

Key comparison CCAUV.V-K1

MEASURAND : Charge sensitivity

$x_i$ : result of measurement carried out by laboratory  $i$

$u_i$ : combined standard uncertainty of  $x_i$

Back-to-back (BB) accelerometer type 8305 S/N 1483337

Frequency → Lab $i$ ↓	40 Hz		50 Hz		63 Hz		80 Hz		100 Hz		125 Hz		160 Hz		200 Hz	
	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$
PTB	0.12665	0.05	0.12664	0.05	0.12662	0.05	0.12662	0.05	0.12662	0.05	0.12663	0.05	0.12664	0.05	0.12662	0.05
BNM-CESTA	0.12670	0.25	0.12670	0.25	0.12670	0.25	0.12680	0.25	0.12680	0.25	0.12670	0.25	0.12670	0.25	0.12680	0.25
CSIRO-NML	0.12670	0.20	0.12670	0.20	0.12660	0.15	0.12660	0.15	0.12660	0.15	0.12660	0.15	0.12660	0.15	0.12660	0.15
CMI	0.12649	0.23	0.12654	0.22	0.12658	0.23	0.12660	0.22	0.12661	0.23	0.12660	0.22	0.12660	0.23	0.12661	0.23
CSIR-NML	0.12750	0.45	0.12700	0.35	0.12620	0.35	0.12610	0.35	0.12640	0.30	0.12620	0.30	0.12660	0.25	0.12620	0.25
CENAM	0.12641	0.25	0.12636	0.25	0.12648	0.25	0.12647	0.25	0.12645	0.25	0.12646	0.25	0.12660	0.25	0.12662	0.25
NRC	0.12647	0.15	0.12646	0.15	0.12641	0.15	0.12697	0.15	0.12666	0.15	0.12672	0.15	0.12675	0.15	0.12669	0.15
KRISS	0.12647	0.18	0.12648	0.18	0.12646	0.18	0.12647	0.18	0.12644	0.18	0.12646	0.18	0.12649	0.18	0.12651	0.18
NMIJ	0.12629	0.21	0.12649	0.21	0.12655	0.22	0.12656	0.24	0.12658	0.24	0.12656	0.21	0.12660	0.22	0.12657	0.22
VNIIM	0.12604	0.20	0.12616	0.20	0.12610	0.20	0.12612	0.20	0.12610	0.20	0.12646	0.20	0.12682	0.20	0.12686	0.22
NIST	0.12670	0.15	0.12660	0.15	0.12660	0.14	0.12650	0.15	0.12670	0.14	0.12640	0.16	0.12650	0.15	0.12650	0.15
NMi-VSL	0.12650	0.13	0.12651	0.12	0.12639	0.11	0.12641	0.11	0.12645	0.10	0.12645	0.10	0.12660	0.17	0.12651	0.11

BNM-CESTA was a participant in the CIPM MRA at the time of the comparison.

Key comparison CCAUV.V-K1

Back-to-back (BB) accelerometer type 8305 S/N 1483337, Continued

Frequency Lab <i>i</i>	250 Hz		315 Hz		400 Hz		500 Hz		630 Hz		800 Hz		1000 Hz		1250 Hz	
	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$
	/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	
PTB	0.12665	0.05	0.12667	0.05	0.12664	0.05	0.12662	0.05	0.12668	0.05	0.12669	0.05	0.12678	0.05	0.12685	0.05
BNM-CESTA	0.12680	0.25	0.12690	0.25	0.12700	0.25	0.12690	0.25	0.12690	0.25	0.12700	0.25	0.12700	0.25	0.12700	0.25
CSIRO-NML	0.12660	0.15	0.12670	0.15	0.12670	0.15	0.12670	0.15	0.12670	0.15	0.12670	0.15	0.12690	0.15	0.12690	0.15
CMI	0.12665	0.25	0.12660	0.26	0.12665	0.27	0.12670	0.27	0.12666	0.27	0.12670	0.27	0.12673	0.27	0.12682	0.27
CSIR-NML	0.12650	0.25	0.12660	0.25	0.12710	0.30	0.12710	0.30	0.12680	0.25	0.12690	0.25	0.12680	0.30	0.12690	0.30
CENAM	0.12651	0.25	0.12649	0.25	0.12658	0.25	0.12657	0.25	0.12661	0.25	0.12667	0.25	0.12674	0.40	0.12677	0.40
NRC	0.12669	0.15	0.12656	0.15	0.12677	0.15	0.12650	0.23	0.12669	0.17	0.12687	0.22	0.12690	0.27	0.12695	0.29
KRISS	0.12655	0.18	0.12655	0.18	0.12658	0.18	0.12659	0.18	0.12663	0.18	0.12665	0.18	0.12670	0.19	0.12675	0.19
NMIJ	0.12653	0.22	0.12646	0.24	0.12667	0.32	0.12655	0.25	0.12657	0.23	0.12661	0.26	0.12672	0.16	0.12683	0.15
VNIIM	0.12670	0.22	0.12680	0.22	0.12680	0.22	0.12694	0.22	0.12694	0.22	0.12708	0.22	0.12744	0.22	0.12772	0.22
NIST	0.12660	0.15	0.12660	0.16	0.12660	0.15	0.12640	0.17	0.12630	0.20	0.12640	0.43	0.12640	0.22	0.12650	0.21
NMi-VSL	0.12658	0.11	0.12671	0.13	0.12649	0.20	0.12662	0.13	0.12707	0.14	0.12721	0.25	0.12705	0.53	0.12670	0.28

Frequency Lab <i>i</i>	1600 Hz		2000 Hz		2500 Hz		3150 Hz		4000 Hz		5000 Hz	
	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$
	/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	
PTB	0.12698	0.05	0.12716	0.05	0.12741	0.10	0.12773	0.10	0.12849	0.10	0.12934	0.10
BNM-CESTA	0.12710	0.25	0.12730	0.25	0.12750	0.25	0.12780	0.25	-	-	-	-
CSIRO-NML	0.12700	0.15	0.12710	0.15	0.12740	0.15	0.12790	0.15	0.12850	0.15	0.12950	0.20
CMI	0.12688	0.26	0.12706	0.24	0.12720	0.23	0.12751	0.35	0.12801	0.30	0.12935	0.30
CSIR-NML	0.12710	0.30	0.12710	0.30	0.12720	0.30	0.12770	0.35	0.12820	0.35	0.12920	0.35
CENAM	0.12702	0.40	0.12721	0.40	0.12727	0.40	0.12798	0.40	0.12828	0.40	0.12931	0.40
NRC	0.12703	0.31	0.12720	0.33	0.12710	0.34	0.12732	0.43	0.12836	0.47	0.12930	0.54
KRISS	0.12683	0.19	0.12702	0.19	0.12724	0.19	0.12767	0.22	0.12834	0.22	0.12946	0.22
NMIJ	0.12686	0.23	0.12702	0.23	0.12722	0.24	0.12779	0.54	0.12845	0.56	0.12931	0.66
VNIIM	0.12840	0.22	0.12890	0.22	0.12922	0.34	0.12920	0.34	0.12898	0.34	0.13074	0.34
NIST	0.12660	0.21	0.12670	0.34	0.12670	0.58	0.12810	0.63	0.12860	0.59	0.12920	0.60
NMi-VSL	0.12682	0.38	0.12692	0.21	0.12708	0.27	0.12757	0.78	0.12826	1.16	0.12929	1.89

BNM-CESTA was a participant in the CIPM MRA at the time of the comparison.

