

Assimilation at the Met Office

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Met Office

Global

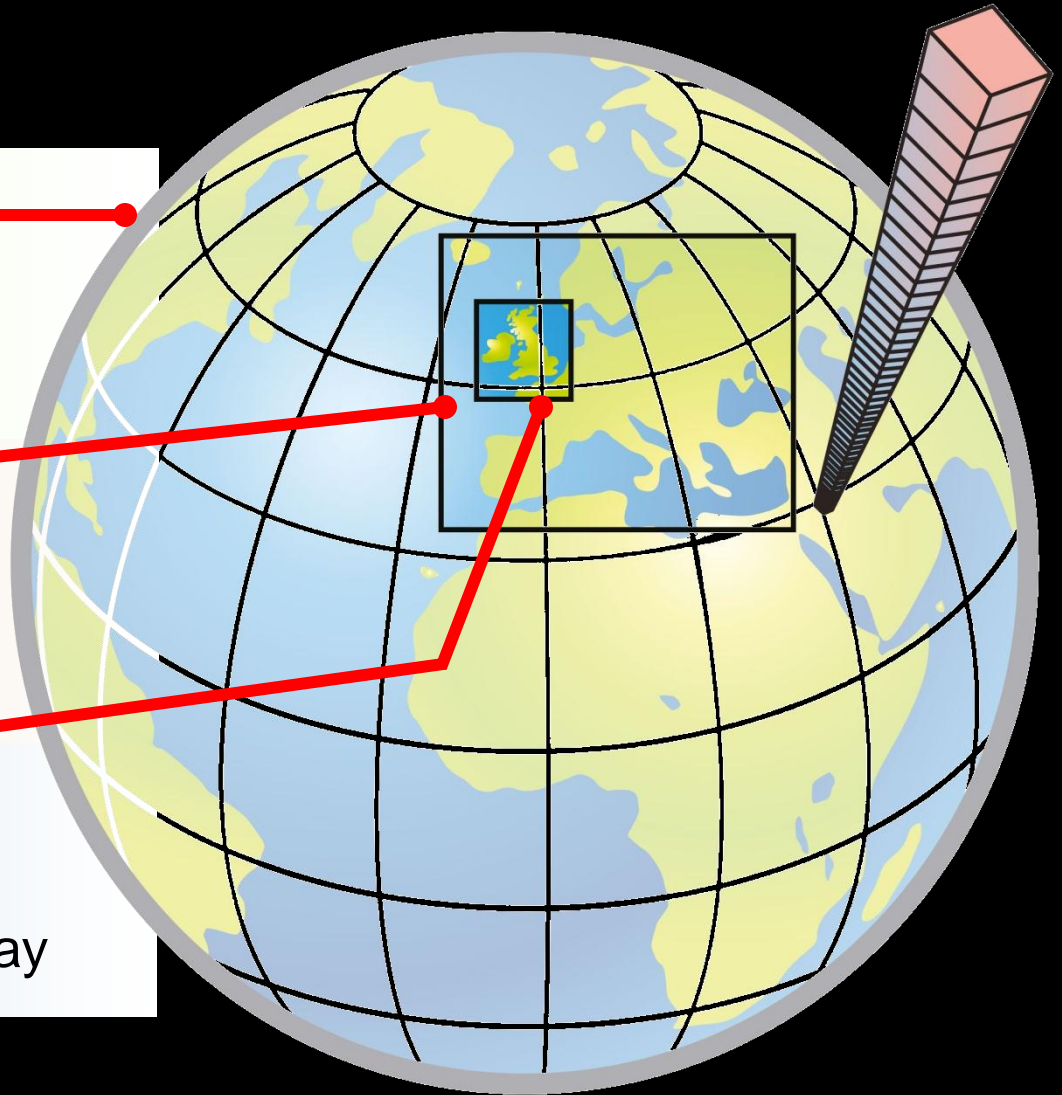
- 25km 70 Levels
- 48hr forecast twice/day
- 144hr forecast twice/day

