Siegert pseudostate treatment of ultracold collisions JEFFREY SHAINLINE, CHRIS GREENE, University of Colorado and JILA — The previously developed [1,2] formalism of Siegert pseudostates is applied to a two-channel model of ultracold collisions between fermions. The dependence of the real part of the energy of a low-lying Feshbach resonance on magnetic field is considered. The accuracy of a wave packet expanded in the basis of Siegert pseudostates is investigated before and after the real part of the Feshbach resonance has been tuned to negative energy. We observe the wave packet evolving in time [3]. Financial support by the U.S. Department of Energy, Office of Science is gratefully acknowledged. [1] O. I. Tolstikhin, V. N. Ostrovsky, and H. Nakamura, Phys. Rev. A **58**, 2077 (1998). [2] G. V. Sitnikov. I. Tolstikhin, Phys. Rev. A **67**, 2077 (2003). [3] R. Santra, J. M. Shainline, C. H. Greene, Accepted for publication in Phys. Rev. A.

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