1154-37-1738      **Richard Montgomery\*** ([rmont@ucsc.edu](mailto:rmont@ucsc.edu)). *Scattering in the N-Body Problem; Preliminary Report.*

The distances between bodies increase at an asymptotically linear rate for a large open set of solutions to the Newtonian N-body problem, solutions termed “hyperbolic” by Chazy in 1927. A McGehee-inspired coordinate change adds a manifold at infinity which gives these solutions a place to go: they tend to equilibria at infinity. By analyzing the flow at and near infinity we reprove the analytic asymptotic expansions of Chazy for these solutions, and we set up a scattering map associated to solutions hyperbolic in both time directions.

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