Euro4

- 4km 70 Levels
- 60hr forecast twice/day
- 120hr forecast twice/day

UKV

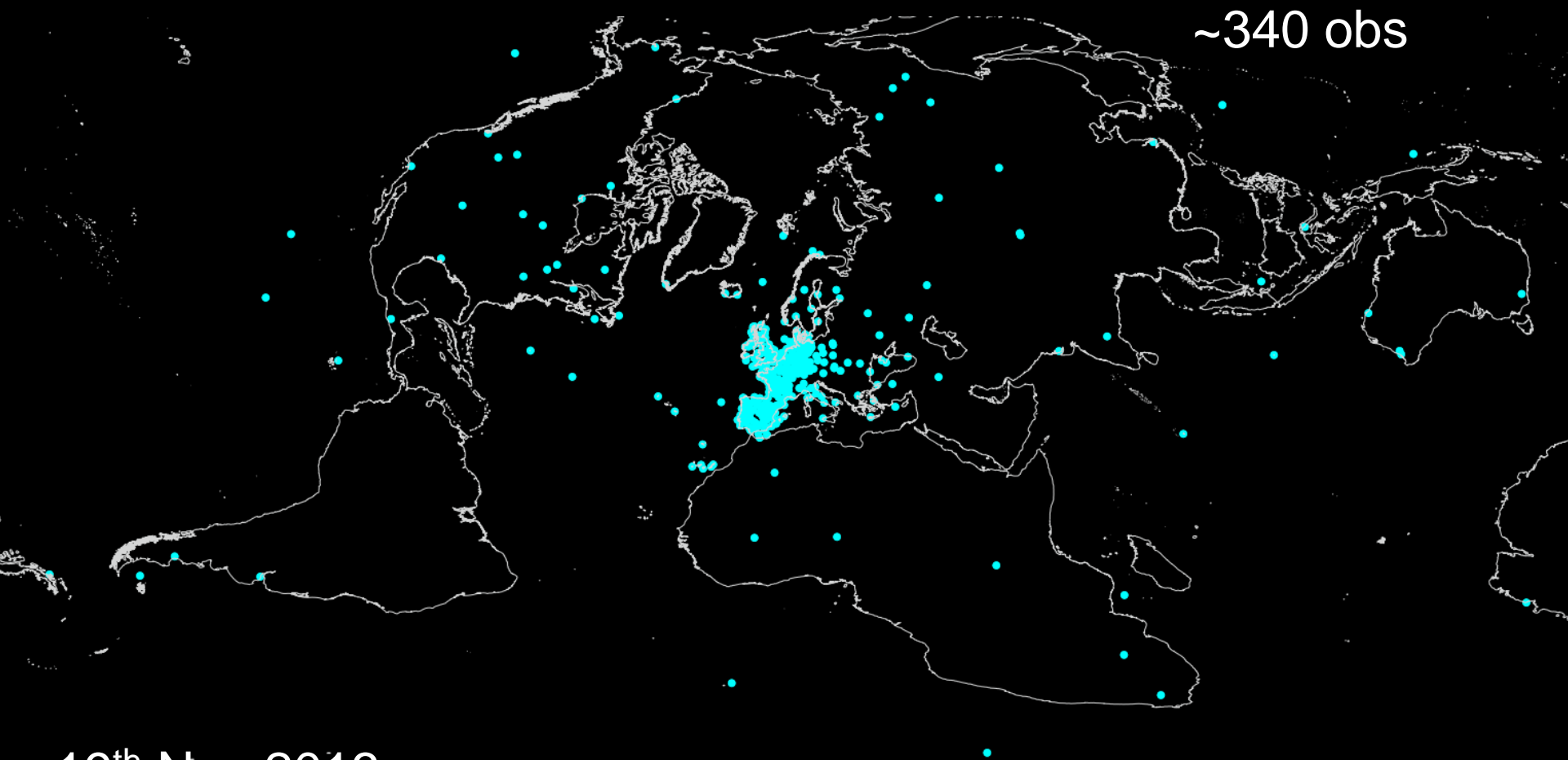
- 1.5km 70 Levels
- 36hr forecast eight times/day





