

Addendum to the final report of 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 of CCT-K5 and CCT-K5.1 into the KCDB

based on

- the draft B report K5 of May 2005
- the addendum to draft B report K5 of April 2008
- the final report K5.1

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Contents

Contents	2
Introduction.....	3
Results from CCT.K5.1	3
Merge the bilateral K5.1 results to the KCDB set of K5	5
References.....	7
The KCDB results at 961°C.....	9
The KCDB results at 1000°C.....	13
The KCDB results at 1064°C.....	17
The KCDB results at 1084°C.....	21
The KCDB results at 1100°C.....	25
The KCDB results at 1200°C.....	29
The KCDB results at 1300°C.....	33
The KCDB results at 1400°C.....	37
The KCDB results at 1500°C.....	41
The KCDB results at 1600°C.....	45
The KCDB results at 1700°C.....	49

Introduction

This document describes the merge of the results from the keycomparisons CCT.K5 and CCT.K5.1 with the objective of having one set of results for the KCDB. As reference documents the final reports of CCT.K5 and CCT.K5.1 are used. After a short outline of the calculation of the degrees of equivalence for NRC via the bilateral comparison K5.1 the KCDB results for K5 are short description of the

Results from CCT.K5.1

The results from the bilateral CCT.K5.1 between the NRC and the PTB are presented in Table 7 and 8 of that final report [1]. These results are copied and presented below in Tables 1 and 2. From this starting point one is able to determine the differences between the radiance temperatures of the NRC and the PTB per lamp.

Table 1 Differences between the radiance temperatures of lamp C598 measured at the NRC and the PTB.

$I(C598)$ [A]	$dT(NRC_I-PTB)$ [K]	$dT(NRC_II-PTB)$ [K]	$dT(NRC_average-PTB)$ [K]	$u_{combined}$ [K], k=1
5.027	0.16	0.04	0.10	0.24
5.298	0.15	0.02	0.09	0.26
5.808	0.03	-0.09	-0.03	0.28
5.981	0.11	-0.04	0.03	0.29
6.116	0.08	-0.04	0.02	0.30
7.054	0.12	-0.02	0.05	0.33
8.092	0.27	0.02	0.15	0.39
9.210	0.25	-0.05	0.10	0.45
10.393	0.58	0.07	0.33	0.48
11.635	0.39	-0.18	0.10	0.53
12.930	0.54	-0.08	0.23	0.60

Table 2 Differences between the radiance temperatures of lamp 644C measured at the NRC and the PTB.

$I(644C)$ [A]	$dT(NRC_I-PTB)$ [K]	$dT(NRC_II-PTB)$ [K]	$dT(NRC_average-PTB)$ [K]	$u_{combined}$ [K], k=1
5.185	0.14	-0.02	0.06	0.24
5.457	0.24	0.11	0.18	0.26
5.966	0.05	-0.06	0.00	0.28
6.141	-0.05	-0.15	-0.10	0.29
6.276	0.11	-0.01	0.05	0.30
7.223	0.10	0.01	0.06	0.33
8.276	0.17	-0.05	0.06	0.39
9.411	0.18	-0.09	0.04	0.45
10.617	0.32	-0.05	0.14	0.48
11.880	0.29	-0.02	0.14	0.53
13.197	0.31	-0.13	0.09	0.60

The lamp currents represent the nominal temperatures from the silverpoint to 1700°C. For determination of the difference between the NRC and the PTB the average value is taken. Furthermore the associated uncertainty is calculated using the uncertainty set of one lamp and the standard deviation associated with the mean of the two lamp values. In formulae the average difference and associated uncertainty are given by:

$$\begin{aligned} \Delta t_{NRC-PTB}(t_{nom}) &\equiv \overline{\Delta t_{NRC-PTB}(t_{nom}, k)} \\ &\equiv \sum_k \Delta t_{NRC-PTB}(k, t_{nom}) / \sum_k 1 \text{ and} \end{aligned} \quad (1)$$

$$u(\Delta t_{NRC-PTB}(t_{nom}))^2 \equiv stdev^2(\Delta t_{NRC-PTB}(k, t_{nom})) / \sum_k 1 + u^2(\overline{\Delta t_{NRC-PTB}(k, t_{nom})}). \quad (2)$$

More explicitly the average difference and uncertainty are calculated according to the following expressions:

$$\Delta t_{NRC-PTB}(t_{nom}) \equiv 1/2 \Delta t_{NRC-PTB}(C598, t_{nom}) + 1/2 \Delta t_{NRC-PTB}(644C, t_{nom}) \text{ and} \quad (3)$$

$$\begin{aligned} u^2(\Delta t_{NRC-PTB}(t_{nom})) &\equiv 1/2 [stdev(\Delta t_{NRC-PTB}(C598, t_{nom}), \Delta t_{NRC-PTB}(644C, t_{nom}))]^2 \\ &+ [1/2 u(\Delta t_{NRC-PTB}(C598, t_{nom})) + 1/2 u(\Delta t_{NRC-PTB}(644C, t_{nom}))]^2. \end{aligned} \quad (4)$$

Using these equations the average difference between the NRC and the PTB is calculated using the data from Tables 1 and 2. The results are presented below.

Table 3 Average differences $\Delta t_{NRC-PTB}(t_{nom})$ between the radiance temperatures of lamps C598 and 644C measured at the NRC and the PTB.

t_{nom} [°C]	$\Delta t_{NRC-PTB}$ [K]	$u(\Delta t_{NRC-PTB})$ [K], k=2
961	0.08	0.48
1000	0.14	0.53
1064	-0.02	0.56
1084	-0.04	0.59
1100	0.04	0.60
1200	0.06	0.66
1300	0.11	0.79
1400	0.07	0.90
1500	0.24	0.98
1600	0.12	1.06
1700	0.12	1.22

Merge the bilateral K5.1 results to the KCDB set of K5

The final step of merging the results of the bilateral comparison and the initial keycomparison is realized by determining the new equivalence data for NRC based on the entry of PTB and the determined difference from the bilateral. In equation the calculation is summarized as:

$$D_{NRC}(t_{nom}) \equiv D_{PTB}(t_{nom}) + \Delta t_{NRC-PTB}(t_{nom}) \text{ and} \quad (5)$$

$$u^2(D_{NRC}(t_{nom})) \equiv u^2(D_{PTB}(t_{nom})) + u^2(\Delta t_{NRC-PTB}(t_{nom})). \quad (6)$$

In this stage the uncertainty is based on the sum of squares of $u(D_{PTB}(t_{nom}))$ and $u(\Delta t_{NRC-PTB}(t_{nom}))$ as both are determined individually. More information on the sources of uncertainty, along the full uncertainty budgets, is needed in order to further reduce the combined uncertainty, i.e., removing double counted type A sources of uncertainty.

Table 4 The final results from the PTB in the CCT-K5 key comparison, $D_{PTB}(t_{nom})$ as function of the nominal temperature. The values are used to determine the K5.1 equivalent data from the NRC within the set of CCT-K5.

t_{nom} [°C]	D_{PTB} [K]	$u_{combined}$ [K], k=2
961	0.051	0.169
1000	-0.054	0.183
1064	-0.046	0.205
1084	-0.001	0.213
1100	-0.035	0.211
1200	0.033	0.220
1300	0.024	0.283
1400	0.000	0.352
1500	-0.025	0.394
1600	0.001	0.433
1700	-0.100	0.480

Based on Eqs. 5 and 6 the differences of the NRC in the set of CCT-K5 can now be calculated using the values of the PTB. Table 4 presents the results from PTB in the comparison. The final results for the NRC are calculated using the data of Table 3 and 4. These final results are presented in Table 5.

Table 5 The final results from the NRC K5.1 bilateral comparison within the set of CCT-K5, $D_{NRC}(t_{nom})$ as function of the nominal temperature t_{nom} (left, 5a). For comparison the earlier results are also presented (right, 5b). Note the increase of the uncertainty of the K5.1 data due to linkage through PTB and other transfer standards used.

t_{nom} [°C]	D_{NRC} from K5.1 [K]	$u(D_{NRC})$ [K], k=2	t_{nom} [°C]	D_{NRC} from K5 [K]	$u(D_{NRC})$ [K], k=2
961	0.13	0.51	961	0.31	0.26
1000	0.08	0.56	1000	0.25	0.25
1064	-0.06	0.60	1064	0.15	0.29
1084	-0.04	0.63	1084	0.12	0.30
1100	0.00	0.64	1100	0.08	0.30
1200	0.09	0.70	1200	-0.12	0.33
1300	0.13	0.83	1300	-0.19	0.42
1400	0.07	0.97	1400	-0.73	0.50
1500	0.21	1.06	1500	-0.85	0.56
1600	0.12	1.15	1600	-1.02	0.64
1700	0.02	1.31	1700	-1.34	0.74

The improvement of the results of the NRC is clearly visible in Fig. 1 where both results are presented in one graph. The results of Table 5a will be used in the determination of the KCDB degrees of equivalence matrix.

