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Strain-Induced Antiferromagnetic Phase in $CeAuSb_2$ JOONBUM PARK, Max Planck Institute for Chemical Physics of Solids and Max Planck POSTECH Center for Complex Phase Materials, HIDEAKI SAKAI, Department of Physics, Osaka University, ANDREW MACKENZIE, CLIFFORD HICKS, Max Planck Institute for Chemical Physics of Solids — We present results of the electrical transport measurements under uniaxial pressure on the antiferromagnet $CeAuSb_2$. In the unstrained system, the resistivity along [100] shows a sharp drop at the Néel temperature ($T_N \approx 6.5$ K), suggesting a first order transition. With compression along [100] by ≈ 0.3 %, the transition splits into two continuous transitions, at temperatures T_1 and T_2. T_1 is fully suppressed at a compression of ≈ 0.6 %, and in pressure ramps at low temperature this transition is a sharp cusp with hysteresis, indicating a first-order transition. T_2, on the other hand, rises continuously with increasing compression, reaching 9 K at 1.2 % compression. At present, the nature of the strain-induced phase between T_1 and T_2 is not clear.

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