Title (en)

DEVICE FOR ATOMIC CLOCK

Title (de)

VORRICHTUNG FÜR ATOMUHR

Title (fr)

DISPOSITIF POUR HORLOGE ATOMIQUE

Publication

EP 2473886 A1 20120711 (FR)

Application

EP 10760897 A 20100901

Priority

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- EP 10760897 A 20100901

Abstract (en)

[origin: WO2011026252A1] The aim of the present invention is to provide a device for an atomic clock, enabling double passage into the gas cell without the disadvantages of the prior art. Said aim is achieved by a device for an atomic clock, including: a laser source (102) generating a laser beam; a quarter-wave plate (105) modifying the linear polarization of the laser beam into a circular polarization and vice versa; a gas cell (106) placed on the laser beam having a circular polarization; a mirror (107) sending the laser beam back toward the gas cell; a first photodetector (108a); as well as means (103, 101a, 107) for diverting the reflected beam of the laser source (102), characterized in that the device includes a second photodetector (109) placed behind the mirror (107), said mirror being semitransparent and allowing a portion of the laser beam to pass therethrough, said second photodetector (109) being used for controlling the optical frequency of the laser and/or for controlling the temperature of the cell (106).

IPC 8 full level

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CPC (source: EP US)

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