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Stability of a laser cavity with non-parabolic phase transformation elements

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Abstract content
   (Max 300 words)

In this work we present a general approach to determine the stability of a laser cavity which can include non-conventional phase transformation elements. We consider two pertinent examples of the detailed investigation of the stability of a laser cavity firstly with a lens with spherical aberration and thereafter a lens axicon doublet to illustrate the implementation of the given approach. In the particular case of the intracavity elements having parabolic surfaces, the approach comes to the wellknown stability condition for conventional laser resonators.

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