Addendum to final report

CCT-K5: Comparison of local realizations of the ITS-90
between the silver point and 1700 °C
using vacuum tungsten strip lamps
as transfer standards

Combining the final results to the KCDB
based on the Final report

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May 2008

One page summary

Four GEC high-stability vacuum Tungsten-strip lamps were used as transfer standards for radiance temperature measurements at specific currents corresponding to nominal temperatures T_{nom}. To shorten the measurement time significantly the set of transfer standards was split in two sets of two lamps for simultaneous comparisons in two loops. The pilot of each loop measured on both lamp sets in order to establish a linkage mechanism between both loops. The established link $\Delta t\,(T_{nom})$ is described in detail in the CCT-K5 final report. Using this link the four key comparison reference values, $T_R\,(k,\,T_{nom})$, were calculated at each nominal temperature T_{nom}, that is, one value for each individual lamp k, with $k \in$ {C564, C681} or $k \in$ {C860, C864} for loop 1 and loop 2, respectively.

The key comparison reference value $T_R\,(k,\,T_{nom})$ is calculated for each nominal temperature T_{nom} on the basis of the median of measured radiance temperatures $T_i\,(k,\,T_{nom})$. For each participant i, either from loop 1 or loop 2, the difference from the key comparison reference value is calculated for each lamp k in the loop. As a result two differences are calculated, $D_i\,(C564,\,T_{nom}) = T_i\,(C564,\,T_{nom}) - T_R\,(C564,\,T_{nom})$ and $D_i\,(C681,\,T_{nom}) = T_i\,(C681,\,T_{nom}) - T_R\,(C681,\,T_{nom})$ for loop 1 and similarly for loop 2. For each difference the associated uncertainty $U_i \equiv U_i\,(D_i\,(k,\,T_{nom}))$ is calculated based on the sum of squares of $U_i\,(T_i\,(k,\,T_{nom}))$ and $U_i\,(T_R\,(k,\,T_{nom}))$.

Consequently four different combinations determine the difference between two participants. For participants in the same loop this condenses to the average of two differences. Again, for loop 1
$$D_{ij}\,(loop\ 1,\,T_{nom}) = ¼\,D_{ij}\,(C564,\,T_{nom}) + ¼\,D_{ji}\,(C564,\,T_{nom}) + ¼\,D_{ij}\,(C681,\,T_{nom}) + ¼\,D_{ji}\,(C681,\,T_{nom}).$$
$$= ½\,D_{ij}\,(C564,\,T_{nom}) + ½\,D_{ij}\,(C681,\,T_{nom}),$$
where $D_{ij}\,(k,\,T_{nom}) = D_i\,(k,\,T_{nom}) - D_j\,(k,\,T_{nom})$.

The degree of equivalence of each temperature T_i with respect to the key comparison reference value is given by a pair of terms: the average difference $D_i = \Sigma_k\,D_i(k,\,T_{nom})\,/\,\Sigma_k\,1$ and associated uncertainty U_i, its expanded uncertainty at 95 % confidence, both expressed in K. The uncertainty U_i includes the uncertainties in the original laboratory calibrations, the standard deviation of the average difference, the key comparison reference values and, when applicable, the link between the loops.

For the difference between two inter-loop participants the four different combinations cannot be condensed and even an additional term arises describing the difference $\Delta t\,(T_{nom})$ between the two loops, that is $D_{ij}\,(inter\text{-}loop,\,T_{nom}) = D_i\,(loop\ i,\,T_{nom}) - D_j\,(loop\ j,\,T_{nom}) \pm \Delta t\,(T_{nom})$, where the $\pm$ sign relates to either adding or subtracting the differences between the loops depending on whether participant j is in loop 1 or loop 2. In this latter case the uncertainties will be larger as they include the uncertainty of established link $U\,(\Delta t\,(T_{nom}))$.

Contents

Finalize CCT-K5 from two-to-one entry

Resumé

Two sets of two GEC high-stability vacuum tungsten-strip lamps were used as transfer standards during the comparison. The each set circulated in a loop of participants. The pilot and co-pilot of the comparison measured on both lamp sets. The main issue to solve in this comparison was to identify the linkage mechanism between two sets of measurements performed on four lamps.
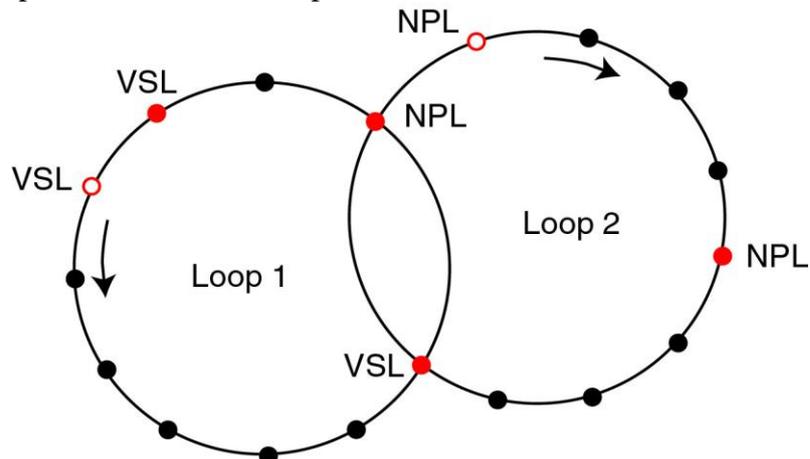
The link was realized through the pilot institutes of each loop, as they are the only participants that measured all four lamps. Using the link the median as representative value for the KCRV was calculated on the basis of a single contribution from each institute for each nominal temperature.

Based on the calculated KCRV, one then can determine the differences from the participant entries with respect to the KCRV and, together with the KCRV, the difference between two participants. The KCRV is global, that is, one set of values as a function of the nominal temperature, without a lamp- or loop-dependence. The set of differences per participant $\delta t_i(k, t_{nom})$, however, is still specified either from loop 1 or from loop 2. The latter is important when calculating the uncertainty associated with the difference between two participants, as one has to take the uncertainty of the loop difference into account as well. Based on this argument, one can distinguish interloop and intraloop intercomparisons.

In the agreed draft B each participant has two entries per nominal temperature. From these entries the difference between two participants, either interloop or intraloop, was calculated. The result is in total 4 combinations of differences since both participants have measured 2 lamps.

From 4-to-1 or 2-to-1?

The issue raised is how to condense either the participant result to a single one or the difference between two participants to a single value. Very straight forward is to simply average out the four differences that can be calculated between two participants. This was brought forward at the CCT-WG5 meeting May 2007 and was unanimously accepted.

Single entry solution for KCDB

The differences between the participants through the KCRVs are already determined and reported in the agreed draft B. The results are presented in the tables. Now the average values are calculated accordingly to fill the KCDB. Based on the formulas from page 26 the average differences and associated uncertainties are calculated along the following route.

First, the average difference is calculated,

$$\overline{\Delta t_{nm}(t_{nom})} \equiv \sum_k \Delta t_{nm}(k, t_{nom}) / \sum_k 1,$$
based on 2 and 4 differences for the intra- and the inter-loop, respectively.

The uncertainty associated with this average difference is composed of two items. One is based on the standard deviation associated with the average, $\text{stdev}(\overline{\Delta t_{nm}(k, t_{nom})})/\sqrt{\sum_k 1}$, and the other is based on the average of already calculated uncertainties, $u(\Delta t_{nm}(k, t_{nom}))$. The combination is calculated as:

$$u(\overline{\Delta t_{nm}(t_{nom})})^2 \equiv \text{stdev}^2(\Delta t_{nm}(k, t_{nom}))/\sum_k 1 + \overline{u(\Delta t_{nm}(k, t_{nom}))}^2.$$

More explicitly the average difference and uncertainty for each loop combination are calculated according to the following expressions:

<u>Intra-loop in loop 1</u>
$$\Delta t_{nm}(\text{loop 1}, t_{nom}) \equiv \tfrac{1}{2}\Delta t_{nm}(C564, t_{nom}) + \tfrac{1}{2}\Delta t_{nm}(C681, t_{nom}) \text{ and}$$

$$u^2(\Delta t_{nm}(\text{loop1}, t_{nom})) \equiv \tfrac{1}{2}\,[\text{stdev}(\Delta t_{nm}(C564, t_{nom}), \Delta t_{nm}(C681, t_{nom}))]^2$$
$$+ [\tfrac{1}{2}u(\Delta t_{nm}(C564, t_{nom}) + \tfrac{1}{2}u(\Delta t_{nm}(C681, t_{nom}))]^2.$$

<u>Intra-loop in loop 2</u>
$$\Delta t_{nm}(\text{loop 2}, t_{nom}) \equiv \tfrac{1}{2}\Delta t_{nm}(C860, t_{nom}) + \tfrac{1}{2}\Delta t_{nm}(C864, t_{nom}) \text{ and}$$

$$u^2(\Delta t_{nm}(\text{loop2}, t_{nom})) \equiv \tfrac{1}{2}[\text{stdev}(\Delta t_{nm}(C860, t_{nom}), \Delta t_{nm}(C864, t_{nom}))]^2$$
$$+ [\tfrac{1}{2}u(\Delta t_{nm}(C860, t_{nom})) + \tfrac{1}{2}u(\Delta t_{nm}(C864, t_{nom}))]^2.$$

<u>Inter-loop between loops 1 and 2</u>
$$\Delta t_{nm}(\text{loop 1/2}, t_{nom}) \equiv \tfrac{1}{4}\Delta t_{nm}(C564/C860, t_{nom}) + \tfrac{1}{4}\Delta t_{nm}(C564/C864, t_{nom})$$
$$+\tfrac{1}{4}\Delta t_{nm}(C681/C860, t_{nom}) + \tfrac{1}{4}\Delta t_{nm}(C681/C864, t_{nom}) \text{ and}$$

$$u^2(\Delta t_{nm}(\text{loop1/2}, t_{nom})) \equiv \tfrac{1}{4}[\text{stdev}(\Delta t_{nm}(C564/C860, t_{nom}), \Delta t_{nm}(C564/C864, t_{nom}),$$
$$\Delta t_{nm}(C681/C860, t_{nom}), \Delta t_{nm}(C681/C864, t_{nom}))\,]^2$$
$$+[\tfrac{1}{4}u(\Delta t_{nm}(C564/C860, t_{nom})) + \tfrac{1}{4}u(\Delta t_{nm}(C564/C864, t_{nom}))$$
$$+ \tfrac{1}{4}u(\Delta t_{nm}(C681/C860, t_{nom})) + \tfrac{1}{4}u(\Delta t_{nm}(C681/C864, t_{nom})]^2.$$

Although the pilot laboratories NPL and VSL have measured the lamp sets several times during the intercomparison only their first contribution to the set of measurement data is used for the KCDB database, NPL1 and VSL1 respectively. The results are presented below.

Final results

Nominal temperature 961°C

Lab, S/N i ⟹

Lab, S/N j ⟓

	D_i	U_i /K	VSL D_{ij}	U_{ij} /K	NPL D_{ij}	U_{ij} /K	CSIRO D_{ij}	U_{ij} /K	KRISS D_{ij}	U_{ij} /K	NIM D_{ij}	U_{ij} /K	NMC D_{ij}	U_{ij} /K
VSL	-0.010	0.227			0.113	0.408	0.085	0.205	0.040	0.287	-0.065	0.300	0.470	0.377
NPL	-0.124	0.310	-0.113	0.408			-0.028	0.359	-0.073	0.407	-0.178	0.421	0.357	0.465
CSIRO	-0.095	0.123	-0.085	0.205	0.028	0.359			-0.045	0.203	-0.150	0.226	0.385	0.328
KRISS	-0.050	0.255	-0.040	0.287	0.073	0.407	0.045	0.203			-0.105	0.289	0.430	0.408
NIM	0.055	0.259	0.065	0.300	0.178	0.421	0.150	0.226	0.105	0.289			0.535	0.403
NMC	-0.480	0.319	-0.470	0.377	-0.357	0.465	-0.385	0.328	-0.430	0.427	-0.535	0.403		
NRLM	0.010	0.263	0.020	0.312	0.133	0.429	0.105	0.243	0.060	0.329	-0.045	0.329	0.490	0.399
VNIIM	0.555	0.333	0.565	0.380	0.678	0.477	0.650	0.328	0.605	0.398	0.500	0.398	1.035	0.444
NIST														
NRC	0.311	0.262	0.322	0.378	0.435	0.372	0.407	0.325	0.362	0.378	0.257	0.392	0.792	0.440
CENAM	0.091	0.433	0.102	0.512	0.215	0.507	0.187	0.474	0.142	0.512	0.037	0.522	0.572	0.559
INM	-0.294	0.350	-0.283	0.410	-0.170	0.400	-0.198	0.360	-0.243	0.409	-0.348	0.423	0.187	0.467
IMGC	0.111	0.171	0.122	0.324	0.235	0.337	0.207	0.259	0.162	0.323	0.057	0.339	0.592	0.394
PTB	0.051	0.169	0.062	0.420	0.175	0.442	0.147	0.372	0.102	0.420	-0.003	0.433	0.532	0.476

Lab, S/N i ⟹

Lab, S/N j ⇓

Lab, S/N j	D_i	U_i	NRLM D_{ij}	NRLM U_{ij}	VNIIM D_{ij}	VNIIM U_{ij}	NIST D_{ij}	NIST U_{ij}	NRC D_{ij}	NRC U_{ij}	CENAM D_{ij}	CENAM U_{ij}	INM D_{ij}	INM U_{ij}
		/ K		/ K		/ K		/ K		/ K		/ K		/ K
VSL	-0.010	0.227	-0.020	0.312	-0.565	0.380			-0.322	0.378	-0.102	0.512	0.283	0.410
NPL	-0.124	0.310	-0.133	0.429	-0.678	0.477			-0.435	0.372	-0.215	0.091	0.170	0.400
CSIRO	-0.095	0.123	-0.105	0.243	-0.650	0.328			-0.407	0.325	-0.187	0.474	0.198	0.360
KRISS	-0.050	0.255	-0.060	0.316	-0.605	0.395			-0.362	0.378	-0.142	0.512	0.243	0.409
NIM	0.055	0.259	0.045	0.329	-0.500	0.398			-0.257	0.392	-0.037	0.522	0.348	0.423
NMC	-0.480	0.319	-0.490	0.399	-1.035	0.444			-0.792	0.440	-0.572	0.559	-0.187	0.467
NRLM	0.010	0.263			-0.545	0.403			-0.302	0.401	-0.082	0.529	0.303	0.431
VNIIM	0.555	0.333	0.545	0.403					0.243	0.452	0.463	0.569	0.848	0.478
NIST														
NRC	0.311	0.262	0.302	0.401	-0.243	0.452					0.220	0.484	0.605	0.391
CENAM	0.091	0.433	0.082	0.529	-0.463	0.569			-0.220	0.484			0.385	0.521
INM	-0.294	0.350	-0.303	0.431	-0.848	0.478			-0.605	0.391	-0.385	0.521		
IMGC	0.111	0.171	0.102	0.350	-0.443	0.407			-0.200	0.289	0.020	0.450	0.405	0.383
PTB	0.051	0.169	0.042	0.441	-0.503	0.488			-0.260	0.402	-0.040	0.530	0.345	0.489

