On the Magnetic and Mössbauer Spectroscopic Characterization of $EuPd_2Sb_2$

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The $CaBe_2Ge_2$-type antimonide $EuPd_2Sb_2$ (*P*4/*nmm*, a = 462.43(7), c = 1056.1(2) pm) was synthesized by induction melting of the elements in a sealed tantalum tube. Temperature-dependent magnetic susceptibility measurements have revealed Curie-Weiss behavior with an experimental magnetic moment of 7.93(1) μ_B/Eu atom, indicating stable divalent europium. $EuPd_2Sb_2$ orders antiferromagnetically at T_N = 4.5(2) K as is also evident from almost full hyperfine field splitting (B_h = 19.5 T) in the ^{151}Eu Mössbauer spectrum at 4.2 K.

Key words: Europium, Antimonides, Mössbauer Spectroscopy