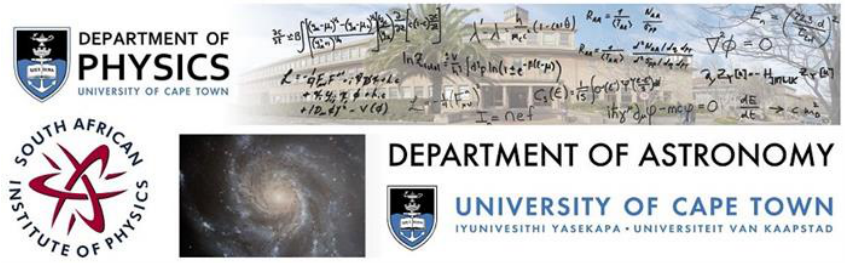

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Low cost passively Q-switched laser

Wednesday, 6 July 2016 16:10 (1h 50m)

Abstract content
   (Max 300 words)
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Present laser designator designs incorporate porro prisms, for alignment purposes, with a single mode as output. While this makes the design insensitive to alignment, it comes at a cost since the resonator contains many custom optical elements. Here we outline the design of a low cost passively Q-switched laser that produces a single pulse with no side lobes in the far field. We replace the porro prisms and lenses with curved mirrors, appropriately designed to produce identical optical transforms, so that the output is similar. In addition, we outline the approach to compact this configuration into a monolithic design for robust performance in a miniature package. We demonstrate the concepts experimentally and numerically, the latter using Fox-Li approach to modeling resonator modes with the Collin's integral for the system under study.

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Main supervisor (name and email)
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