Key comparison CCAUV.V-K1

MEASURAND : Charge sensitivity

$x_i$ : result of measurement carried out by laboratory  $i$

$u_i$ : combined standard uncertainty of  $x_i$

Single-ended (SE) accelerometer type 8305 WH 2335 S/N 1610174

Frequency → Lab $i$ ↓	40 Hz		50 Hz		63 Hz		80 Hz		100 Hz		125 Hz		160 Hz		200 Hz	
	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$	$x_i$ / pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	$u_i/x_i$
PTB	0.12902	0.05	0.12901	0.05	0.12902	0.05	0.12901	0.05	0.12901	0.05	0.12901	0.05	0.12902	0.05	0.12904	0.05
BNM-CESTA	0.12910	0.25	0.12920	0.25	0.12910	0.25	0.12930	0.25	0.12920	0.25	0.12920	0.25	0.12930	0.25	0.12920	0.25
CSIRO-NML	0.12910	0.20	0.12910	0.20	0.12900	0.15	0.12890	0.15	0.12900	0.15	0.12900	0.15	0.12890	0.15	0.12900	0.15
CMI	0.12875	0.23	0.12880	0.23	0.12881	0.23	0.12885	0.23	0.12890	0.23	0.12895	0.23	0.12900	0.23	0.12905	0.23
CSIR-NML	0.12960	0.35	0.12900	0.35	0.12890	0.35	0.12920	0.35	0.12950	0.30	0.12960	0.30	0.12870	0.25	0.12870	0.25
CENAM	0.12893	0.25	0.12893	0.25	0.12898	0.25	0.12895	0.25	0.12893	0.25	0.12888	0.25	0.12886	0.25	0.12888	0.25
NRC	0.12876	0.15	0.12877	0.15	0.12872	0.15	0.12937	0.15	0.12901	0.15	0.12906	0.15	0.12914	0.15	0.12911	0.15
KRISS	0.12872	0.18	0.12873	0.18	0.12873	0.18	0.12873	0.18	0.12875	0.18	0.12877	0.18	0.12880	0.18	0.12882	0.18
NMIJ	0.12853	0.21	0.12866	0.21	0.12877	0.22	0.12878	0.24	0.12871	0.23	0.12877	0.21	0.12878	0.22	0.12879	0.23
VNIIM	0.12832	0.20	0.12852	0.20	0.12880	0.20	0.12858	0.20	0.12856	0.20	0.12888	0.20	0.12882	0.20	0.12900	0.22
NIST	0.12960	0.15	0.12930	0.15	0.12910	0.14	0.12900	0.15	0.12910	0.14	0.12910	0.16	0.12910	0.15	0.12910	0.15
NMI-VSL	0.12905	0.46	0.12898	0.29	0.12881	0.16	0.12881	0.12	0.12879	0.11	0.12881	0.10	0.12895	0.17	0.12888	0.10

BNM-CESTA was a participant in the CIPM MRA at the time of the comparison.

Key comparison CCAUV.V-K1

Single-ended (SE) accelerometer type 8305 WH 2335 S/N 1610174, Continued

Frequency Lab <i>i</i>	250 Hz		315 Hz		400 Hz		500 Hz		630 Hz		800 Hz		1000 Hz		1250 Hz	
	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$
	/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	
PTB	0.12904	0.05	0.12906	0.05	0.12905	0.05	0.12908	0.05	0.12918	0.05	0.12916	0.05	0.12926	0.05	0.12937	0.05
BNM-CESTA	0.12910	0.25	0.12950	0.25	0.12950	0.25	0.12940	0.25	0.12940	0.25	0.12950	0.25	0.12930	0.25	0.12950	0.25
CSIRO-NML	0.12910	0.15	0.12910	0.15	0.12910	0.15	0.12910	0.15	0.12920	0.15	0.12910	0.15	0.12920	0.15	0.12940	0.15
CMI	0.12910	0.24	0.12915	0.23	0.12916	0.23	0.12920	0.26	0.12931	0.33	0.12940	0.33	0.12943	0.33	0.12970	0.31
CSIR-NML	0.12890	0.25	0.12930	0.25	0.12940	0.30	0.12930	0.30	0.12940	0.30	0.12960	0.30	0.12950	0.30	0.12960	0.30
CENAM	0.12894	0.25	0.12904	0.25	0.12910	0.25	0.12915	0.25	0.12913	0.25	0.12923	0.25	0.12941	0.40	0.12946	0.40
NRC	0.12916	0.15	0.12892	0.15	0.12903	0.15	0.12897	0.23	0.12885	0.17	0.12944	0.22	0.12935	0.27	0.12956	0.29
KRISS	0.12883	0.18	0.12884	0.18	0.12888	0.18	0.12892	0.18	0.12895	0.18	0.12900	0.18	0.12905	0.24	0.12911	0.24
NMIJ	0.12882	0.26	0.12881	0.32	0.12884	0.56	0.12893	0.75	0.12879	0.36	0.12890	0.34	0.12955	0.24	0.12972	0.17
VNIIM	0.12880	0.22	0.12872	0.22	0.12868	0.22	0.12858	0.22	0.12866	0.22	0.12872	0.22	0.12882	0.22	0.12860	0.22
NIST	0.12910	0.15	0.12910	0.16	0.12920	0.15	0.12920	0.17	0.12920	0.20	0.12940	0.43	0.12950	0.22	0.12950	0.21
NMi-VSL	0.12892	0.11	0.12899	0.12	0.12907	0.19	0.12929	0.12	0.12946	0.13	0.12981	0.21	0.12973	0.80	0.12958	0.63

