Abstract Submitted
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Experimental test of new technique to overcome spin-depolarizing resonances[1] V.S. MOROZOV, A.W. CHAO[2], A.D. KRISCH, M.A. LEONOVA, R.S. RAYMOND, D.W. SIVERS, V.K. WONG, Univ. of Michigan, Ann Arbor, MI 48109-1040, A. GARISHVILI[3], R. GEBEL, A. LEHRACH, B. LORENTZ, R. MAIER, D. PRASUHN, H. STOCKHORST, D. WELSCH, Forschungszentrum Jülich, IKP, D-52425 Jülich, F. HINTERBERGER, Helmholtz Inst., Univ. Bonn, D-53115 Bonn, A.M. KONDRATENKO, GOO Zaryad, Novosibirsk, RU-630058 — We recently tested a new spin resonance crossing technique, Kondratenko Crossing (KC), by sweeping an rf solenoid's frequency through an rf-induced spin resonance with both the KC and traditional Fast Crossing (FC) patterns. Using both rf bunched and unbunched 1.85 GeV/c polarized deuterons stored in COSY, we varied the parameters of both crossing patterns. Compared to FC with the same crossing speed, KC reduced the depolarization by measured factors of 4.7 $\pm$ 0.3 and 19 $\pm \frac{12}{5}$ for unbunched and bunched beams, respectively. This showed the large potential benefit of KC over FC.

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