Lab, S/N j ⇓

	D_i	U_i	IMGC		PTB	
			D_{ij}	U_{ij}	D_{ij}	U_{ij}
	/ K		/ K		/ K	
VSL	-0.010	0.227	-0.122	0.324	-0.062	0.420
NPL	-0.124	0.310	-0.235	0.337	-0.175	0.442
CSIRO	-0.095	0.123	-0.207	0.259	-0.147	0.372
KRISS	-0.050	0.255	-0.162	0.323	-0.102	0.420
NIM	0.055	0.259	-0.057	0.339	0.003	0.433
NMC	-0.480	0.319	-0.592	0.394	-0.532	0.476
NRLM	0.010	0.263	-0.102	0.350	-0.042	0.441
VNIIM	0.555	0.333	0.443	0.407	0.503	0.488
NIST						
NRC	0.311	0.262	0.200	0.289	0.260	0.402
CENAM	0.091	0.433	-0.020	0.450	0.040	0.530
INM	-0.294	0.350	-0.405	0.383	-0.345	0.489
IMGC	0.111	0.171			0.060	0.333
PTB	0.051	0.169	-0.060	0.333		

CCT-K5 : Nominal temperature, T_{90} = 1234 K
Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K
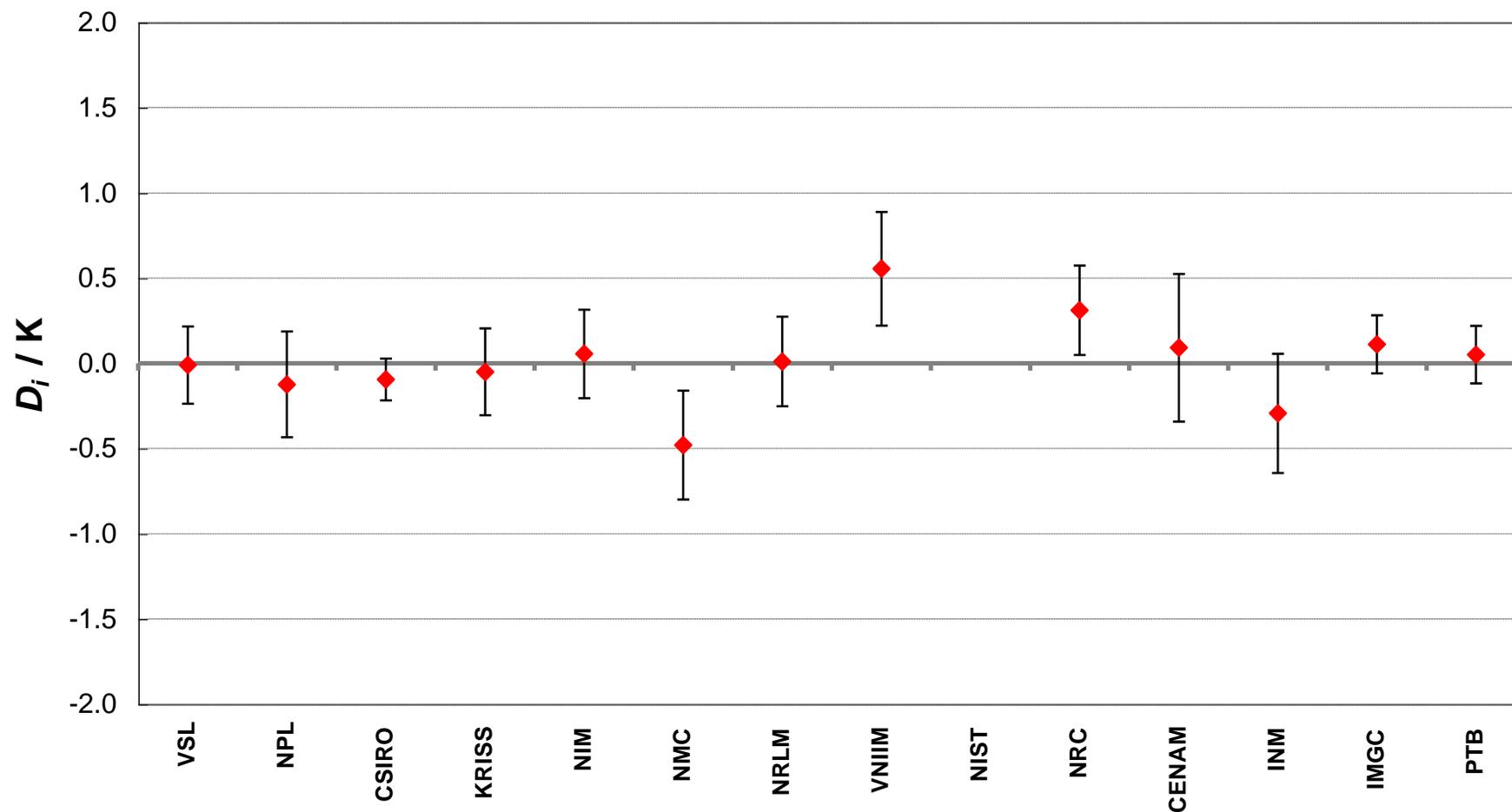
Nominal temperature 1000°C

Lab, S/N i ⟹

Lab, S/N j ⟱

Lab, S/N j	D_i	U_i /K	VSL D_{ij}	U_{ij} /K	NPL D_{ij}	U_{ij} /K	CSIRO D_{ij}	U_{ij} /K	KRISS D_{ij}	U_{ij} /K	NIM D_{ij}	U_{ij} /K	NMC D_{ij}	U_{ij} /K
VSL	-0.002	0.221			0.113	0.386	0.055	0.206	0.020	0.281	-0.090	0.320	0.500	0.375
NPL	-0.114	0.294	-0.113	0.386			-0.058	0.334	-0.093	0.382	-0.203	0.413	0.388	0.446
CSIRO	-0.057	0.116	-0.055	0.206	0.058	0.334			-0.035	0.192	-0.145	0.247	0.445	0.328
KRISS	-0.022	0.235	-0.020	0.281	0.093	0.382	0.035	0.192			-0.110	0.300	0.480	0.394
NIM	0.088	0.279	0.090	0.320	0.203	0.413	0.145	0.247	0.110	0.300			0.590	0.420
NMC	-0.502	0.314	-0.500	0.375	-0.388	0.446	-0.445	0.328	-0.480	0.424	-0.590	0.420		
NRLM	0.053	0.258	0.055	0.312	0.168	0.408	0.110	0.244	0.075	0.345	-0.035	0.345	0.555	0.398
VNIIM	0.333	0.345	0.335	0.408	0.448	0.463	0.390	0.369	0.355	0.459	0.245	0.459	0.835	0.442
NIST	0.151	0.487	0.153	0.548	0.265	0.561	0.208	0.513	0.173	0.546	0.063	0.568	0.653	0.592
NRC	0.251	0.255	0.253	0.358	0.365	0.369	0.308	0.301	0.273	0.354	0.163	0.387	0.753	0.422
CENAM	0.051	0.449	0.053	0.514	0.165	0.522	0.108	0.476	0.073	0.511	-0.038	0.534	0.553	0.560
INM	-0.304	0.366	-0.303	0.406	-0.190	0.435	-0.248	0.357	-0.283	0.402	-0.393	0.431	0.198	0.463
IMGC	0.111	0.179	0.113	0.310	0.225	0.328	0.168	0.241	0.133	0.305	0.023	0.342	0.613	0.381
PTB	-0.054	0.183	-0.053	0.416	0.060	0.437	0.003	0.369	-0.033	0.413	-0.143	0.442	0.448	0.473

Lab, S/N i ⟹

Lab, S/N j ⬇

Lab, S/N j	D_i	U_i	NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij} / K	D_{ij}	U_{ij} / K	D_{ij}	U_{ij} / K	D_{ij}	U_{ij} / K	D_{ij}	U_{ij} / K	D_{ij}	U_{ij} / K
VSL	-0.002	0.221	-0.055	0.312	-0.335	0.408	-0.153	0.548	-0.253	0.358	-0.053	0.514	0.303	0.406
NPL	-0.114	0.294	-0.168	0.408	-0.448	0.463	-0.265	0.561	-0.365	0.369	-0.165	0.077	0.190	0.435
CSIRO	-0.057	0.116	-0.110	0.244	-0.390	0.369	-0.208	0.513	-0.308	0.301	-0.108	0.476	0.248	0.357
KRISS	-0.022	0.235	-0.075	0.309	-0.355	0.436	-0.173	0.546	-0.273	0.354	-0.073	0.511	0.283	0.402
NIM	0.088	0.279	0.035	0.345	-0.245	0.459	-0.063	0.568	-0.163	0.387	0.038	0.534	0.393	0.431
NMC	-0.502	0.314	-0.555	0.398	-0.835	0.442	-0.653	0.592	-0.753	0.422	-0.553	0.560	-0.198	0.463
NRLM	0.053	0.258			-0.280	0.431	-0.098	0.564	-0.198	0.382	0.003	0.530	0.358	0.427
VNIIM	0.333	0.345	0.280	0.431			0.183	0.605	0.083	0.440	0.283	0.574	0.638	0.479
NIST	0.151	0.487	0.098	0.564	-0.183	0.605			-0.100	0.542	0.100	0.655	0.455	0.612
NRC	0.251	0.255	0.198	0.382	-0.083	0.440	0.100	0.542			0.200	0.501	0.555	0.413
CENAM	0.051	0.449	-0.003	0.530	-0.283	0.574	-0.100	0.655	-0.200	0.501			0.355	0.554
INM	-0.304	0.366	-0.358	0.427	-0.638	0.479	-0.455	0.612	-0.555	0.413	-0.355	0.554		
IMGC	0.111	0.179	0.058	0.337	-0.223	0.401	-0.040	0.506	-0.140	0.294	0.060	0.472	0.415	0.405
PTB	-0.054	0.183	-0.108	0.437	-0.388	0.489	-0.205	0.578	-0.305	0.411	-0.105	0.552	0.250	0.509

Lab, S/N i ⟹

Lab, S/N j ⇓

	D_i	U_i	IMGC		PTB	
			D_{ij}	U_{ij}	D_{ij}	U_{ij}
	/ K		/ K		/ K	
VSL	-0.002	0.221	-0.113	0.310	0.053	0.416
NPL	-0.114	0.294	-0.225	0.328	-0.060	0.437
CSIRO	-0.057	0.116	-0.168	0.241	-0.003	0.369
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NIM	0.088	0.279	-0.023	0.342	0.143	0.442
NMC	-0.502	0.314	-0.613	0.381	-0.448	0.473
NRLM	0.053	0.258	-0.058	0.337	0.108	0.437
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NIST	0.151	0.487	0.040	0.506	0.205	0.578
NRC	0.251	0.255	0.140	0.294	0.305	0.411
CENAM	0.051	0.449	-0.060	0.472	0.105	0.552
INM	-0.304	0.366	-0.415	0.405	-0.250	0.509
IMGC	0.111	0.179			0.165	0.360
PTB	-0.054	0.183	-0.165	0.360		

CCT-K5 : Nominal temperature, T_{90} = 1273 K
Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K
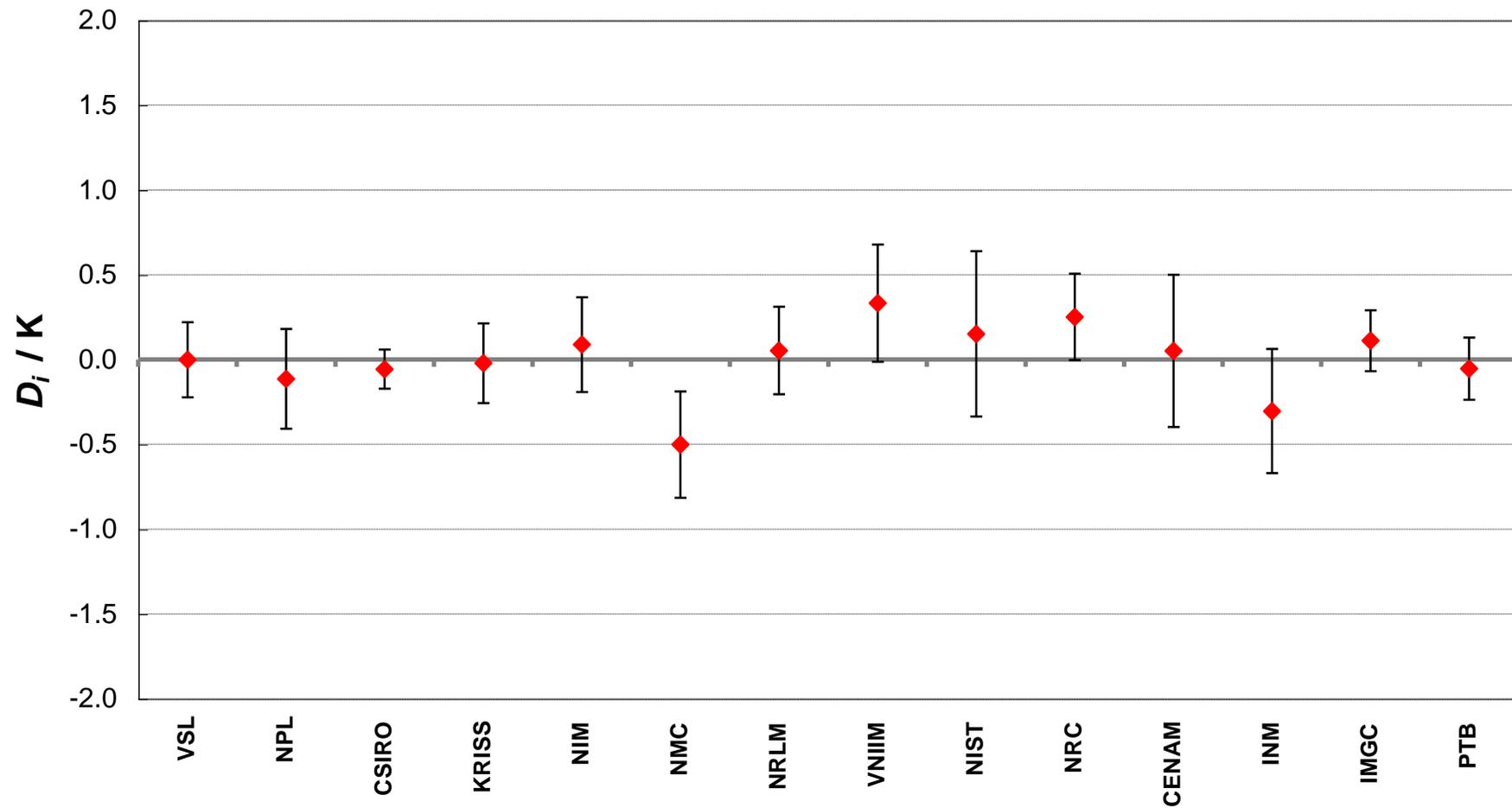
Nominal temperature 1064°C

