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Vortical toroidal mode in nuclei: recent progress

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The vortical dipole toroidal mode (TM) attracts a high attention last decades [1]. The squeezed TM produces the pygmy dipole resonance [2,3] and forms the low-energy part of the isoscalar giant dipole resonance. TM can also occur as the lowest dipole state in light deformed nuclei [4-6]. TM is the only intrinsic electric vortical mode in nuclei. It can exist as a vortex ring [2,7] or vortex-antivortex pair [4].
In the present talk, we review a recent progress in exploration of TM and various interesting aspects related to this vortical mode.

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