

Title (en)
METHOD FOR MODULATING AN ATOMIC CLOCK SIGNAL WITH COHERENT POPULATION TRAPPING AND CORRESPONDING ATOMIC CLOCK

Title (de)
VERFAHREN ZUR MODULATION EINES ATOMUHR SIGNALS MIT COHERENT POPULATION TRAPPING UND ENTSPRECHENDE ATOMUHR

Title (fr)
PROCÉDÉ DE GÉNÉRATION D'UN SIGNAL D'HORLOGE ATOMIQUE A PIÉGEAGE COHÉRENT DE POPULATION ET HORLOGE ATOMIQUE CORRESPONDANTE

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Abstract (en)
[origin: WO2005101141A1] The invention concerns a method for modulating an atomic clock signal and a corresponding atomic clock. The laser beams (L1, L2) are pulse-modulated in amplitude to illuminate (A) an interactive medium. A detection (B) of the current pulse (Sr) and of the pulses (Sr-1 to Sr-p) preceding said current impulsion is performed. Said pulses are superimposed (C) by linear combination to generate a compensated atomic clock signal (SHC) whereof the spectral width is minimized. The invention is applicable to atomic clocks with pulsed interrogation whereof the interactive medium consists of thermal or laser-cooled atoms.

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