

MISTRALE

La réflectométrie GNSS comme moyen de mesure

*Groupe de Travail EO
13 Juin 2017*

Worldwide Fresh Water Withdrawals



Food and Agriculture Organization of the United Nations

In the next decades:



+45%



70%



2 X

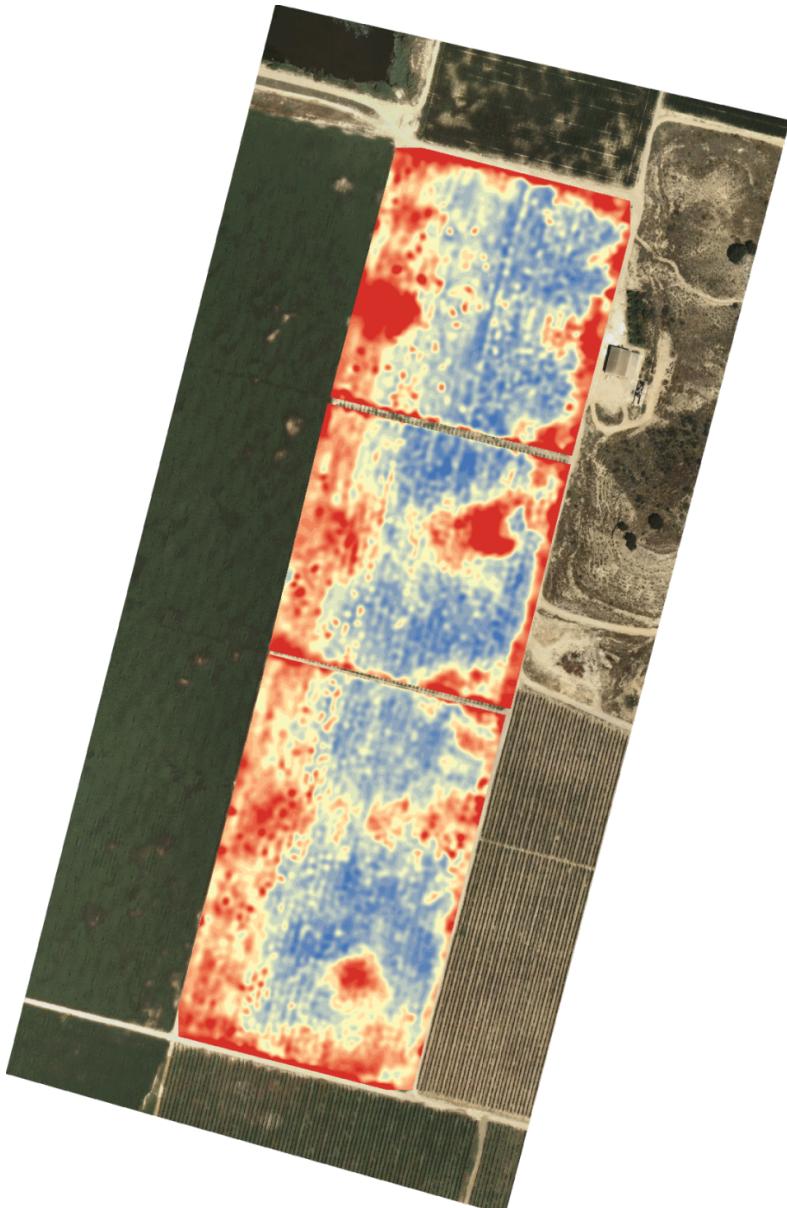


The need

MORE CROP PER DROP

- Irrigation is critical to growing more food using less water

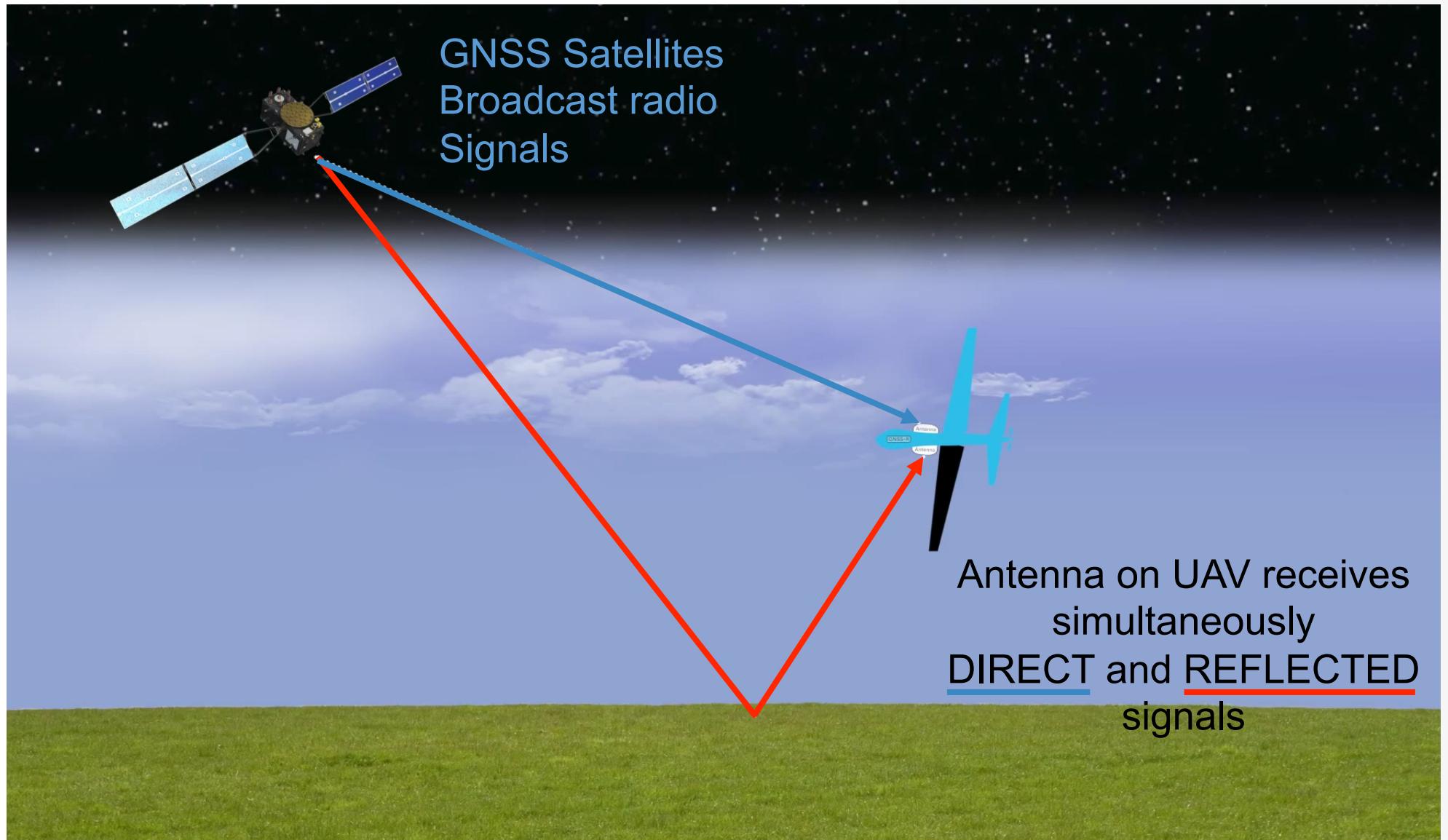
What is MISTRALE about?



