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CFD simulation of the CSL

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Abstract content
 (Max 300 words)

Colliding Shock Lenses (CSL) are one of the better known applications of gas structures. They are real optical elements, sometimes have very good optical qualities and are made out of air. CSL's are dynamic lenses, which last for a few microseconds and are always evolving. The lens exploits the interference of shock waves in air to form a region high pressure, temperature and density that then changes the refractive index of air, hence making it possible to focus laser light.

The limitations with the above experiments is that physical probes positioned at points of interest would interfere with the experiment, hence making it impractical to determine the parameters of interest as mentioned above. Computational Fluid Dynamics (CFD) is employed in this paper to try and alleviate the above problem.

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