Title (en)
METHOD AND DEVICE FOR RECEPTION PROCESSING OF A GPS SATELLITE L2 SIGNAL

Title (de)
VERFAHREN UND GERÄT ZUR VERARBEITUNG UND ZUM EMPFANG EINES GPS SATELLITEN L2 SIGNALS

Title (fr)
PROCEDE ET DISPOSITIF DE TRAITEMENT EN RECEPTION D'UN SIGNAL L2 DE SATELLITE GPS

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EP 1034439 A1 20000913 (FR)

Application
EP 99946229 A 19990924

Priority
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Abstract (en)
[origin: FR2783929A1] The invention concerns a method for determining position using GPS satellites of the NAVSTAR system. More specifically, it concerns reception processing of a GPS satellite L2 signal modulated by an encrypted code Y whereof the key is unknown enabling to estimate its delay relative to the L1 signal and deduce therefrom the extent of ionospheric refraction so as to take it into account and improve the accuracy of location. Said processing consists in bringing the L2 signal in lower band and despreading it using a non-encrypted P-code locally generated in reception by a local generator of non-encrypted spread P-code synchronised on the transmitted Y-code (encrypted P-code), using a phase locking loop with three parallel channels: one first channel demodulated by a punctual version of the locally-generated non-encrypted spread P-code, a second advance channel demodulated a first time by an advance version of the locally-generated non-encrypted spread P-code and a second time by the demodulated signal of the punctual channel, and a third delayed channel demodulated a first time by a delayed version of the locally-generated non-encrypted spread P-code and a second time by the demodulated signal of the punctual channel, synchronisation being obtained by finding out power equality of the carrier of the L2 signal output from the advance and delayed channels.

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