

Abstract Submitted
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ESR studies of the quasi-2D frustrated Cs₂CuBr₄¹ S.A. ZVYAGIN, D. KAMENSKYI, J. WOSNITZA, HLD-HZDR, 01328 Dresden, Germany, M. IKEDA, T. FUJITA, M. HAGIWARA, KYOKUGEN, Osaka University, Toyonaka, Osaka 560-8531, Japan, O.A. STARYKH, Department of Physics and Astronomy, University of Utah, Salt Lake City, UT 84112, USA, *R. HU, H. RYU, C. PETROVIC, Condensed Matter Physics and Materials Science Department, BNL, Upton, NY 11973, USA — We report low-temperature electron spin resonance (ESR) studies of single-crystalline samples of Cs₂CuBr₄, a spin-1/2 antiferromagnet with a triangular spin-lattice structure. A remarkable angular dependence of the resonance field, including the splitting of the ESR line for some orientations of the magnetic field, and the presence of a gap in the ESR excitation spectrum at temperatures above $T_N \sim 1.3$ K have been revealed. Our observations suggest that uniform Dzyaloshinskii-Moriya interaction affects the low-energy excitation spectrum in this frustrated compound. The results are compared with that obtained recently for the isostructural material Cs₂CuCl₄ [Povarov et al., Phys. Rev. Lett. 107, 037204 (2011)].

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