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**Giant Zeeman electric-dipole resonance in antiferromagnetic conductors.** REVAZ RAMAZASHVILI, LPTMS, Orsay — Essential dependence of the electron g-factor on the quasiparticle momentum is a fundamental and, so far, largely overlooked property of antiferromagnetic conductors. It leads to a number of remarkable phenomena, such as excitation of spin flip transitions by AC *electric* field. Absorption intensity of these transitions exceeds that of the Electron Spin Resonance by some four orders of magnitude. I develop a theory of this phenomenon in a weakly doped antiferromagnetic insulator. The predictions may be relevant for a number of antiferromagnetic conductors, ranging from chromium to electron-and hole-doped cuprates, to organic conductors with spin density wave, and to heavy fermion antiferromagnetic metals.

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