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Three-Body Scattering via the Faddeev Scheme in Configuration Space. NOLAN SAMBOY[1], GEORGE RAWITSCHER, ROBIN CÔTÉ, Department of Physics, University of Connecticut, Storrs, CT 06269-3046, WALTER GLOECKLE, Institute for Theoretical Physics II, Ruhr University Bochum, D-44780 Bochum, Germany — We are adapting Faddeev Equations to three-body atomic and molecular systems by reformulating them in the configuration space using integral equations with Greens functions. The non-additive forces between the three bodies, as well as transitions between rearrangement channels, are included rigorously. The method includes all partial waves, but we will present only the s-wave pieces relevant to ultracold collisions. This formulation appears to be a valuable alternative to current approaches based on solving the differential Schroedinger Equation.

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