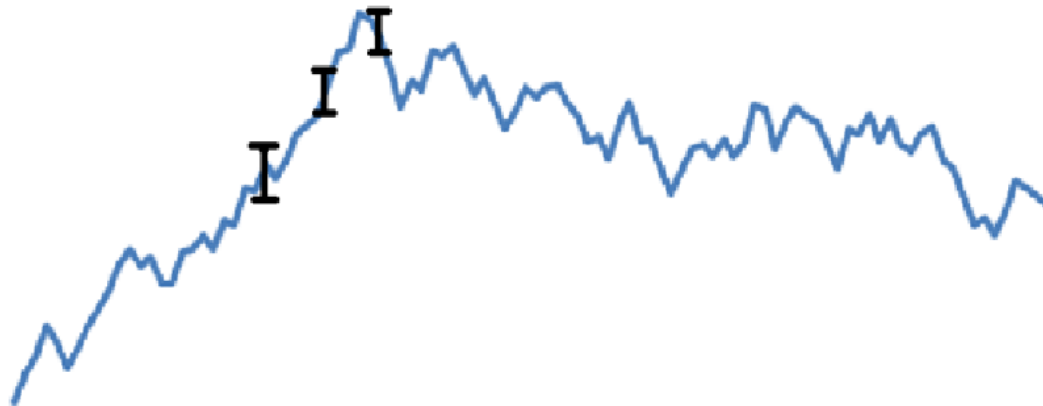
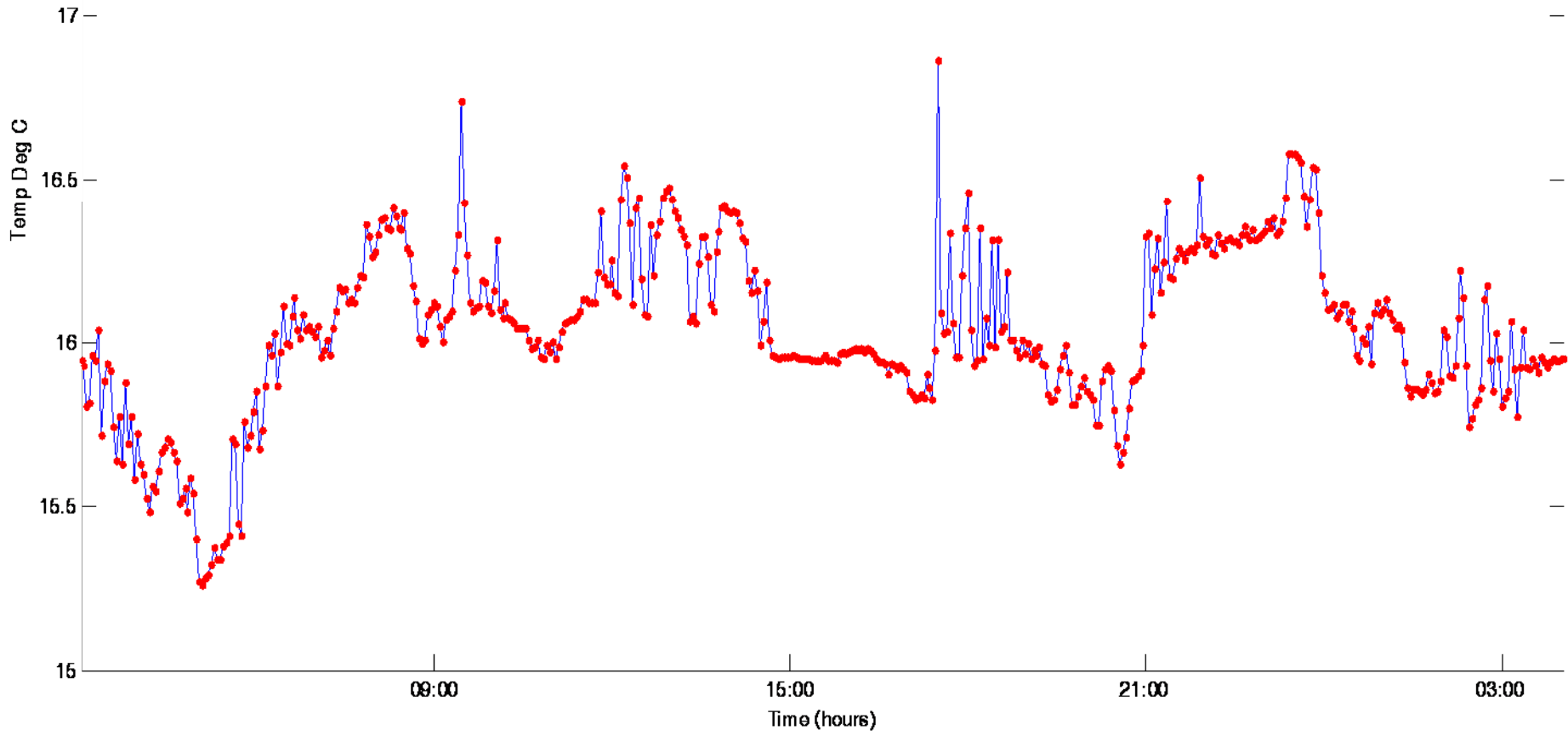


