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**Cold collisions in Cr-Cr and Cr-Rb mixtures** ZORAN PAVLOVIĆ,  
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Center for Astrophysics, Cambridge, MA 02138 — We report calculations of the elastic and inelastic cross sections for collisions between two maximally spin-polarized chromium and rubidium atoms in the ultracold regime. Using available data on transition frequencies, discrete dipole matrix elements, and photoionization oscillator strengths in Cr and Rb, we obtain a value for the static polarizability of Cr-Rb and the dispersion coefficient  $C_6$  for the van der Waals interaction. The effect of shape resonances on elastic and inelastic rate coefficients in collision of Cr-Rb mixtures is studied. We also calculate Cr-Cr differential cross sections in order to examine the anisotropic character of the magnetic dipolar interaction in the presence of a magnetic field.

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