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**Comparative study of radiation-induced transport in Wegscheider's and Umansky's GaAs/AlGaAs material**[1] R.G. MANI, Georgia State University, W. WEGSCHEIDER, Univ. of Regensburg, V. UMANSKY, Weizmann Inst. — Transport studies of GaAs/AlGaAs specimens have shown radiation-induced, periodic-in-the-inverse-magnetic-field, magnetoresistance oscillations that saturate into novel radiation-induced zero- resistance states (RIZRS) at the deepest oscillatory minima.[1] The origin of these RIZRS remains a topic for further experimental investigation, as does the dependence of these phenomena on the impurity configuration and the material quality. On the latter point, it remains to be understood if similar material prepared in different laboratories yield a similar response under the same conditions. In addressing this issue, we examine here the radiation-induced transport in GaAs/AlGaAs material prepared by W. Wegscheider and co-workers. In a previous study, Simovic et al.[2] have reported the observation of B-periodic radiation- induced oscillations and the strong suppression of the inverse- B periodic oscillations in Wegscheider's GaAs/AlGaAs material. Here, we compare our experimental results to their study and also to our own previous results obtained on specimens prepared by V. Umansky and co-workers. 1) R. G. Mani, Appl. Phys. Lett., 91, 132103 (2007). 2) B. Simovic et al., Phys. Rev. B 71, 233303 (2005).

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Ramesh Mani
Georgia State University

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