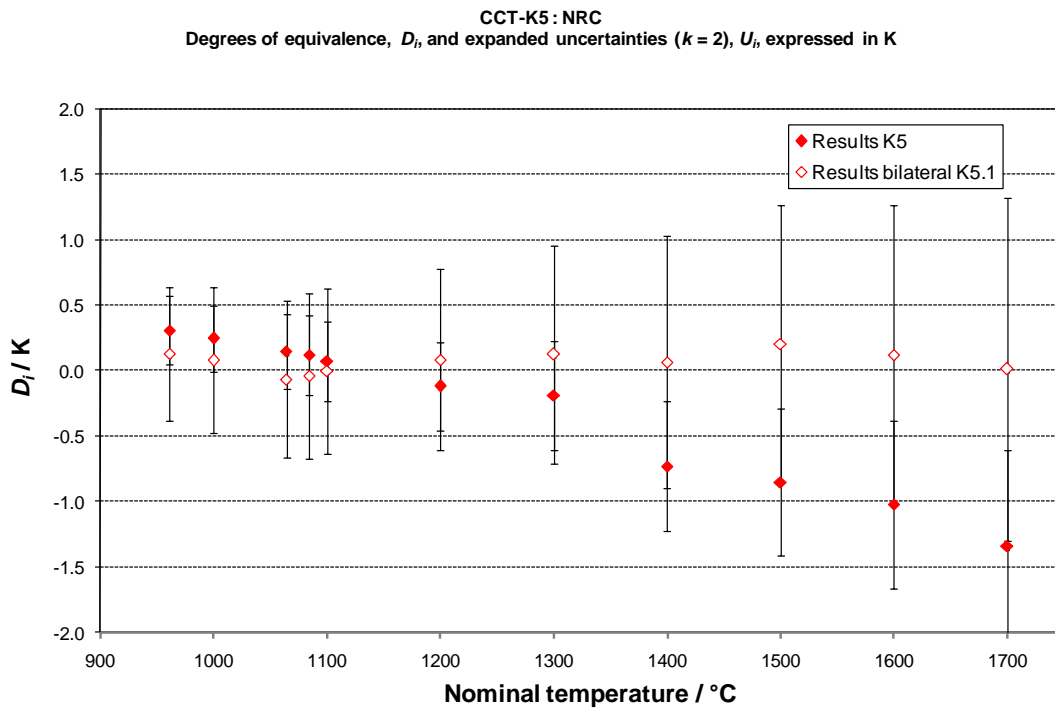


Figure 1 The degrees of equivalence $D_{NRC}(t_{nom})$ as function of the nominal temperatures for the case of the initial comparison CCT-K5 (closed symbols) and the bilateral comparison (open symbols).

For completeness of this report also the general overview of the CCT-K5 keycomparison results are presented in Fig. 2. The red dots indicate the degrees of equivalence at 11 nominal temperatures for each participant. The blue lines indicate the outer values of the associated uncertainty values.

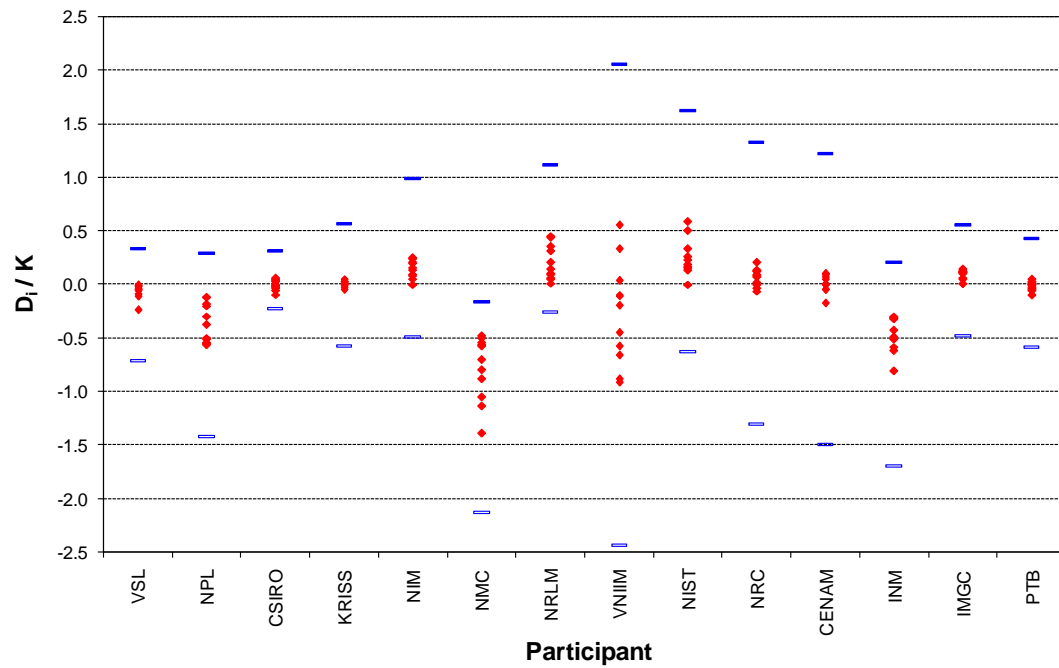


Figure 2 The degrees of equivalences for all participants as function of the nominal temperatures; here the new results from bilateral CCT-K5.1 are embedded as well. The red dots indicate individual measurements whereas the blue lines indicated the outer values of the associated uncertainties ($k=2$).

References

- [1] Metrologia, 2006, 43, Tech. Suppl., 03003
- [2] Final report and addendum of CCT.K5

The KCDB results at 961°C

Lab, S/N *j* \implies

Lab, S/N *i* \Downarrow

	<i>D_i</i> / K		<i>U_i</i>		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	<i>D_i</i> / K	<i>U_i</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>
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	0.131	0.511	0.141	0.559	0.255	0.597	0.226	0.525	0.181	0.570	0.076	0.572	0.611	0.602		
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 *j* \longrightarrow

