

Title (en)
ARRAY OF MAGNETOMETERS OPERATING IN ZERO FIELD AND ASSOCIATED METHOD FOR CALIBRATING INTER-MAGNETOMETER COUPLINGS

Title (de)
ANORDNUNG VON MAGNETOMETERN, DIE IM NULLFELD ARBEITEN, UND ZUGEHÖRIGES VERFAHREN ZUM KALIBRIEREN VON KOPPLUNGEN ZWISCHEN MAGNETOMETERN

Title (fr)
RÉSEAU DE MAGNÉTOMÈTRES FONCTIONNANT EN CHAMP NUL ET PROCÉDÉ ASSOCIÉ DE CALIBRATION DES COUPLAGES INTER-MAGNÉTOMÈTRES

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Application
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Abstract (en)
[origin: WO2021156568A1] The invention relates to a method for determining a coupling between magnetometers of an array of N magnetometers, for example optically pumped magnetometers, wherein each magnetometer comprises a field cancellation system capable of being activated such that the magnetometer operates in zero field. Said method comprises a first phase (P1) during which the N magnetometers are separated into N-1 magnetometers the field cancellation system of which is deactivated, and a measuring magnetometer the field cancellation system of which is activated. Said first phase comprises: - generating (GENj), by means of the magnetometers, a plurality of reference magnetic fields having known amplitudes and separate directions, - measuring (MESi), by means of the measuring magnetometer, the ambient magnetic field over a plurality of measurement axes; determining (CALCij) coupling coefficients between the measurement magnetometer and each of the N magnetometers from the measurement and the known amplitudes.

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