Lab, S/N i ⟹

Lab, S/N j	D_i /K	U_i /K	VSL D_{ij} /K	VSL U_{ij} /K	NPL D_{ij} /K	NPL U_{ij} /K	CSIRO D_{ij} /K	CSIRO U_{ij} /K	KRISS D_{ij} /K	KRISS U_{ij} /K	NIM D_{ij} /K	NIM U_{ij} /K	NMC D_{ij} /K	NMC U_{ij} /K
VSL	-0.033	0.257			0.149	0.410	0.005	0.227	-0.040	0.313			0.505	0.408
NPL	-0.181	0.329	-0.149	0.410			-0.144	0.351	-0.189	0.409			0.357	0.473
CSIRO	-0.038	0.155	-0.005	0.227	0.144	0.351			-0.045	0.214			0.500	0.360
KRISS	0.007	0.279	0.040	0.313	0.189	0.409	0.045	0.214					0.545	0.439
NIM														
NMC	-0.538	0.350	-0.505	0.408	-0.357	0.473	-0.500	0.360	-0.545	0.225				
NRLM	0.062	0.291	0.095	0.341	0.244	0.433	0.100	0.266	0.055	0.000			0.600	0.429
VNIIM	-0.093	0.365	-0.060	0.428	0.089	0.477	-0.055	0.387	-0.100	0.000			0.445	0.456
NIST	0.134	0.536	0.167	0.590	0.315	0.600	0.172	0.551	0.127	0.589			0.672	0.635
NRC	0.149	0.287	0.182	0.381	0.330	0.399	0.187	0.317	0.142	0.379			0.687	0.447
CENAM	0.104	0.515	0.137	0.573	0.285	0.585	0.142	0.531	0.097	0.571			0.642	0.618
INM	-0.316	0.401	-0.284	0.441	-0.135	0.466	-0.279	0.387	-0.324	0.439			0.222	0.500
IMGC	0.129	0.206	0.162	0.322	0.310	0.354	0.167	0.243	0.122	0.320			0.667	0.399
PTB	-0.046	0.205	-0.014	0.441	0.135	0.465	-0.009	0.386	-0.054	0.439			0.492	0.499

Lab, S/N i ⟹

Lab, S/N j ⇩

	D_i	U_i /K	NRLM D_{ij}	U_{ij} /K	VNIIM D_{ij}	U_{ij} /K	NIST D_{ij}	U_{ij} /K	NRC D_{ij}	U_{ij} /K	CENAM D_{ij}	U_{ij} /K	INM D_{ij}	U_{ij} /K
VSL	-0.033	0.257	-0.095	0.341	-0.060	0.428	-0.167	0.590	-0.182	0.381	-0.137	0.573	0.284	0.441
NPL	-0.181	0.329	-0.244	0.433	0.089	0.477	-0.315	0.600	-0.330	0.399	-0.285	0.121	0.135	0.466
CSIRO	-0.038	0.155	-0.100	0.266	-0.055	0.387	-0.172	0.551	-0.187	0.317	-0.142	0.531	0.279	0.387
KRISS	0.007	0.279	-0.055	0.344	-0.100	0.470	-0.127	0.589	-0.142	0.379	-0.097	0.571	0.324	0.439
NIM														
NMC	-0.538	0.350	-0.600	0.429	0.445	0.456	-0.672	0.635	-0.687	0.447	-0.642	0.618	-0.222	0.500
NRLM	0.062	0.291			-0.155	0.448	-0.072	0.606	-0.087	0.406	-0.042	0.589	0.379	0.462
VNIIM	-0.093	0.365	-0.155	0.448			-0.227	0.638	-0.242	0.451	-0.197	0.621	0.224	0.503
NIST	0.134	0.536	0.072	0.606	0.227	0.638			-0.015	0.582	0.030	0.722	0.450	0.632
NRC	0.149	0.287	0.087	0.406	0.242	0.451	0.015	0.582			0.045	0.564	0.465	0.456
CENAM	0.104	0.515	0.042	0.589	0.197	0.621	-0.030	0.722	-0.045	0.564			0.420	0.627
INM	-0.316	0.401	-0.379	0.462	-0.224	0.503	-0.450	0.632	-0.465	0.456	-0.420	0.627		
IMGC	0.129	0.206	0.067	0.351	0.222	0.404	-0.005	0.552	-0.020	0.311	0.025	0.528	0.445	0.440
PTB	-0.046	0.205	-0.109	0.462	0.047	0.502	-0.180	0.629	-0.195	0.433	-0.150	0.608	0.270	0.534

Lab, S/N i ⟹

Lab, S/N j ⟱

	D_i	U_i	IMGC		PTB	
			D_{ij}	U_{ij}	D_{ij}	U_{ij}
	/ K		/ K		/ K	
VSL	-0.033	0.257	-0.162	0.322	0.014	0.441
NPL	-0.181	0.329	-0.310	0.354	-0.135	0.465
CSIRO	-0.038	0.155	-0.167	0.243	0.009	0.386
KRISS	0.007	0.279	-0.122	0.320	0.054	0.439
NIM	0.000	0.000	0.000	0.000	0.000	0.000
NMC	-0.538	0.350	-0.667	0.399	-0.492	0.499
NRLM	0.062	0.291	-0.067	0.351	0.109	0.462
VNIIM	-0.093	0.365	-0.222	0.404	-0.047	0.502
NIST	0.134	0.536	0.005	0.552	0.180	0.629
NRC	0.149	0.287	0.020	0.311	0.195	0.433
CENAM	0.104	0.515	-0.025	0.528	0.150	0.608
INM	-0.316	0.401	-0.445	0.440	-0.270	0.534
IMGC	0.129	0.206			0.175	0.376
PTB	-0.046	0.205	-0.175	0.376		

CCT-K5 : Nominal temperature, T_{90} = 1337 K

Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K
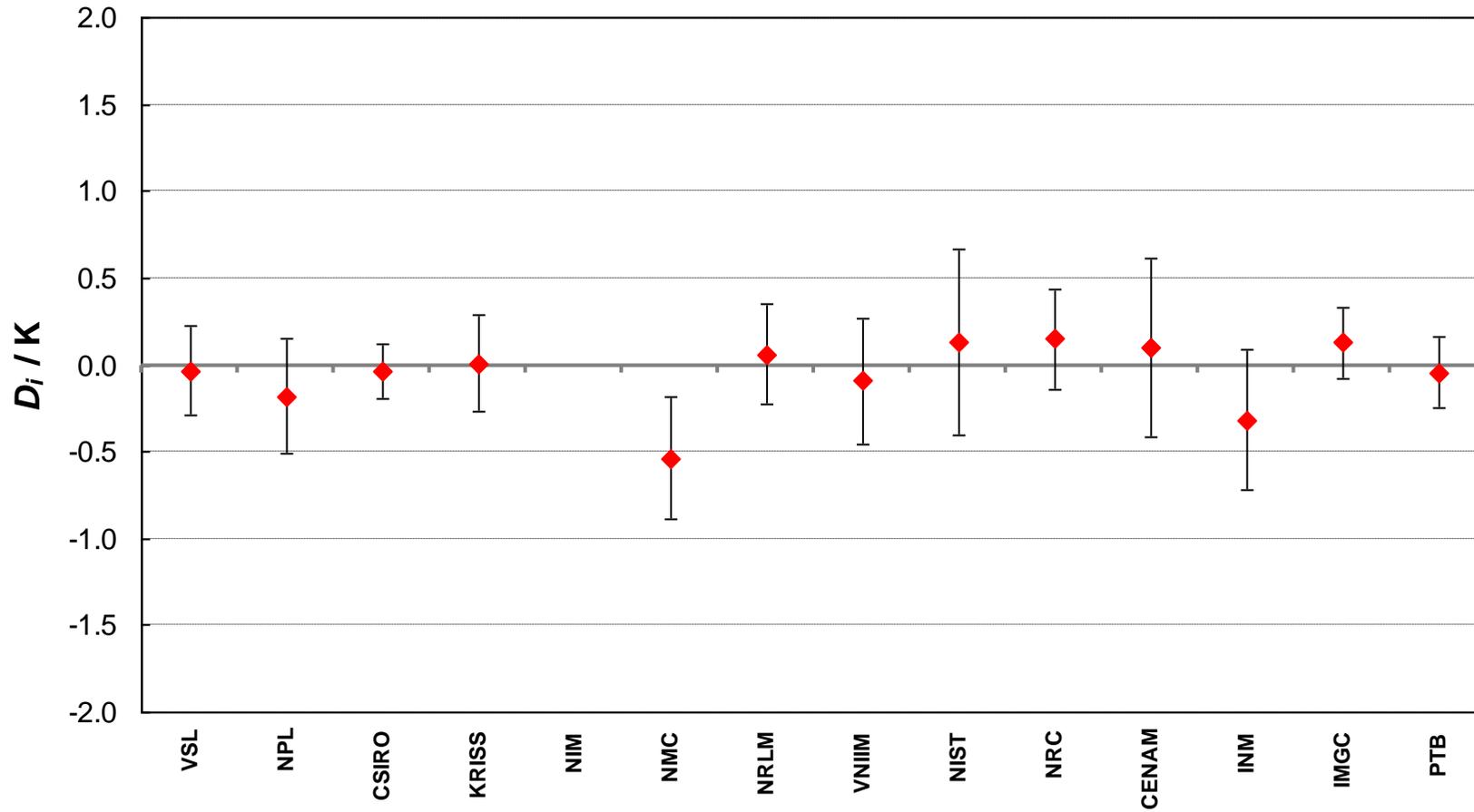
Nominal temperature 1084°C

Lab, S/N i ⟹

Lab, S/N j ⟱

Lab, S/N j	D_i	U_i /K	VSL D_{ij}	U_{ij} /K	NPL D_{ij}	U_{ij} /K	CSIRO D_{ij}	U_{ij} /K	KRISS D_{ij}	U_{ij} /K	NIM D_{ij}	U_{ij} /K	NMC D_{ij}	U_{ij} /K
VSL	-0.013	0.254			0.188	0.405	0.000	0.226	-0.040	0.284			0.550	0.409
NPL	-0.201	0.323	-0.188	0.405			-0.188	0.344	-0.228	0.381			0.363	0.467
CSIRO	-0.013	0.148	0.000	0.226	0.188	0.344			-0.040	0.172			0.550	0.360
KRISS	0.027	0.238	0.040	0.284	0.228	0.381	0.040	0.172					0.590	0.415
NIM														
NMC	-0.563	0.348	-0.550	0.409	-0.363	0.467	-0.550	0.360	-0.590	0.210				
NRLM	0.097	0.288	0.110	0.341	0.298	0.427	0.110	0.266	0.070	0.000			0.660	0.429
VNIIM	-0.103	0.408	-0.090	0.464	0.098	0.511	-0.090	0.422	-0.130	0.000			0.460	0.497
NIST														
NRC	0.124	0.302	0.138	0.389	0.325	0.410	0.138	0.326	0.098	0.366			0.688	0.454
CENAM	0.099	0.532	0.113	0.586	0.300	0.600	0.113	0.546	0.073	0.570			0.663	0.632
INM	-0.306	0.403	-0.293	0.437	-0.105	0.476	-0.293	0.381	-0.333	0.416			0.258	0.496
IMGC	0.124	0.217	0.138	0.326	0.325	0.358	0.138	0.246	0.098	0.297			0.688	0.401
PTB	-0.001	0.213	0.013	0.435	0.200	0.462	0.013	0.380	-0.028	0.415			0.563	0.495

Lab, S/N j ⬇	D_i	U_i /K	NRLM D_{ij}	U_{ij} /K	VNIIM D_{ij}	U_{ij} /K	NIST D_{ij}	U_{ij} /K	NRC D_{ij}	U_{ij} /K	CENAM D_{ij}	U_{ij} /K	INM D_{ij}	U_{ij} /K
VSL	-0.013	0.254	-0.110	0.341	0.090	0.464			-0.138	0.389	-0.113	0.586	0.293	0.437
NPL	-0.201	0.323	-0.298	0.427	-0.098	0.511			-0.325	0.410	-0.300	0.101	0.105	0.476
CSIRO	-0.013	0.148	-0.110	0.266	0.090	0.422			-0.138	0.326	-0.113	0.546	0.293	0.381
KRISS	0.027	0.238	-0.070	0.318	0.130	0.472			-0.098	0.366	-0.073	0.570	0.333	0.416
NIM														
NMC	-0.563	0.348	-0.660	0.429	-0.460	0.497			-0.688	0.454	-0.663	0.632	-0.258	0.496
NRLM	0.097	0.288			0.200	0.481			-0.028	0.413	-0.003	0.602	0.403	0.458
VNIIM	-0.103	0.408	-0.200	0.481					-0.228	0.499	-0.203	0.664	0.203	0.538
NIST														
NRC	0.124	0.302	0.028	0.413	0.228	0.499					0.025	0.591	0.430	0.470
CENAM	0.099	0.532	0.003	0.602	0.203	0.664			-0.025	0.591			0.405	0.641
INM	-0.306	0.403	-0.403	0.458	-0.203	0.538			-0.430	0.470	-0.405	0.641		
IMGC	0.124	0.217	0.028	0.354	0.228	0.452			0.000	0.338	0.025	0.554	0.430	0.450
PTB	-0.001	0.213	-0.098	0.457	0.103	0.537			-0.125	0.446	-0.100	0.626	0.305	0.542