~225 obs

19th Nov 2013



19th Nov 2013



Desroziers et al. (2005) method for diagnosing observation error

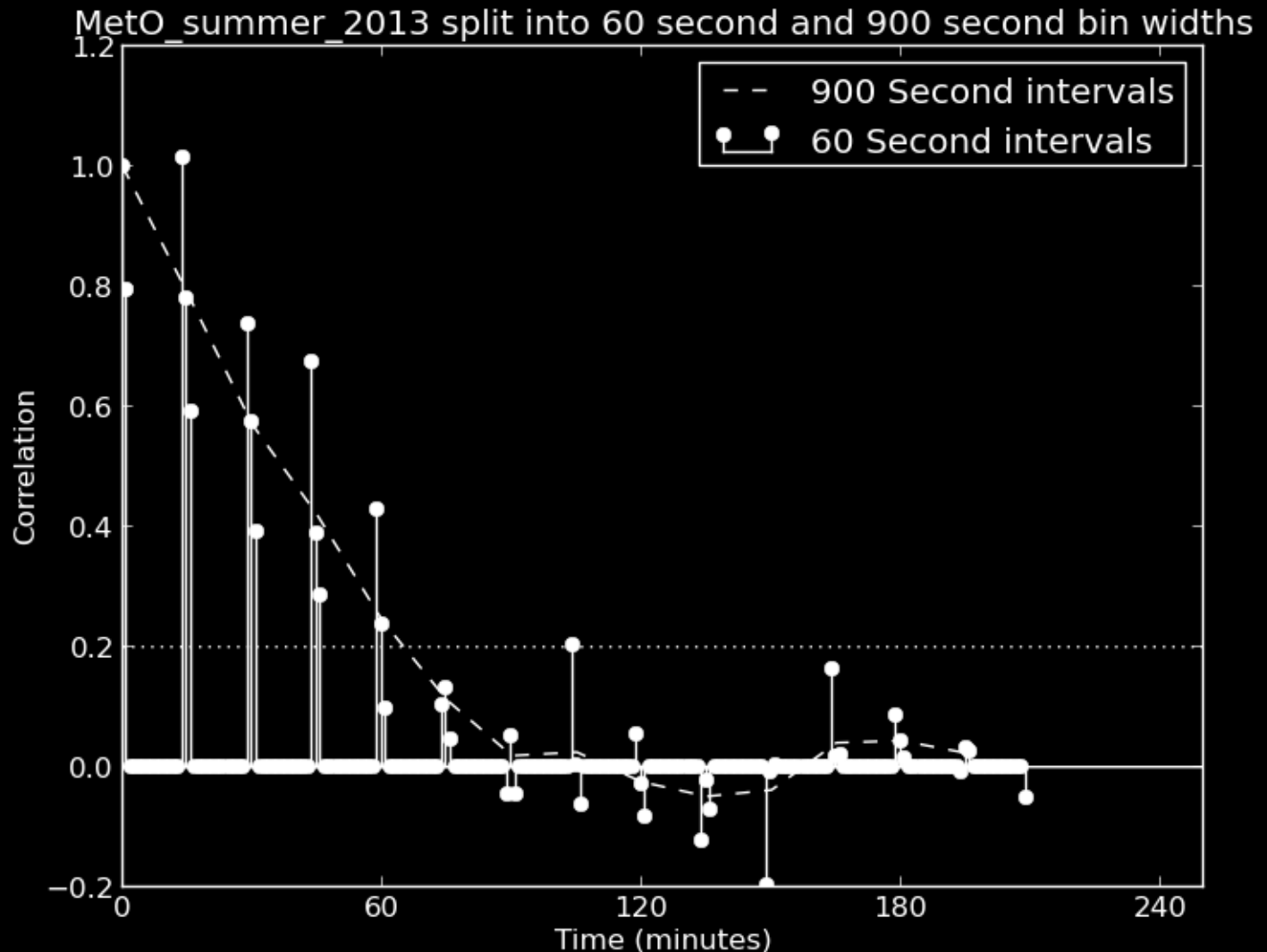
Innovation = (O-B) difference between Observation and Background