Frequency Lab <i>i</i>	1600 Hz		2000 Hz		2500 Hz		3150 Hz		4000 Hz		5000 Hz	
	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$	$x_i$	$u_i/x_i$
	/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>		/ pC/(m/s <sup>2</sup> ) / 10 <sup>-2</sup>	
PTB	0.12960	0.05	0.12988	0.05	0.13025	0.10	0.13075	0.10	0.13176	0.10	0.13334	0.10
BNM-CESTA	0.12960	0.25	0.12990	0.25	0.13000	0.25	0.13080	0.25	-	-	-	-
CSIRO-NML	0.12960	0.15	0.12980	0.15	0.13020	0.15	0.13100	0.15	0.13200	0.15	0.13360	0.20
CMI	0.12983	0.31	0.13005	0.31	0.13041	0.35	0.13099	0.40	0.13162	0.40	0.13280	0.40
CSIR-NML	0.12980	0.30	0.13030	0.30	0.13080	0.35	0.13170	0.40	0.13330	0.45	0.13660	0.50
CENAM	0.12967	0.40	0.12995	0.40	0.13028	0.40	0.13028	0.40	0.13122	0.40	0.13203	0.40
NRC	0.12940	0.31	0.12957	0.33	0.12974	0.34	0.12992	0.43	0.13085	0.47	0.13203	0.54
KRISS	0.12926	0.24	0.12948	0.24	0.12968	0.28	0.13014	0.30	0.13080	0.33	0.13186	0.33
NMIJ	0.13022	0.25	0.13101	0.25	0.13194	0.26	0.13341	0.53	0.13653	0.66	0.14152	0.76
VNIIM	0.12890	0.22	0.12912	0.22	0.12916	0.34	0.12944	0.34	0.13134	0.34	0.13230	0.34
NIST	0.12960	0.21	0.12970	0.34	0.13050	0.58	0.13150	0.63	0.13230	0.59	0.13360	0.60
NMi-VSL	0.12990	0.86	0.13041	0.49	0.13116	0.79	0.13243	0.31	0.13475	2.85	0.13810	1.69

BNM-CESTA was a participant in the CIPM MRA at the time of the comparison.

CCAUV.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Key comparison CCAUV.V-K1.1 MEASURAND : Charge sensitivity

$x_{i-K1.1}$ : result of measurement carried out by laboratory  $i$

$u_{i-K1.1}$ : combined standard uncertainty of  $x_{i-K1.1}$

Back-to-back (B2B) accelerometer type 8305 S/N 748376

Frequency $\Rightarrow$ Lab $i$ $\Downarrow$	40 Hz		50 Hz		63 Hz		80 Hz		100 Hz		125 Hz	
	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>
PTB	0.12598	0.10	0.12586	0.10	0.12598	0.10	0.12600	0.10	0.12597	0.10	0.12601	0.10
NIM	0.12601	0.50	0.12562	0.50	0.12584	0.50	0.12594	0.50	0.12599	0.50	0.12600	0.50
NPLI	0.12610	0.70	-	-	-	-	0.12620	0.70	0.12620	0.70	-	-
INMETRO	0.12598	0.24	0.12596	0.24	0.12599	0.24	0.12600	0.24	0.12601	0.24	0.12601	0.24

Frequency $\Rightarrow$ Lab $i$ $\Downarrow$	160 Hz		200 Hz		250 Hz		315 Hz		400 Hz		500 Hz	
	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>
PTB	0.12606	0.10	0.12617	0.10	0.12601	0.10	0.12619	0.10	0.12610	0.10	0.12606	0.10
NIM	0.12604	0.20	0.12606	0.50	0.12601	0.50	0.12609	0.50	0.12611	0.50	0.12613	0.50
NPLI	0.12630	0.70	0.12610	0.70	-	-	-	-	-	-	0.12600	0.70
INMETRO	0.12603	0.24	0.12604	0.24	0.12603	0.24	0.12605	0.24	0.12609	0.24	0.12612	0.24

Frequency $\Rightarrow$ Lab $i$ $\Downarrow$	630 Hz		800 Hz		1000 Hz		1250 Hz		1600 Hz		2000 Hz	
	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>
PTB	0.12608	0.10	0.12614	0.10	0.12630	0.10	0.12646	0.10	0.12660	0.10	0.12680	0.10
NIM	0.12624	0.50	0.12622	0.50	0.12625	0.50	0.12635	0.50	0.12639	0.50	0.12653	0.50
NPLI	-	-	0.12600	0.70	0.12600	0.70	-	-	-	-	0.12560	0.70
INMETRO	0.12614	0.24	0.12616	0.24	0.12624	0.24	0.12630	0.34	0.12645	0.34	0.12659	0.34

Frequency $\Rightarrow$ Lab $i$ $\Downarrow$	2500 Hz		3150 Hz		4000 Hz		5000 Hz	
	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>
PTB	0.12710	0.10	0.12738	0.10	0.12804	0.10	0.12884	0.10
NIM	0.12681	0.50	0.12722	0.50	0.12769	0.50	0.12851	0.50
NPLI	-	-	-	-	0.12600	1.00	0.12380	1.00
INMETRO	0.12684	0.50	0.12718	0.50	0.12784	0.50	0.12857	1.00

Single-ended (SE) accelerometer type 8305 WH 2335

Frequency Lab <i>i</i>	40 Hz		50 Hz		63 Hz		80 Hz		100 Hz		125 Hz	
	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>
PTB	0.13075	0.1048	0.13076	0.1048	0.13073	0.1048	0.13074	0.1048	0.13075	0.1048	0.13075	0.1048
NIM	0.13097	0.5003	0.13098	0.5003	0.13096	0.5003	0.13097	0.5003	0.13093	0.5003	0.13094	0.5003
NPLI	0.13097	0.6996	-	-	-	-	0.13107	0.6996	0.13107	0.6996	-	-
INMETRO	0.13093	0.2490	0.13090	0.2490	0.13093	0.2490	0.13094	0.2490	0.13095	0.2490	0.13094	0.2490

Frequency Lab <i>i</i>	160 Hz		200 Hz		250 Hz		315 Hz		400 Hz		500 Hz	
	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>
PTB	0.13080	0.1048	0.13080	0.1048	0.13079	0.1048	0.13108	0.1048	0.13088	0.1048	0.13086	0.1048
NIM	0.13098	0.2027	0.13100	0.5003	0.13104	0.5003	0.13103	0.5003	0.13102	0.5003	0.13104	0.5003
NPLI	0.13117	0.6996	0.13097	0.6996	-	-	-	-	-	-	0.13087	0.6996
INMETRO	0.13091	0.2490	0.13094	0.2490	0.13093	0.2490	0.13095	0.2490	0.13099	0.2490	0.13094	0.2490

Frequency Lab <i>i</i>	630 Hz		800 Hz		1000 Hz		1250 Hz		1600 Hz		2000 Hz	
	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>
PTB	0.13085	0.1048	0.13087	0.1048	0.13093	0.1048	0.13104	0.1048	0.13122	0.1048	0.13146	0.1048
NIM	0.13110	0.5003	0.13105	0.5003	0.13112	0.5003	0.13122	0.5003	0.13134	0.5003	0.13151	0.5003
NPLI	-	-	0.13097	0.6996	0.13097	0.6996	-	-	-	-	0.13087	0.6996
INMETRO	0.13101	0.2490	0.13103	0.2490	0.13112	0.2490	0.13120	0.3459	0.13138	0.3458	0.13159	0.3458

