Title:	Possible Signatures of Chiral Anomaly in the Magnetoresistance of a Quasi-2-Dimensional Electron Gas at the Interface of LaVO3 and KTaO3
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Abstract:	In a Dirac semimetal, charges flow between two Weyl nodes when electric and magnetic fields (E||B) are parallel to each other manifesting interesting physical properties such as negative longitudinal magnetoresistance (NLMR), planar Hall effect (PHE). A co-existence of weak antilocalization (WAL) is observed with large NLMR and an unusual Hall resistance with (B||E) configuration, at the conducting interface of LaVO3 (LVO) and KTaO3 (KTO). The full-width half maxima of the depth of the conducting channel at the interface is estimated to be around 10 nm by using spectroscopy techniques of photoluminescence and time-correlated single-photon counting: suggesting a quasi-2-dimensional nature of the conducting electrons. The PHE exhibits oscillatory behavior as a function of the angle between E and B. Very similar temperature dependence of NLMR and PHE suggest a strong correlation among them.
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