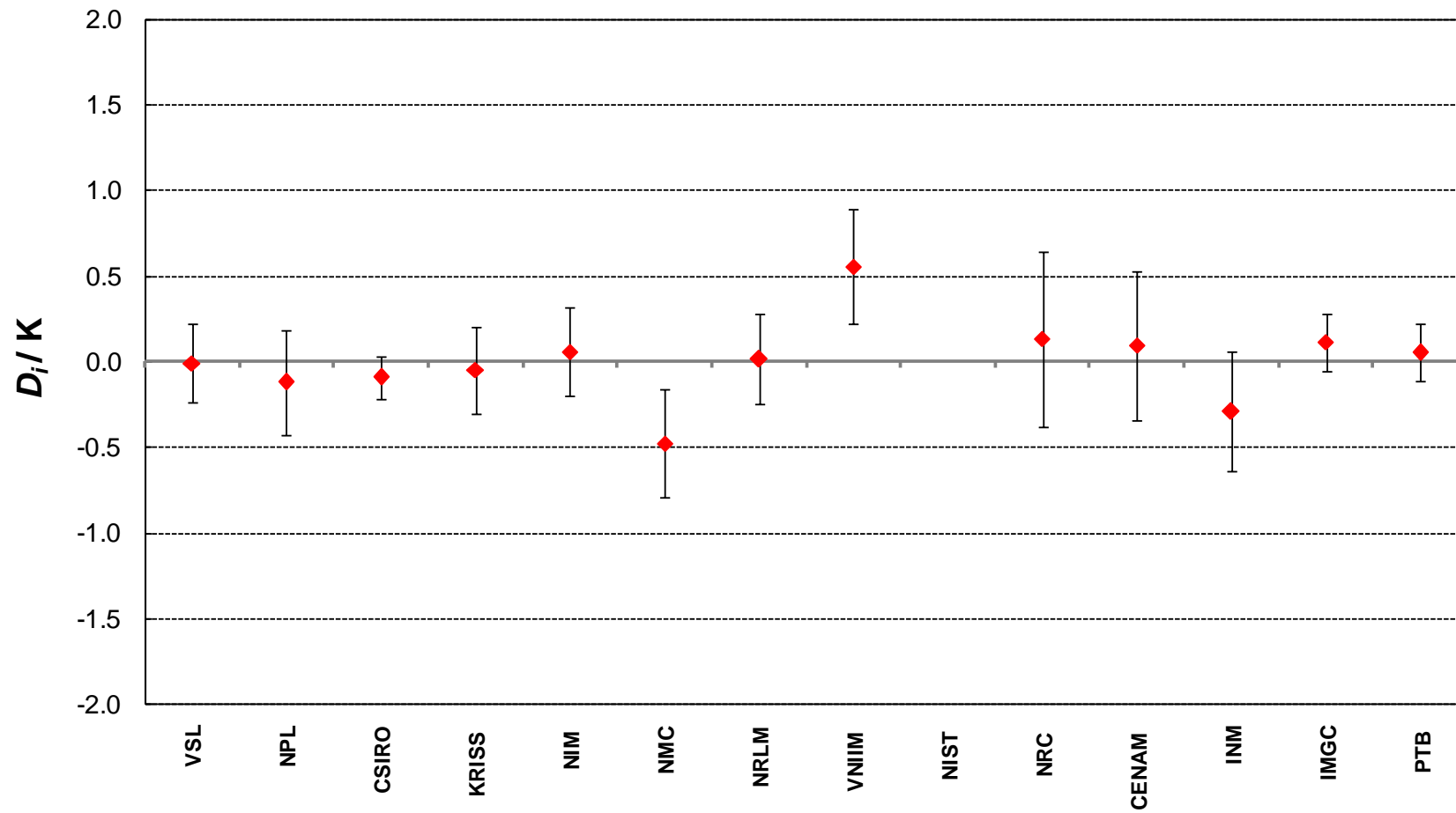
Lab, S/N *i*



	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.010	0.227	-0.020	0.312	-0.565	0.380			-0.141	0.559	-0.102	0.512	0.283	0.410
NPL	-0.124	0.310	-0.133	0.429	-0.678	0.477			-0.255	0.597	-0.215	0.091	0.170	0.400
CSIRO	-0.095	0.123	-0.105	0.243	-0.650	0.328			-0.226	0.525	-0.187	0.474	0.198	0.360
KRISS	-0.050	0.255	-0.060	0.316	-0.605	0.395			-0.181	0.570	-0.142	0.512	0.243	0.409
NIM	0.055	0.259	0.045	0.329	-0.500	0.398			-0.076	0.572	-0.037	0.522	0.348	0.423
NMC	-0.480	0.319	-0.490	0.399	-1.035	0.444			-0.611	0.602	-0.572	0.559	-0.187	0.467
NRLM	0.010	0.263			-0.545	0.403			-0.121	0.574	-0.082	0.529	0.303	0.431
VNIIM	0.555	0.333	0.545	0.403					0.424	0.610	0.463	0.569	0.848	0.478
NIST														
NRC	0.131	0.511	0.121	0.574	-0.424	0.610					0.040	0.669	0.425	0.619
CENAM	0.091	0.433	0.082	0.529	-0.463	0.569			-0.040	0.669			0.385	0.521
INM	-0.294	0.350	-0.303	0.431	-0.848	0.478			-0.425	0.619	-0.385	0.521		
IMGC	0.111	0.171	0.102	0.350	-0.443	0.407			-0.020	0.538	0.020	0.450	0.405	0.383
PTB	0.051	0.169	0.042	0.441	-0.503	0.488			-0.080	0.538	-0.040	0.530	0.345	0.489

Lab, S/N <i>i</i>	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
			/ 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
VNIM	0.555	0.333	0.443	0.407	0.503	0.488
NIST						
NRC	0.131	0.511	0.020	0.538	0.080	0.538
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



The KCDB results at 1000°C

Lab, S/N j \Rightarrow

Lab, S/N i \Downarrow

	D_i U_i		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
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	0.081	0.559	0.083	0.601	0.195	0.631	0.138	0.570	0.103	0.606	-0.007	0.624	0.583	0.641
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 j \longrightarrow

Lab, S/N i \downarrow

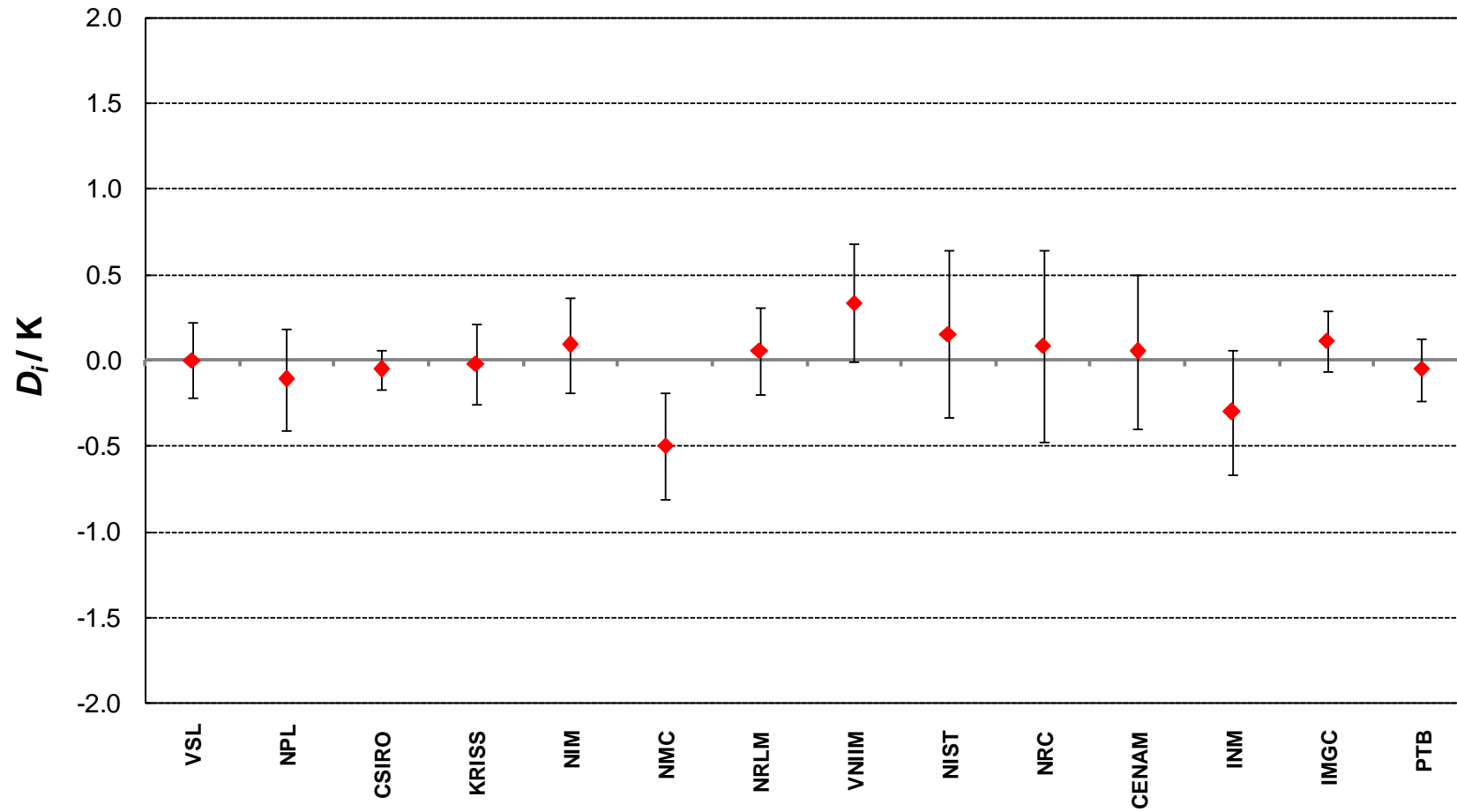
	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.002	0.221	-0.055	0.312	-0.335	0.408	-0.153	0.548	-0.083	0.601	-0.053	0.514	0.303	0.406
NPL	-0.114	0.294	-0.168	0.408	-0.448	0.463	-0.265	0.561	-0.195	0.631	-0.165	0.077	0.190	0.435
CSIRO	-0.057	0.116	-0.110	0.244	-0.390	0.369	-0.208	0.513	-0.138	0.570	-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	-0.103	0.606	-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	0.007	0.624	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	-0.583	0.641	-0.553	0.560	-0.198	0.463
NRLM	0.053	0.258			-0.280	0.431	-0.098	0.564	-0.028	0.615	0.003	0.530	0.358	0.427
VNIIM	0.333	0.345	0.280	0.431			0.183	0.605	0.252	0.657	0.283	0.574	0.638	0.479
NIST	0.151	0.487	0.098	0.564	-0.183	0.605			0.070	0.741	0.100	0.655	0.455	0.612
NRC	0.081	0.559	0.028	0.615	-0.252	0.657	-0.070	0.741			0.030	0.716	0.385	0.668
CENAM	0.051	0.449	-0.003	0.530	-0.283	0.574	-0.100	0.655	-0.030	0.716			0.355	0.554
INM	-0.304	0.366	-0.358	0.427	-0.638	0.479	-0.455	0.612	-0.385	0.668	-0.355	0.554		
IMGC	0.111	0.179	0.058	0.337	-0.223	0.401	-0.040	0.506	0.030	0.587	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	-0.135	0.588	-0.105	0.552	0.250	0.509

Lab, S/N j \longrightarrow

Lab, S/N i \downarrow

	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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
KRISS	-0.022	0.235	-0.133	0.305	0.033	0.413
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
VNIM	0.333	0.345	0.223	0.401	0.388	0.489
NIST	0.151	0.487	0.040	0.506	0.205	0.578
NRC	0.081	0.559	-0.030	0.587	0.135	0.588
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



The KCDB results at 1064°C

Lab, S/N *j* →

Lab, S/N *i* ↓

	D_i / K		U_i		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}
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	-0.061	0.597	-0.028	0.650	0.120	0.682	-0.023	0.617	-0.068	0.659					0.477	0.692
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 j \longrightarrow

Lab, S/N i



	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.033	0.257	-0.095	0.341	0.060	0.428	-0.167	0.590	0.028	0.650	-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	-0.120	0.682	-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	0.023	0.617	-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	0.068	0.659	-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	-0.477	0.692	-0.642	0.618	-0.222	0.500
NRLM	0.062	0.291			0.155	0.448	-0.072	0.606	0.123	0.664	-0.042	0.589	0.379	0.462
VNIIM	-0.093	0.365	-0.155	0.448			-0.227	0.638	-0.032	0.700	-0.197	0.621	0.224	0.503
NIST	0.134	0.536	0.072	0.606	0.227	0.638			0.195	0.803	0.030	0.722	0.450	0.632
NRC	-0.061	0.597	-0.123	0.664	0.032	0.700	-0.195	0.803			-0.165	0.789	0.255	0.719
CENAM	0.104	0.515	0.042	0.589	0.197	0.621	-0.030	0.722	0.165	0.789			0.420	0.627
INM	-0.316	0.401	-0.379	0.462	-0.224	0.503	-0.450	0.632	-0.255	0.719	-0.420	0.627		
IMGC	0.129	0.206	0.067	0.351	0.222	0.404	-0.005	0.552	0.190	0.632	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	0.015	0.631	-0.150	0.608	0.270	0.534

