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P- and CP-odd observables in photons and di-leptons from axially charged plasma HO-UNG YEE, KIMINAD MAMO, University of Illinois at Chicago — Axial charge in a QCD plasma is P- and CP-odd. We propose and study P- and CP-odd observables in photon and di-lepton emissions from an axially charged QCD plasma, which may provide possible experimental evidences of axial charge fluctuations in the plasma created in heavy-ion collisions. Our observables measure spin polarization asymmetries of the emitted photons and di-leptons, and are shown to be related to the imaginary part of chiral magnetic conductivity at finite frequency-momentum, which ultimately arises from the underlying triangle anomaly of the QCD plasma with a finite axial charge density.

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