Lab, S/N j ⇓	D_i /K	U_i /K	IMGC D_{ij} /K	IMGC U_{ij} /K	PTB D_{ij} /K	PTB U_{ij} /K
VSL	-0.013	0.254	-0.138	0.326	-0.013	0.435
NPL	-0.201	0.323	-0.325	0.358	-0.200	0.462
CSIRO	-0.013	0.148	-0.138	0.246	-0.013	0.380
KRISS	0.027	0.238	-0.098	0.297	0.028	0.415
NIM						
NMC	-0.563	0.348	-0.688	0.401	-0.563	0.495
NRLM	0.097	0.288	-0.028	0.354	0.098	0.457
VNIIM	-0.103	0.408	-0.228	0.452	-0.103	0.537
NIST						
NRC	0.124	0.302	0.000	0.338	0.125	0.446
CENAM	0.099	0.532	-0.025	0.554	0.100	0.626
INM	-0.306	0.403	-0.430	0.450	-0.305	0.542
IMGC	0.124	0.217			0.125	0.385
PTB	-0.001	0.213	-0.125	0.385		

CCT-K5 : Nominal temperature, $T_{90} = 1357$ K

Degrees of equivalence, D_i, and expanded uncertainties ($k = 2$), U_i, expressed in K

CCT-K5 final report: From final results to KCDB values
May 2008
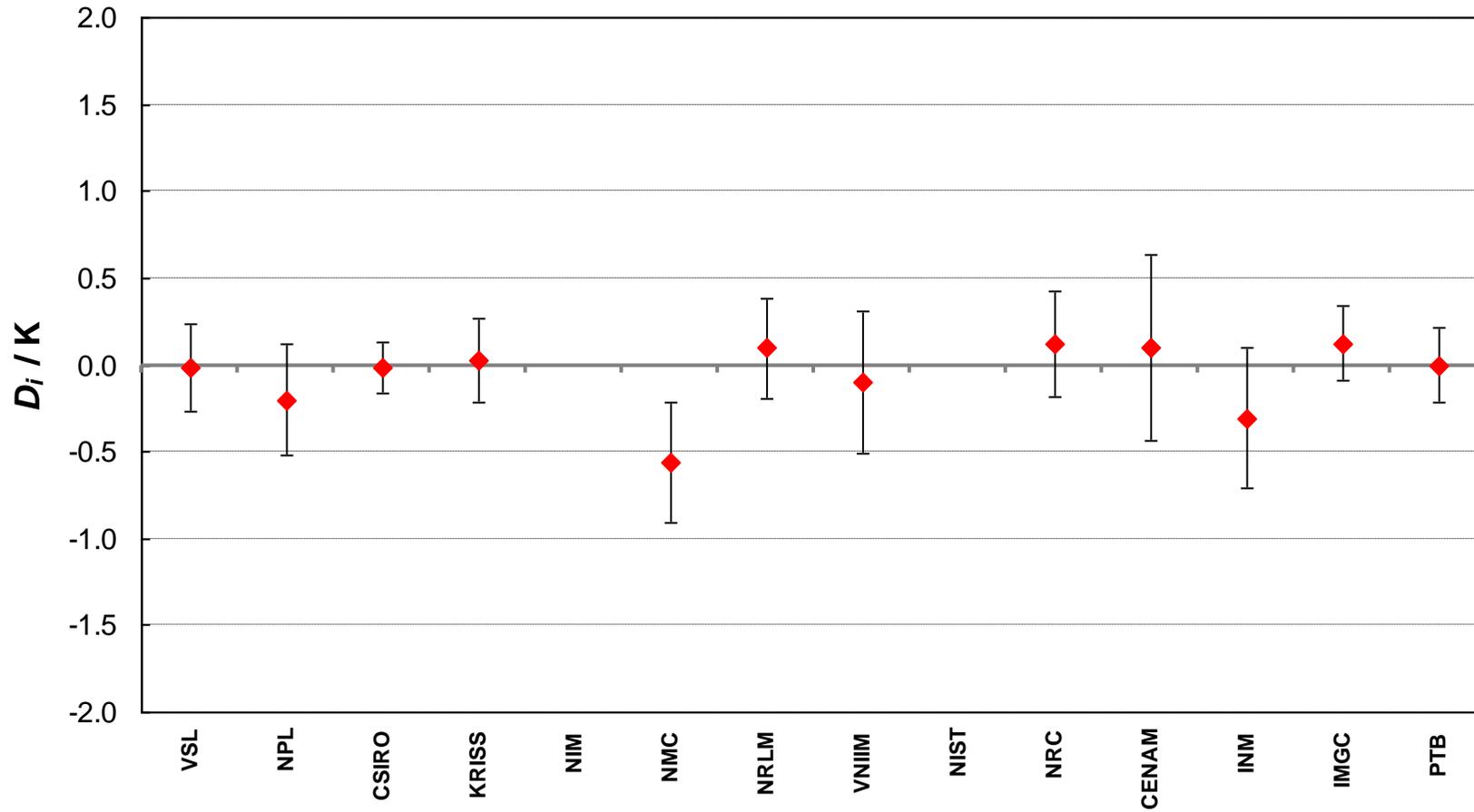
Nominal temperature 1100°C

Lab, S/N i ⟹

Lab, S/N j	D_i	U_i /K	VSL D_{ij}	U_{ij} /K	NPL D_{ij}	U_{ij} /K	CSIRO D_{ij}	U_{ij} /K	KRISS D_{ij}	U_{ij} /K	NIM D_{ij}	U_{ij} /K	NMC D_{ij}	U_{ij} /K
VSL	-0.017	0.250			0.278	0.412	-0.005	0.227	-0.025	0.304	-0.175	0.371	0.560	0.406
NPL	-0.295	0.342	-0.278	0.412			-0.283	0.353	-0.303	0.406	-0.453	0.455	0.282	0.474
CSIRO	-0.012	0.145	0.005	0.227	0.283	0.353			-0.020	0.206	-0.170	0.292	0.565	0.357
KRISS	0.008	0.255	0.025	0.304	0.303	0.406	0.020	0.206			0.150	0.346	0.585	0.420
NIM	0.158	0.339	0.175	0.371	0.453	0.455	0.170	0.292	0.150	0.346			0.735	0.481
NMC	-0.577	0.345	-0.560	0.406	-0.282	0.474	-0.565	0.357	-0.585	0.464	-0.735	0.481		
NRLM	0.103	0.287	0.120	0.341	0.398	0.435	0.115	0.265	0.095	0.396	-0.055	0.396	0.680	0.429
VNIIM	-0.197	0.437	-0.180	0.484	0.098	0.546	-0.185	0.443	-0.205	0.545	-0.355	0.545	0.380	0.528
NIST	0.235	0.556	0.252	0.600	0.530	0.641	0.247	0.561	0.227	0.595	0.077	0.630	0.812	0.644
NRC	0.075	0.300	0.092	0.380	0.370	0.427	0.087	0.316	0.067	0.374	-0.083	0.427	0.652	0.447
CENAM	0.070	0.531	0.087	0.581	0.365	0.612	0.082	0.540	0.062	0.576	-0.088	0.612	0.647	0.625
INM	-0.320	0.424	-0.303	0.447	-0.025	0.499	-0.308	0.392	-0.328	0.442	-0.478	0.486	0.257	0.504
IMGC	0.100	0.216	0.117	0.316	0.395	0.382	0.112	0.233	0.092	0.308	-0.058	0.370	0.677	0.393
PTB	-0.035	0.211	-0.018	0.444	0.260	0.492	-0.023	0.389	-0.043	0.438	-0.193	0.483	0.542	0.501

Lab, S/N j ⇩

Lab, S/N j	D_i	U_i	NRLM D_{ij}	U_{ij}	VNIIM D_{ij}	U_{ij}	NIST D_{ij}	U_{ij}	NRC D_{ij}	U_{ij}	CENAM D_{ij}	U_{ij}	INM D_{ij}	U_{ij}
	/ K		/ K		/ K		/ K		/ K		/ K		/ K	
VSL	-0.017	0.250	-0.120	0.341	0.180	0.484	-0.252	0.600	-0.092	0.380	-0.087	0.581	0.303	0.447
NPL	-0.295	0.342	-0.398	0.435	-0.098	0.546	-0.530	0.641	-0.370	0.427	-0.365	0.103	0.025	0.499
CSIRO	-0.012	0.145	-0.115	0.265	0.185	0.443	-0.247	0.561	-0.087	0.316	-0.082	0.540	0.308	0.392
KRISS	0.008	0.255	-0.095	0.334	0.205	0.493	-0.227	0.595	-0.067	0.374	-0.062	0.576	0.328	0.442
NIM	0.158	0.339	0.055	0.396	0.355	0.545	-0.077	0.630	0.083	0.427	0.088	0.612	0.478	0.486
NMC	-0.577	0.345	-0.680	0.429	-0.380	0.528	-0.812	0.644	-0.652	0.447	-0.647	0.625	-0.257	0.504
NRLM	0.103	0.287			0.300	0.504	-0.132	0.615	0.028	0.405	0.033	0.597	0.423	0.468
VNIIM	-0.197	0.437	-0.300	0.504			-0.432	0.698	-0.272	0.522	-0.267	0.682	0.123	0.572
NIST	0.235	0.556	0.132	0.615	0.432	0.698			0.160	0.615	0.165	0.756	0.555	0.707
NRC	0.075	0.300	-0.028	0.405	0.272	0.522	-0.160	0.615			0.005	0.591	0.395	0.490
CENAM	0.070	0.531	-0.033	0.597	0.267	0.682	-0.165	0.756	-0.005	0.591			0.390	0.656
INM	-0.320	0.424	-0.423	0.468	-0.123	0.572	-0.555	0.707	-0.395	0.490	-0.390	0.656		
IMGC	0.100	0.216	-0.003	0.345	0.297	0.477	-0.135	0.570	0.025	0.339	0.030	0.554	0.420	0.476
PTB	-0.035	0.211	-0.138	0.465	0.162	0.569	-0.270	0.650	-0.110	0.460	-0.105	0.635	0.285	0.566

Lab, S/N i ⟹

Lab, S/N j ⇓

	D_i	U_i	IMGC		PTB	
			D_{ij}	U_{ij}	D_{ij}	U_{ij}
	/K		/K		/K	
VSL	-0.017	0.250	-0.117	0.316	0.018	0.444
NPL	-0.295	0.342	-0.395	0.382	-0.260	0.492
CSIRO	-0.012	0.145	-0.112	0.233	0.023	0.389
KRISS	0.008	0.255	-0.092	0.308	0.043	0.438
NIM	0.158	0.339	0.058	0.370	0.193	0.483
NMC	-0.577	0.345	-0.677	0.393	-0.542	0.501
NRLM	0.103	0.287	0.003	0.345	0.138	0.465
VNIIM	-0.197	0.437	-0.297	0.477	-0.162	0.569
NIST	0.235	0.556	0.135	0.570	0.270	0.650
NRC	0.075	0.300	-0.025	0.339	0.110	0.460
CENAM	0.070	0.531	-0.030	0.554	0.105	0.635
INM	-0.320	0.424	-0.420	0.476	-0.285	0.566
IMGC	0.100	0.216			0.135	0.402
PTB	-0.035	0.211	-0.135	0.402		

CCT-K5 : Nominal temperature, T_{90} = 1373 K

Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K

CCT-K5 final report: From final results to KCDB values
May 2008
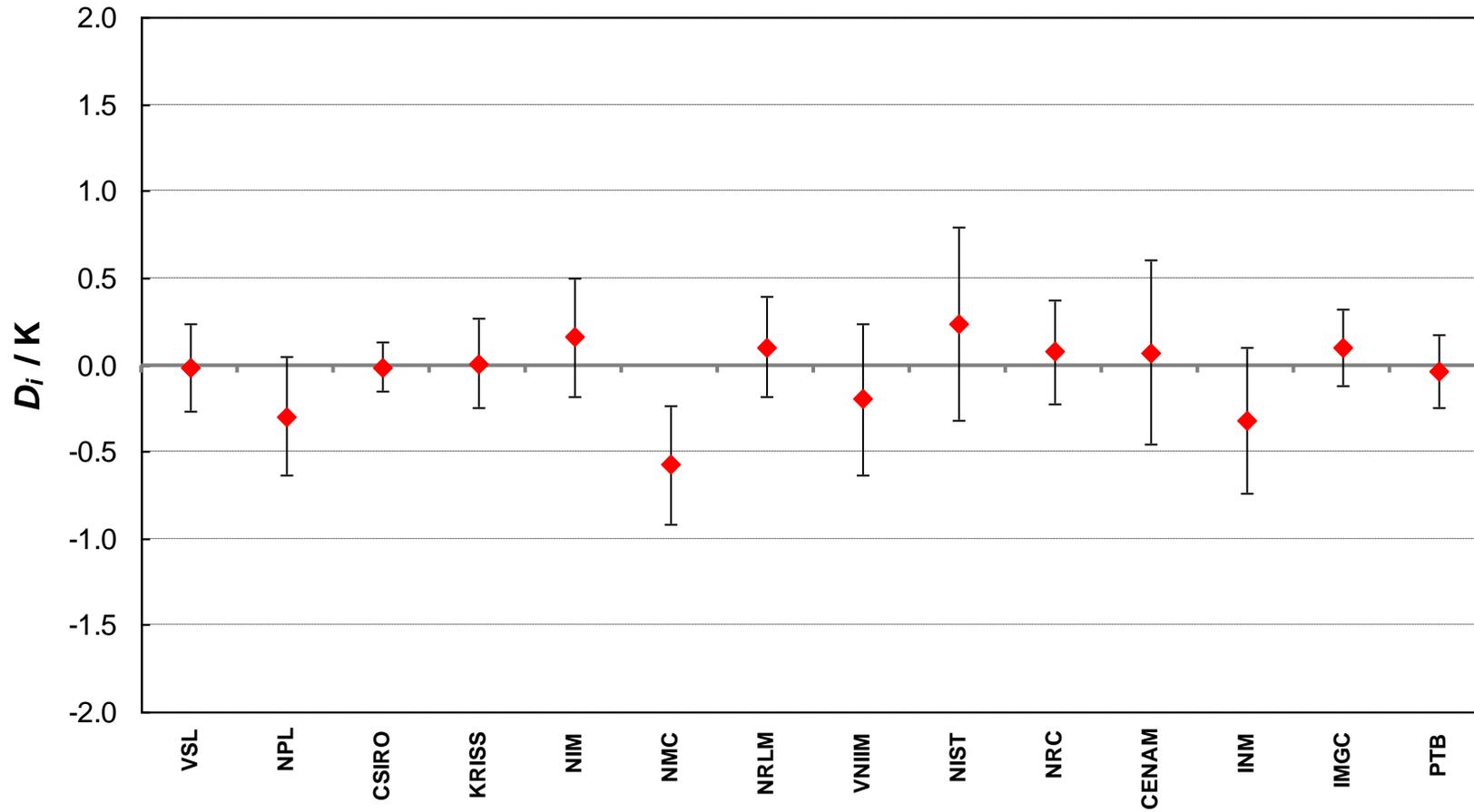
Nominal temperature 1200°C

