SOFOG3D Flux data processing comparison

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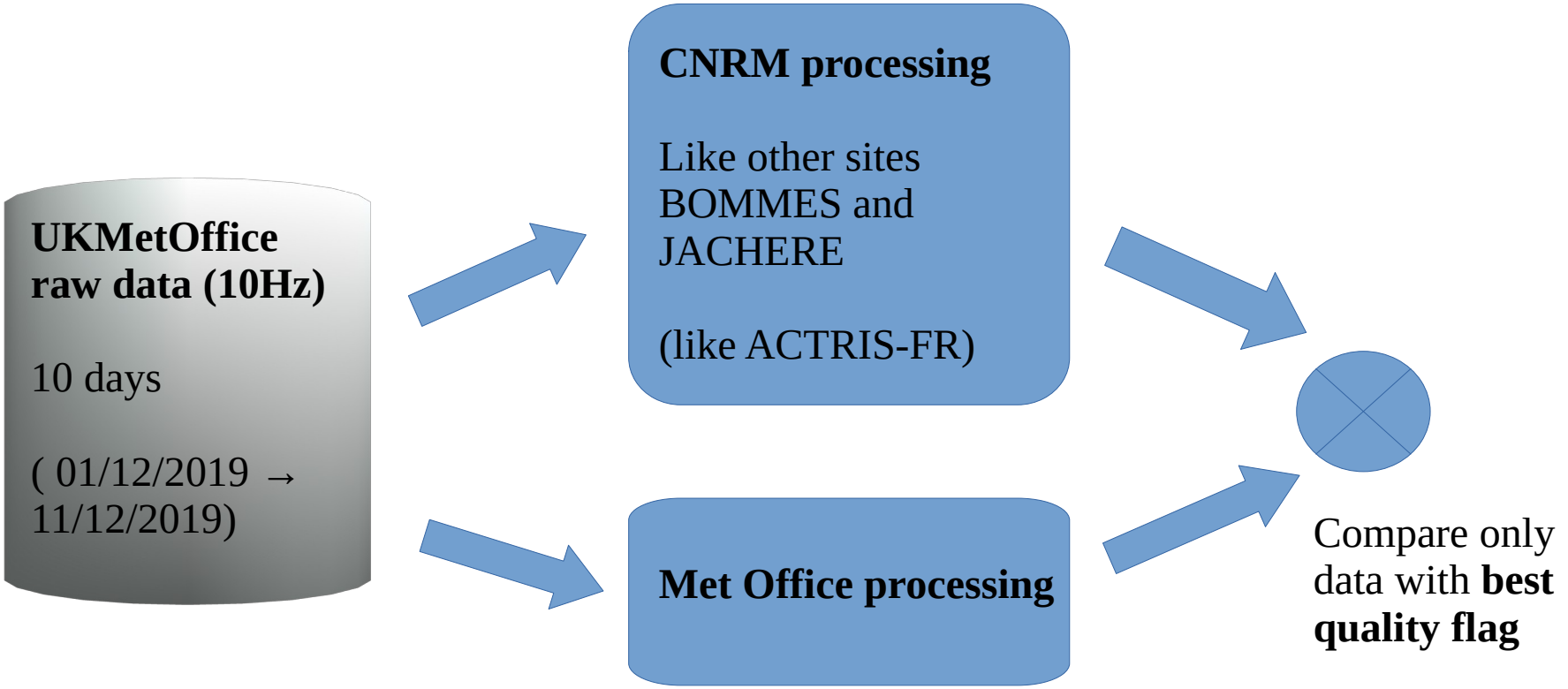
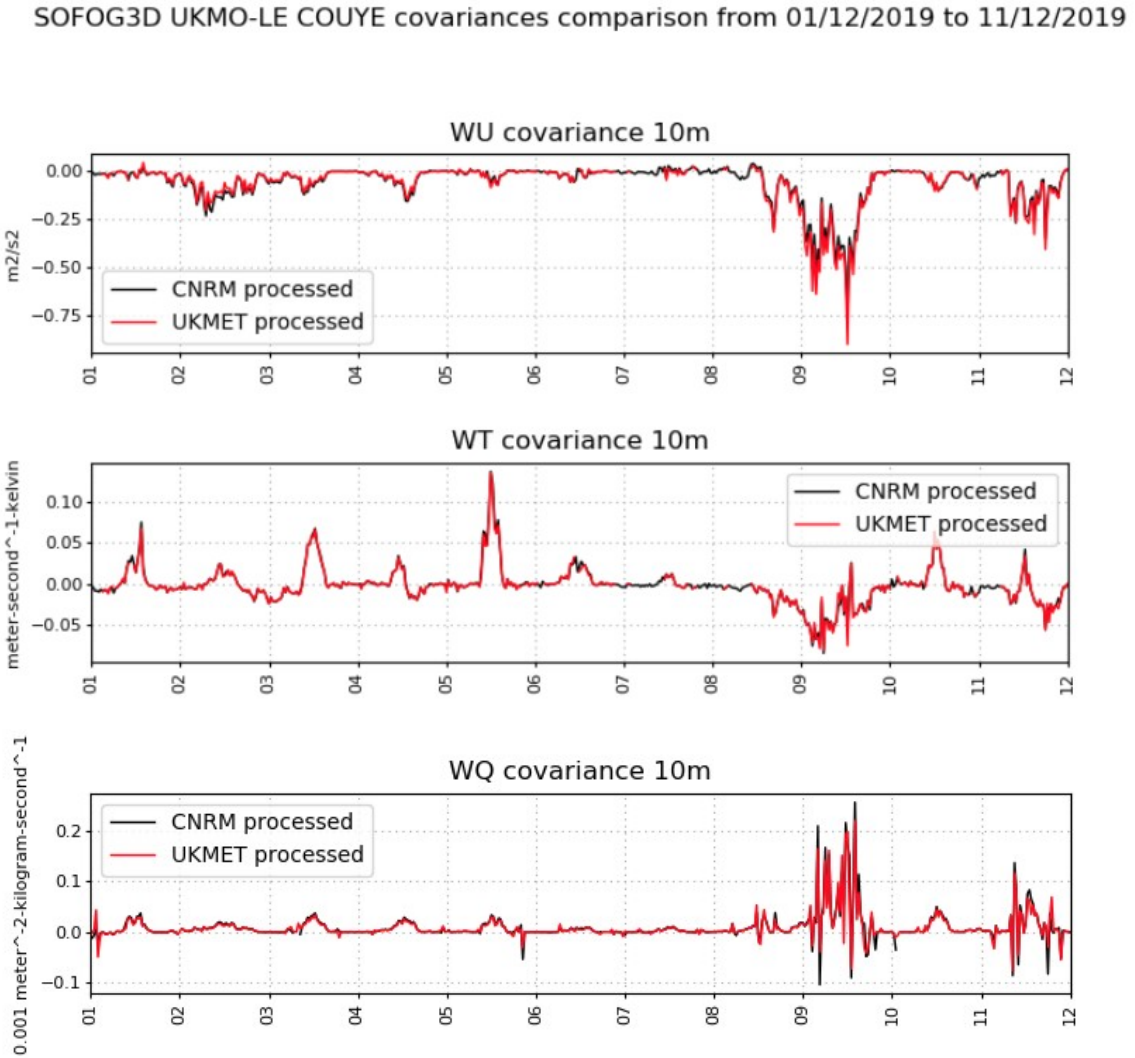
Context