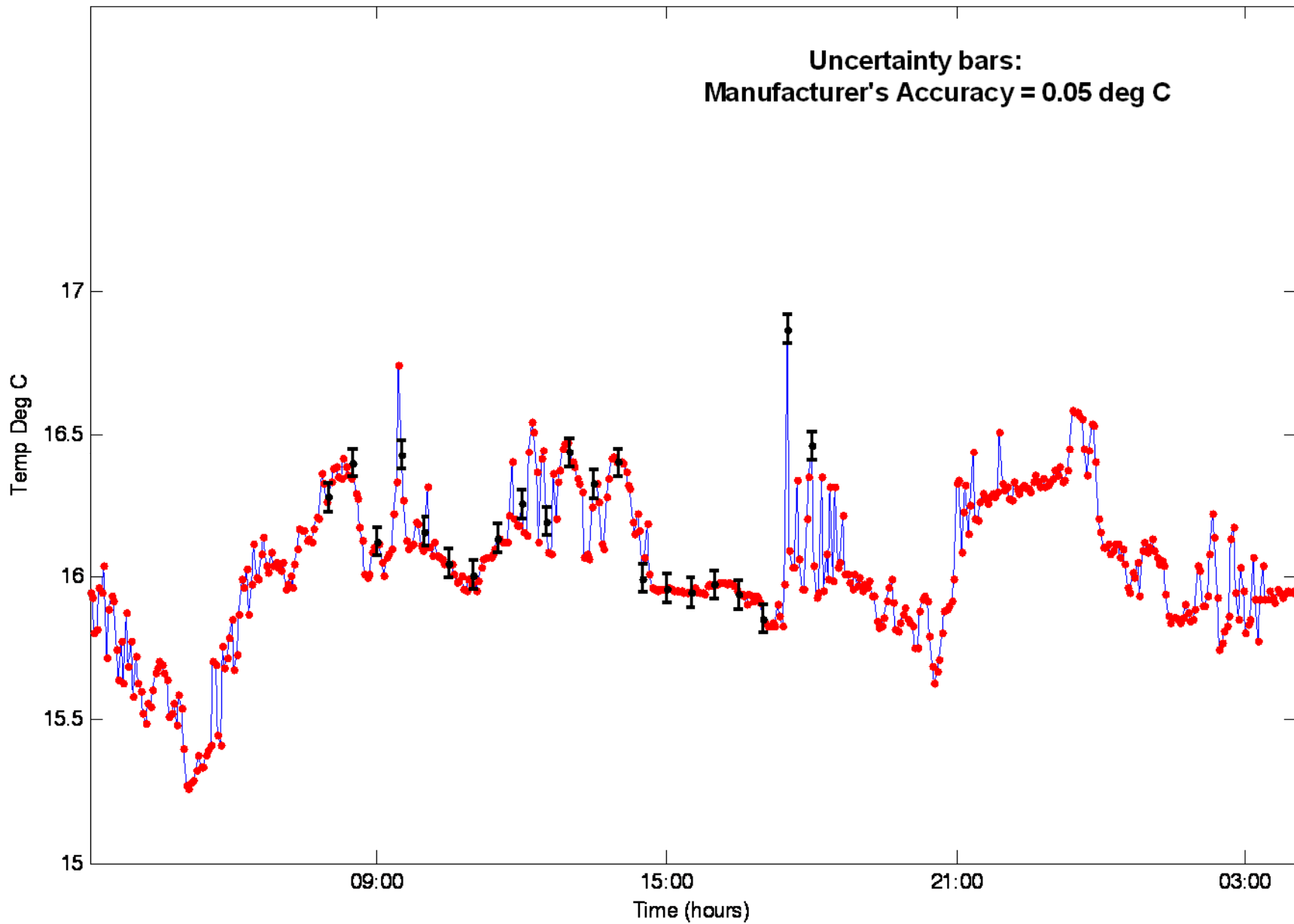
Uncertainty Estimates

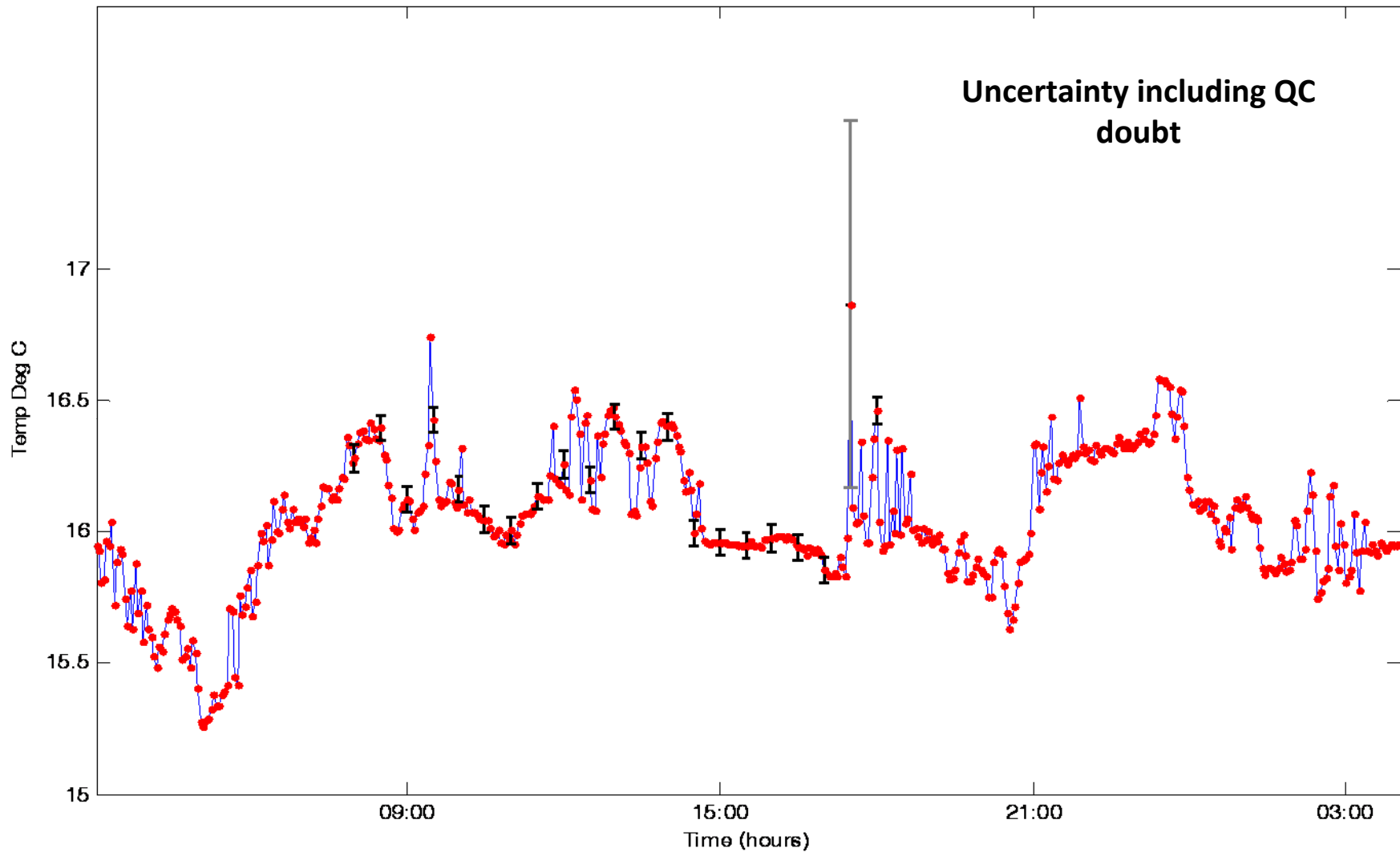


- Goal – automated uncertainty estimates for each data observation
- Why IMOS should produce uncertainty estimates

Temperature - Aqualogger 520, PH100 56m
Deployment Oct '09







QC contribute to Uncertainty?

1. Is it possible? ie. Are the estimates robust and a meaningful reflection of our uncertainty given those tests
