Title (en)

OPTICAL INTERFEROMETER WITH SQUEEZED VACUUM AND REDUCED GUIDED-ACOUSTIC-WAVE BRILLOUIN SCATTERING NOISE.

Title (de)

OPTISCHES INTERFEROMETER MIT GEQUETSCHTEM VAKUUMZUSTAND UND VERRINGERUNG DES RAUSCHENS, DAS DURCH BRILLOUIN-STREUUNG GELEITETER AKUSTISCHER WELLEN VERURSACHT IST.

Title (fr)

INTERFEROMETRE OPTIQUE A VIDE COMPRIME ET A BRUIT DIMINUE DE DISPERSION DE BRILLOUIN D'ONDE ACOUSTIQUE GUIDEE.

Publication

EP 0619032 A4 19940802 (EN)

Application

EP 93906030 A 19930217

Priority

- GB 9218235 A 19920827
- US 9301421 W 19930217

Abstract (en)

[origin: WO9405967A1] An interferometric measurement scheme utilizing squeezed light wherein an input pulse is split (14) into two consecutive input pulses (15a, 15b) separated by a time interval that is less than the inverse spectral width of GAWBS. The two pulses are further split (16) into first (20a, 20b) and second (22a, 22b) pairs of pulses and are caused to propagate in opposite directions through a fiber optic interferometer loop (18) and are recombined upon exiting the loop (16). The recombined pulses are caused to pass through a (pi) phase modulator (38) which modulates one of the two pulses. The output is then introduced to a balanced detector (50) where the detected signal of the two is averaged such that GAWBS noise is cancelled.

IPC 1-7

G02F 1/35; G01J 9/02

IPC 8 full level

G01B 9/02 (2006.01); **G01J 9/02** (2006.01); **G02F 1/35** (2006.01); G02F 1/21 (2006.01)

CPC (source: EP)

G01J 9/02 (2013.01); **G02F 1/3519** (2013.01); G01J 2009/0226 (2013.01); G02F 1/211 (2021.01)

Citation (search report)

- [PX] M. SHIRASAKI & H.A. HAUS: "Reduction of guided-acoustic-wave Brillouin scattering noise in a squeezer", OPTICS LETTERS, vol. 17, 1 September 1992 (1992-09-01), WASHINGTON US, pages 1225 - 1227, XP000293926
- See references of WO 9405967A1

Designated contracting state (EPC)

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DOCDB simple family (application)

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