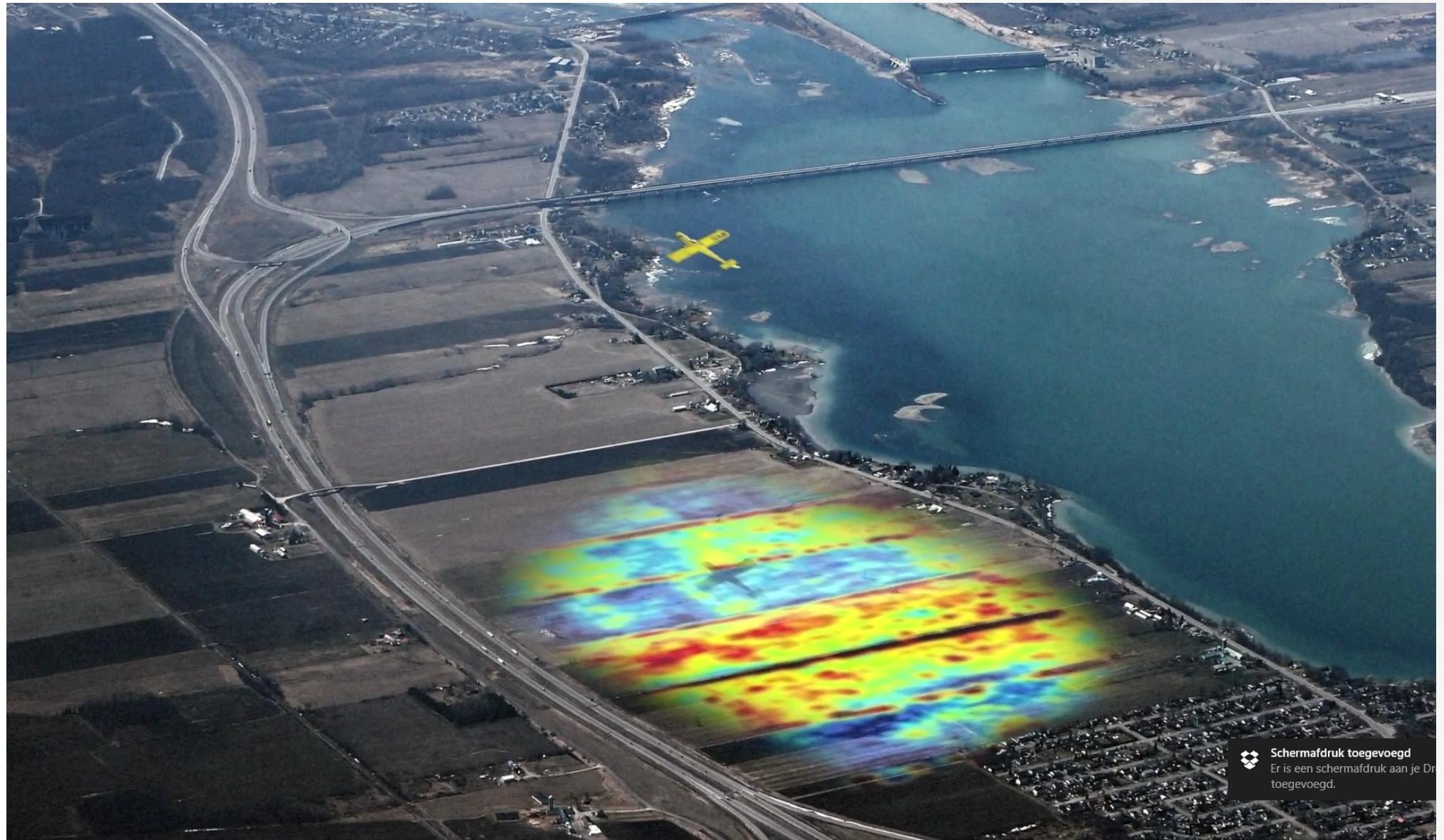
Soil Moisture Maps Service

Helping farmers to make better decisions on irrigation by providing them soil moisture maps

MISTRALE Concept



MISTRALE Concept



MISTRALE: complement to existing solutions

Satellite



- ↑ Global picture (large areas)
- ↓ Low resolution
- ↓ No periodicity flexibility

