

Report on progress of the CCT K10 comparison

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CCT NCTh meeting, September 2018

- Comparison of ITS-90 realisations from 962 °C to 3000 °C
- Will be used to justify radiation thermometry CMCs:
previous key comparison had large uncertainties and did not extend above 1700 °C
- Comparison artefacts are:
 - two transfer radiation thermometers
 - HTEP blackbody cells: Ni-C or Co-C (~1330 °C, both doped to introduce some element of blindness), Ru-C (1953 °C), WC-C (2750 °C)
 - transfer Cu fixed point (for drift checks)

Participants and progress

Region	Laboratories	Status
APMP	NMIJ, NIM, KRISS	✓
SIM	NIST, NRC	✓
COOMET	VNIIM	✓
EURAMET	NPL, LNE-Cnam, PTB, CEM	In progress

Initial NPL measurements during ~Aug/ Sept 2014

NPL measurements carried out after each loop/ region

EURAMET loop nearing completion (LNE-Cnam and PTB measurements complete, CEM measurements well underway)

Final NPL measurements on return of instruments
~Sept 2018 (other contracts permitting.....)

Issues/ current timescale

- Delays due to transportation issues and participant delays

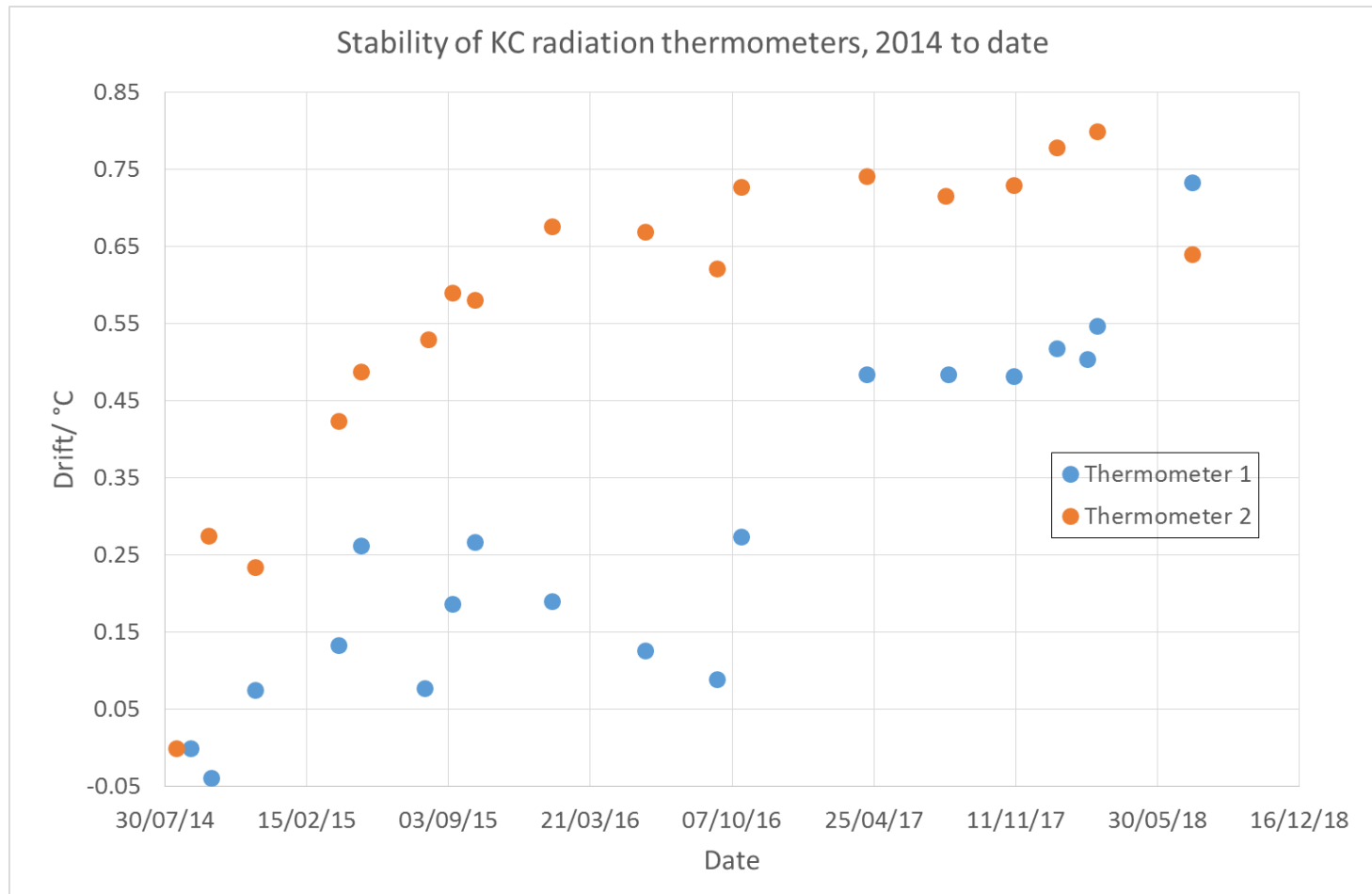
Currently significantly behind schedule:

Original timescale from ~July 2014 to ~August 2016

Now expected completion is ~November/ December 2018

- Have had issues due to equipment breakage
 - e.g. some labs have measured Ni-C cell, others Co-C
 - several different WC-C cells used
- The transfer thermometers have been drifting
 - this will complicate the analysis

Stability of the transfer thermometers





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