Lab, S/N i ⟹

Lab, S/N j ⟱

	D_i / K	U_i / K	VSL D_{ij} / K	VSL U_{ij} / K	NPL D_{ij} / K	NPL U_{ij} / K	CSIRO D_{ij} / K	CSIRO U_{ij} / K	KRISS D_{ij} / K	KRISS U_{ij} / K	NIM D_{ij} / K	NIM U_{ij} / K	NMC D_{ij} / K	NMC U_{ij} / K
VSL	-0.055	0.262			0.322	0.478	-0.030	0.244	-0.055	0.343	-0.140	0.421	0.650	0.458
NPL	-0.377	0.411	-0.322	0.478			-0.352	0.416	-0.377	0.481	-0.462	0.532	0.328	0.550
CSIRO	-0.025	0.122	0.030	0.244	0.352	0.416			-0.025	0.246	-0.110	0.340	0.680	0.400
KRISS	0.000	0.278	0.055	0.343	0.377	0.481	0.025	0.246			-0.085	0.407	0.705	0.479
NIM	0.085	0.379	0.140	0.421	0.462	0.532	0.110	0.340	0.085	0.407			0.790	0.557
NMC	-0.705	0.384	-0.650	0.458	-0.328	0.550	-0.680	0.400	-0.705	0.524	-0.790	0.557		
NRLM	0.145	0.320	0.200	0.384	0.522	0.511	0.170	0.303	0.145	0.455	0.060	0.455	0.850	0.496
VNIIM	-0.445	0.686	-0.390	0.724	-0.068	0.795	-0.420	0.687	-0.445	0.778	-0.530	0.778	0.260	0.773
NIST	0.183	0.632	0.238	0.674	0.560	0.745	0.208	0.632	0.183	0.676	0.098	0.714	0.888	0.728
NRC	-0.117	0.333	-0.062	0.413	0.260	0.512	-0.092	0.340	-0.117	0.416	-0.202	0.476	0.588	0.495
CENAM	0.003	0.628	0.058	0.673	0.380	0.738	0.028	0.631	0.003	0.675	-0.082	0.713	0.708	0.727
INM	-0.427	0.445	-0.372	0.477	-0.050	0.584	-0.402	0.415	-0.427	0.480	-0.512	0.532	0.278	0.550
IMGC	0.048	0.222	0.103	0.330	0.425	0.450	0.073	0.231	0.048	0.334	-0.037	0.404	0.753	0.428
PTB	0.033	0.220	0.088	0.461	0.410	0.552	0.058	0.397	0.033	0.464	-0.052	0.518	0.738	0.536

Lab, S/N j ⟱

	D_i	U_i /K	NRLM D_{ij}	U_{ij} /K	VNIIM D_{ij}	U_{ij} /K	NIST D_{ij}	U_{ij} /K	NRC D_{ij}	U_{ij} /K	CENAM D_{ij}	U_{ij} /K	INM D_{ij}	U_{ij} /K
VSL	-0.055	0.262	-0.200	0.384	0.390	0.724	-0.238	0.674	0.062	0.413	-0.058	0.673	0.372	0.477
NPL	-0.377	0.411	-0.522	0.511	0.068	0.795	-0.560	0.745	-0.260	0.512	-0.380	0.174	0.050	0.584
CSIRO	-0.025	0.122	-0.170	0.303	0.420	0.687	-0.208	0.632	0.092	0.340	-0.028	0.631	0.402	0.415
KRISS	0.000	0.278	-0.145	0.387	0.445	0.732	-0.183	0.676	0.117	0.416	-0.003	0.675	0.427	0.480
NIM	0.085	0.379	-0.060	0.455	0.530	0.778	-0.098	0.714	0.202	0.476	0.082	0.713	0.512	0.532
NMC	-0.705	0.384	-0.850	0.496	-0.260	0.773	-0.888	0.728	-0.588	0.495	-0.708	0.727	-0.278	0.550
NRLM	0.145	0.320			0.590	0.747	-0.038	0.698	0.262	0.451	0.142	0.697	0.572	0.510
VNIIM	-0.445	0.686	-0.590	0.747			-0.628	0.927	-0.328	0.758	-0.448	0.926	-0.018	0.795
NIST	0.183	0.632	0.038	0.698	0.628	0.927			0.300	0.704	0.180	0.884	0.610	0.783
NRC	-0.117	0.333	-0.262	0.451	0.328	0.758	-0.300	0.704			-0.120	0.698	0.310	0.536
CENAM	0.003	0.628	-0.142	0.697	0.448	0.926	-0.180	0.884	0.120	0.698			0.430	0.749
INM	-0.427	0.445	-0.572	0.510	0.018	0.795	-0.610	0.783	-0.310	0.536	-0.430	0.749		
IMGC	0.048	0.222	-0.097	0.376	0.493	0.716	-0.135	0.653	0.165	0.380	0.045	0.654	0.475	0.494
PTB	0.033	0.220	-0.112	0.495	0.478	0.785	-0.150	0.731	0.150	0.497	0.030	0.728	0.460	0.577

Lab, S/N i ⟹

Lab, S/N j ⬇

	D_i	U_i	IMGC		PTB	
			D_{ij}	U_{ij}	D_{ij}	U_{ij}
	/ K		/ K		/ K	
VSL	-0.055	0.262	-0.103	0.330	-0.088	0.461
NPL	-0.377	0.411	-0.425	0.450	-0.410	0.552
CSIRO	-0.025	0.122	-0.073	0.231	-0.058	0.397
KRISS	0.000	0.278	-0.048	0.334	-0.033	0.464
NIM	0.085	0.379	0.037	0.404	0.052	0.518
NMC	-0.705	0.384	-0.753	0.428	-0.738	0.536
NRLM	0.145	0.320	0.097	0.376	0.112	0.495
VNIIM	-0.445	0.686	-0.493	0.716	-0.478	0.785
NIST	0.183	0.632	0.135	0.653	0.150	0.731
NRC	-0.117	0.333	-0.165	0.380	-0.150	0.497
CENAM	0.003	0.628	-0.045	0.654	-0.030	0.728
INM	-0.427	0.445	-0.475	0.494	-0.460	0.577
IMGC	0.048	0.222			0.015	0.430
PTB	0.033	0.220	-0.015	0.430		

CCT-K5 : Nominal temperature, T_{90} = 1473 K

**Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K**
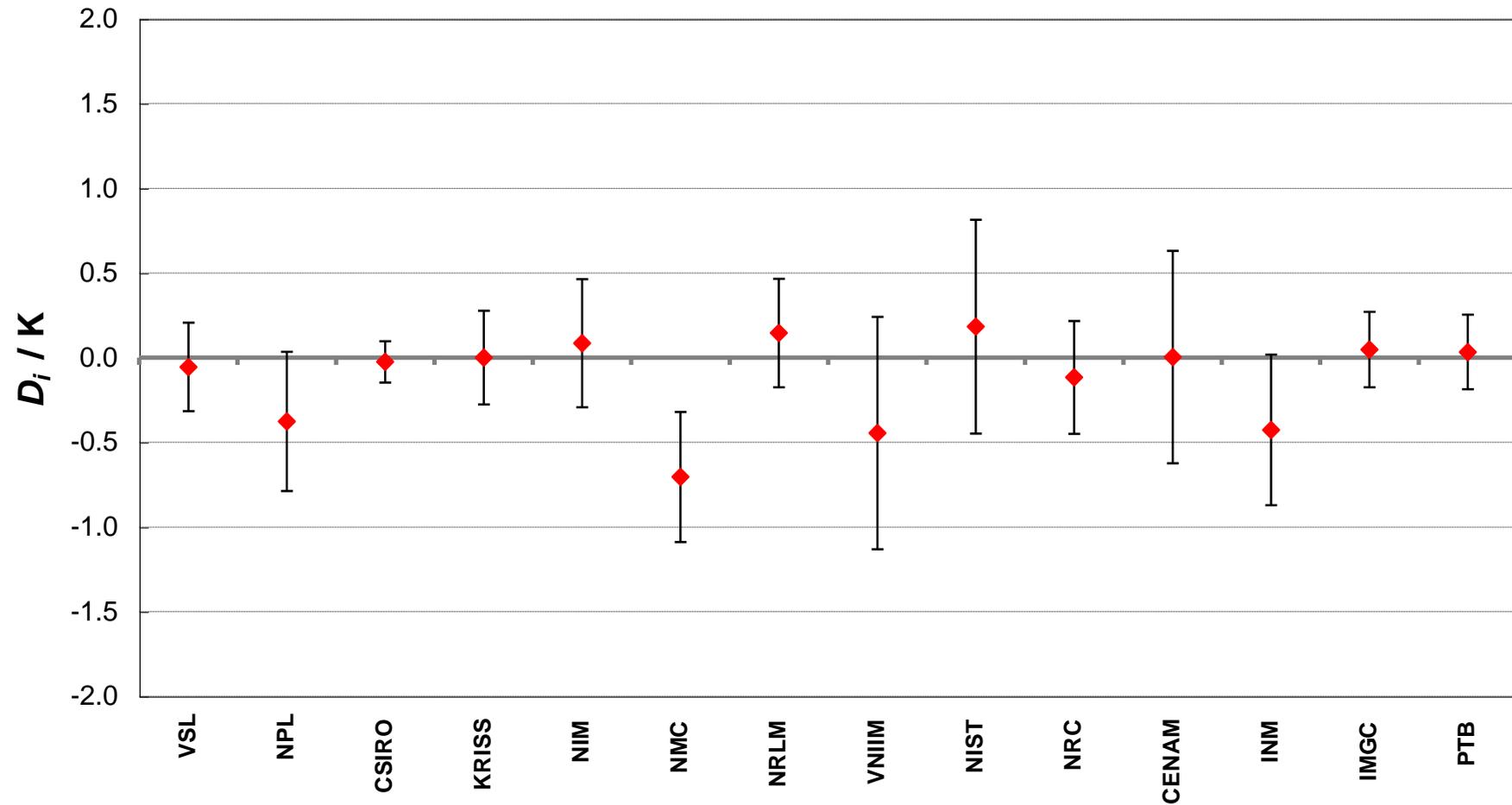
Nominal temperature 1300°C

Lab, S/N i ⟹

Lab, S/N j ⇓

Lab, S/N j	D_i	U_i /K	VSL D_{ij}	U_{ij} /K	NPL D_{ij}	U_{ij} /K	CSIRO D_{ij}	U_{ij} /K	KRISS D_{ij}	U_{ij} /K	NIM D_{ij}	U_{ij} /K	NMC D_{ij}	U_{ij} /K
VSL	-0.045	0.322			0.452	0.545	-0.045	0.283	-0.065	0.403	-0.185	0.478	0.750	0.530
NPL	-0.497	0.486	-0.452	0.545			-0.497	0.471	-0.517	0.550	-0.637	0.601	0.298	0.631
CSIRO	0.000	0.165	0.045	0.283	0.497	0.471			-0.020	0.292	-0.140	0.388	0.795	0.453
KRISS	0.020	0.343	0.065	0.403	0.517	0.550	0.020	0.292			-0.120	0.461	0.815	0.557
NIM	0.140	0.437	0.185	0.478	0.637	0.601	0.140	0.388	0.120	0.461			0.935	0.632
NMC	-0.795	0.459	-0.750	0.530	-0.298	0.631	-0.795	0.453	-0.815	0.601	-0.935	0.632		
NRLM	0.210	0.393	0.255	0.456	0.707	0.591	0.210	0.362	0.190	0.531	0.070	0.531	1.005	0.574
VNIIM	-0.660	0.956	-0.615	0.990	-0.163	1.051	-0.660	0.951	-0.680	1.045	-0.800	1.045	0.135	1.030
NIST	0.164	0.719	0.208	0.760	0.660	0.845	0.163	0.708	0.143	0.763	0.023	0.800	0.958	0.823
NRC	-0.187	0.415	-0.142	0.482	0.310	0.598	-0.187	0.394	-0.207	0.486	-0.327	0.544	0.608	0.577
CENAM	-0.047	0.755	-0.002	0.796	0.450	0.872	-0.047	0.746	-0.067	0.798	-0.187	0.835	0.748	0.857
INM	-0.492	0.580	-0.447	0.566	0.005	0.706	-0.492	0.493	-0.512	0.570	-0.632	0.619	0.303	0.649
IMGC	0.064	0.284	0.108	0.379	0.560	0.524	0.063	0.259	0.043	0.385	-0.077	0.455	0.858	0.494
PTB	0.024	0.283	0.068	0.512	0.520	0.625	0.023	0.430	0.003	0.516	-0.117	0.571	0.818	0.602

