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Zeeman relaxation and magnetic Feshbach resonances in bosonic ^{52}Cr gas. Z. PAVLOVIĆ[1,2], R. KREMS[2,3], R. CÔTÉ[1], H. R. SADEGHPOUR[2], [1]UCONN, [2]ITAMP, Harvard-Smithsonian CFA, [3]CUA, Harvard/MIT — We present spin-change collision cross sections and rate constants in cold and ultracold chromium gas in the presence of a magnetic field. By performing coupled-channels calculations, we obtain positions and widths of magnetic Feshbach resonances in the ultracold collisions of Cr atoms. We specifically address scattering of cold chromium in relation with two separate experiments[1,2] and present detailed results for resonances in higher partial waves as well as partial Zeeman relaxation cross sections and rate coefficients.

[1]J. D. Weinstein *et al.*, Phys.Rev.A **65**, 021604(2002).
[2]J. Werner *et al.*, arXiv: cond-mat/0412049.

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