# MAGNETO-TORSIONAL OSCILLATIONS AND DYNAMIC JET COLLIMATION

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Many quasars and active galactic nuclei (AGN) appear in radio, optical, and X-ray maps, as a bright nuclear sources from which emerge single or double long, thin jets . When observed with high angular resolution these jets show structure with bright knots separated by relatively dark regions. High percentages of polarization, sometimes more then 50% in some objects, indicates the nonthermal nature of the radiation which is well explained as the synchrotron radiation of the relativistic electrons in an ordered magnetic field.

We consider magnetic collimation, connected with torsional oscillations of a cylinder with elongated magnetic field. We consider a cylinder with a periodically distributed initial rotation around the cylinder axis. The stabilizing azimuthal magnetic field is created here by torsional oscillations, where charge separation is not necessary. Approximate simplified model is developed. Ordinary differential equation is derived, and solved numerically, what gives a possibility to estimate quantitatively the range of parameters where jets may be stabilized by torsional oscillations.