Data consistency

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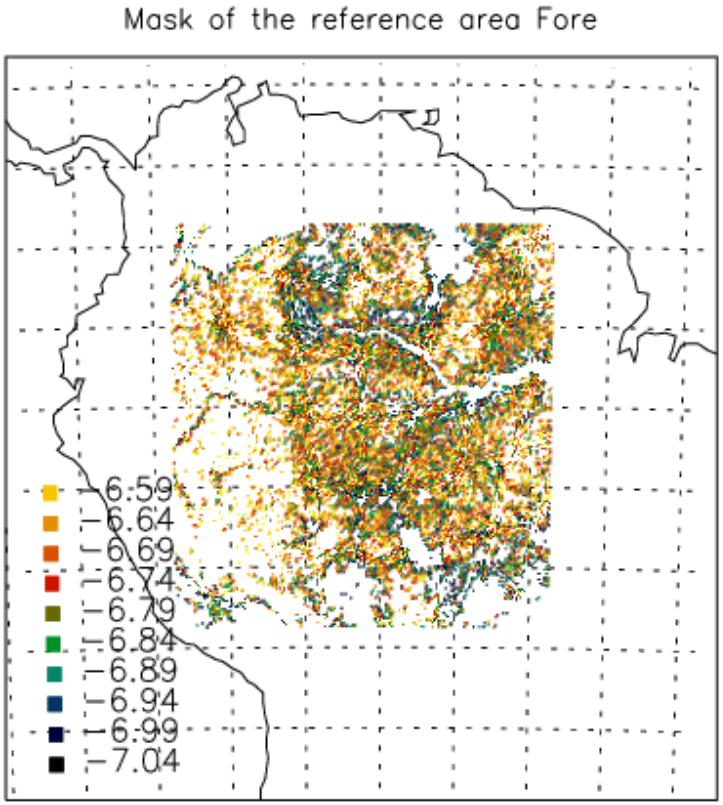
Overview

- ERS2 calibration
- Pattern evolution over time on the rain forest
  - ERS2
  - ASCAT-A

