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The chiral anomaly in Weyl semimetals as seen by optical probes

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The chiral anomaly a characteristic feature of chiral Weyl bands subjected to parallel electric and magnetic fields is well known for its manifestations in such dc probes as longitudinal magnetoresistance and planar Hall effect. Unfortunately, disentangling the chiral-anomaly contribution from other contributions in transport measurements is rather nontrivial. Reports on detecting the chiral anomaly by other experimental methods are therefore of paramount importance, but remain rare. Theoretically, it has been shown that low-frequency (terahertz or infrared) optical measurements provide a way to observe the chiral anomaly in Weyl semimetals. In the talk, recent results on optical observations of the chiral anomaly in the Weyl semimetals TaAs, NbAs, and GdPtBi are reported.