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)**

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For more information

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