Gyrosynchrotron radiation: polarisation, kinetic equation, and damping.

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The expressions are obtained for the Stokes parameters of polarised radiation emissed by electrons in magnetic field with arbitrary their distribution on energies as well as for matrix of absorption coefficients of such electrons as functions of frequency and direction. The computer codes are written for calculation of all these quantities. The relativistic kinetic equation is formulated describing multiple action of the mechanism taking into account polarisation, induced radiation and prohibition principle. The energy losses of radiating electron and the law of damping of its radiation are found. The results can be applied to the interpretation of spectra of the jets in AGN and accretion discs in binary systems containing black holes or neutron stars.

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