Residual = (O-A) difference between Observation and Analysis

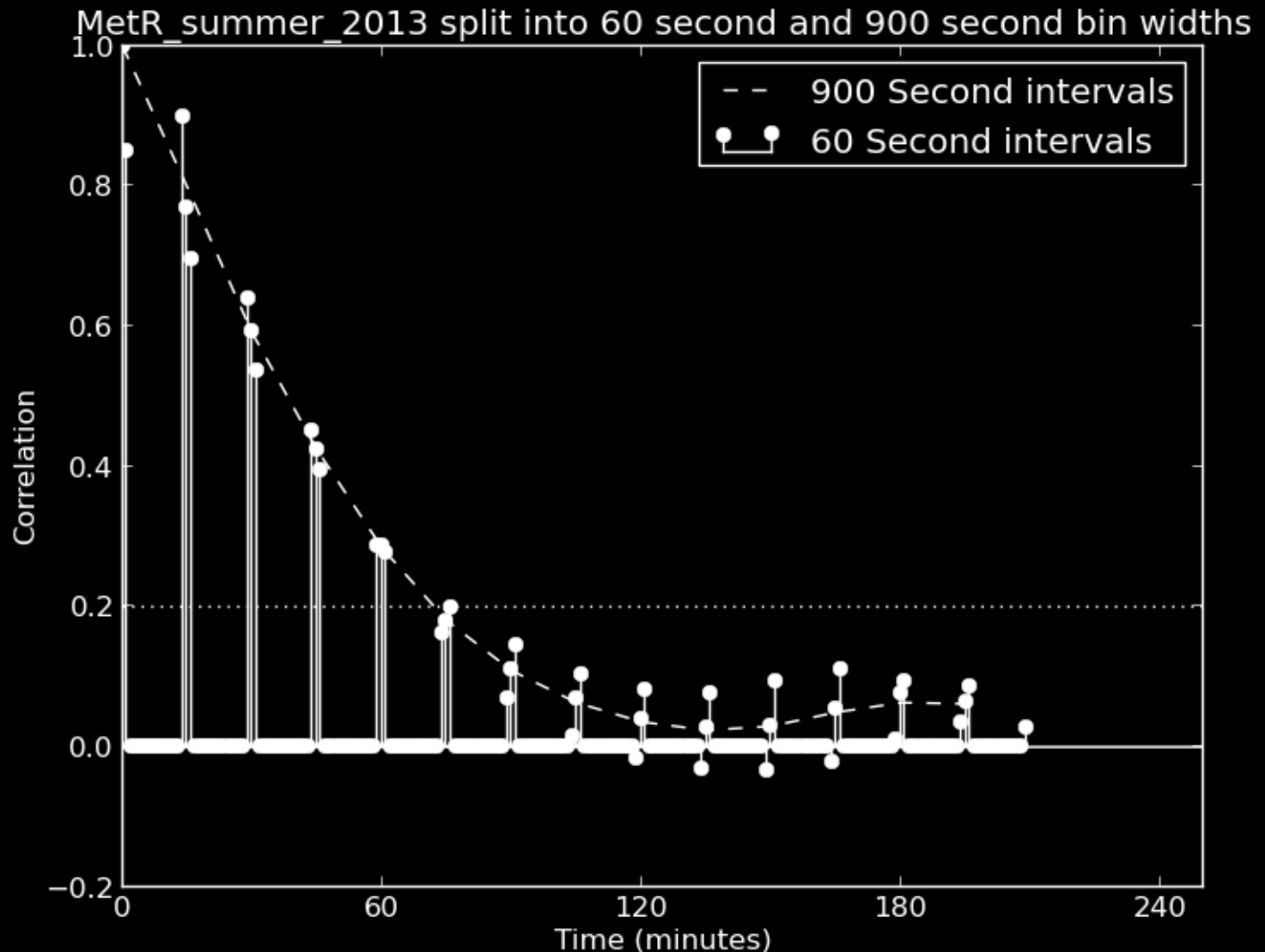
Covariance of observation errors:

$$R_{i,j} = (O-A)_i(O-B)_j$$

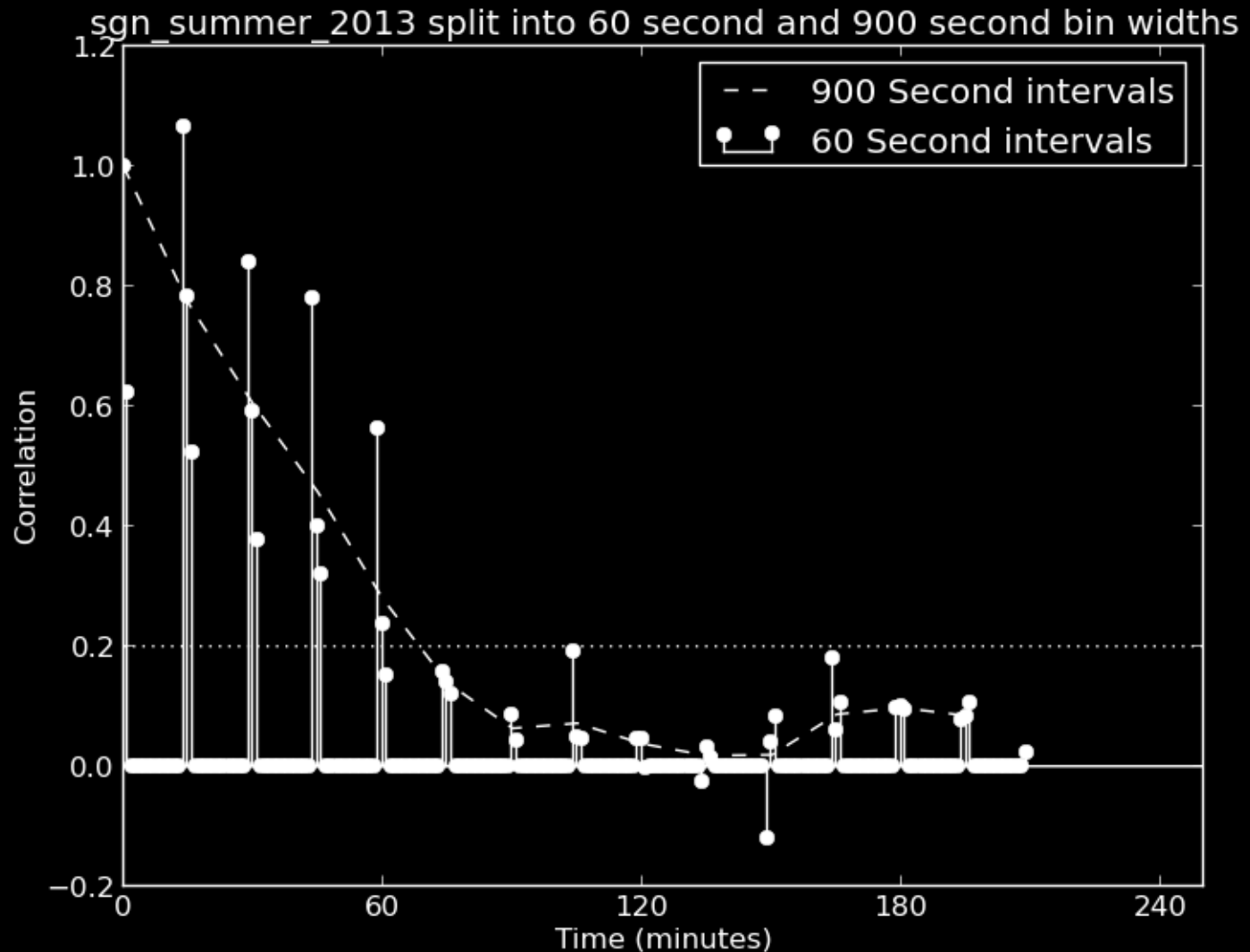
Temporal correlations of ZTD obs, METO



Temporal correlations of ZTD obs, METR