- We have 2 différents eddy-covariance measurements systems with 2 different processing managed by CNRM and Met Office
- Eddy-covariance data-processing can generate differences in the turbulent produced variables
- First aim is to evaluate uncertainties due to flux processing between SOFOG3D sites

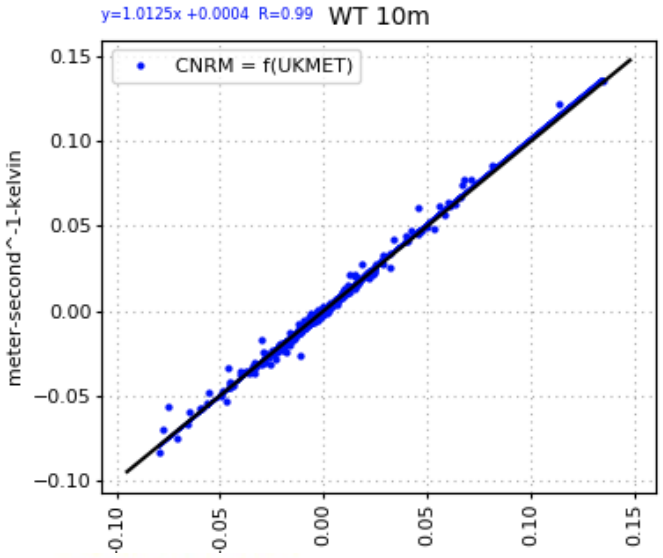
Méthodology



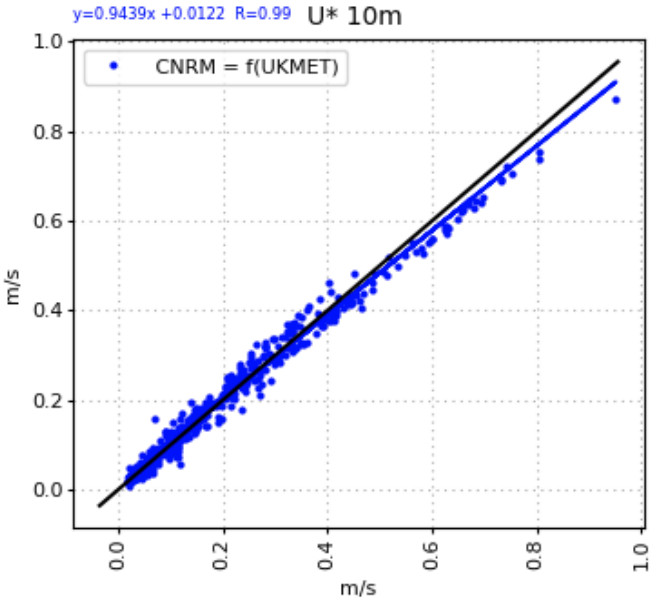
Results


SOFOG3D UKMO-LE COUYE covariances comparison from 01/12/2019 to 11/12/2019
WU covariance 10m
m2/s2
CNRM processed
UKMET processed
WT covariance 10m
meter-second^-1-kelvin
CNRM processed
UKMET processed
WQ covariance 10m
0.001 meter^-2-kilogram-second^-1
CNRM processed
UKMET processed

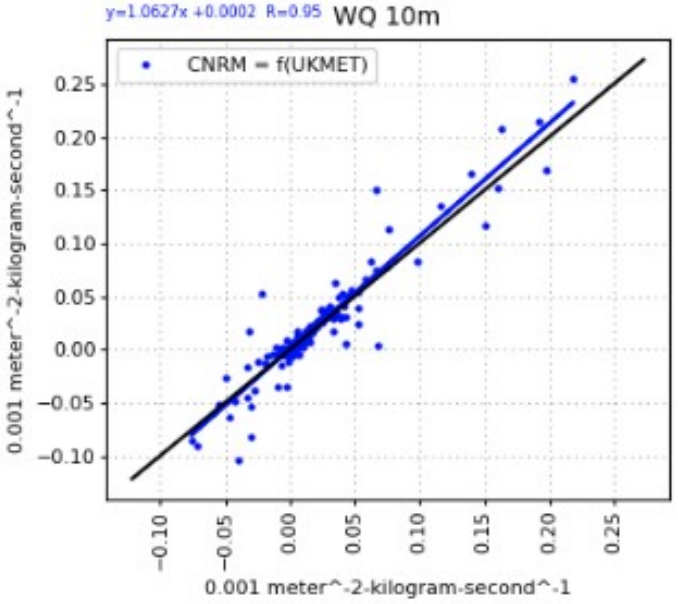
Results



SH Flux : +1 %



Ustar : -6 %



Latent Heat Flux :
+6 %

but more scattered

Conclusion and discussion

- First evaluation of uncertainties due to processing are between 1 and 6 %
- More scattered for latent heat flux

➡ Data analysis have to take in account these uncertainties

➡ Continue this work in order to minimize processing uncertainties
(understanding of differences, agreement about a same way to process, …) ?