Frequency Lab <i>i</i>	2500 Hz		3150 Hz		4000 Hz		5000 Hz	
	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>	$x_{i-K1.1}$ / pC/(m/s <sup>2</sup> )	$2u_{i-K1.1}/x_{i-K1.1}$ / 10 <sup>-2</sup>
PTB	0.13175	0.1048	0.13228	0.1047	0.13323	0.1047	0.13456	0.1046
NIM	0.13197	0.5003	0.13251	0.5003	0.13325	0.5003	0.13454	0.5002
NPLI	-	-	-	-	0.13087	0.9987	0.13157	0.9986
INMETRO	0.13192	0.5031	0.13243	0.5030	0.13345	0.5030	0.13476	0.9990

Key comparison EUROMET.AUV.V-K1

MEASURAND : Charge sensitivity

$x_{i-EUR}$ : result of measurement carried out by laboratory  $i$  in EUROMET.AUV.V-K1

$u_{i-EUR}$ : combined standard uncertainty of  $x_{i-EUR}$

Back-to-back (BB) accelerometer type 8305 S/N 2355677

Frequency Lab $i$	40 Hz		80 Hz		160 Hz		800 Hz		2000 Hz		5000 Hz	
	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>
PTB	0.12798	0.05	0.12797	0.05	0.12801	0.05	0.12826	0.05	0.12855	0.05	0.13077	0.1
BNM-CESTA	0.1278	0.25	0.128	0.25	0.128	0.25	0.128	0.25	0.1282	0.25	0.131	0.25
GUM	0.12793	0.30	0.12784	0.30	0.12782	0.30	0.1279	0.30	0.12828	0.30	0.1306	0.30
DPLA	0.12776	0.173	0.1278	0.111	0.1279	0.102	0.12818	0.219	0.12829	0.232	0.13054	0.149
INRIM	0.1278	0.17	0.1279	0.17	0.1279	0.17	0.1281	0.17	0.1285	0.24	0.1304	0.28
SP	0.1283	0.2	0.1284	0.2	0.1284	0.2	0.1284	0.2	0.1286	0.4	0.1312	0.65
INETI	0.1278	0.42	0.1281	0.171	0.1278	0.2	0.128	0.222	-	-	-	-
CMI	0.12769	0.25	0.12775	0.25	0.12785	0.25	0.12792	0.25	0.12812	0.35	0.13105	0.4
UME	0.12803	0.25	0.12799	0.25	0.12799	0.25	0.12809	0.25	0.12829	0.5	0.13135	0.5

Back-to-back (BB) accelerometer type 8305 S/N 606559

Frequency Lab $i$	40 Hz		80 Hz		160 Hz		800 Hz		2000 Hz		5000 Hz	
	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>
PTB	0.12648	0.05	0.12644	0.05	0.12646	0.05	0.12655	0.10	0.12678	0.10	0.129	0.15
BEV	0.1261	0.3	0.1261	0.28	0.1262	0.28	0.1265	0.28	0.127	0.3	0.1291	0.33
CEM	0.1267	0.3	0.1263	0.3	0.1265	0.3	0.1267	0.3	0.127	0.3	0.129	0.33
METAS	0.1258	0.366	0.1258	0.344	0.1258	0.338	0.1259	0.338	0.1262	0.379	0.1281	0.466

BNM-CESTA was a participant in the CIPM MRA at the time of the comparison.

Key comparison EUROMET.AUV.V-K1

MEASURAND : Charge sensitivity

$x_{i-EUR}$ : result of measurement carried out by laboratory  $i$  in EUROMET.AUV.V-K1

$u_{i-EUR}$ : combined standard uncertainty of  $x_i$

Single-ended (SE) accelerometer type 8305 WH 2335 S/N 2361558

Frequency $\Rightarrow$ Lab $i$ $\Downarrow$	40 Hz		80 Hz		160 Hz		800 Hz		2000 Hz		5000 Hz	
	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>	$x_{i-EUR}$ / pC/(m/s <sup>2</sup> )	$u_{i-EUR}/x_{i-EUR}$ / 10 <sup>-2</sup>
PTB	0.12588	0.05	0.12589	0.05	0.12592	0.05	0.12619	0.05	0.12665	0.05	0.12955	0.10
BNM-CESTA	0.1259	0.25	0.1259	0.25	0.126	0.25	0.1262	0.25	0.1265	0.25	0.1297	0.25
GUM	0.12588	0.30	0.12581	0.30	0.12578	0.30	0.12593	0.30	0.12645	0.30	0.12929	0.30
DPLA	0.12573	0.173	0.12582	0.111	0.1259	0.102	0.12617	0.218	0.12645	0.184	0.1293	0.147
INRIM	0.1256	0.17	0.1257	0.17	0.1257	0.17	0.1258	0.17	0.1265	0.24	0.1289	0.28
SP	0.1261	0.2	0.1261	0.2	0.1262	0.2	0.1265	0.2	0.1271	0.4	0.1309	0.75
INETI	0.1251	0.415	0.1261	0.161	0.1259	0.203	0.126	0.233	-	-	-	-
CMI	0.1261	0.25	0.1261	0.25	0.1261	0.25	0.1262	0.25	0.1267	0.5	0.1297	1
UME	0.1264	0.25	0.1263	0.25	0.12631	0.25	0.12642	0.25	0.1272	0.5	0.13087	0.5
BEV	0.126	0.24	0.1263	0.21	0.1265	0.21	0.1269	0.21	0.1275	0.24	0.13	0.27
CEM	0.1263	0.3	0.1265	0.3	0.1265	0.3	0.1268	0.3	0.1273	0.3	0.1301	0.33
METAS	0.1262	0.367	0.1264	0.345	0.1266	0.34	0.1269	0.339	0.1276	0.38	0.1305	0.491

BNM-CESTA was a participant in the CIPM MRA at the time of the comparison.

The results of these laboratories were corrected before further calculation to take into account the change in the sensitivity of the SE accelerometer, which occurred during the comparison. The values given here are stated without the correction.



