

Abstract Submitted
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Field-induced slow spin relaxation in monoclinic $\text{Nd}_2\text{Ti}_2\text{O}_7$ single crystals¹ HUI XING, Department of Physics, Zhejiang University, GEN LONG, Department of Physics, SUNY at Buffalo, HANJIE GUO, CHUNMU FENG, GUANGHAN CAO, Zhejiang University, HAO ZENG, SUNY at Buffalo, ZHUAN XU, Zhejiang University — We report the ac susceptibility measurement in the paramagnetic state of the monoclinic $\text{Nd}_2\text{Ti}_2\text{O}_7$ single crystals. An unexpected slow spin relaxation is observed in the presence of a nonzero magnetic field. Such behavior is absent in zero field. Distinct features of the relaxation, including the intrinsic frequency on the order of 1 Hz, the field-, temperature- and spin dilution dependence, and its evolution under positive and negative pressures, indicate that the relaxation is associated with an unusual cooperative behavior involving spin correlations.

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