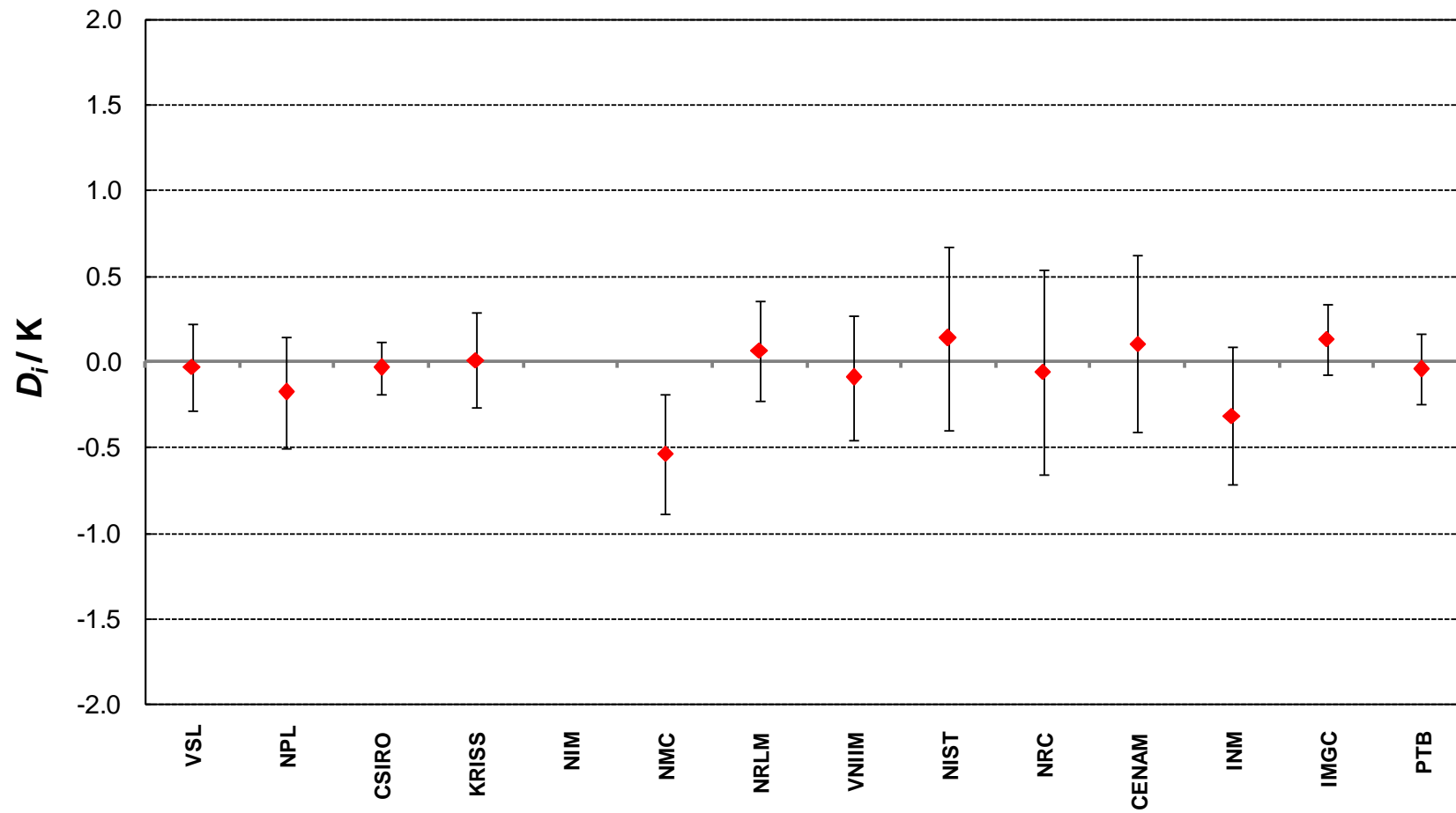
Lab, S/N *j* \longrightarrow

Lab, S/N *i*



	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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	-0.061	0.597	-0.190	0.632	-0.015	0.631
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



The KCDB results at 1084°C

Lab, S/N *j* →

Lab, S/N *i* ↓

	<i>D_i</i> / K		<i>U_i</i>		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	<i>D_i</i> / K	<i>U_i</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>	<i>D_{ij}</i> / K	<i>U_{ij}</i>
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	-0.036	0.632	-0.023	0.681	0.165	0.709	-0.023	0.649	-0.063	0.675					0.527	0.721
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* \longrightarrow

Lab, S/N *i*



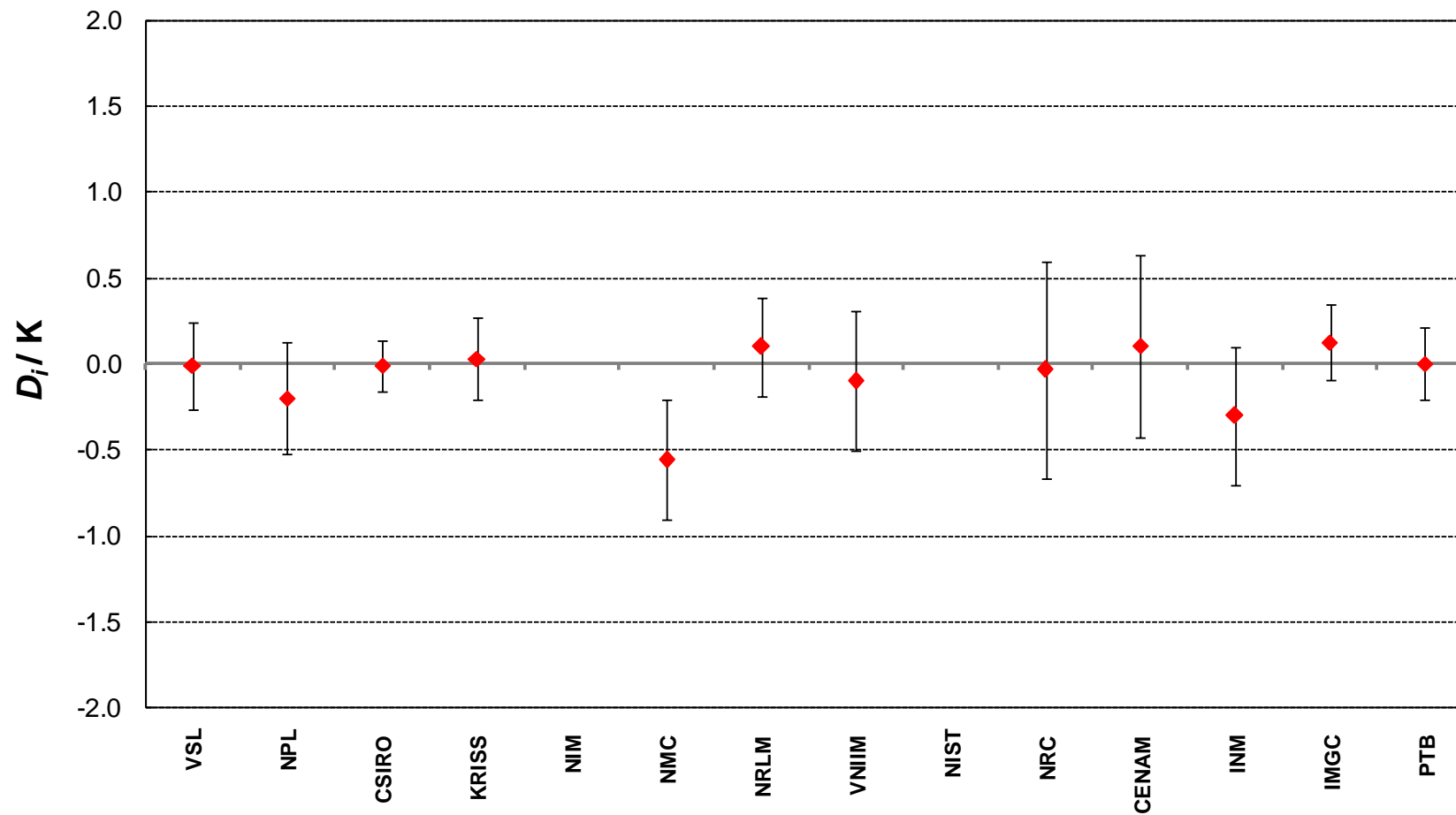
	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.013	0.254	-0.110	0.341	0.090	0.464			0.023	0.681	-0.113	0.586	0.293	0.437
NPL	-0.201	0.323	-0.298	0.427	-0.098	0.511			-0.165	0.709	-0.300	0.101	0.105	0.476
CSIRO	-0.013	0.148	-0.110	0.266	0.090	0.422			0.023	0.649	-0.113	0.546	0.293	0.381
KRISS	0.027	0.238	-0.070	0.318	0.130	0.472			0.063	0.675	-0.073	0.570	0.333	0.416
NIM														
NMC	-0.563	0.348	-0.660	0.429	-0.460	0.497			-0.527	0.721	-0.663	0.632	-0.258	0.496
NRLM	0.097	0.288			0.200	0.481			0.133	0.694	-0.003	0.602	0.403	0.458
VNIIM	-0.103	0.408	-0.200	0.481					-0.067	0.752	-0.203	0.664	0.203	0.538
NIST														
NRC	-0.036	0.632	-0.133	0.694	0.067	0.752					-0.135	0.826	0.270	0.749
CENAM	0.099	0.532	0.003	0.602	0.203	0.664			0.135	0.826			0.405	0.641
INM	-0.306	0.403	-0.403	0.458	-0.203	0.538			-0.270	0.749	-0.405	0.641		
IMGC	0.124	0.217	0.028	0.354	0.228	0.452			0.160	0.668	0.025	0.554	0.430	0.450
PTB	-0.001	0.213	-0.098	0.457	0.103	0.537			0.035	0.667	-0.100	0.626	0.305	0.542