Key comparison EUROMET.AUV.V-K1.1 and key comparison APMP.AUV.V-K1.2

MEASURAND : Charge sensitivity

$x_{i\text{-EUR-K1.1}}$ : result of measurement carried out by laboratory  $i$  in EUROMET.AUV.V-K1.1

$u_{i\text{-EUR-K1.1}}$ : combined standard uncertainty of  $x_{i\text{-EUR-K1.1}}$

$U_{i\text{-EUR-K1.1}}$ : expanded uncertainty of  $x_{i\text{-EUR-K1.1}}$ ,  $U_{i\text{-EUR-K1.1}} = 2u_{i\text{-EUR-K1.1}}$

Back-to-back (BB) accelerometer type 8305 S/N 2161771

Frequency $\Rightarrow$ Lab $i$ $\Downarrow$	40 Hz		80 Hz		160 Hz		800 Hz		2000 Hz		5000 Hz	
	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %
PTB	0.12505	0.10	0.12511	0.10	0.12521	0.10	0.12537	0.10	0.12576	0.10	0.12791	0.10
INETI	0.12558	0.51	0.12499	0.38	0.12549	0.32	0.12543	0.32	0.12604	0.34	0.12820	0.68
BEV	0.12500	0.60	0.12470	0.56	0.12472	0.56	0.12500	0.56	0.12530	0.60	0.12740	0.66
LNE	0.12502	0.60	0.12518	0.60	0.12526	0.60	0.12540	0.60	0.12572	0.60	0.12741	0.60
NCM	0.12515	0.20	0.12521	0.20	0.12519	0.20	0.12531	0.20	0.12569	0.30	0.12791	0.50

Single-ended (SE) accelerometer type 8305 WH 2335 S/N 1610168

Frequency $\Rightarrow$ Lab $i$ $\Downarrow$	40 Hz		80 Hz		160 Hz		800 Hz		2000 Hz		5000 Hz	
	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %	$x_{i\text{-EUR-K1.1}}$ / pC/(m/s <sup>2</sup> )	$U_{i\text{-EUR-K1.1}}$ / %
PTB	0.13065	0.10	0.13065	0.10	0.13070	0.10	0.13074	0.10	0.13133	0.10	0.13442	0.10
INETI	0.13110	0.37	0.13090	0.25	0.13090	0.26	0.13190	0.86	0.13400	0.70	0.13590	1.34
BEV	0.13070	0.60	0.13040	0.56	0.13040	0.56	0.13060	0.56	0.13110	0.60	0.13410	0.66
LNE	0.13055	0.60	0.13066	0.60	0.13068	0.60	0.13089	0.60	0.13130	0.60	0.13504	0.60
NCM	0.13078	0.20	0.13076	0.20	0.13065	0.20	0.13067	0.20	0.13146	0.30	0.13426	0.50

Key comparison APMP.AUV.V-K1.2

The individual measurements of NIM, KIM-LIPI and NPLI are available in Table 5, for the Single-ended (SE) accelerometer type 8305 S/N 2519436, and in Table 6, for the Back-to-back (BB) accelerometer type 8305 S/N 2440139, on pages 5 and 10, respectively, of the APMP.AUV.V-K1.2 Final Report.

MEASURAND : Charge sensitivity

Key comparison CCAUV.V-K1

One key comparison value,  $x_R$ , is computed for each accelerometer and for each frequency as a weighted mean of the participant results.\*

The combined standard uncertainty,  $u_R$ , of each key comparison reference value is obtained as the standard deviation of the weighted mean.

Frequency / Hz	BB accelerometer type 8305 S/N 1483337			SE accelerometer type 8305 WH 2335 S/N 1610174		
	$x_R$ / pC/(m/s <sup>2</sup> )	$u_R$ / pC/(m/s <sup>2</sup> )	$u_R/x_R$ / 10 <sup>-2</sup>	$x_R$ / pC/(m/s <sup>2</sup> )	$u_R$ / pC/(m/s <sup>2</sup> )	$u_R/x_R$ / 10 <sup>-2</sup>
40	0.12658	0.00005	0.04	0.12898	0.00005	0.04
50	0.12658	0.00005	0.04	0.12897	0.00005	0.04
63	0.12654	0.00005	0.04	0.12896	0.00005	0.04
80	0.12658	0.00005	0.04	0.12898	0.00005	0.04
100	0.12658	0.00005	0.04	0.12896	0.00005	0.04
125	0.12658	0.00005	0.04	0.12898	0.00005	0.04
160	0.12663	0.00005	0.04	0.12899	0.00005	0.04
200	0.12660	0.00005	0.04	0.12900	0.00005	0.04
250	0.12663	0.00005	0.04	0.12902	0.00005	0.04
315	0.12665	0.00005	0.04	0.12905	0.00005	0.04
400	0.12666	0.00005	0.04	0.12906	0.00005	0.04
500	0.12663	0.00005	0.04	0.12910	0.00005	0.04
630	0.12670	0.00005	0.04	0.12917	0.00005	0.04
800	0.12673	0.00005	0.04	0.12919	0.00005	0.04
1000	0.12680	0.00005	0.04	0.12926	0.00005	0.04
1250	0.12683	0.00005	0.04	0.12938	0.00005	0.04
1600	0.12696	0.00005	0.04	0.12959	0.00005	0.04
2000	0.12713	0.00005	0.04	0.12988	0.00005	0.04
2500	0.12732	0.00008	0.06	no KCRV		
3150	0.12776	0.00009	0.07			
4000	0.12843	0.00009	0.07			
5000	0.12936	0.00010	0.08			

The degree of equivalence of each laboratory with respect to the reference value is given by a pair of terms: the deviation  $D_i = x_i - x_R$ , and its expanded uncertainty ( $k = 2$ ),  $U_i$ ,  
 $U_i = 2(u_i^2 - u_R^2)^{1/2}$  \*\*.

The degree of equivalence between two laboratories  $i$  and  $j$  is given by a pair of terms: the deviation  $D_{ij} = x_i - x_j$  and its expanded uncertainty ( $k = 2$ ),  $U_{ij}$ ,  
 $U_{ij} = 2(u_i^2 + u_j^2)^{1/2}$ .

The full matrices of equivalence are computed in four cases:  
 - BB accelerometer at frequencies 40 Hz, 160 Hz and 5 kHz,  
 - SE accelerometer at frequency 160 Hz.

\* For the BB accelerometer,  $x_R$  is based on 12 laboratories at frequencies of 40 Hz to 1 kHz, 11 laboratories at 1.25 kHz to 3.15 kHz and 10 laboratories at 4 kHz and 5 kHz. For the SE accelerometer no reference value is available from 2.5 kHz to 5 kHz.

\*\*  $U_i = 2(u_i^2 + u_R^2)^{1/2}$  for the laboratories excluded from the calculation of  $x_R$ .

