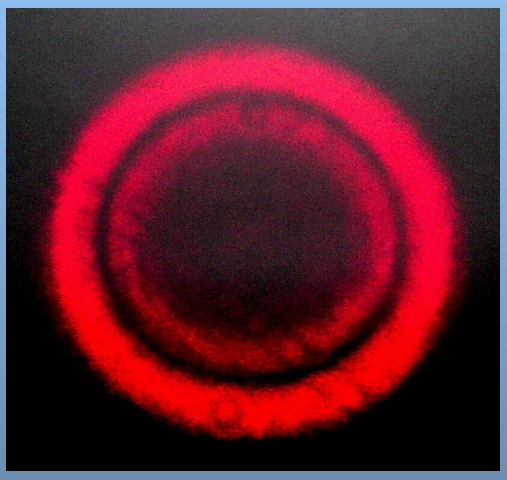
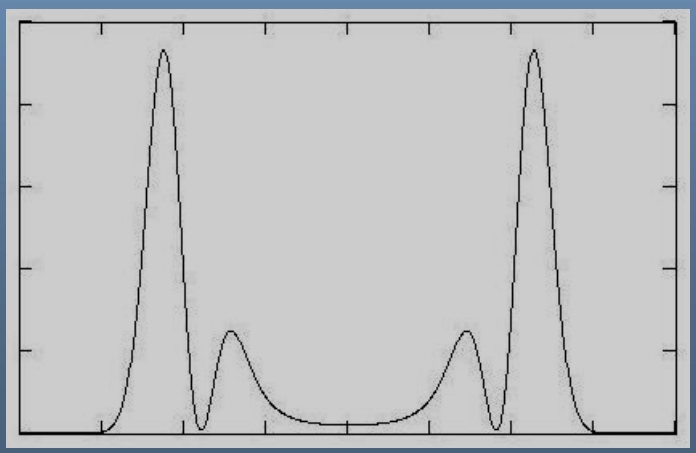
Hollow Light Cylinders with special Dipole Moments





Vision Crystal Technology AG
Lügensteinweg 27 · 30890 Göxe · Germany
Tel.:+49 (0)5108-6446-0 · Fax:+49 (0)5108-6446-11
www.vct-ag.com

Generation of Hollow Light Cylinders with Monoclinic Double Tungstate (MDT)

Under certain conditions monoclinic double tungstate (MDT) which is orientated for the exotic effect of conical refraction is able to generate hollow light cylinders with very unique properties.

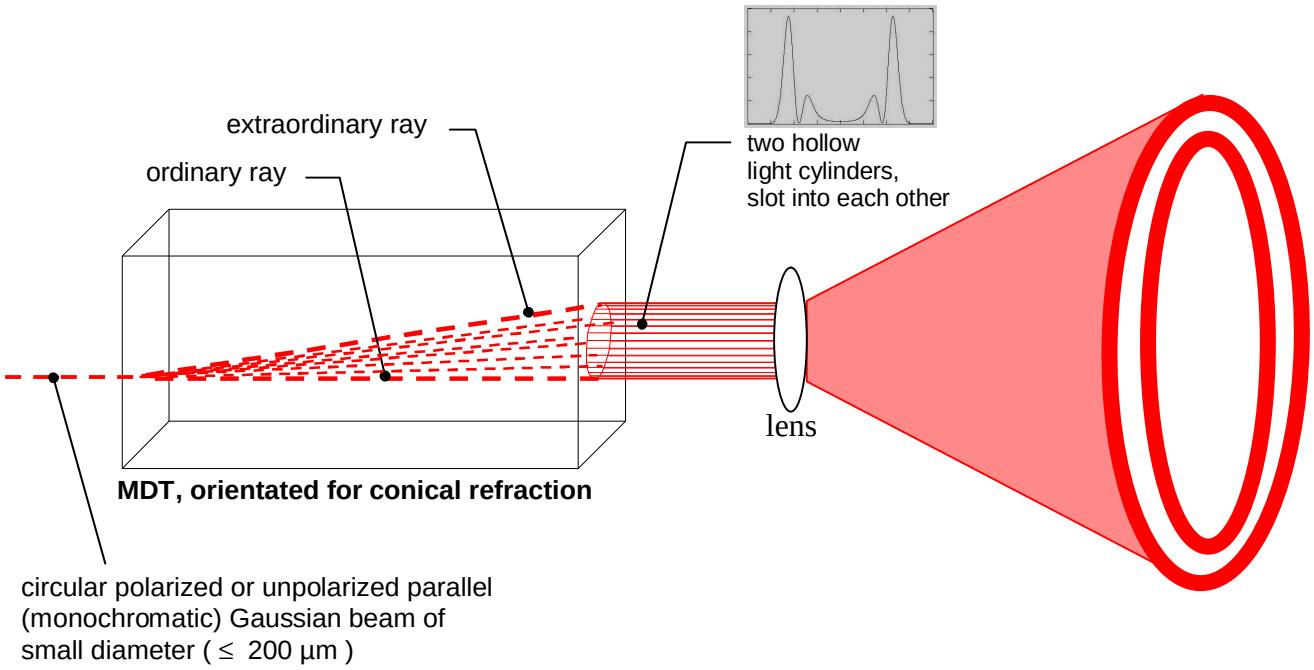


Fig. 1: Internal conical refraction with a MDT crystal

The hollow light cylinders caused by internal conical refraction contain a very special distribution of the polarization states and therefore produce strong dipole moments which could be very useful to trap or move small particles, molecules or atoms.

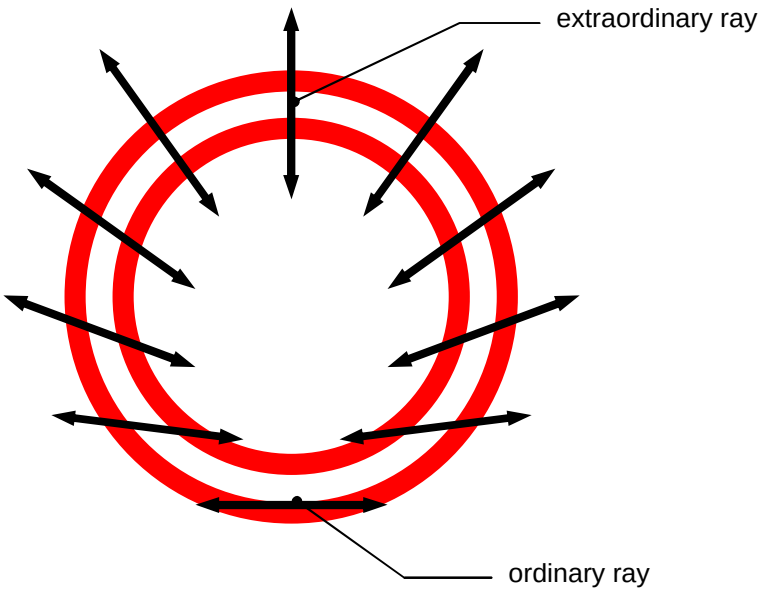


Fig. 2: Distribution of polarization planes within the hollow light cylinders (front view).