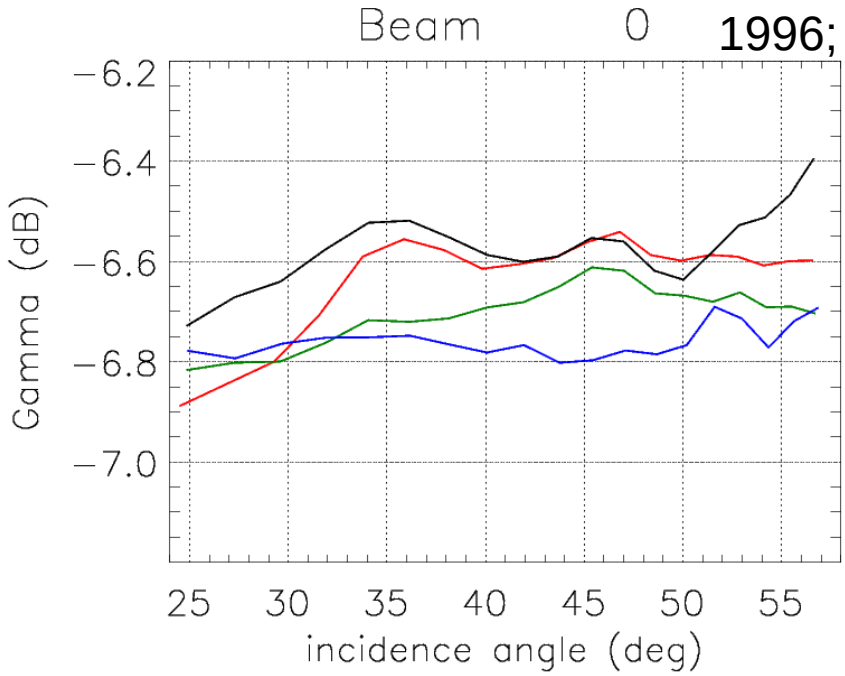
ERS2 calibration

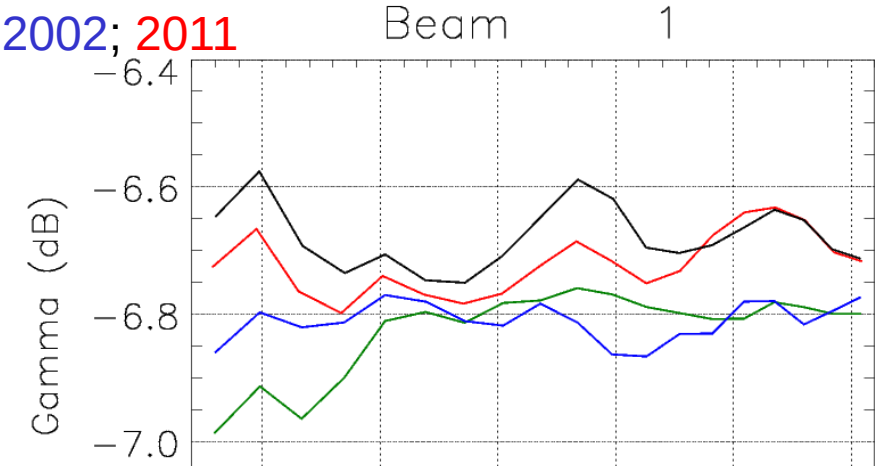
Correction of the flatness of the antenna pattern

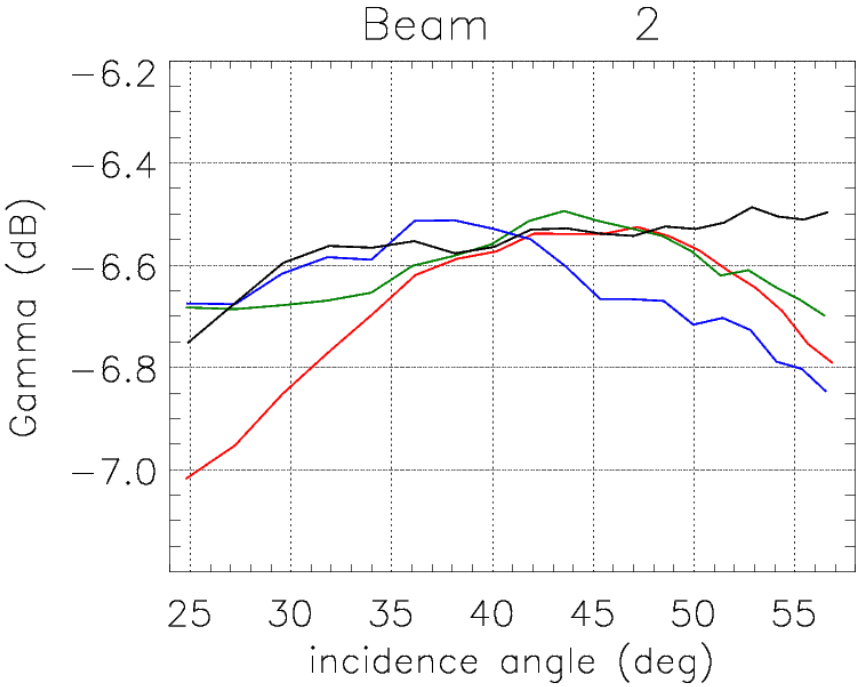
- Using the rain forest, assuming “flat” behaviour
  - Considering a mask to remove unstable rain forest areas



