

Key comparisons CCM.F-K3.a and CCM.F-K3.b

MEASURAND : Force

CCM.F-K3.a

NOMINAL VALUES : 500 kN and 1 MN

Two compression force transducers of 1 MN nominal force and two force steps of 500 kN and 1 MN were employed.

CCM.F-K3.b

NOMINAL VALUE : 500 kN

Two compression force transducers of 500 kN nominal force and one force step of 500 kN were employed.

Measurements were carried out from 2005 to 2011.

The measurement results for both comparisons are presented in Section 7 (pp. 6 to 17) of the CCM.F-K3 Final Report.

Key comparisons CCM.F-K3.a and CCM.F-K3.b

MEASURAND : Force

Key comparisons CCM.F-K3.a and CCM.F-K3.b

For each nominal value of the force, the key comparison reference value, x_R , is calculated as the weighted mean of the corrected measurement results. Correlations were considered when evaluating the associated standard uncertainty, u_R .

	x_R / MN	u_R / N
500 kN	0.5	2
1 MN	1	4

For each nominal value of the force, the degree of equivalence of each laboratory i with respect to the key comparison reference value is given by a pair of terms, both expressed in 10^{-6} : D_i , where D_i is the relative deviation of the final result from x_R , and U_i is its associated expanded uncertainty ($k = 2$).

Key comparisons CCM.F-K3.a and CCM.F-K3.b

MEASURAND : Force

Degrees of equivalence relative to the CCM.F-K3 (a and b) key comparison reference values

500 kN

Lab *i* ↓

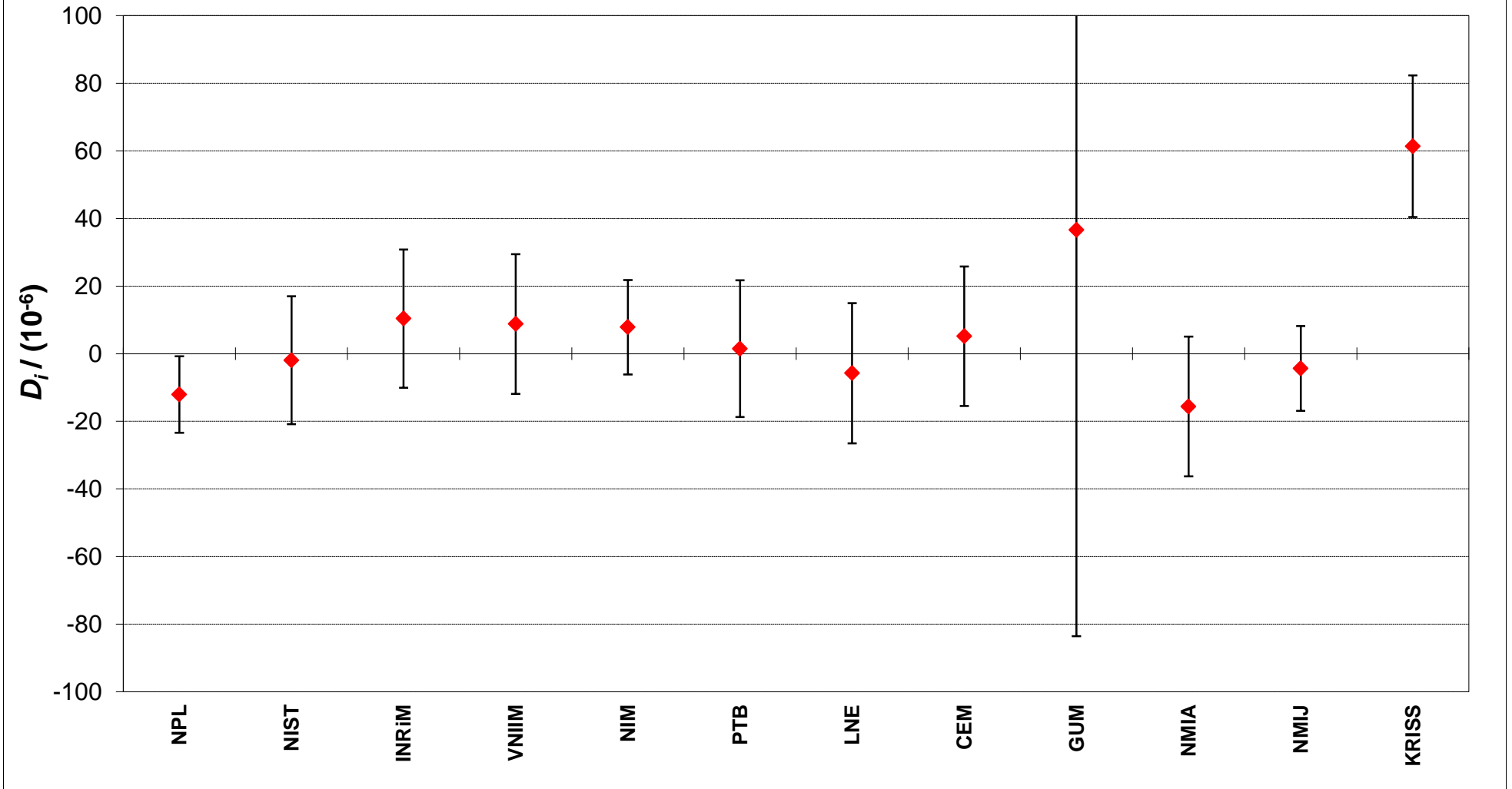
	D_i	U_i
	/ 10^{-6}	
NPL	-12.0	11.3
NIST	-1.9	18.9
INRiM	10.4	20.4
VNIIM	8.8	20.7
NIM	7.8	14.0
PTB	1.5	20.2
LNE	-5.8	20.7
CEM	5.1	20.6
GUM	36.6	120.1
NMIA	-15.6	20.7
NMIJ	-4.4	12.5
KRISS	61.3	21.0

1 MN

Lab *i* ↓

	D_i	U_i
	/ 10^{-6}	
NPL	-9.5	12.7
NIST	-9.2	19.4
INRiM	8.9	22.5
VNIIM	3.9	22.4
NIM	10.3	16.1
PTB	4.2	22.2

CCM.F-K3 (a and b) force 500 kN
Degrees of equivalence, D_i and expanded uncertainty U_i ($k = 2$)



CCM.F-K3.a force 1 MN
Degrees of equivalence, D_i and expanded uncertainty U_i ($k = 2$)