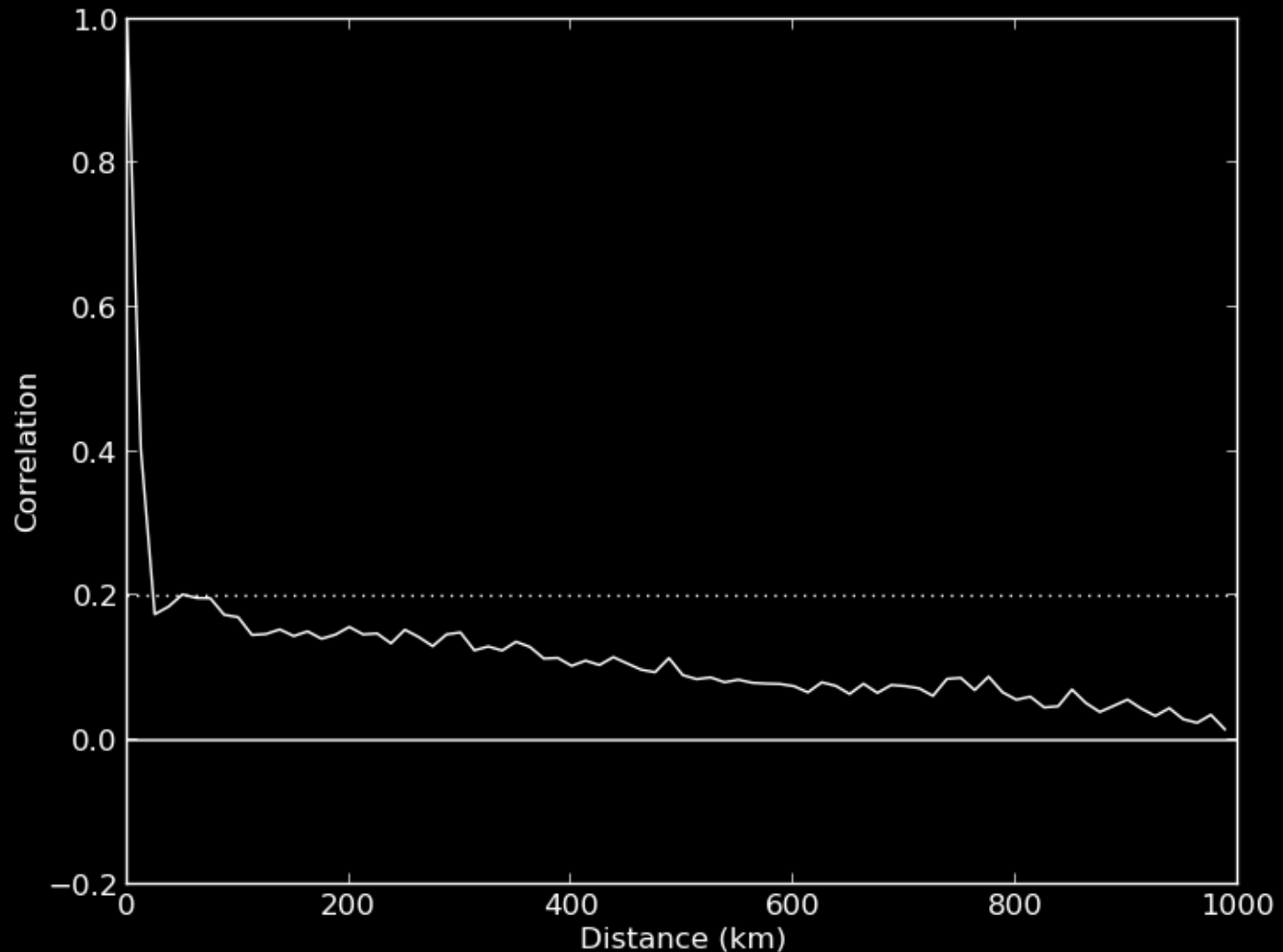


Temporal correlations of ZTD obs, SGN





Spatial correlations of ZTD obs, METO



