Reuniwatt

Excellence in forecasting

Using all-sky cameras to observe clouds and their evolution in the context of climate change

G. Roussel

Reuniwatt: a leader in cloud observation and forecasting

Founded in

2010

Serving

3

markets: Renewable energies, Atmospheric sciences, Defence & Space

Various forecasting sources:

- in-situ cameras
- geostationary satellites
- numerical weather prediction models

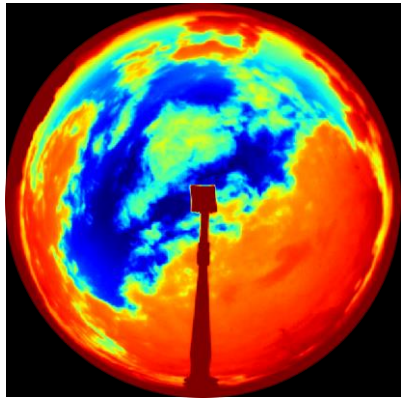
Strong R&D investments

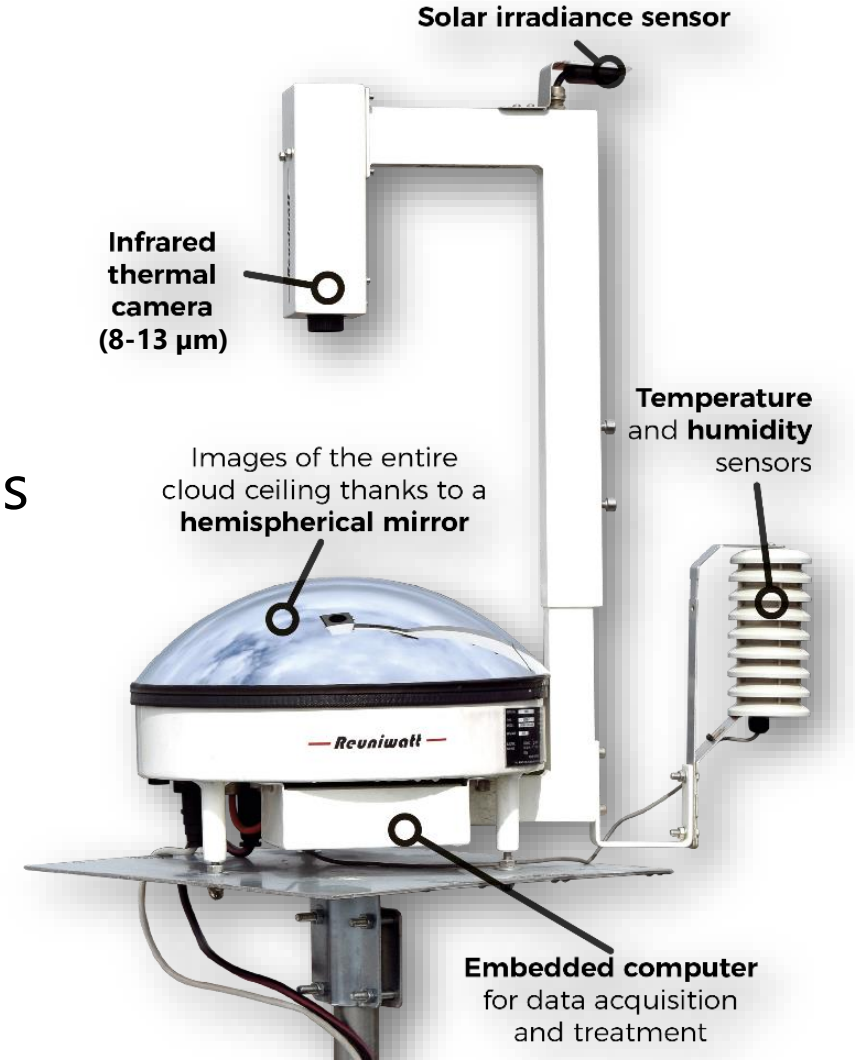
400,000

hours, >100 publications, 5 patents

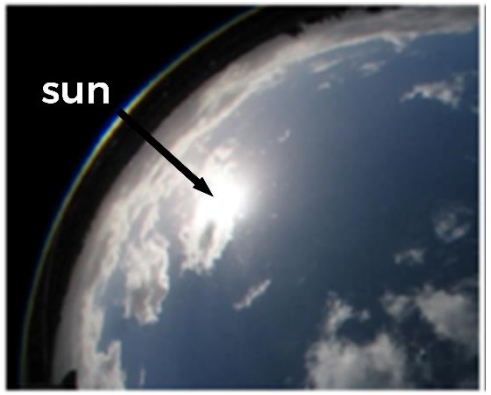
Sky InSight™: the thermal infrared sky imager

- Derivable properties:
  - Cloud Base Height
  - Cloud Optical Depth
  - Global Horizontal Irradiance
  - Cloud Fraction
- Maximum forecast horizon: 30 minutes