Linking CCAUV.V-K1.1 to CCAUV.V-K1: common participation of PTB, see Section 8.2 on page 78 of the CCAUV.V-K1.1 Final Report

Linking EUROMET.AUV.V-K1 to CCAUV.V-K1: common participation of PTB, BNM-CESTA and CMI, see Appendix A of the EUROMET.AUV.V-K1 Final Report

Linking EUROMET.AUV.V-K1.1 to CCAUV.V-K1: common participation of PTB, see Section 8 of the EUROMET.AUV.V-K1.1 Final Report

Linking APMP.AUV.V-K1.2 to CCAUV.V-K1: common participation of NIM, see Section 8 of the APMP.AUV.V-K1.2 Final Report

The linkage processes make it possible to extend the graphs of equivalence obtained for CCAUV.V-K1 (BB accelerometer at frequencies 40 Hz 160 Hz, and 5 kHz, and SE accelerometer at frequency 160 Hz) to include results from other key comparisons

CCAUV.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Degrees of equivalence relative to the key comparison reference value

Transfer standard : Back-to-back (BB) accelerometer type 8305

Frequency → Lab <i>i</i> ↓	40 Hz		50 Hz		63 Hz		80 Hz		100 Hz		125 Hz		160 Hz		200 Hz	
	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$
PTB	0.6	0.8	0.6	0.9	0.7	0.9	0.4	0.9	0.4	0.9	0.5	0.9	0.1	0.8	0.3	0.9
BNM-CESTA	1.2	6.3	1.2	6.3	1.6	6.3	2.2	6.3	2.2	6.3	1.3	6.3	0.7	6.3	2.0	6.3
CSIRO-NML	1.2	5.0	1.2	5.0	0.6	3.7	0.3	3.7	0.3	3.7	0.3	3.7	-0.3	3.7	0.1	3.7
CMI	-0.9	5.7	-0.5	5.5	0.4	5.8	0.3	5.5	0.3	5.8	0.3	5.5	-0.3	5.7	0.2	5.8
CSIR-NML	9.2	11.4	4.2	8.8	-3.4	8.8	-4.8	8.8	-1.8	7.5	-3.7	7.5	-0.3	6.3	-4.0	6.2
CENAM	-1.7	6.2	-2.2	6.2	-0.7	6.3	-1.1	6.3	-1.3	6.3	-1.1	6.3	-0.3	6.3	0.2	6.3
NRC	-1.1	3.7	-1.2	3.7	-1.3	3.7	3.9	3.6	0.8	3.6	1.5	3.6	1.2	3.6	0.9	3.6
KRISS	-1.1	4.5	-1.0	4.5	-0.9	4.5	-1.0	4.5	-1.4	4.5	-1.2	4.5	-1.4	4.5	-0.9	4.5
NMIJ	-2.9	5.2	-0.9	5.4	0.1	5.6	-0.2	6.0	0.1	5.9	-0.2	5.2	-0.3	5.4	-0.3	5.5
VNIIM	-5.4	5.0	-4.2	5.0	-4.4	5.0	-4.6	5.0	-4.8	5.0	-1.1	5.0	1.9	5.0	2.6	5.5
NIST	1.2	3.7	0.2	3.7	0.6	3.4	-0.8	3.7	1.2	3.4	-1.7	3.9	-1.3	3.7	-1.0	3.7
NMi-VSL	-0.9	3.1	-0.7	2.8	-1.5	2.5	-1.7	2.5	-1.3	2.5	-1.2	2.5	-0.3	4.2	-0.9	2.5

NIM	0.3	6.5
NPLI	1.2	9.0
INMETRO	0.0	3.3

-0.6	6.5
2.0	9.0
0.0	3.3

-0.2	2.8
2.4	9.0
-0.3	3.3

GUM	-0.3	7.7
DPLA	-2	4.5
INRIM	-1.6	4.5
SP	3.3	5.2
INETI	-1.6	10.7
UME	0.7	6.4
BEV	-3.8	7.7
CEM	2.2	7.7
METAS	-6.8	9.3

Black: CCAUV.V-K1  
 Red: CCAUV.V-K1.1  
 Blue: EUROMET.AUV.V-K1  
 Orange: EUROMET.AUV.V-K1.1  
 Purple: APMP.AUV.V-K1.2

-1.2	7.7
-1.6	3.1
-0.6	4.5
4.3	5.2
1.4	4.5
0.3	6.4
-3.4	7.2
-1.4	7.7
-6.4	8.8

The equivalence for the BB accelerometer at frequency 160 Hz was extended to CMS/ITRI, NML-SIRIM participants in APMP.AUV.V-K1, and to INMETRO, CENAM and INTI participants in SIM.AUV.V-K1. Click [here](#) to access the full matrix and graph of equivalence.

-1.8	7.7
-1	2.9
-1	4.5
3.9	5.2
-2	5.2
-0.1	6.4
-2.6	7.2
0.4	7.7
-6.6	8.6

INETI	5.9	6.6
BEV	0.1	7.7
LNE	0.3	7.7
NCM	1.6	3.1

-0.8	5.1
-3.7	7.2
1.1	7.7
1.4	3.1

KIM-LIPI	-3.8	12.7
NPLI	5.9	12.8

-2.9	12.6
4.9	12.8

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

The BIPM key comparison database, September 2010

CCAUV.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Degrees of equivalence relative to the key comparison reference value - continued

Transfer standard : Back-to-back (BB) accelerometer type 8305

Frequency → Lab <i>i</i> ↓	250 Hz		315 Hz		400 Hz		500 Hz		630 Hz		800 Hz		1000 Hz		1250 Hz	
	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$	$D_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	$U_i$
PTB	0.2	0.9	0.2	0.9	-0.2	0.8	-0.2	0.8	-0.3	0.8	-0.4	0.8	-0.2	0.8	0.2	0.8
BNM-CESTA	1.7	6.3	2.5	6.3	3.4	6.3	2.7	6.3	2.0	6.3	2.7	6.3	2.0	6.3	1.7	6.3
CSIRO-NML	-0.3	3.7	0.5	3.7	0.4	3.7	0.7	3.7	-0.1	3.7	-0.4	3.7	1.0	3.7	0.7	3.7
CMI	0.3	6.3	-0.6	6.5	-0.2	6.8	0.7	6.8	-0.4	6.8	-0.4	6.8	-0.7	6.8	-0.2	6.8
CSIR-NML	-1.3	6.3	-0.6	6.3	4.4	7.6	4.7	7.6	1.0	6.3	1.7	6.3	0.1	7.5	0.7	7.5
CENAM	-1.2	6.3	-1.6	6.3	-0.8	6.3	-0.7	6.3	-0.9	6.3	-0.6	6.3	-0.6	10.1	-0.7	10.1
NRC	0.6	3.7	-0.9	3.6	1.1	3.7	-1.3	5.8	-0.2	4.1	1.4	5.4	1.0	6.7	1.2	7.2
KRISS	-0.8	4.5	-1.0	4.5	-0.9	4.5	-0.5	4.5	-0.7	4.5	-0.8	4.4	-1.0	4.7	-0.8	4.7
NMIJ	-1.0	5.6	-1.9	6.1	0.1	8.0	-0.8	6.3	-1.3	5.7	-1.2	6.6	-0.8	3.9	-0.1	3.5
VNIIM	0.7	5.5	1.5	5.5	1.4	5.5	3.1	5.5	2.4	5.5	3.5	5.5	6.4	5.5	8.9	5.7
NIST	-0.3	3.7	-0.6	3.9	-0.7	3.7	-2.3	4.2	-4.0	5.0	-3.3	10.8	-4.0	5.5	-3.3	5.2
NMi-VSL	-0.5	2.5	0.6	3.2	-1.7	4.8	-0.2	3.1	3.7	3.6	4.7	6.3	2.5	13.4	-1.4	7.0