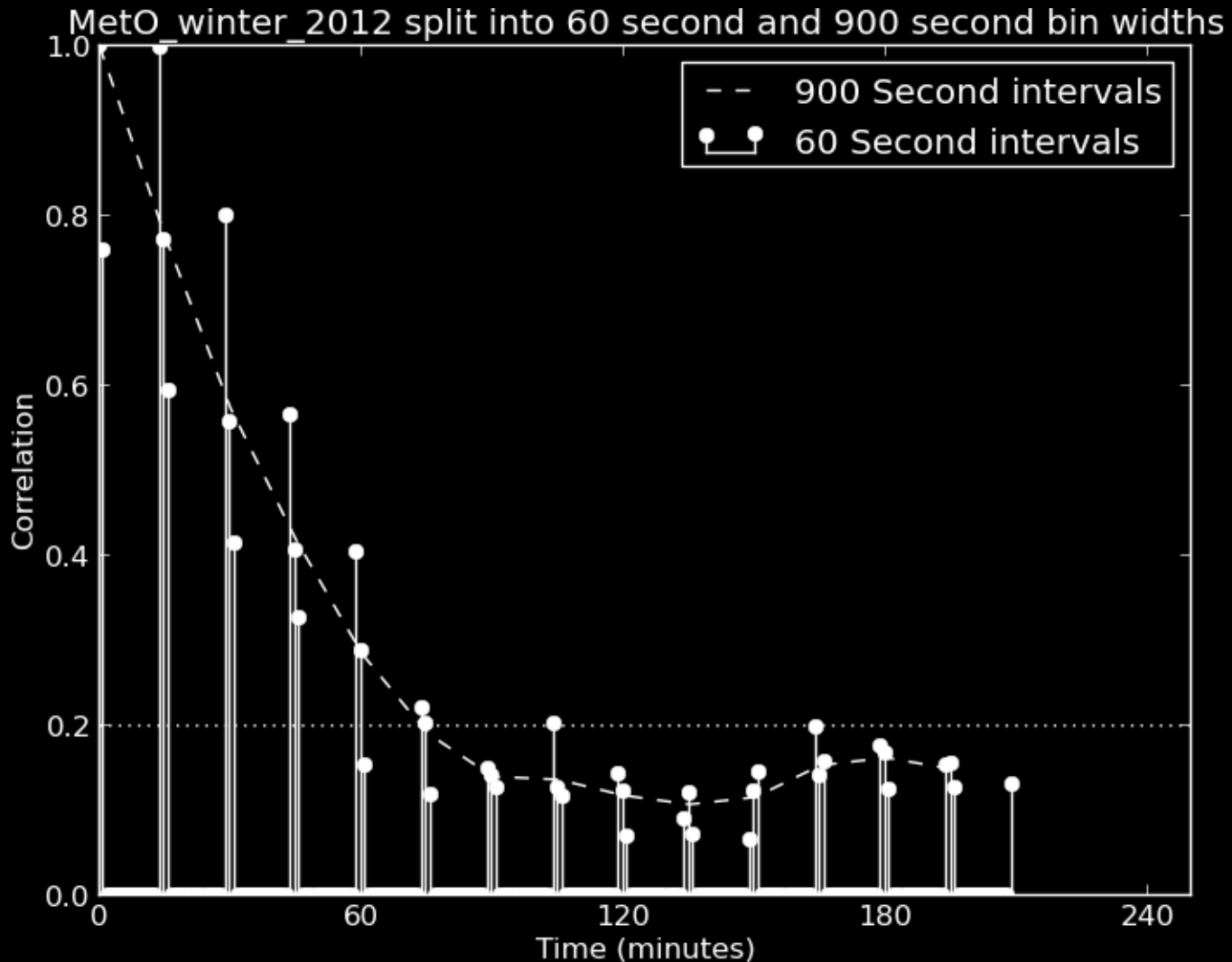


Upcoming work

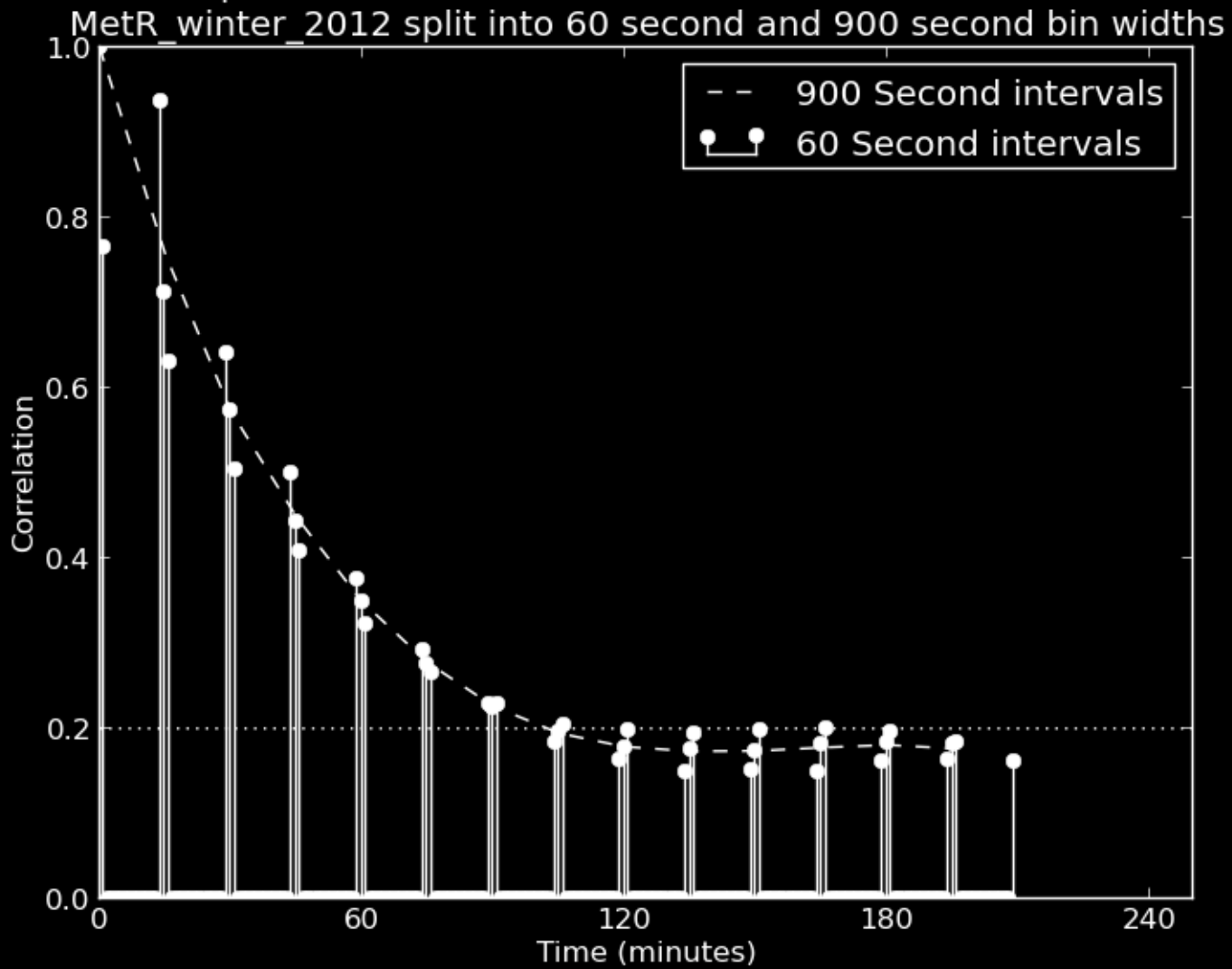
- Global Desroziers
- Increase use of observations in global
- UKV 4D-VAR hourly cycling?



Temporal correlations of ZTD obs, METO



Temporal correlations of ZTD obs, METR



Temporal correlations of ZTD obs, SGN