Lab, S/N j \longrightarrow

Lab, S/N i \downarrow

	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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	-0.036	0.632	-0.160	0.668	-0.035	0.667
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



The KCDB results at 1100°C

Lab, S/N j \Rightarrow

Lab, S/N i	D_i / K		U_i		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}
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	0.000	0.637	0.017	0.684	0.295	0.723	0.012	0.653	-0.008	0.686	-0.158	0.721	0.577	0.724		
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 \longrightarrow

Lab, S/N i



	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.017	0.250	-0.120	0.341	0.180	0.484	-0.252	0.600	-0.017	0.684	-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	-0.295	0.723	-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	-0.012	0.653	-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	0.008	0.686	-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	0.158	0.721	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	-0.577	0.724	-0.647	0.625	-0.257	0.504
NRLM	0.103	0.287			0.300	0.504	-0.132	0.615	0.103	0.698	0.033	0.597	0.423	0.468
VNIIM	-0.197	0.437	-0.300	0.504			-0.432	0.698	-0.197	0.772	-0.267	0.682	0.123	0.572
NIST	0.235	0.556	0.132	0.615	0.432	0.698			0.235	0.845	0.165	0.756	0.555	0.707
NRC	0.000	0.637	-0.103	0.698	0.197	0.772	-0.235	0.845			-0.070	0.829	0.320	0.765
CENAM	0.070	0.531	-0.033	0.597	0.267	0.682	-0.165	0.756	0.070	0.829			0.390	0.656
INM	-0.320	0.424	-0.423	0.468	-0.123	0.572	-0.555	0.707	-0.320	0.765	-0.390	0.656		
IMGC	0.100	0.216	-0.003	0.345	0.297	0.477	-0.135	0.570	0.100	0.672	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	-0.035	0.671	-0.105	0.635	0.285	0.566

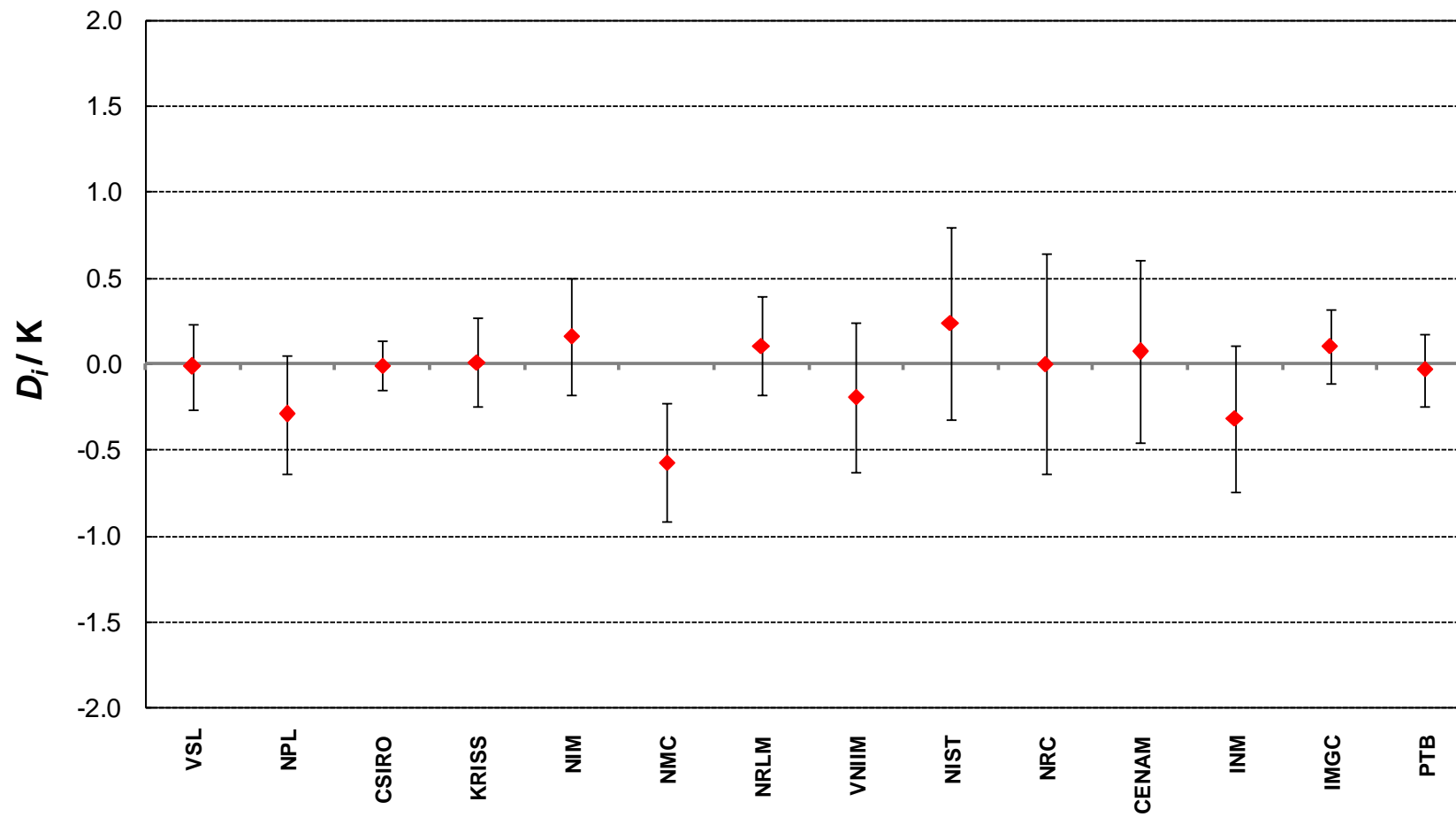
Lab, S/N j \longrightarrow

Lab, S/N i



	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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
VNIM	-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	0.000	0.637	-0.100	0.672	0.035	0.671
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



The KCDB results at 1200°C

Lab, S/N j \Rightarrow

Lab, S/N i



	D_i / K		U_i		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}
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	0.060	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	-0.530	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	0.098	0.714	0.888	0.728
NRC	0.088	0.696	0.143	0.743	0.465	0.808	0.113	0.706	0.088	0.749	0.003	0.792	0.003	0.792	0.793	0.795
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	-0.082	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	-0.512	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	-0.037	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	-0.052	0.518	0.738	0.536

