

Title (en)

LASER SYSTEMS USING PHASE CONJUGATE FEEDBACK

Title (de)

LASERSYSTEME MIT RUECKKOPPLUNG DURCH PHASENKONJUGIERUNG

Title (fr)

SYSTEMES LASER UTILISANT UNE RETROACTION A CONJUGAISON DE PHASE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO9856087A1] A laser system for emission of a highly coherent, possibly single mode, output light beam, comprising a first laser (30), such as an array of broad area lasers, for emission of a first high power light beam. An external cavity is formed between the laser and e.g. a phase conjugator (35) emitting a second light beam in response to the first incident light beam. A frequency selective element (37), such as an etalon, is positioned in the external cavity. The feedback from the external cavity forces the first laser to emit a stable and significantly improved spatially and temporally coherent high power output beam. Furthermore, in the external cavity a frequency doubler crystal (166) may be positioned for frequency doubling at least a part of the light beam in the cavity. The frequency doubler crystal may advantageously be positioned inside the etalon (221) where the laser beam has high intensity and high temporal coherence.

IPC 1-7

H01S 3/10; **H01S 5/40**; **H01S 3/109**

IPC 8 full level

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CPC (source: EP)

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