NIM
NPLI
INMETRO

GUM
DPLA
INRIM
SP
INETI
UME
BEV
CEM
METAS

INETI
BEV
LNE
NCM

KIM-LIPI
NPLI

Laboratory results  
at the frequencies of 1250 Hz  
to 5000 Hz excluded from  
calculation of the reference value

0.8	6.5
-1.4	9.0
0.2	3.3

-3.3	7.7
-0.6	5.7
-1.4	4.5
1.6	5.2
-2.3	5.7
-1.5	6.4
-0.5	7.5
1.5	8
-6.5	8.9

0.2	4.4
-4.1	7.2
-0.1	7.7
-1.0	3.1

1.0	13.0
4.0	12.8

Black: CCAUV.V-K1  
Red: CCAUV.V-K1.1  
Blue: EUROMET.AUV.V-K1  
Orange: EUROMET.AUV.V-K1.1  
Purple: APMP.AUV.V-K1.2

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

The BIPM key comparison database, September 2010

CCAUV.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Degrees of equivalence relative to the key comparison reference value - continued

Transfer standard : Back-to-back (BB) accelerometer type 8305

Frequency → Lab <i>i</i> ↓	1600 Hz		2000 Hz		2500 Hz		3150 Hz		4000 Hz		5000 Hz	
	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	
PTB	0.3	0.7	0.4	0.7	0.9	2.0	-0.3	1.9	0.7	1.8	-0.3	1.7
BNM-CESTA	1.4	6.3	1.7	6.3	1.8	6.2	0.5	6.2				
CSIRO-NML	0.4	3.7	-0.3	3.7	0.8	3.5	1.4	3.4	0.7	3.4	1.4	4.8
CMI	-0.8	6.5	-0.7	6.0	-1.2	5.6	-2.5	8.8	-4.2	7.5	-0.2	7.5
CSIR-NML	1.4	7.6	-0.3	7.6	-1.2	7.5	-0.6	8.8	-2.3	8.8	-1.6	8.8
CENAM	0.6	10.1	0.8	10.1	-0.5	10.1	2.2	10.1	-1.5	10.1	-0.6	10.2
NRC	0.7	7.7	0.7	8.3	-2.2	8.5	-4.4	10.9	-0.7	11.9	-0.7	13.8
KRISS	-1.3	4.7	-1.1	4.7	-0.9	4.6	-0.9	5.2	-0.9	5.2	0.9	5.2
NMIJ	-1.0	5.7	-1.1	5.6	-1.0	5.9	0.4	13.6	0.2	14.3	-0.6	17.0
VNIIM	14.4	5.7	17.7	5.8	19.0	8.9	14.4	9.0	5.5	9.0	13.8	9.1
NIST	-3.6	5.2	-4.3	8.6	-6.2	14.6	3.4	16.0	1.7	15.1	-1.6	15.4
NMi-VSL	-1.4	9.6	-2.1	5.4	-2.4	6.7	-1.8	20.0	-1.7	29.7	-0.8	48.8

  Laboratory results at the frequencies of 1250 Hz to 5000 Hz excluded from calculation of the reference value

  No data

NIM
NPLI
INMETRO

-2.7	6.5
-12.0	8.9
-2.1	4.5

-3.3	6.6
-50.6	12.5
-2.7	13.0

GUM
DPLA
INRIM
SP
INETI
UME
BEV
CEM
METAS

-2.5	7.7
-2.4	6
-0.3	6.2
0.7	10.3
-2.4	12.7
2.2	8.1
2.2	8.1
-5.8	9.9

Black: CCAUV.V-K1  
 Red: CCAUV.V-K1.1  
 Blue: EUROMET.AUV.V-K1  
 Orange: EUROMET.AUV.V-K1.1  
 Purple: APMP.AUV.V-K1.2

-1.8	8.1
-2.4	4.6
-3.8	7.6
4.1	17.1
5.6	13.2
1.0	9.4
0.0	9.4
-9.0	12.6

INETI
BEV
LNE
NCM

3.1	4.6
-4.3	7.7
-0.1	7.8
-0.4	4.2

2.7	9.2
-5.3	8.9
-5.2	8.2
-0.2	7.0

KIM-LIPI
NPLI

5.1	12.8
8.4	15.8

11.1	14.1
12.9	18.3

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

The BIPM key comparison database, September 2010

CCAU.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Degrees of equivalence relative to the key comparison reference value

Transfer standard : Single-ended (SE) accelerometer type 8305

Frequency → Lab <i>i</i> ↓	40 Hz		50 Hz		63 Hz		80 Hz		100 Hz		125 Hz		160 Hz		200 Hz	
	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	
PTB	0.4	0.8	0.4	0.8	0.6	0.9	0.4	0.9	0.5	0.9	0.4	0.9	0.3	0.9	0.4	0.9
BNM-CESTA	1.2	6.4	2.3	6.4	1.4	6.4	3.2	6.4	2.4	6.4	2.2	6.4	3.1	6.4	2.0	6.4
CSIRO-NML	1.2	5.1	1.3	5.1	0.4	3.7	-0.8	3.7	0.4	3.8	0.2	3.8	-0.9	3.7	-0.1	3.8
CMI	-2.3	5.8	-1.7	5.8	-1.5	5.8	-1.3	5.9	-0.6	5.9	-0.3	5.9	0.1	5.9	0.5	5.9
CSIR-NML	6.2	9.0	0.3	9.0	-0.6	9.0	2.2	9.0	5.4	7.7	6.2	7.7	-2.9	6.4	-3.0	6.4
CENAM	-0.6	6.4	-0.4	6.4	0.2	6.4	-0.3	6.4	-0.4	6.4	-1.0	6.4	-1.3	6.4	-1.2	6.4
NRC	-2.2	3.8	-2.0	3.7	-2.4	3.7	3.9	3.6	0.5	3.6	0.8	3.7	1.5	3.6	1.1	3.7
KRISS	-2.6	4.5	-2.4	4.5	-2.4	4.5	-2.5	4.5	-2.2	4.5	-2.1	4.5	-1.9	4.5	-1.8	4.5
NMIJ	-4.5	5.3	-3.1	5.3	-1.9	5.6	-2.0	6.1	-2.5	5.8	-2.1	5.2	-2.1	5.5	-2.1	5.7
VNIIM	-6.6	5.0	-4.5	5.0	-1.6	5.1	-4.0	5.1	-4.0	5.1	-1.0	5.1	-1.7	5.1	-0.1	5.6
NIST	6.2	3.8	3.3	3.7	1.4	3.5	0.2	3.8	1.4	3.5	1.2	4.0	1.1	3.8	1.0	3.8
NMi-VSL	0.7	11.8	0.1	7.4	-1.5	3.9	-1.7	2.9	-1.7	2.5	-1.7	2.5	-0.5	4.3	-1.2	2.4