Lab, S/N *j* \longrightarrow

Lab, S/N *i*



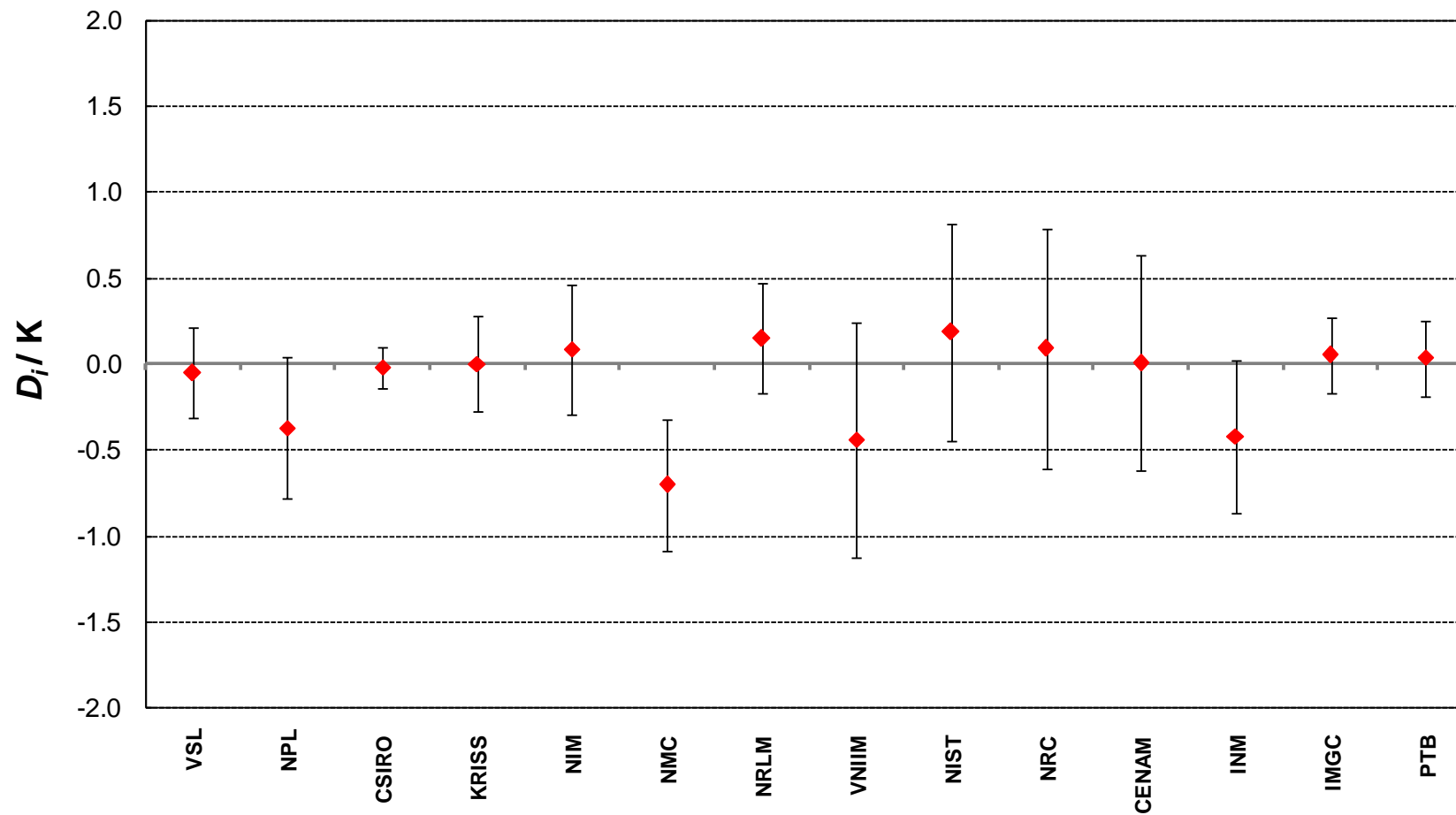
	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.055	0.262	-0.200	0.384	0.390	0.724	-0.238	0.674	-0.143	0.743	-0.058	0.673	0.372	0.477
NPL	-0.377	0.411	-0.522	0.511	0.068	0.795	-0.560	0.745	-0.465	0.808	-0.380	0.174	0.050	0.584
CSIRO	-0.025	0.122	-0.170	0.303	0.420	0.687	-0.208	0.632	-0.113	0.706	-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	-0.088	0.749	-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	-0.003	0.792	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	-0.793	0.795	-0.708	0.727	-0.278	0.550
NRLM	0.145	0.320			0.590	0.747	-0.038	0.698	0.057	0.766	0.142	0.697	0.572	0.510
VNIIM	-0.445	0.686	-0.590	0.747			-0.628	0.927	-0.533	0.977	-0.448	0.926	-0.018	0.795
NIST	0.183	0.632	0.038	0.698	0.628	0.927			0.095	0.940	0.180	0.884	0.610	0.783
NRC	0.088	0.696	-0.057	0.766	0.533	0.977	-0.095	0.940			0.085	0.937	0.515	0.826
CENAM	0.003	0.628	-0.142	0.697	0.448	0.926	-0.180	0.884	-0.085	0.937			0.430	0.749
INM	-0.427	0.445	-0.572	0.510	0.018	0.795	-0.610	0.783	-0.515	0.826	-0.430	0.749		
IMGC	0.048	0.222	-0.097	0.376	0.493	0.716	-0.135	0.653	-0.040	0.731	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	-0.055	0.730	0.030	0.728	0.460	0.577

Lab, S/N j \longrightarrow

Lab, S/N i \downarrow

	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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
VNIM	-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	0.088	0.696	0.040	0.731	0.055	0.730
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



The KCDB results at 1300°C

Lab, S/N j \Rightarrow

Lab, S/N i \Downarrow

	D_i / K		U_i		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}
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	0.129	0.835	0.174	0.895	0.625	0.966	0.129	0.851	0.109	0.902	-0.012	0.942	0.924	0.952		
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* \longrightarrow

Lab, S/N *i*



	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.045	0.322	-0.255	0.456	0.615	0.990	-0.208	0.760	-0.174	0.895	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	-0.625	0.966	-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	-0.129	0.851	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	-0.109	0.902	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	0.012	0.942	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	-0.924	0.952	-0.748	0.857	-0.303	0.649
NRLM	0.210	0.393			0.870	1.015	0.047	0.792	0.082	0.922	0.257	0.827	0.702	0.609
VNIIM	-0.660	0.956	-0.870	1.015			-0.823	1.177	-0.789	1.269	-0.613	1.200	-0.168	1.061
NIST	0.164	0.719	-0.047	0.792	0.823	1.177			0.035	1.102	0.210	1.021	0.655	0.925
NRC	0.129	0.835	-0.082	0.922	0.789	1.269	-0.035	1.102			0.175	1.125	0.620	1.016
CENAM	-0.047	0.755	-0.257	0.827	0.613	1.200	-0.210	1.021	-0.175	1.125			0.445	0.928
INM	-0.492	0.580	-0.702	0.609	0.168	1.061	-0.655	0.925	-0.620	1.016	-0.445	0.928		
IMGC	0.064	0.284	-0.147	0.441	0.723	0.974	-0.100	0.741	-0.065	0.882	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	-0.105	0.881	0.070	0.851	0.515	0.704

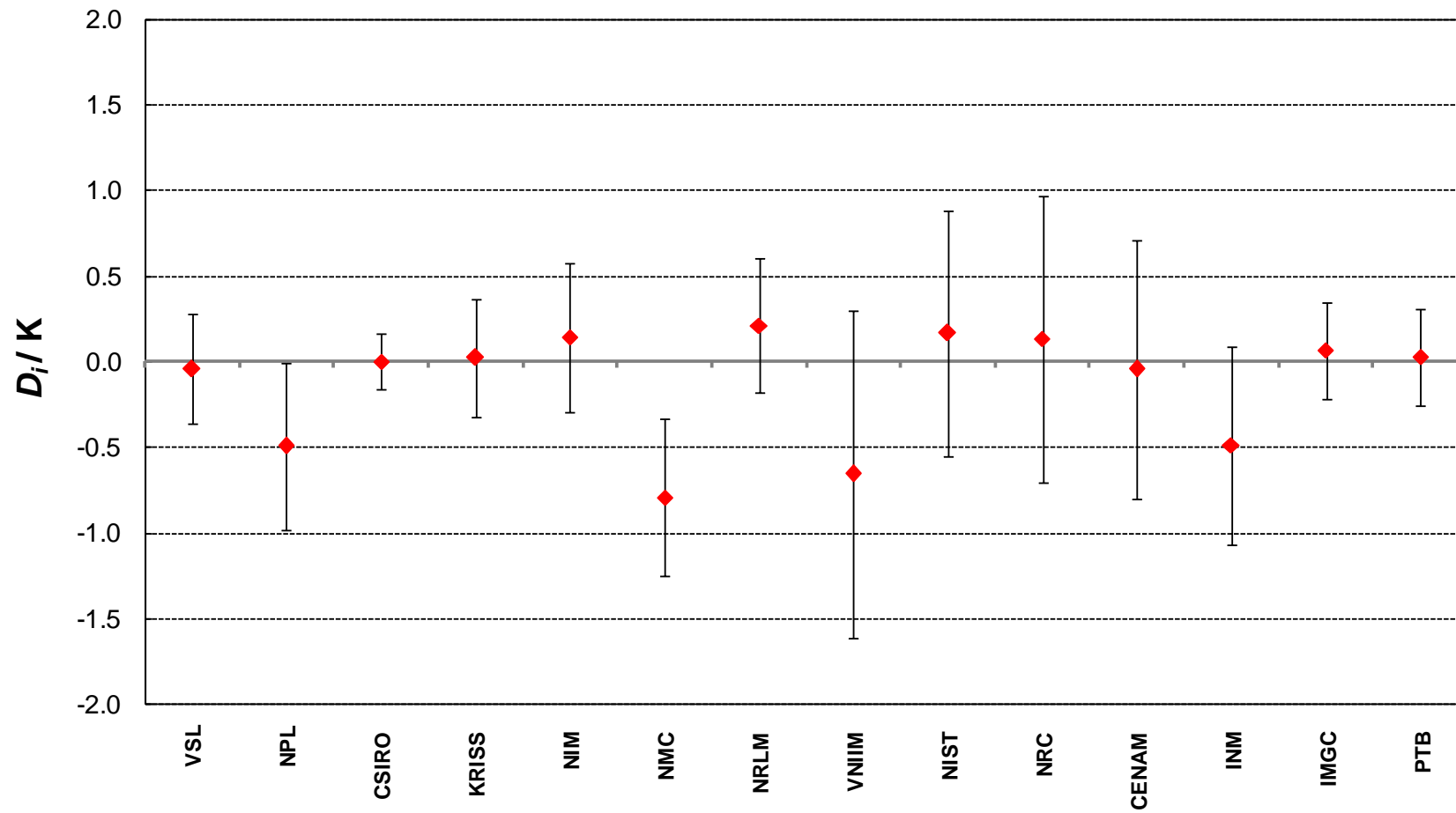
Lab, S/N j \longrightarrow

Lab, S/N i



	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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
VNIM	-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	0.129	0.835	0.065	0.882	0.105	0.881
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



The KCDB results at 1400°C

Lab, S/N j \Rightarrow

Lab, S/N i	D_i / K		U_i		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}
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	0.070	0.968	0.115	1.042	0.580	1.139	0.025	0.993	0.015	1.052	-0.125	1.100	0.955	1.099		
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 \longrightarrow