Lab, S/N j ⟓	D_i	U_i /K	NRLM D_{ij}	U_{ij} /K	VNIIM D_{ij}	U_{ij} /K	NIST D_{ij}	U_{ij} /K	NRC D_{ij}	U_{ij} /K	CENAM D_{ij}	U_{ij} /K	INM D_{ij}	U_{ij} /K
VSL	-0.045	0.322	-0.255	0.456	0.615	0.990	-0.208	0.760	0.142	0.482	0.002	0.796	0.447	0.566
NPL	-0.497	0.486	-0.707	0.591	0.163	1.051	-0.660	0.845	-0.310	0.598	-0.450	0.169	-0.005	0.706
CSIRO	0.000	0.165	-0.210	0.362	0.660	0.951	-0.163	0.708	0.187	0.394	0.047	0.746	0.492	0.493
KRISS	0.020	0.343	-0.190	0.463	0.680	1.003	-0.143	0.763	0.207	0.486	0.067	0.798	0.512	0.570
NIM	0.140	0.437	-0.070	0.531	0.800	1.045	-0.023	0.800	0.327	0.544	0.187	0.835	0.632	0.619
NMC	-0.795	0.459	-1.005	0.574	-0.135	1.030	-0.958	0.823	-0.608	0.577	-0.748	0.857	-0.303	0.649
NRLM	0.210	0.393			0.870	1.015	0.047	0.792	0.397	0.532	0.257	0.827	0.702	0.609
VNIIM	-0.660	0.956	-0.870	1.015			-0.823	1.177	-0.473	1.019	-0.613	1.200	-0.168	1.061
NIST	0.164	0.719	-0.047	0.792	0.823	1.177			0.350	0.808	0.210	1.021	0.655	0.925
NRC	-0.187	0.415	-0.397	0.532	0.473	1.019	-0.350	0.808			-0.140	0.835	0.305	0.643
CENAM	-0.047	0.755	-0.257	0.827	0.613	1.200	-0.210	1.021	0.140	0.835			0.445	0.928
INM	-0.492	0.580	-0.702	0.609	0.168	1.061	-0.655	0.925	-0.305	0.643	-0.445	0.928		
IMGC	0.064	0.284	-0.147	0.441	0.723	0.974	-0.100	0.741	0.250	0.460	0.110	0.779	0.555	0.626
PTB	0.024	0.283	-0.187	0.560	0.683	1.034	-0.140	0.818	0.210	0.572	0.070	0.851	0.515	0.704

Lab, S/N j ⇓

	D_i	U_i	IMGC D_{ij}	U_{ij}	PTB D_{ij}	U_{ij}
	/K		/K		/K	
VSL	-0.045	0.322	-0.108	0.379	-0.068	0.512
NPL	-0.497	0.486	-0.560	0.524	-0.520	0.625
CSIRO	0.000	0.165	-0.063	0.259	-0.023	0.430
KRISS	0.020	0.343	-0.043	0.385	-0.003	0.516
NIM	0.140	0.437	0.077	0.455	0.117	0.571
NMC	-0.795	0.459	-0.858	0.494	-0.818	0.602
NRLM	0.210	0.393	0.147	0.441	0.187	0.560
VNIIM	-0.660	0.956	-0.723	0.974	-0.683	1.034
NIST	0.164	0.719	0.100	0.741	0.140	0.818
NRC	-0.187	0.415	-0.250	0.460	-0.210	0.572
CENAM	-0.047	0.755	-0.110	0.779	-0.070	0.851
INM	-0.492	0.580	-0.555	0.626	-0.515	0.704
IMGC	0.064	0.284			0.040	0.484
PTB	0.024	0.283	-0.040	0.484		

CCT-K5 : Nominal temperature, T_{90} = 1573 K

Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K
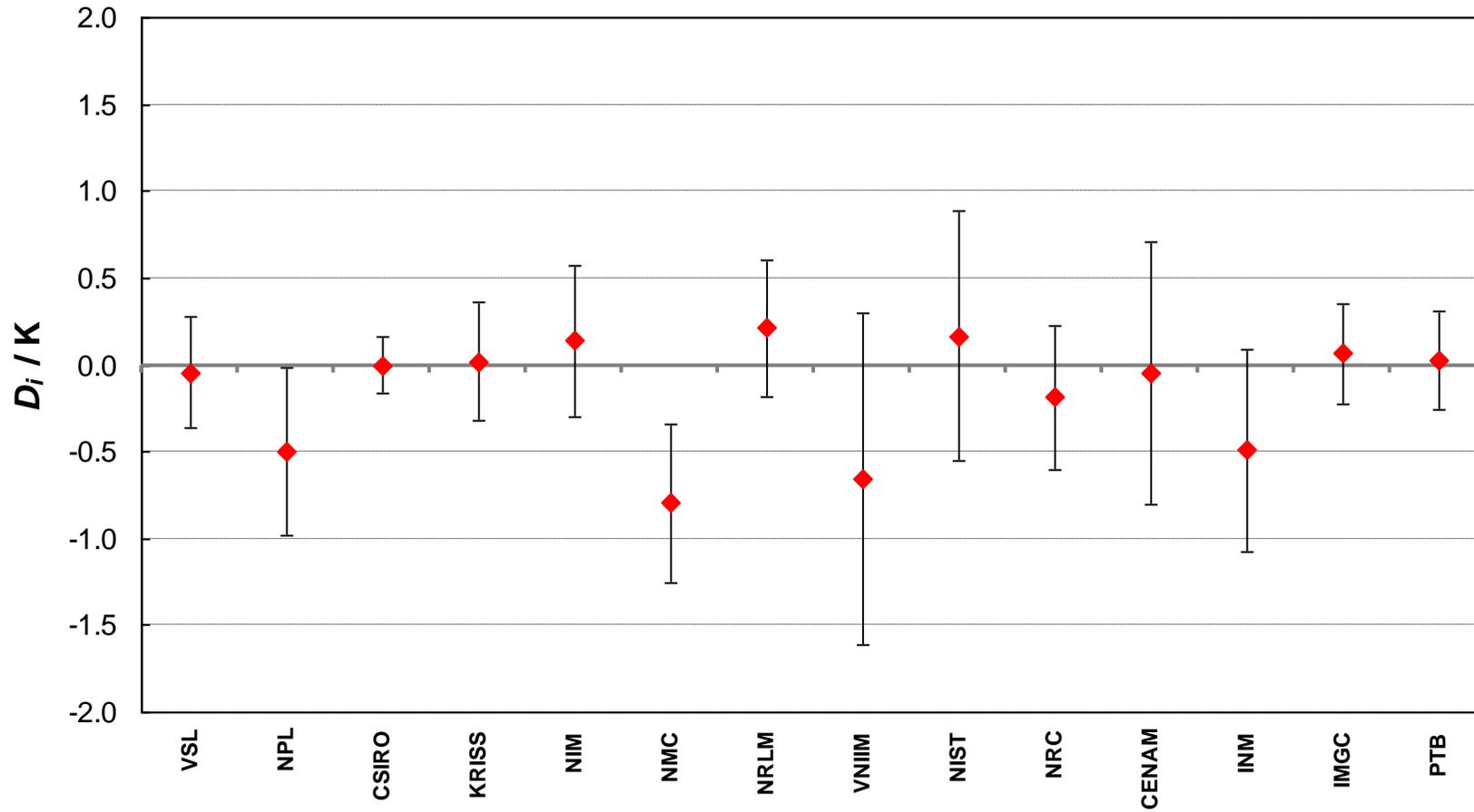
Nominal temperature 1400°C

Lab, S/N i ⟹

Lab, S/N j ⇓

Lab	D_i / K	U_i / K	VSL D_{ij} / K	U_{ij} / K	NPL D_{ij} / K	U_{ij} / K	CSIRO D_{ij} / K	U_{ij} / K	KRISS D_{ij} / K	U_{ij} / K	NIM D_{ij} / K	U_{ij} / K	NMC D_{ij} / K	U_{ij} / K
VSL	-0.045	0.385			0.465	0.656	-0.090	0.322	-0.100	0.464	-0.240	0.558	0.840	0.585
NPL	-0.510	0.600	-0.465	0.656			-0.555	0.575	-0.565	0.661	-0.705	0.722	0.375	0.738
CSIRO	0.045	0.221	0.090	0.322	0.555	0.575			-0.010	0.334	-0.150	0.455	0.930	0.496
KRISS	0.055	0.410	0.100	0.464	0.565	0.661	0.010	0.334			-0.140	0.534	0.940	0.622
NIM	0.195	0.522	0.240	0.558	0.705	0.722	0.150	0.455	0.140	0.534			1.080	0.715
NMC	-0.885	0.519	-0.840	0.585	-0.375	0.738	-0.930	0.496	-0.940	0.679	-1.080	0.715		
NRLM	0.310	0.473	0.355	0.528	0.820	0.710	0.265	0.422	0.255	0.616	0.115	0.616	1.195	0.650
VNIIM	-0.880	1.228	-0.835	1.259	-0.370	1.332	-0.925	1.220	-0.935	1.328	-1.075	1.328	0.005	1.285
NIST	0.260	0.815	0.305	0.854	0.770	0.972	0.215	0.792	0.205	0.858	0.065	0.905	1.145	0.918
NRC	-0.730	0.496	-0.685	0.559	-0.220	0.714	-0.775	0.462	-0.785	0.565	-0.925	0.635	0.155	0.653
CENAM	-0.050	0.906	-0.005	0.944	0.460	1.043	-0.095	0.889	-0.105	0.947	-0.245	0.991	0.835	1.003
INM	-0.510	0.629	-0.465	0.643	0.000	0.801	-0.555	0.560	-0.565	0.648	-0.705	0.710	0.375	0.726
IMGC	0.115	0.352	0.160	0.443	0.625	0.632	0.070	0.308	0.060	0.450	-0.080	0.535	1.000	0.556
PTB	0.000	0.352	0.045	0.589	0.510	0.739	-0.045	0.496	-0.055	0.594	-0.195	0.661	0.885	0.679

Lab, S/N j ⬇

	D_i	U_i	NRLM		VNIIM		NIST		NRC		CENAM		INM	
			D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
	/ K		/ K		/ K		/ K		/ K		/ K		/ K	
VSL	-0.045	0.385	-0.355	0.528	0.835	1.259	-0.305	0.854	0.685	0.559	0.005	0.944	0.465	0.643
NPL	-0.510	0.600	-0.820	0.710	0.370	1.332	-0.770	0.972	0.220	0.714	-0.460	0.252	0.000	0.801
CSIRO	0.045	0.221	-0.265	0.422	0.925	1.220	-0.215	0.792	0.775	0.462	0.095	0.889	0.555	0.560
KRISS	0.055	0.410	-0.255	0.535	0.935	1.279	-0.205	0.858	0.785	0.565	0.105	0.947	0.565	0.648
NIM	0.195	0.522	-0.115	0.616	1.075	1.328	-0.065	0.905	0.925	0.635	0.245	0.991	0.705	0.710
NMC	-0.885	0.519	-1.195	0.650	-0.005	1.285	-1.145	0.918	-0.155	0.653	-0.835	1.003	-0.375	0.726
NRLM	0.310	0.473			1.190	1.290	0.050	0.896	1.040	0.623	0.360	0.983	0.820	0.699
VNIIM	-0.880	1.228	-1.190	1.290			-1.140	1.440	-0.150	1.287	-0.830	1.496	-0.370	1.326
NIST	0.260	0.815	-0.050	0.896	1.140	1.440			0.990	0.918	0.310	1.184	0.770	1.015
NRC	-0.730	0.496	-1.040	0.623	0.150	1.287	-0.990	0.918			-0.680	0.986	-0.220	0.707
CENAM	-0.050	0.906	-0.360	0.983	0.830	1.496	-0.310	1.184	0.680	0.986			0.460	1.052
INM	-0.510	0.629	-0.820	0.699	0.370	1.326	-0.770	1.015	0.220	0.707	-0.460	1.052		
IMGC	0.115	0.352	-0.195	0.520	0.995	1.241	-0.145	0.832	0.845	0.539	0.165	0.926	0.625	0.674
PTB	0.000	0.352	-0.310	0.649	0.880	1.301	-0.260	0.923	0.730	0.657	0.050	1.002	0.510	0.761

Lab, S/N j ⇓

| | D_i | U_i | IMGC | | PTB | |
| | | | D_{ij} | U_{ij} | D_{ij} | U_{ij} |
	/ K		/ K		/ K	
VSL	-0.045	0.385	-0.160	0.443	-0.045	0.589
NPL	-0.510	0.600	-0.625	0.632	-0.510	0.739
CSIRO	0.045	0.221	-0.070	0.308	0.045	0.496
KRISS	0.055	0.410	-0.060	0.450	0.055	0.594
NIM	0.195	0.522	0.080	0.535	0.195	0.661
NMC	-0.885	0.519	-1.000	0.556	-0.885	0.679
NRLM	0.310	0.473	0.195	0.520	0.310	0.649
VNIIM	-0.880	1.228	-0.995	1.241	-0.880	1.301
NIST	0.260	0.815	0.145	0.832	0.260	0.923
NRC	-0.730	0.496	-0.845	0.539	-0.730	0.657
CENAM	-0.050	0.906	-0.165	0.926	-0.050	1.002
INM	-0.510	0.629	-0.625	0.674	-0.510	0.761
IMGC	0.115	0.352			0.115	0.558
PTB	0.000	0.352	-0.115	0.558		