2. Will uncertainty estimates be of value to users?

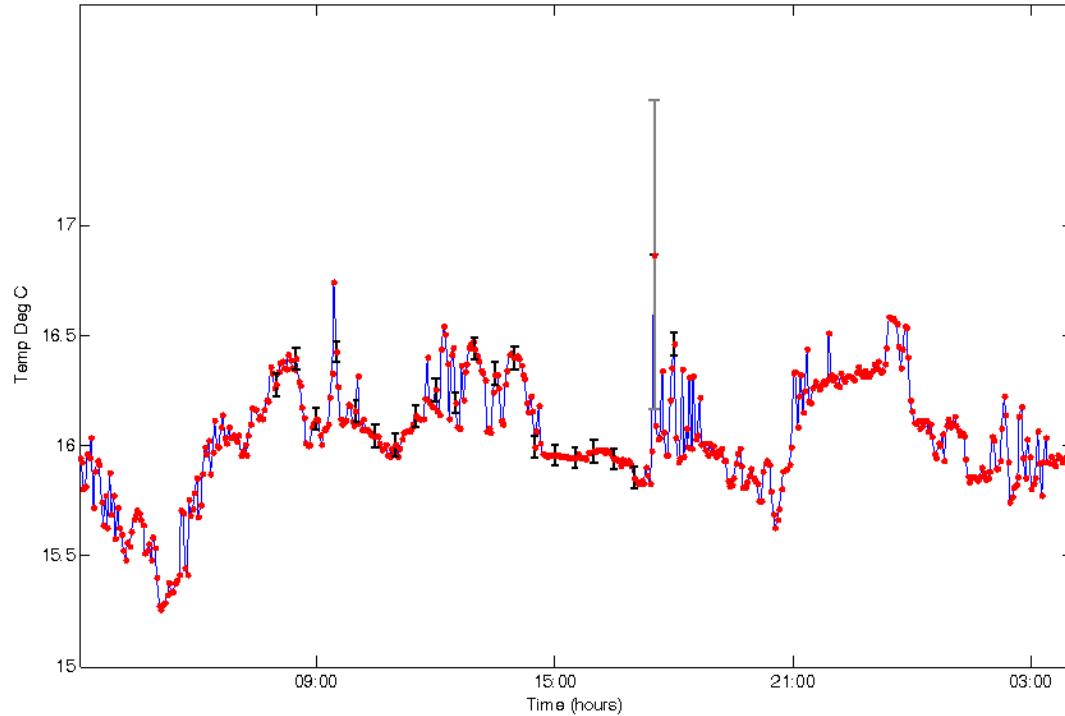
Quality Test Families:

- Spike or gradient or 'rate of change' or 'cumulative rate of change'
- Range tests – global, regional, climatologies
- Comparison with neighbouring sensor
- Comparison with other parameters

How to do it

- Measure QC outcome against historical distributions
- Get expert to provide rules (or parameters for “error” functions)

User requirements



- Users can filter the data according to size of uncertainty estimates, eg. $UE < 3\sigma$
- Is that presentation of information transparent enough for users?

Discussion priorities:

1. Calibration schedule; calibration history to eMII
2. Any other known sources of error:
from point of calibration, to deployment, to loading data. Requires new collection?
3. Any knowledge of user requirements
4. Is everyone comfortable with QC in uncertainty estimates?