MISTRALE



- ↑ High resolution maps (field)
- ↑ On demand

In situ



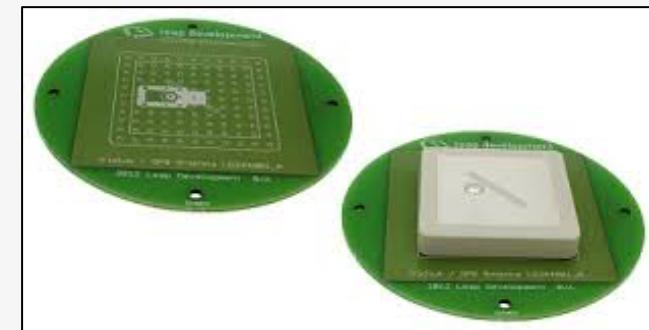
- ↑ Continuous measurements
- ↓ No maps

MISTRALE: project status 1/2

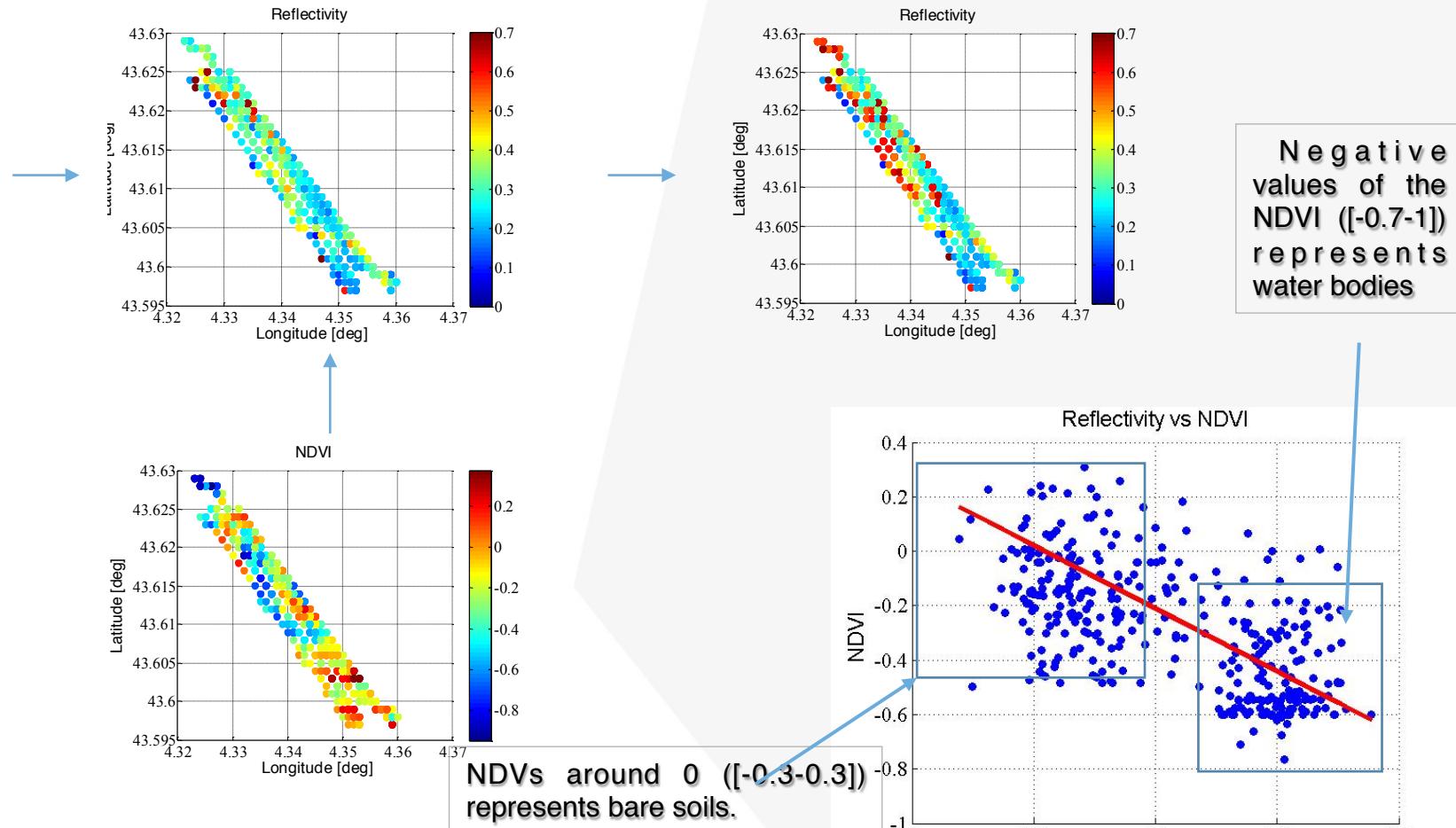
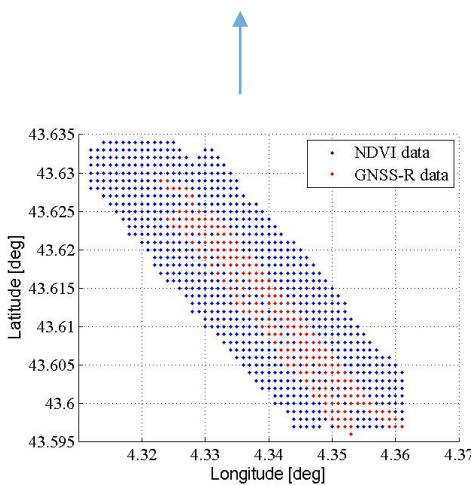
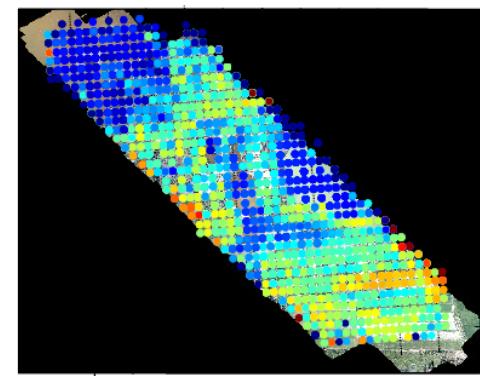