CCT-K5 : Nominal temperature, $T_{90} = 1673$ K

Degrees of equivalence, D_i, and expanded uncertainties ($k = 2$), U_i, expressed in K
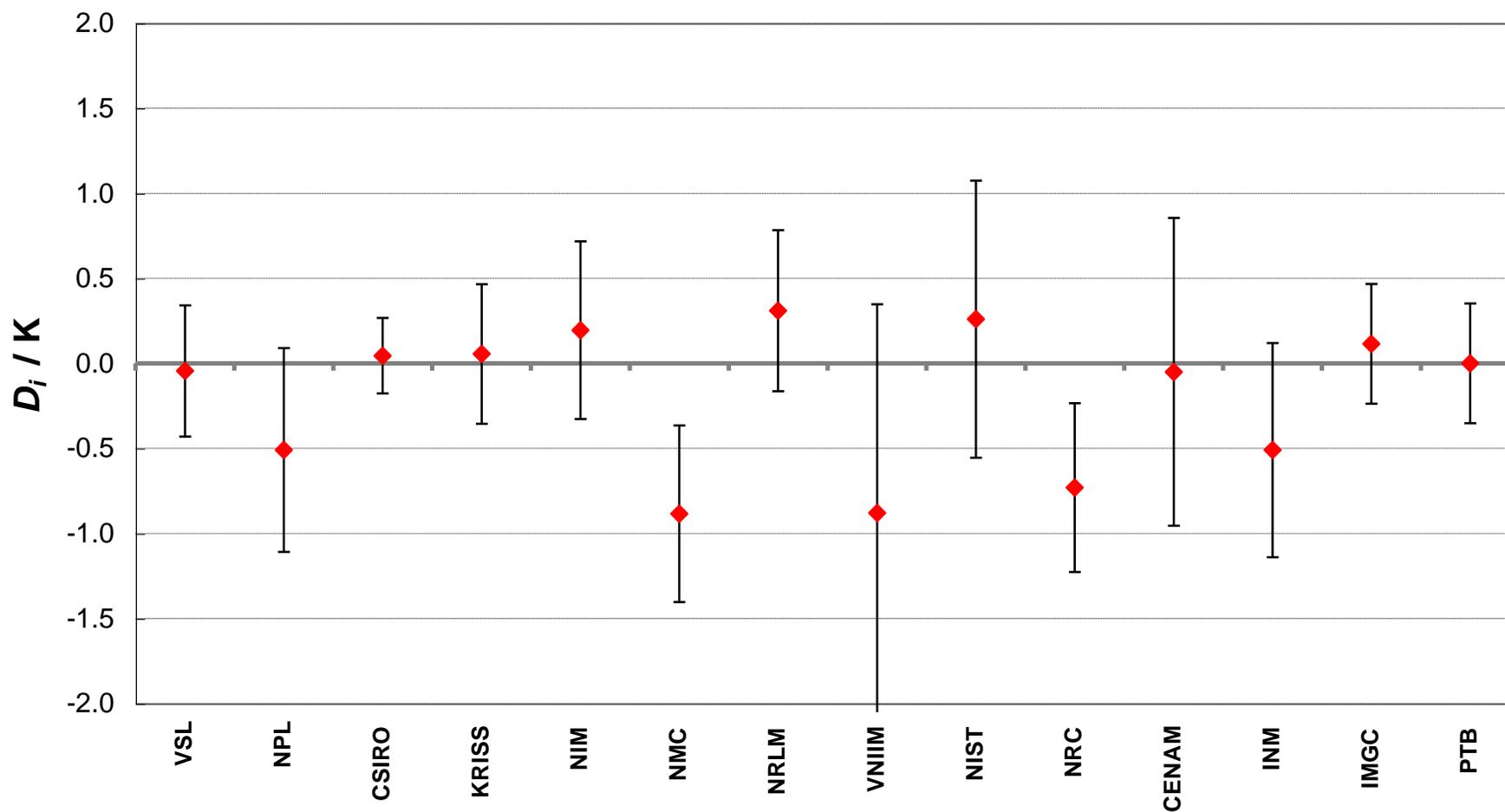
Nominal temperature 1500°C

Lab, S/N i ⟹

Lab, S/N j	D_i	U_i /K	VSL D_{ij}	U_{ij} /K	NPL D_{ij}	U_{ij} /K	CSIRO D_{ij}	U_{ij} /K	KRISS D_{ij}	U_{ij} /K	NIM D_{ij}	U_{ij} /K	NMC D_{ij}	U_{ij} /K
VSL	-0.082	0.414			0.467	0.747	-0.140	0.349	-0.110	0.518	-0.295	0.623	0.970	0.656
NPL	-0.550	0.683	-0.467	0.747			-0.607	0.671	-0.577	0.770	-0.762	0.834	0.503	0.849
CSIRO	0.058	0.259	0.140	0.349	0.607	0.671			0.030	0.387	-0.155	0.508	1.110	0.584
KRISS	0.028	0.467	0.110	0.518	0.577	0.770	-0.030	0.387			-0.185	0.623	1.080	0.710
NIM	0.213	0.593	0.295	0.623	0.762	0.834	0.155	0.508	0.185	0.623			1.265	0.821
NMC	-1.052	0.588	-0.970	0.656	-0.503	0.849	-1.110	0.584	-1.080	0.769	-1.265	0.821		
NRLM	0.353	0.538	0.435	0.589	0.902	0.822	0.295	0.485	0.325	0.702	0.140	0.702	1.405	0.746
VNIIM	-0.912	1.520	-0.830	1.554	-0.363	1.617	-0.970	1.532	-0.940	1.655	-1.125	1.655	0.140	1.563
NIST	0.336	0.918	0.418	0.963	0.885	1.104	0.278	0.905	0.308	0.981	0.123	1.032	1.388	1.044
NRC	-0.850	0.565	-0.767	0.636	-0.300	0.815	-0.907	0.543	-0.877	0.663	-1.062	0.736	0.203	0.752
CENAM	0.000	1.026	0.083	1.072	0.550	1.190	-0.057	1.020	-0.027	1.088	-0.212	1.134	1.053	1.144
INM	-0.580	0.730	-0.497	0.741	-0.030	0.924	-0.637	0.663	-0.607	0.764	-0.792	0.828	0.473	0.843
IMGC	0.146	0.396	0.228	0.502	0.695	0.724	0.088	0.377	0.118	0.535	-0.067	0.623	1.198	0.643
PTB	-0.025	0.394	0.058	0.648	0.525	0.833	-0.082	0.557	-0.052	0.674	-0.237	0.746	1.028	0.763

Lab, S/N i ⟹

Lab, S/N j ⬇

Lab, S/N j	D_i	U_i /K	NRLM D_{ij}	U_{ij} /K	VNIIM D_{ij}	U_{ij} /K	NIST D_{ij}	U_{ij} /K	NRC D_{ij}	U_{ij} /K	CENAM D_{ij}	U_{ij} /K	INM D_{ij}	U_{ij} /K
VSL	-0.082	0.414	-0.435	0.589	0.830	1.554	-0.418	0.963	0.767	0.636	-0.083	1.072	0.497	0.741
NPL	-0.550	0.683	-0.902	0.822	0.363	1.617	-0.885	1.104	0.300	0.815	-0.550	0.272	0.030	0.924
CSIRO	0.058	0.259	-0.295	0.485	0.970	1.532	-0.278	0.905	0.907	0.543	0.057	1.020	0.637	0.663
KRISS	0.028	0.467	-0.325	0.615	0.940	1.590	-0.308	0.981	0.877	0.663	0.027	1.088	0.607	0.764
NIM	0.213	0.593	-0.140	0.702	1.125	1.655	-0.123	1.032	1.062	0.736	0.212	1.134	0.792	0.828
NMC	-1.052	0.588	-1.405	0.746	-0.140	1.563	-1.388	1.044	-0.203	0.752	-1.053	1.144	-0.473	0.843
NRLM	0.353	0.538			1.265	1.597	0.017	1.022	1.202	0.721	0.352	1.125	0.932	0.816
VNIIM	-0.912	1.520	-1.265	1.597			-1.248	1.728	-0.063	1.569	-0.913	1.791	-0.333	1.615
NIST	0.336	0.918	-0.017	1.022	1.248	1.728			1.185	1.044	0.335	1.336	0.915	1.166
NRC	-0.850	0.565	-1.202	0.721	0.063	1.569	-1.185	1.044			-0.850	1.128	-0.270	0.811
CENAM	0.000	1.026	-0.352	1.125	0.913	1.791	-0.335	1.336	0.850	1.128			0.580	1.223
INM	-0.580	0.730	-0.932	0.816	0.333	1.615	-0.915	1.166	0.270	0.811	-0.580	1.223		
IMGC	0.146	0.396	-0.207	0.606	1.058	1.519	-0.190	0.939	0.995	0.619	0.145	1.050	0.725	0.786
PTB	-0.025	0.394	-0.377	0.732	0.888	1.574	-0.360	1.024	0.825	0.744	-0.025	1.128	0.555	0.891

Lab, S/N i ⟹

Lab, S/N j ⟱

	D_i	U_i	IMGC D_{ij}	IMGC U_{ij}	PTB D_{ij}	PTB U_{ij}
	/K		/K		/K	
VSL	-0.082	0.414	-0.228	0.502	-0.058	0.648
NPL	-0.550	0.683	-0.695	0.724	-0.525	0.833
CSIRO	0.058	0.259	-0.088	0.377	0.082	0.557
KRISS	0.028	0.467	-0.118	0.535	0.052	0.674
NIM	0.213	0.593	0.067	0.623	0.237	0.746
NMC	-1.052	0.588	-1.198	0.643	-1.028	0.763
NRLM	0.353	0.538	0.207	0.606	0.377	0.732
VNIIM	-0.912	1.520	-1.058	1.519	-0.888	1.574
NIST	0.336	0.918	0.190	0.939	0.360	1.024
NRC	-0.850	0.565	-0.995	0.619	-0.825	0.744
CENAM	0.000	1.026	-0.145	1.050	0.025	1.128
INM	-0.580	0.730	-0.725	0.786	-0.555	0.891
IMGC	0.146	0.396			0.170	0.611
PTB	-0.025	0.394	-0.170	0.611		

CCT-K5 : Nominal temperature, T_{90} = 1773 K

Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K
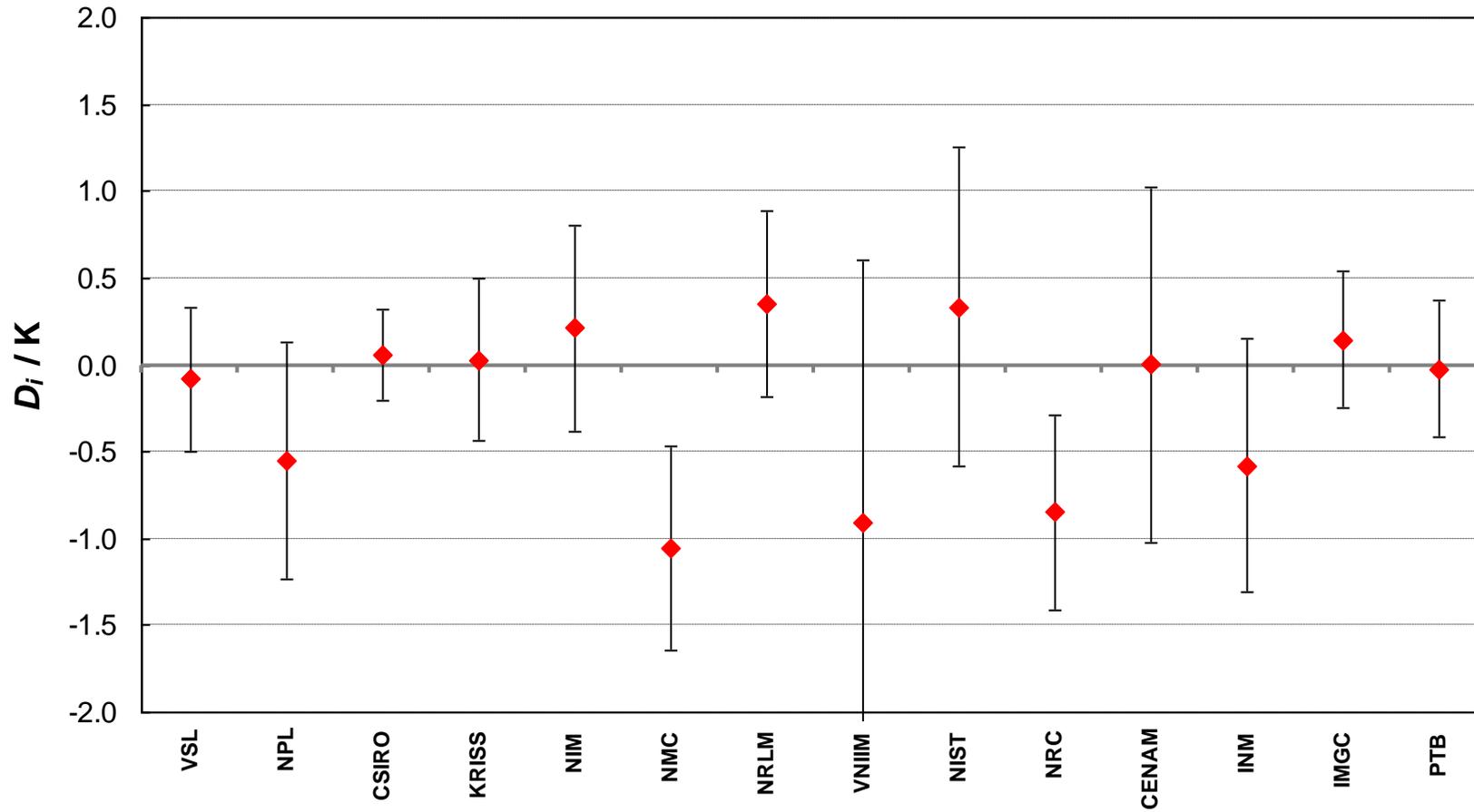
Nominal temperature 1600°C

Lab, S/N i ⟹

Lab, S/N j ⇓

Lab, S/N j	D_i	U_i /K	VSL D_{ij}	U_{ij} /K	NPL D_{ij}	U_{ij} /K	CSIRO D_{ij}	U_{ij} /K	KRISS D_{ij}	U_{ij} /K	NIM D_{ij}	U_{ij} /K	NMC D_{ij}	U_{ij} /K
VSL	-0.113	0.452			0.427	0.853	-0.165	0.387	-0.140	0.572	-0.350	0.702	1.020	0.724
NPL	-0.540	0.781	-0.427	0.853			-0.592	0.768	-0.567	0.875	-0.777	0.951	0.593	0.972
CSIRO	0.053	0.262	0.165	0.387	0.592	0.768			0.025	0.426	-0.185	0.580	1.185	0.628
KRISS	0.028	0.502	0.140	0.572	0.567	0.875	-0.025	0.426			-0.210	0.702	1.160	0.764
NIM	0.238	0.660	0.350	0.702	0.777	0.951	0.185	0.580	0.210	0.702			1.370	0.892
NMC	-1.133	0.652	-1.020	0.724	-0.593	0.972	-1.185	0.628	-1.160	0.836	-1.370	0.892		
NRLM	0.443	0.599	0.555	0.662	0.982	0.938	0.390	0.543	0.415	0.788	0.205	0.788	1.575	0.828
VNIIM	-0.578	1.797	-0.465	1.835	-0.038	1.901	-0.630	1.807	-0.605	1.955	-0.815	1.955	0.555	1.860
NIST	0.591	1.014	0.703	1.069	1.130	1.240	0.538	1.002	0.563	1.086	0.353	1.148	1.723	1.167
NRC	-1.020	0.643	-0.907	0.713	-0.480	0.939	-1.072	0.607	-1.047	0.738	-1.257	0.826	0.113	0.851
CENAM	-0.005	1.224	0.108	1.272	0.535	1.411	-0.057	1.217	-0.032	1.287	-0.242	1.340	1.128	1.355
INM	-0.615	0.820	-0.502	0.833	-0.075	1.056	-0.667	0.744	-0.642	0.854	-0.852	0.932	0.518	0.955
IMGC	0.126	0.436	0.238	0.557	0.665	0.831	0.073	0.413	0.098	0.589	-0.112	0.696	1.258	0.726
PTB	0.001	0.433	0.113	0.720	0.540	0.950	-0.052	0.616	-0.027	0.745	-0.237	0.832	1.133	0.858

