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Novel few- and many-body lattice methods for cold atoms DEAN

LEE, North Carolina State University — We discuss general methods for measuring scattering phase shifts, spin-orbit coupling, and mixing angles for quantum particles on a lattice. We also present many-body lattice results for ground state properties at unitarity and deviations due to finite S-wave scattering length, S-wave effective range, and P-wave scattering volumes.

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