Title (en)

OPTICAL SYSTEM FOR HOMOGENIZING AN AT LEAST PARTIALLY COHERENT LIGHT FIELD

Title (de)

OPTISCHE ANORDNUNG ZUR HOMOGENISIERUNG EINES ZUMINDEST TEILWEISE KOH RENTEN LICHTFELDES

Title (fr)

SYSTEME OPTIQUE POUR HOMOGENEISER UN CHAMP LUMINEUX AU MOINS PARTIELLEMENT COHERENT

Publication

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Application

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Abstract (en)

[origin: WO03098316A2] The invention relates to an optical system for homogenizing an at least partially coherent light field, especially one emitted by a laser, preferably by an excimer laser. The optical system according to the invention essentially comprises an optical cycle, at least one coupling element for coupling a light field into the optical cycle and at least one decoupling element. The light field (1) or a portion of said light field (1) coupled into the cycle repeatedly passes the optical cycle, thereby at least partially deforming the wave front of the light field (1). Portions of the light field (1) are coupled out when they have passed the optical cycle once or several times. The light field (1) is coupled into the optical cycle with a predetermined wave front. During the repeated passage of the optical cycle, portions of the light field (1) whose wave fronts deviate from one another are coupled out of the cycle. If the laser radiation is pulsed, the distances across which the individual portions of the light field travel are longer than the temporal coherence length.

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