Lab, S/N i	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.045	0.385	-0.355	0.528	0.835	1.259	-0.305	0.854	-0.115	1.042	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	-0.580	1.139	-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	-0.025	0.993	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	-0.015	1.052	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	0.125	1.100	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	-0.955	1.099	-0.835	1.003	-0.375	0.726
NRLM	0.310	0.473			1.190	1.290	0.050	0.896	0.240	1.078	0.360	0.983	0.820	0.699
VNIIM	-0.880	1.228	-1.190	1.290			-1.140	1.440	-0.950	1.564	-0.830	1.496	-0.370	1.326
NIST	0.260	0.815	-0.050	0.896	1.140	1.440			0.190	1.266	0.310	1.184	0.770	1.015
NRC	0.070	0.968	-0.240	1.078	0.950	1.564	-0.190	1.266			0.120	1.326	0.580	1.155
CENAM	-0.050	0.906	-0.360	0.983	0.830	1.496	-0.310	1.184	-0.120	1.326			0.460	1.052
INM	-0.510	0.629	-0.820	0.699	0.370	1.326	-0.770	1.015	-0.580	1.155	-0.460	1.052		
IMGC	0.115	0.352	-0.195	0.520	0.995	1.241	-0.145	0.832	0.045	1.030	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	-0.070	1.030	0.050	1.002	0.510	0.761

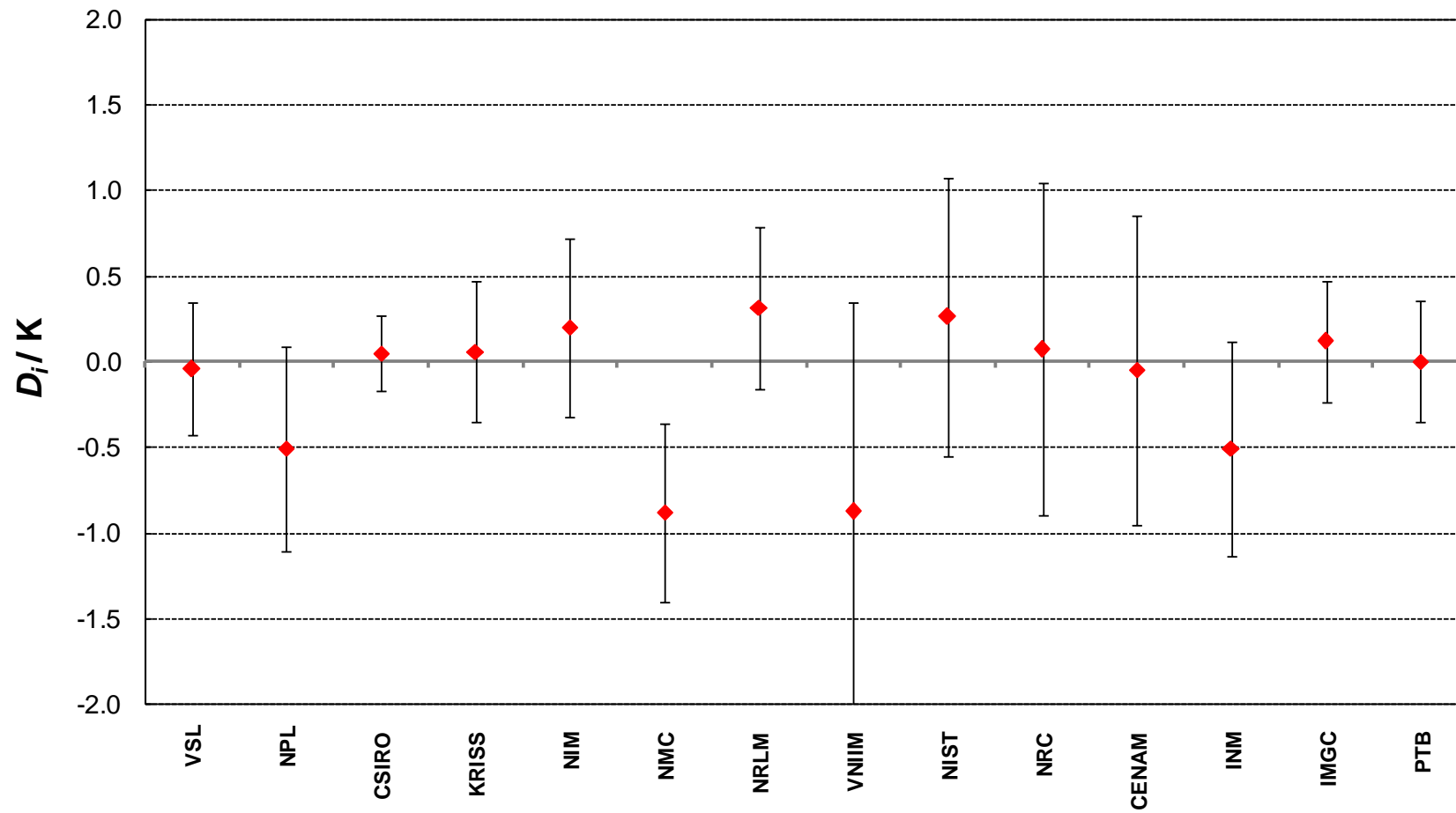
Lab, S/N j \longrightarrow

Lab, S/N i



	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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
VNIM	-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	0.070	0.968	-0.045	1.030	0.070	1.030
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



The KCDB results at 1500°C

Lab, S/N *j* \Rightarrow

Lab, S/N *i*



D_i	U_i
/ K	

	VSL		NPL		CSIRO		KRISS		NIM		NMC	
	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	
VSL	-0.082	0.414										
NPL	-0.550	0.683	-0.467	0.747								
CSIRO	0.058	0.259	0.140	0.349	0.607	0.671						
KRISS	0.028	0.467	0.110	0.518	0.577	0.770	-0.030	0.387				
NIM	0.213	0.593	0.295	0.623	0.762	0.834	0.155	0.508	0.185	0.623		
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
VNIM	-0.912	1.520	-0.830	1.554	-0.363	1.617	-0.970	1.532	-0.940	1.655	-1.125	1.655
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
NRC	0.211	1.055	0.293	1.133	0.760	1.257	-0.153	1.086	0.183	1.154	-0.002	1.210
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
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
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
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

Lab, S/N j \longrightarrow

Lab, S/N i



	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.082	0.414	-0.435	0.589	0.830	1.554	-0.418	0.963	-0.293	1.133	-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	-0.760	1.257	-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	-0.153	1.086	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	-0.183	1.154	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	0.002	1.210	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	-1.263	1.208	-1.053	1.144	-0.473	0.843
NRLM	0.353	0.538			1.265	1.597	0.017	1.022	0.143	1.184	0.352	1.125	0.932	0.816
VNIIM	-0.912	1.520	-1.265	1.597			-1.248	1.728	-1.123	1.850	-0.913	1.791	-0.333	1.615
NIST	0.336	0.918	-0.017	1.022	1.248	1.728			0.125	1.398	0.335	1.336	0.915	1.166
NRC	0.211	1.055	-0.143	1.184	1.123	1.850	-0.125	1.398			0.210	1.472	0.790	1.283
CENAM	0.000	1.026	-0.352	1.125	0.913	1.791	-0.335	1.336	-0.210	1.472			0.580	1.223
INM	-0.580	0.730	-0.932	0.816	0.333	1.615	-0.915	1.166	-0.790	1.283	-0.580	1.223		
IMGC	0.146	0.396	-0.207	0.606	1.058	1.519	-0.190	0.939	-0.065	1.127	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	-0.235	1.126	-0.025	1.128	0.555	0.891

