



BI-STATIC GNSS REFLECTOMETRY

Use of interferometry to improve the accuracy of GNSS reflectometry

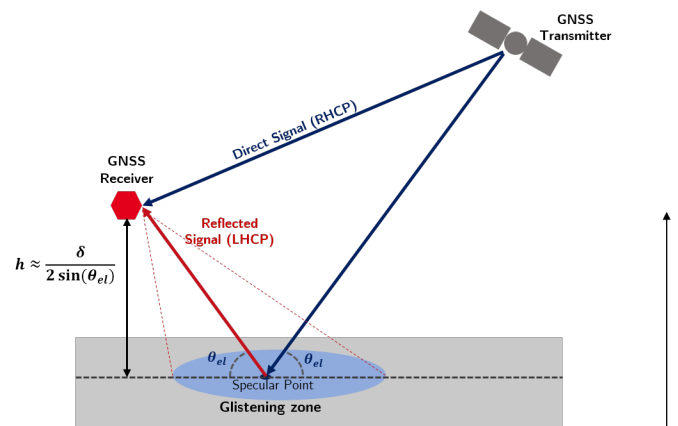
Technological benefits

Increased accuracy

- This invention makes the measurement of the altitude potentially more precise.

Reduced sensitivity to irregularities in aquatic surfaces

- The measurement of altitude is facilitated in the case of disturbed aquatic surfaces (wind, waves ...)



Invention overview

The aim of the invention is to determine the water depth of an aquatic surface (lakes, oceans, rivers, etc.) by increasing the signal-to-noise ratio. For this, this invention combines two types of processing: conventional GNSS + interferometric (as in VLBI)

Potential applications

Maritime

- Coastal altimetry, tide gauge, wolffish, tidal wave ...

Limnology

- Study of the altitude of lakes, rivers ...

Hygrometry

- Joint study of altimetry and the hygrometry on the shores

Commercial benefits

Resale of specific measures

- Possibility to resell the measurements made with this invention

Improvement of coastal altimetry models

- Scientific use
- Civil security, forecasting

TRL : 2 (2014)

Property 100% CNES