ERS-2 Evolution
Gamma nought over the rainforest



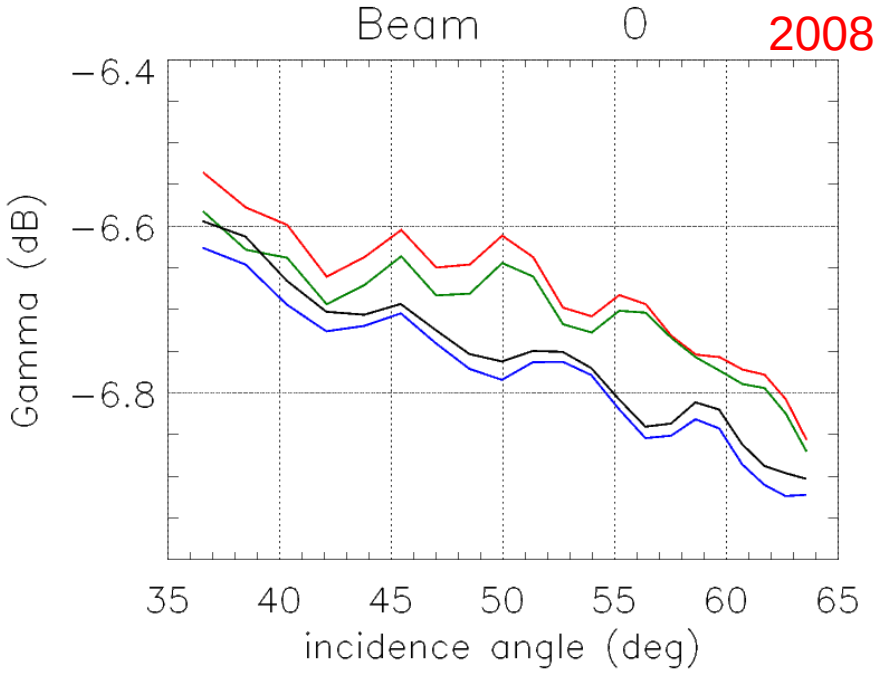


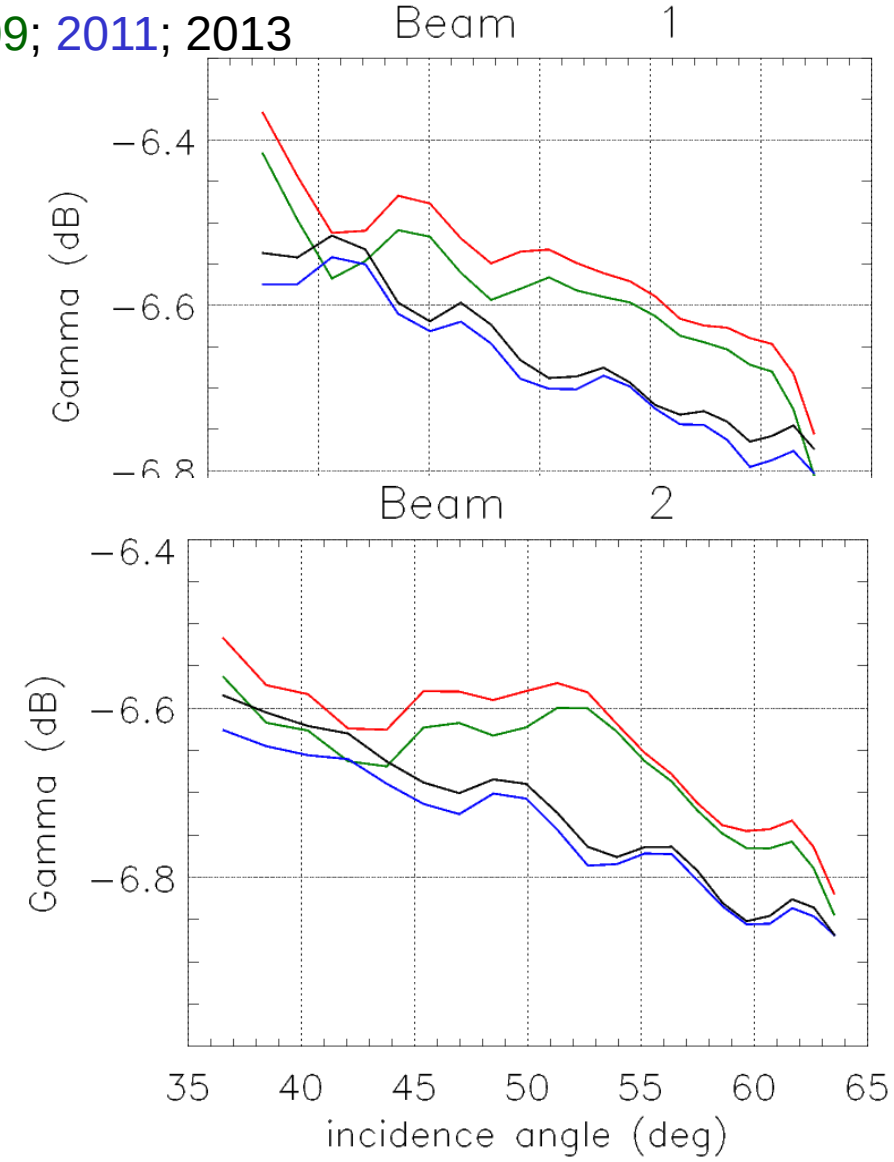


- Relatively flat pattern (except aft beam)
- No clear tendency in time
- Stability within 0.4 dB over 16 years