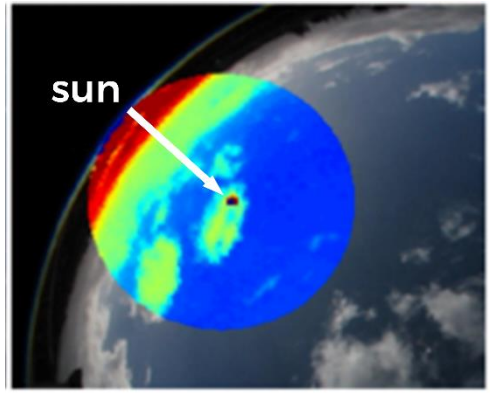




Infrared imaging benefits

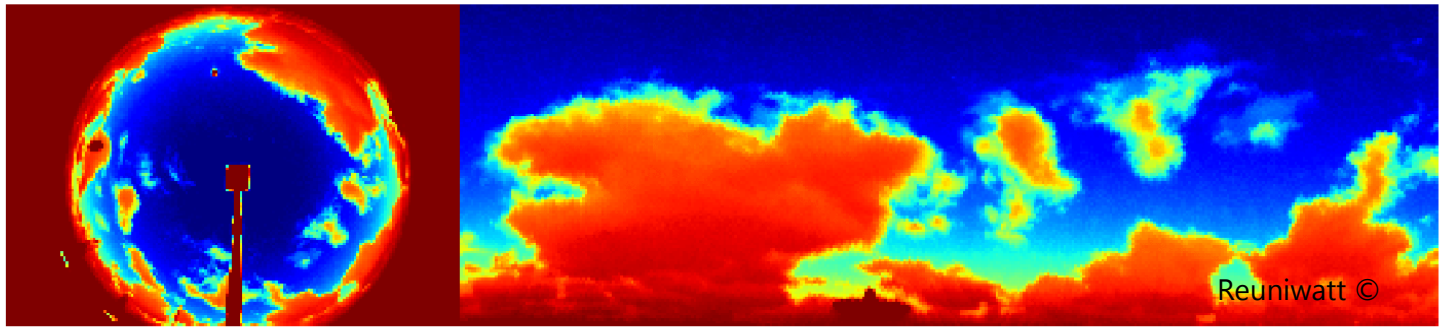


VISIBLE



INFRARED

- Night and day operation without sensibility change
- No sun flare
- Radiometric contrast useful for cloud property retrieval

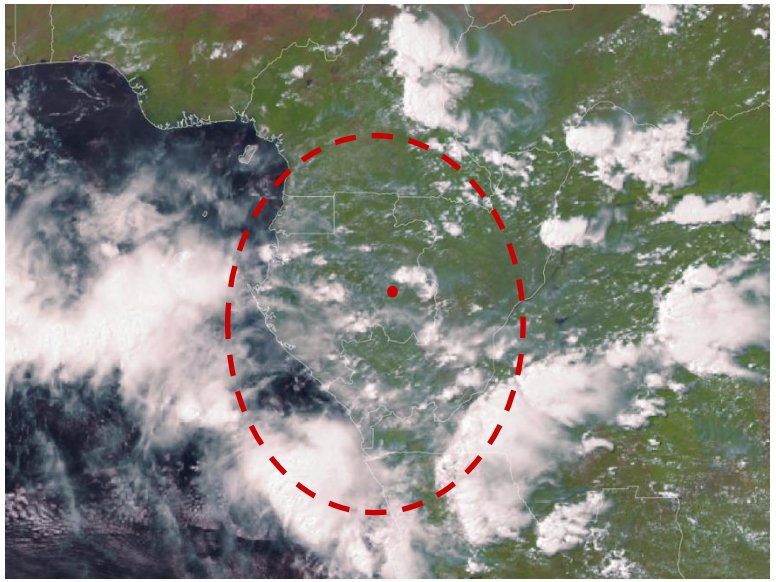


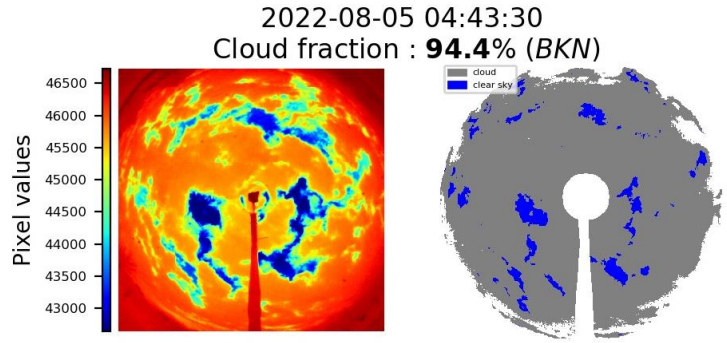
Horizon view, Toulouse, 2017-09-25

DYVALOCCA project: overview

- Collaboration between French, German and Gabonese partners
- Study area: Bambidie, Gabon
- Unique phenomenon: persistence of a low cloud cover during the dry season which keeps the forest cool and humid
- Main purpose: monitor the evolution of these clouds and evaluate their effects on water and light availability for the forest
- Activities:
  - Long-term in-situ measurements
  - Numerical modelling
  - Field campaign

DYVALOCCA project: field campaign





- Realized in July 2022
- Measurement material:
  - Ceilometer
  - Disdrometer
  - Sodar
  - Microwave sounder
  - Tethersondes and radiosondes
  - Sky Insight

Contact

Would you like more information?
Do not hesitate to contact us.

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