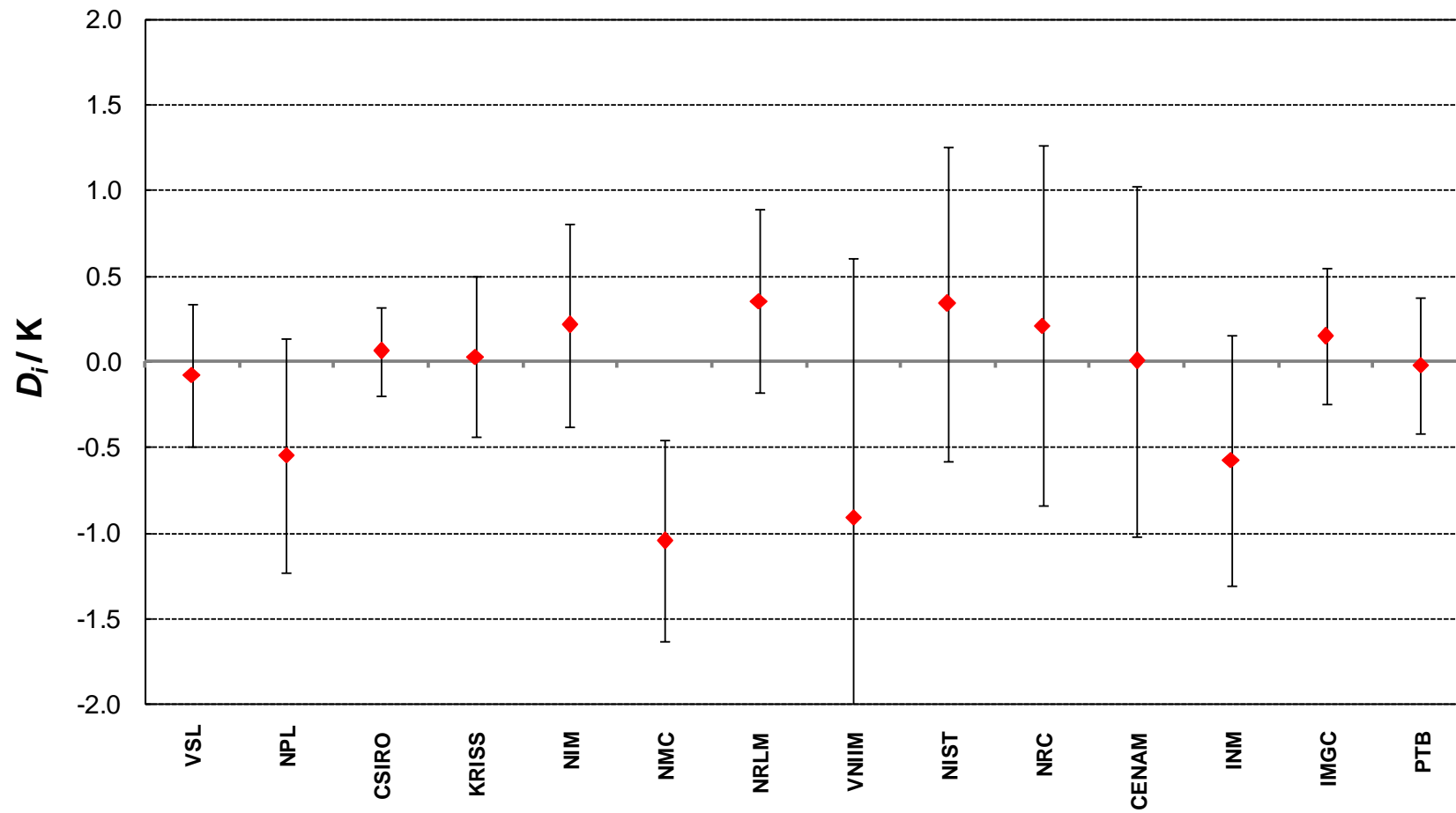
Lab, S/N j \longrightarrow

Lab, S/N i



	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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	0.211	1.055	0.065	1.127	0.235	1.126
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



The KCDB results at 1600°C

Lab, S/N j \Rightarrow

Lab, S/N i \Downarrow

	D_i / K		U_i		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}
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	0.121	1.146	0.233	1.232	0.660	1.387	0.068	1.175	0.093	1.251	-0.117	1.322	1.253	1.318		
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 \longrightarrow

Lab, S/N i	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.113	0.452	-0.555	0.662	0.465	1.835	-0.703	1.069	-0.233	1.232	-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	-0.660	1.387	-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	-0.068	1.175	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	-0.093	1.251	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	0.117	1.322	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	-1.253	1.318	-1.128	1.355	-0.518	0.955
NRLM	0.443	0.599			1.020	1.888	-0.148	1.137	0.322	1.293	0.447	1.330	1.057	0.918
VNIIM	-0.578	1.797	-1.020	1.888			-1.168	2.007	-0.698	2.131	-0.573	2.122	0.037	1.892
NIST	0.591	1.014	0.148	1.137	1.168	2.007			0.470	1.530	0.595	1.554	1.205	1.292
NRC	0.121	1.146	-0.322	1.293	0.698	2.131	-0.470	1.530			0.125	1.677	0.735	1.409
CENAM	-0.005	1.224	-0.447	1.330	0.573	2.122	-0.595	1.554	-0.125	1.677			0.610	1.428
INM	-0.615	0.820	-1.057	0.918	-0.037	1.892	-1.205	1.292	-0.735	1.409	-0.610	1.428		
IMGC	0.126	0.436	-0.317	0.678	0.703	1.787	-0.465	1.045	0.005	1.226	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	-0.120	1.225	0.005	1.336	0.615	1.008

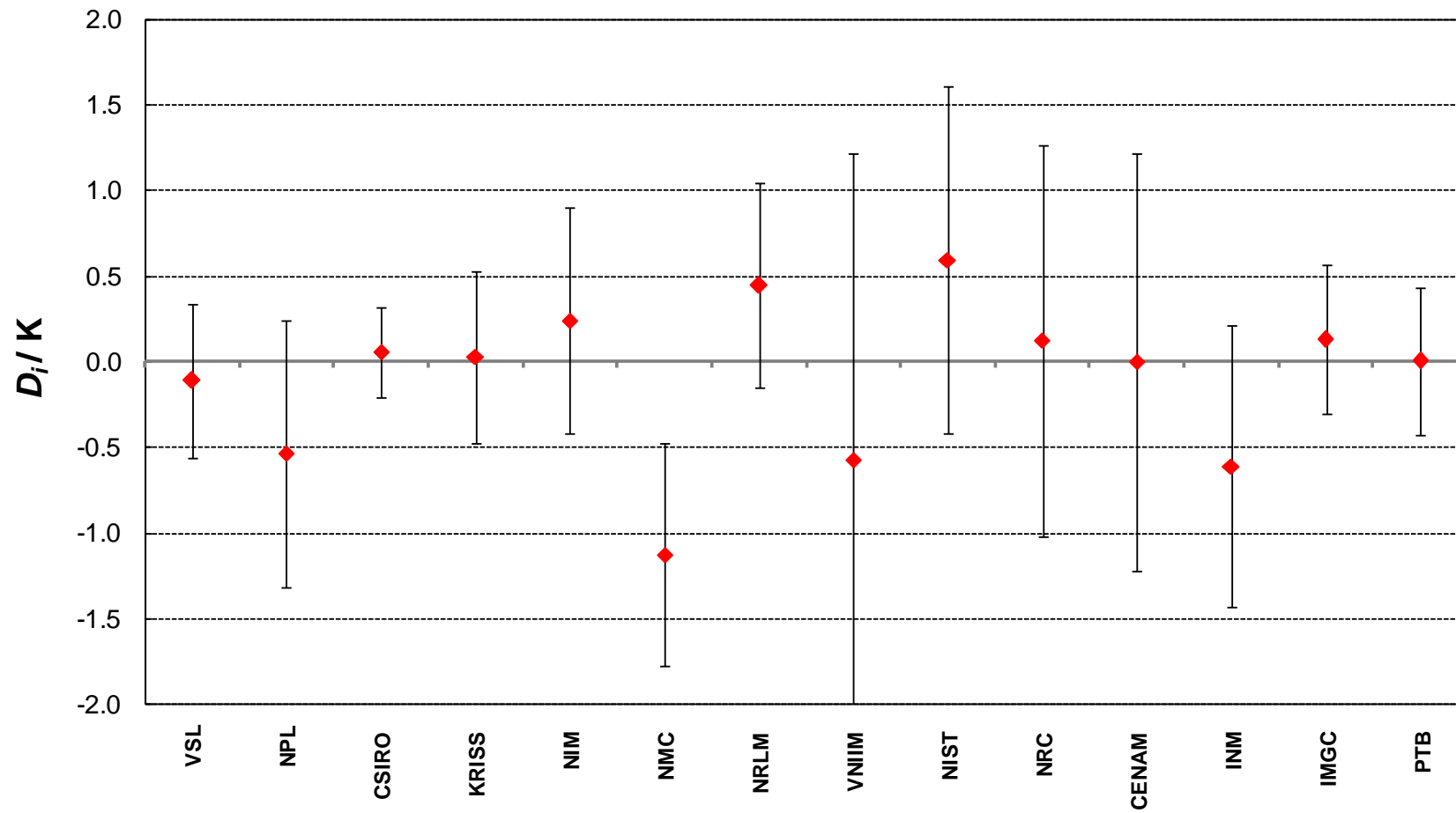
Lab, S/N j \longrightarrow

Lab, S/N i



	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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
VNIIIM	-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	0.121	1.146	-0.005	1.226	0.120	1.225
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



The KCDB results at 1700°C

Lab, S/N j \longrightarrow

Lab, S/N i \downarrow

	D_i / K		U_i		VSL		NPL		CSIRO		KRISS		NIM		NMC	
	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}	D_{ij} / K	U_{ij}
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		
VNIM	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	0.015	1.313	0.250	1.398	0.580	1.566	-0.015	1.338	0.015	1.432	-0.235	1.507	1.405	1.504		
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* \longrightarrow

Lab, S/N *i*



	D_i U_i		NRLM		VNIIM		NIST		NRC		CENAM		INM	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
VSL	-0.235	0.480	-0.690	0.752	-0.270	2.054	-0.735	1.185	-0.250	1.398	-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	-0.580	1.566	-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	0.015	1.338	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	-0.015	1.432	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	0.235	1.507	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	-1.405	1.504	-1.220	1.475	-0.585	1.056
NRLM	0.455	0.667			0.420	2.117	-0.045	1.271	0.440	1.473	0.625	1.446	1.260	1.016
VNIIM	0.035	2.022	-0.420	2.117			-0.465	2.277	0.020	2.411	0.205	2.379	0.840	2.146
NIST	0.500	1.129	0.045	1.271	0.465	2.277			0.485	1.732	0.670	1.708	1.305	1.433
NRC	0.015	1.313	-0.440	1.473	-0.020	2.411	-0.485	1.732			0.185	1.862	0.820	1.587
CENAM	-0.170	1.321	-0.625	1.446	-0.205	2.379	-0.670	1.708	-0.185	1.862			0.635	1.554
INM	-0.805	0.892	-1.260	1.016	-0.840	2.146	-1.305	1.433	-0.820	1.587	-0.635	1.554		
IMGC	0.005	0.482	-0.450	0.760	-0.030	2.036	-0.495	1.179	-0.010	1.398	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	-0.115	1.398	0.070	1.451	0.705	1.093

Lab, S/N j \longrightarrow

Lab, S/N i



	D_i U_i		IMGC		PTB	
	/ K		D_{ij}	U_{ij}	D_{ij}	U_{ij}
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
VNIM	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	0.015	1.313	0.010	1.398	0.115	1.398
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