MISTRALE: project status 2/2

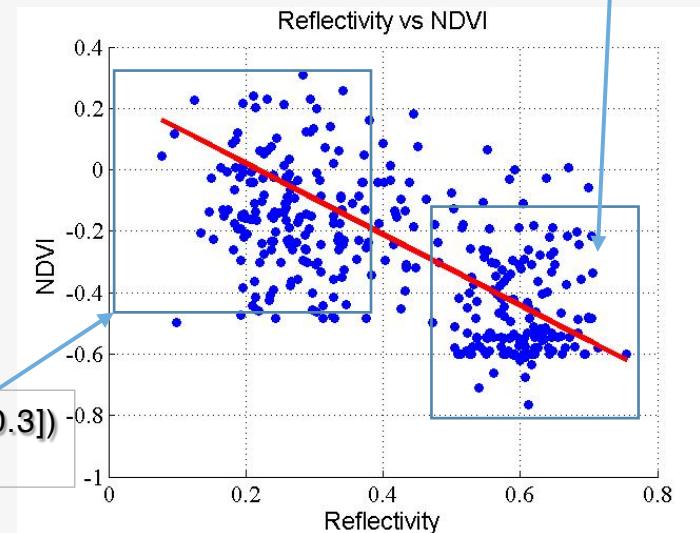
- Integration of the dedicated GNSS receiver
- Design of dedicated antennas
- Development of a webservice portal

