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Collision and evaporation dynamics of different isotopes of Sr Y. NATALI MARTINEZ DE ESCOBAR, PASCAL MICKELSON, MI YAN, THOMAS KILLIAN, Rice University — We study the collision and evaporation dynamics of both bosonic and fermionic isotopes of strontium (Sr) in a 1064 nm optical dipole trap. Because of the small s-wave scattering length for the bosonic ^{88}Sr isotope, the elastic-scattering cross section depends strongly on collisional energies. Extending this model to other abundant isotopes and isotope mixtures allows us to determine effective collisional behavior and guides our progress toward quantum degeneracy in Sr.

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