ASCAT Evolution

Gamma nought pattern over the rainforest





- Sloped pattern

Conclusions

- Gamma nought pattern
  - ERS-2: flat
  - ASCAT-A: sloped pattern
- No clear temporal tendency in the data
  - ERS-2 relatively stable (within 0.4 dB) over 16 years
  - ASCAT relatively stable (within 0.2 dB) over 5 years

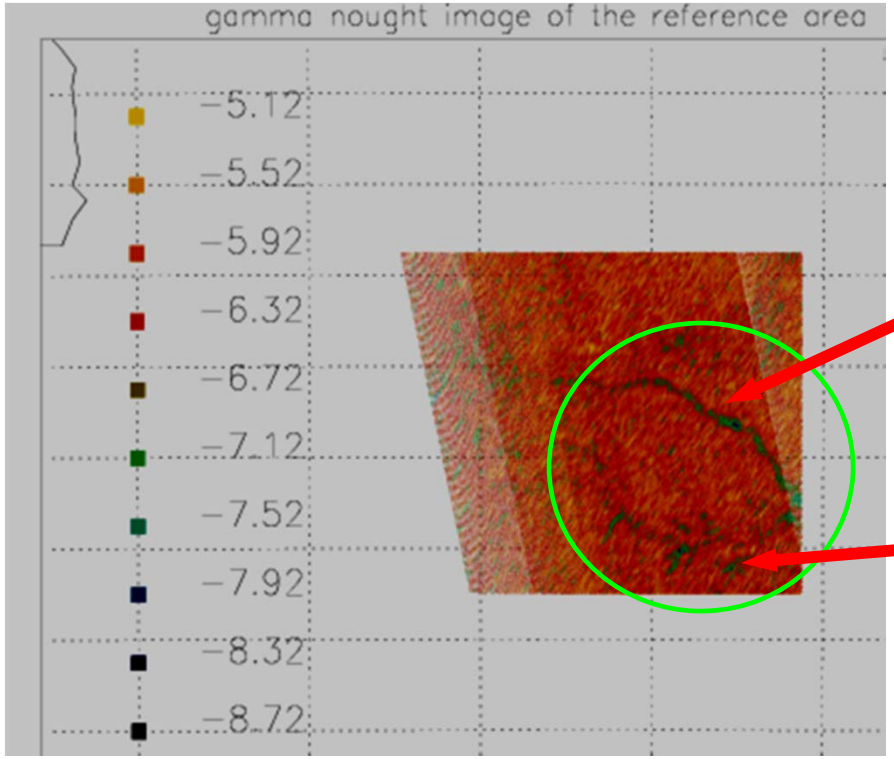
Backup slides

Backup slides

Rain forest mask

- Motivation
  - Residual components at orbital frequency in spectral analysis of sigma0 over rain forest
    - Indicates that the rain forest is not spatially homogeneous
- Constructions
  - Exclude unstable areas and areas whose sigma0 is too different from mean sigma0 (towns and rivers)