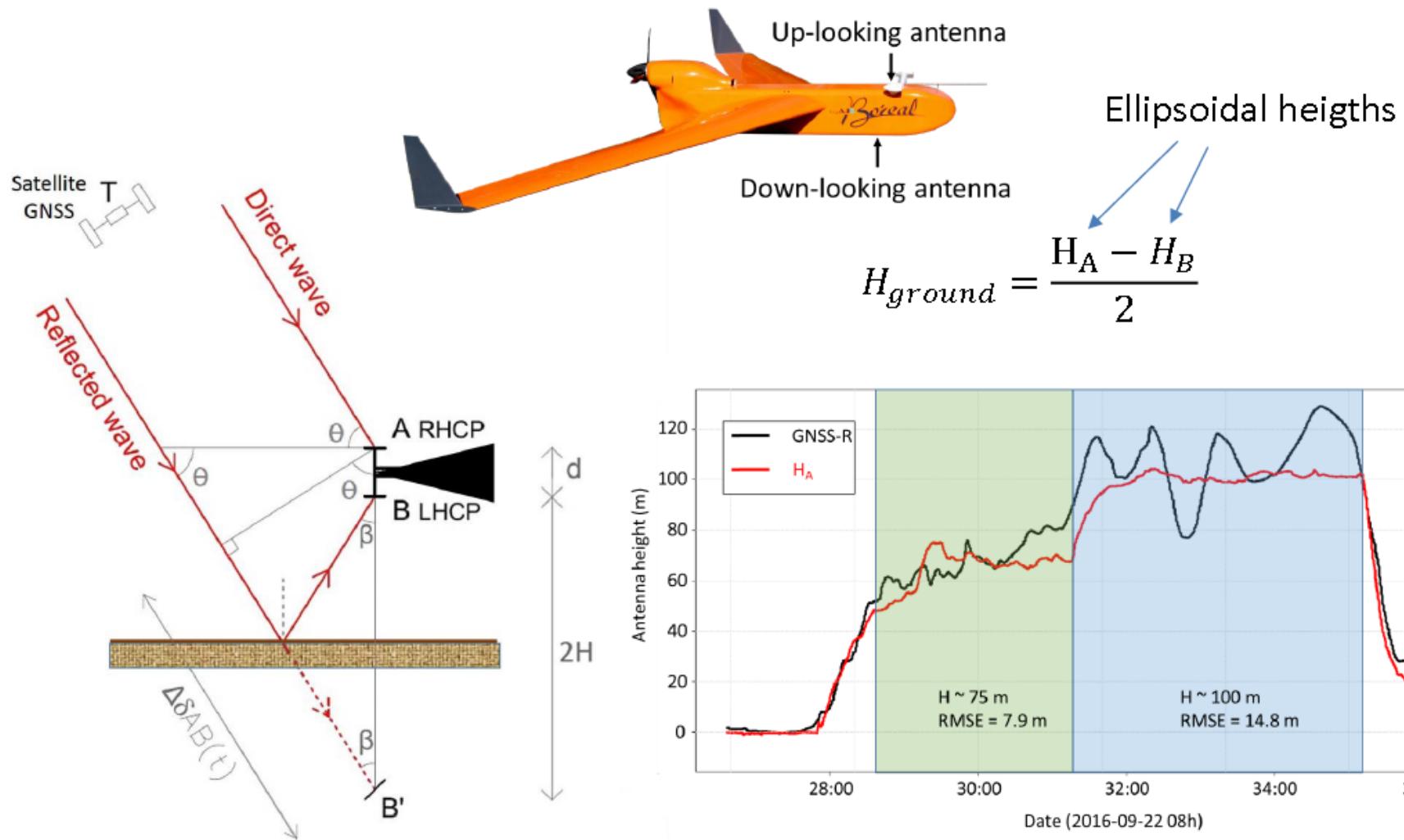


MISTRALE: initial results 1/2



Clear correlation between the NDVI and measured GNSS-R Reflectivity





MISTRALE: NEXT STEPS



MISTRALE: @ a glance

- H2020 project
- 36 months duration
- 5 partners
 - M3 Systems Belgium (coord.)
 - ENAC
 - STARLAB
 - GET/CNRS
 - Avion Jaune
 - Aervision



This project has received funding from the European GNSS Agency under the European Union's Horizon 2020 research and innovation programme under grant agreement no. 641606.



GROUPE
MISTRAL

CONCEPTS
POSITIONING
PRODUCTS

Thank you!



✓ Boreal