Lab, S/N j ⇓

Lab	D_i	U_i	NRLM D_{ij}	U_{ij}	VNIIM D_{ij}	U_{ij}	NIST D_{ij}	U_{ij}	NRC D_{ij}	U_{ij}	CENAM D_{ij}	U_{ij}	INM D_{ij}	U_{ij}
	/ K		/ K		/ K		/ K		/ K		/ K		/ K	
VSL	-0.113	0.452	-0.555	0.662	0.465	1.835	-0.703	1.069	0.907	0.713	-0.108	1.272	0.502	0.833
NPL	-0.540	0.781	-0.982	0.938	0.038	1.901	-1.130	1.240	0.480	0.939	-0.535	0.297	0.075	1.056
CSIRO	0.053	0.262	-0.390	0.543	0.630	1.807	-0.538	1.002	1.072	0.607	0.057	1.217	0.667	0.744
KRISS	0.028	0.502	-0.415	0.685	0.605	1.868	-0.563	1.086	1.047	0.738	0.032	1.287	0.642	0.854
NIM	0.238	0.660	-0.205	0.788	0.815	1.955	-0.353	1.148	1.257	0.826	0.242	1.340	0.852	0.932
NMC	-1.133	0.652	-1.575	0.828	-0.555	1.860	-1.723	1.167	-0.113	0.851	-1.128	1.355	-0.518	0.955
NRLM	0.443	0.599			1.020	1.888	-0.148	1.137	1.462	0.811	0.447	1.330	1.057	0.918
VNIIM	-0.578	1.797	-1.020	1.888			-1.168	2.007	0.442	1.841	-0.573	2.122	0.037	1.892
NIST	0.591	1.014	0.148	1.137	1.168	2.007			1.610	1.171	0.595	1.554	1.205	1.292
NRC	-1.020	0.643	-1.462	0.811	-0.442	1.841	-1.610	1.171			-1.015	1.337	-0.405	0.900
CENAM	-0.005	1.224	-0.447	1.330	0.573	2.122	-0.595	1.554	1.015	1.337			0.610	1.428
INM	-0.615	0.820	-1.057	0.918	-0.037	1.892	-1.205	1.292	0.405	0.900	-0.610	1.428		
IMGC	0.126	0.436	-0.317	0.678	0.703	1.787	-0.465	1.045	1.145	0.713	0.130	1.255	0.740	0.886
PTB	0.001	0.433	-0.442	0.817	0.578	1.845	-0.590	1.139	1.020	0.853	0.005	1.336	0.615	1.008

Lab, S/N j ⇩

	D_i	U_i	IMGC D_{ij}	U_{ij}	PTB D_{ij}	U_{ij}
	/K		/K		/K	
VSL	-0.113	0.452	-0.238	0.557	-0.113	0.720
NPL	-0.540	0.781	-0.665	0.831	-0.540	0.950
CSIRO	0.053	0.262	-0.073	0.413	0.052	0.616
KRISS	0.028	0.502	-0.098	0.589	0.027	0.745
NIM	0.238	0.660	0.112	0.696	0.237	0.832
NMC	-1.133	0.652	-1.258	0.726	-1.133	0.858
NRLM	0.443	0.599	0.317	0.678	0.442	0.817
VNIIM	-0.578	1.797	-0.703	1.787	-0.578	1.845
NIST	0.591	1.014	0.465	1.045	0.590	1.139
NRC	-1.020	0.643	-1.145	0.713	-1.020	0.853
CENAM	-0.005	1.224	-0.130	1.255	-0.005	1.336
INM	-0.615	0.820	-0.740	0.886	-0.615	1.008
IMGC	0.126	0.436			0.125	0.683
PTB	0.001	0.433	-0.125	0.683		

CCT-K5 : Nominal temperature, T_{90} = 1873 K

Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K
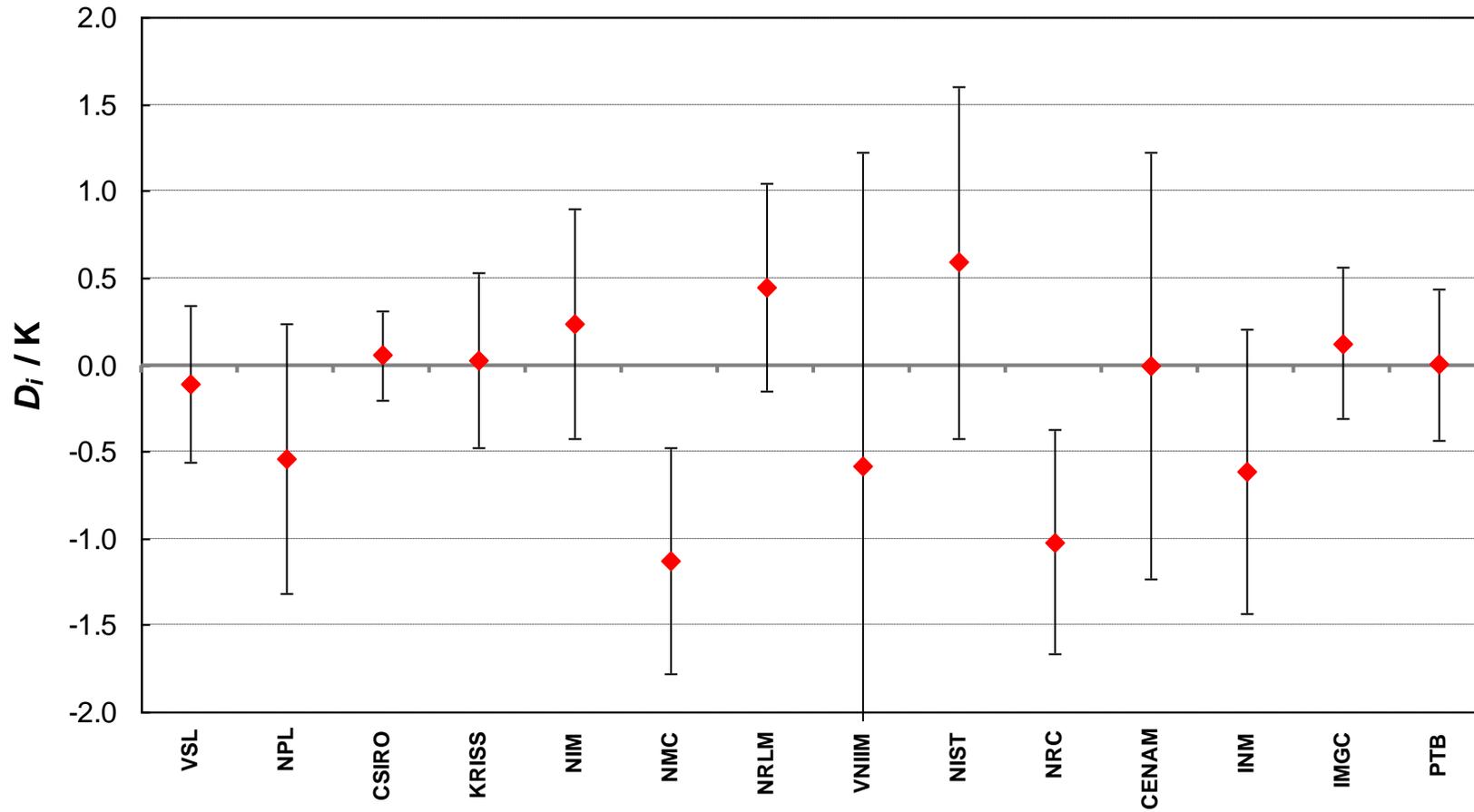
Nominal temperature 1700°C

Lab, S/N i ⟹

Lab, S/N j ⟱

Lab, S/N j	D_i	U_i	VSL D_{ij}	U_{ij}	NPL D_{ij}	U_{ij}	CSIRO D_{ij}	U_{ij}	KRISS D_{ij}	U_{ij}	NIM D_{ij}	U_{ij}	NMC D_{ij}	U_{ij}
	/ K		/ K		/ K		/ K		/ K		/ K		/ K	
VSL	-0.235	0.480			0.330	0.929	-0.265	0.433	-0.235	0.667	-0.485	0.813	1.155	0.816
NPL	-0.565	0.854	-0.330	0.929			-0.595	0.834	-0.565	0.972	-0.815	1.052	0.825	1.075
CSIRO	0.030	0.259	0.265	0.433	0.595	0.834			0.030	0.511	-0.220	0.673	1.420	0.723
KRISS	0.000	0.571	0.235	0.667	0.565	0.972	-0.030	0.511			-0.250	0.816	1.390	0.896
NIM	0.250	0.740	0.485	0.813	0.815	1.052	0.220	0.673	0.250	0.816			1.640	1.038
NMC	-1.390	0.734	-1.155	0.816	-0.825	1.075	-1.420	0.723	-1.390	0.968	-1.640	1.038		
NRLM	0.455	0.667	0.690	0.752	1.020	1.036	0.425	0.625	0.455	0.911	0.205	0.911	1.845	0.950
VNIIM	0.035	2.022	0.270	2.054	0.600	2.155	0.005	2.025	0.035	2.179	-0.215	2.179	1.425	2.102
NIST	0.500	1.129	0.735	1.185	1.065	1.383	0.470	1.112	0.500	1.219	0.250	1.284	1.890	1.302
NRC	-1.340	0.740	-1.105	0.792	-0.775	1.064	-1.370	0.678	-1.340	0.841	-1.590	0.933	0.050	0.960
CENAM	-0.170	1.321	0.065	1.371	0.395	1.538	-0.200	1.309	-0.170	1.401	-0.420	1.458	1.220	1.475
INM	-0.805	0.892	-0.570	0.907	-0.240	1.169	-0.835	0.809	-0.805	0.950	-1.055	1.033	0.585	1.056
IMGC	0.005	0.482	0.240	0.606	0.570	0.928	-0.025	0.446	0.005	0.669	-0.245	0.782	1.395	0.812
PTB	-0.100	0.480	0.135	0.775	0.465	1.046	-0.130	0.657	-0.100	0.825	-0.350	0.918	1.290	0.945

Lab, S/N j ⇩

	D_i	U_i	NRLM D_{ij}	U_{ij}	VNIIM D_{ij}	U_{ij}	NIST D_{ij}	U_{ij}	NRC D_{ij}	U_{ij}	CENAM D_{ij}	U_{ij}	INM D_{ij}	U_{ij}
	/ K		/ K		/ K		/ K		/ K		/ K		/ K	
VSL	-0.235	0.480	-0.690	0.752	-0.270	2.054	-0.735	1.185	1.105	0.792	-0.065	1.371	0.570	0.907
NPL	-0.565	0.854	-1.020	1.036	-0.600	2.155	-1.065	1.383	0.775	1.064	-0.395	0.351	0.240	1.169
CSIRO	0.030	0.259	-0.425	0.625	-0.005	2.025	-0.470	1.112	1.370	0.678	0.200	1.309	0.835	0.809
KRISS	0.000	0.571	-0.455	0.799	-0.035	2.099	-0.500	1.219	1.340	0.841	0.170	1.401	0.805	0.950
NIM	0.250	0.740	-0.205	0.911	0.215	2.179	-0.250	1.284	1.590	0.933	0.420	1.458	1.055	1.033
NMC	-1.390	0.734	-1.845	0.950	-1.425	2.102	-1.890	1.302	-0.050	0.960	-1.220	1.475	-0.585	1.056
NRLM	0.455	0.667			0.420	2.117	-0.045	1.271	1.795	0.915	0.625	1.446	1.260	1.016
VNIIM	0.035	2.022	-0.420	2.117			-0.465	2.277	1.375	2.100	0.205	2.379	0.840	2.146
NIST	0.500	1.129	0.045	1.271	0.465	2.277			1.840	1.334	0.670	1.708	1.305	1.433
NRC	-1.340	0.740	-1.795	0.915	-1.375	2.100	-1.840	1.334			-1.170	1.474	-0.535	1.001
CENAM	-0.170	1.321	-0.625	1.446	-0.205	2.379	-0.670	1.708	1.170	1.474			0.635	1.554
INM	-0.805	0.892	-1.260	1.016	-0.840	2.146	-1.305	1.433	0.535	1.001	-0.635	1.554		
IMGC	0.005	0.482	-0.450	0.760	-0.030	2.036	-0.495	1.179	1.345	0.836	0.175	1.368	0.810	0.978
PTB	-0.100	0.480	-0.555	0.900	-0.135	2.093	-0.600	1.274	1.240	0.967	0.070	1.451	0.705	1.093

Lab, S/N j ⬇

	D_i	U_i /K	IMGC D_{ij}	U_{ij} /K	PTB D_{ij}	U_{ij} /K
VSL	-0.235	0.480	-0.240	0.606	-0.135	0.775
NPL	-0.565	0.854	-0.570	0.928	-0.465	1.046
CSIRO	0.030	0.259	0.025	0.446	0.130	0.657
KRISS	0.000	0.571	-0.005	0.669	0.100	0.825
NIM	0.250	0.740	0.245	0.782	0.350	0.918
NMC	-1.390	0.734	-1.395	0.812	-1.290	0.945
NRLM	0.455	0.667	0.450	0.760	0.555	0.900
VNIIM	0.035	2.022	0.030	2.036	0.135	2.093
NIST	0.500	1.129	0.495	1.179	0.600	1.274
NRC	-1.340	0.740	-1.345	0.836	-1.240	0.967
CENAM	-0.170	1.321	-0.175	1.368	-0.070	1.451
INM	-0.805	0.892	-0.810	0.978	-0.705	1.093
IMGC	0.005	0.482			0.105	0.766
PTB	-0.100	0.480	-0.105	0.766		

CCT-K5 : Nominal temperature, T_{90} = 1973 K

Degrees of equivalence, D_i, and expanded uncertainties (k = 2), U_i, expressed in K