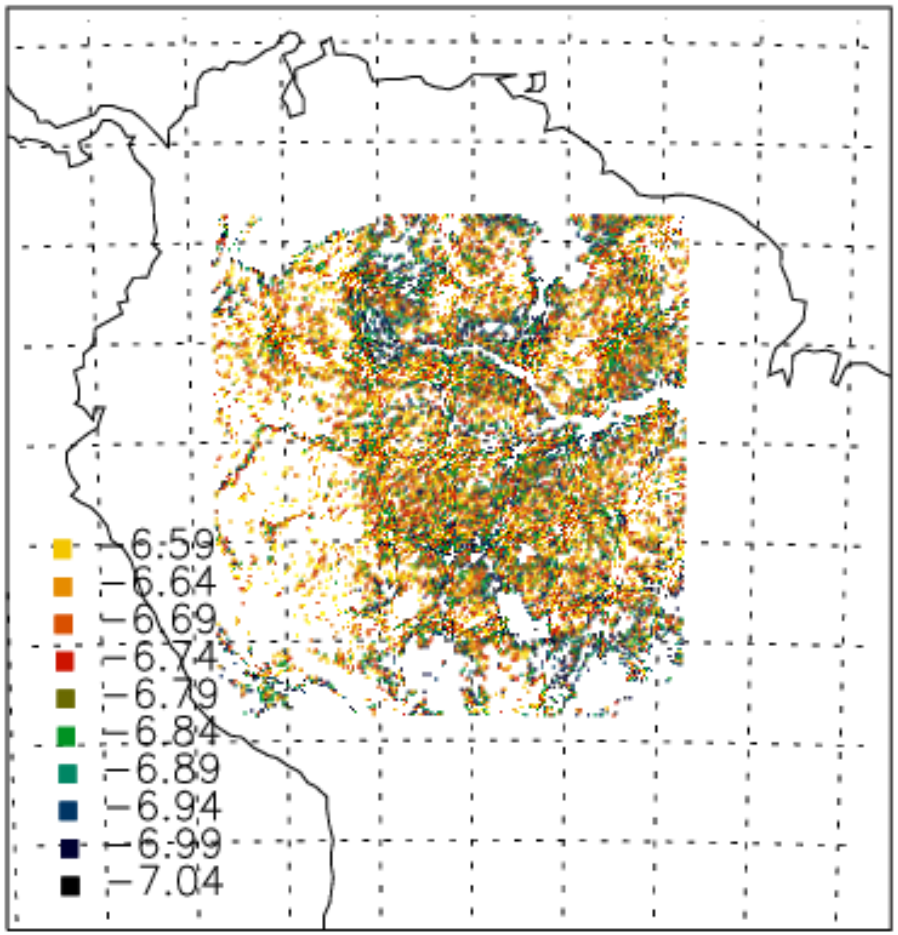
Rain forest mask

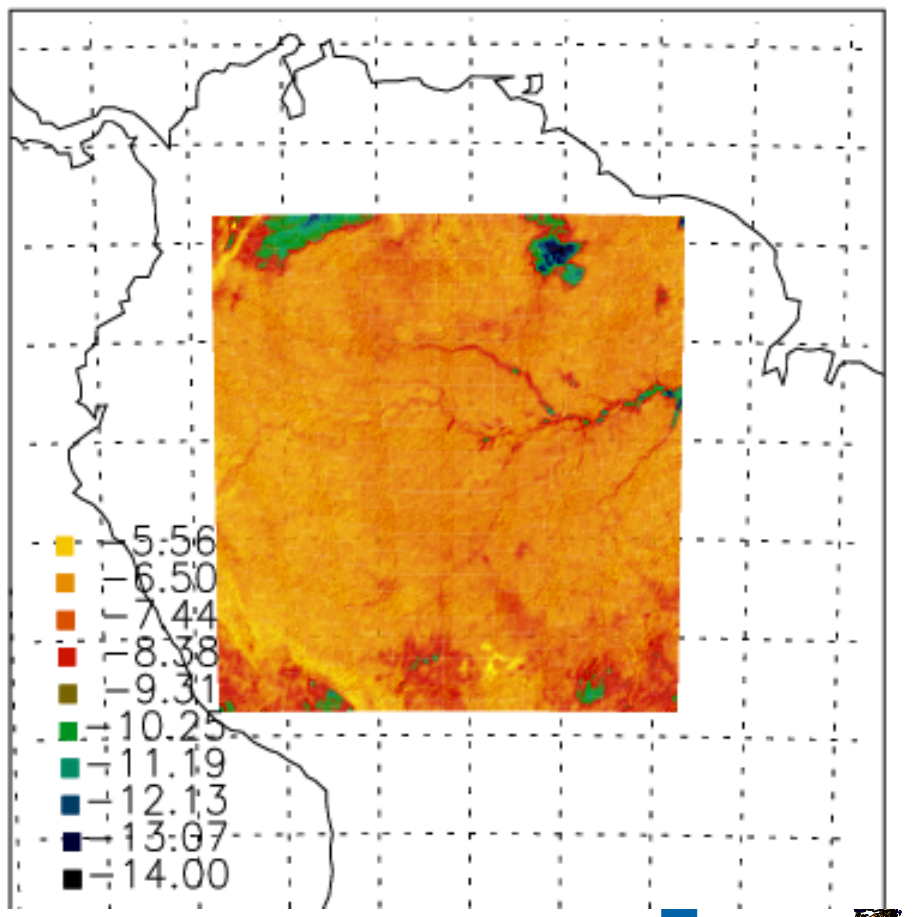


Red: Trees
Yellow: high backscatter (towns,…)
Green: low backscatter (rivers,…)

These rivers should be removed from the calibration area

Rain forest mask





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