NIM	2.2	6.6
NPLI	2.2	9.1
INMETRO	1.8	3.5

2.3	6.6
3.3	9.1
1.9	3.5

1.8	2.9
3.7	9.2
1.1	3.5

GUM	0.1	7.8
DPLA	-1.5	4.6
INRIM	-2.8	4.5
SP	-0.1	7.3
INETI	-10.3	11.8
UME	0.6	6.7
BEV	-3.5	6.5
CEM	-0.4	8.0
METAS	-1.4	9.7

Black: CCAUV.V-K1  
 Red: CCAUV.V-K1.1  
 Blue: EUROMET.AUV.V-K1  
 Orange: EUROMET.AUV.V-K1.1  
 Purple: APMP.AUV.V-K1.2

-0.7	7.8
-0.6	3.1
-1.9	4.6
-0.1	7.2
-0.1	6.5
-0.4	6.7
-0.4	5.7
1.7	8.0
0.7	9.1

-1.3	7.8
-0.1	2.9
-2.1	4.6
0.1	7.9
-2.9	7.9
-1.6	6.7
0.4	5.7
0.4	8.0
1.4	9.0

INETI	4.8	5.2
BEV	0.8	8.1
LNE	-0.7	8
NCM	1.6	3.2

2.8	3.8
-2.2	7.5
0.4	8.1
1.4	3.2

2.3	3.9
-2.7	7.5
0.1	8.1
-0.2	3.2

KIM-LIPI	-0.1	13.1
NPLI	3.7	12.7

-0.8	13.0
2.8	12.7

-0.2	11.5
2.8	11.2

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

CCAU.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Degrees of equivalence relative to the key comparison reference value - continued

Transfer standard : Single-ended (SE) accelerometer type 8305

Frequency → Lab <i>i</i> ↓	250 Hz		315 Hz		400 Hz		500 Hz		630 Hz		800 Hz		1000 Hz		1250 Hz	
	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$
PTB	0.3	0.9	0.2	0.9	-0.2	0.8	-0.2	0.8	0.2	0.8	-0.3	0.8	-0.1	0.7	-0.2	0.8
BNM-CESTA	0.8	6.4	4.5	6.4	4.4	6.4	3.0	6.4	2.3	6.4	3.1	6.4	0.4	6.4	1.2	6.4
CSIRO-NML	0.8	3.8	0.6	3.8	0.4	3.7	0.1	3.7	0.4	3.7	-0.9	3.7	-0.6	3.7	0.3	3.7
CMI	0.8	6.1	1.0	5.9	1.0	5.9	1.0	5.9	1.4	8.5	2.1	8.5	1.7	8.5	3.2	8.0
CSIR-NML	-1.2	6.4	2.5	6.4	3.4	7.7	2.0	7.7	2.3	7.7	4.1	7.7	2.4	7.7	2.2	7.7
CENAM	-0.8	6.4	-0.1	6.4	0.4	6.4	0.6	6.4	-0.4	6.4	0.4	6.4	1.5	10.3	0.8	10.3
NRC	1.4	3.8	-1.3	3.7	-0.4	3.8	-1.3	5.9	-3.2	4.2	2.5	5.5	0.9	6.8	1.8	7.3
KRISS	-1.9	4.5	-2.0	4.5	-1.8	4.5	-1.8	4.5	-2.2	4.5	-1.9	4.5	-2.2	6.1	-2.6	6.1
NMIJ	-2.0	6.6	-2.4	8.1	-2.2	14.5	-1.7	19.3	-3.8	9.2	-2.9	8.6	2.9	6.0	3.4	4.4
VNIIM	-2.2	5.6	-3.3	5.6	-3.8	5.6	-5.2	5.6	-5.1	5.6	-4.7	5.6	-4.4	5.6	-7.8	5.6
NIST	0.8	3.8	0.6	4.0	1.4	3.7	1.0	4.3	0.4	5.1	2.1	11.1	2.4	5.6	1.2	5.3
NMi-VSL	-1.0	2.8	-0.5	2.9	0.1	4.8	1.9	2.9	2.9	3.2	6.2	5.3	4.7	20.7	2.1	16.3

NIM
NPLI
INMETRO

GUM
DPLA
INRIM
SP
INETI
UME
BEV
CEM
METAS

INETI
BEV
LNE
NCM

KIM-LIPI
NPLI

1.8	6.6
1.0	9.1
1.6	3.5

-2.4	7.8
0.0	5.8
-3.8	4.6
0.2	8.5
-5.0	9.0
-3.9	6.7
1.0	5.7
0.0	8.0
1.0	9.0

11.3	11.5
-1.7	7.5
1.2	8.1
-1	3.2

3.2	12.8
3.8	12.7

Black: CCAUV.V-K1  
 Red: CCAUV.V-K1.1  
 Blue: EUROMET.AUV.V-K1  
 Orange: EUROMET.AUV.V-K1.1  
 Purple: APMP.AUV.V-K1.2

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

CCAU.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Degrees of equivalence relative to the key comparison reference value - continued

Transfer standard : Single-ended (SE) accelerometer type 8305

Frequency → Lab <i>i</i> ↓	1600 Hz		2000 Hz		2500 Hz		3150 Hz		4000 Hz		5000 Hz	
	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	
PTB	0.2	0.7	0.1	0.7	no KCRV	no KCRV	no KCRV	no KCRV	no KCRV	no KCRV	no KCRV	no KCRV
BNM-CESTA	0.2	6.4	0.3	6.4								
CSIRO-NML	0.2	3.7	-0.8	3.7								
CMI	2.4	8.0	1.7	8.0								
CSIR-NML	2.1	7.7	4.2	7.7								
CENAM	0.9	10.3	0.8	10.3								
NRC	-1.9	7.9	-3.1	8.5								
KRISS	-3.3	6.1	-4.0	6.1								
NMIJ	6.3	6.6	11.3	6.3								
VNIIM	-6.9	5.6	-7.6	5.6								
NIST	0.2	5.3	-1.8	8.8								
NMi-VSL	3.2	22.4	5.3	12.7								
NIM			0.5	6.6								
NPLI			-5.8	9.1								
INMETRO			1.3	4.7								
GUM			-1.9	7.9	no KCRV							
DPLA			-1.9	4.9								
INRIM			-1.4	6.4								
SP			1.4	12.6								
INETI												
UME			-1.0	13.2								
BEV			2.1	6.5								
CEM			0.0	8.0								
METAS			3.1	10.1								
INETI			26.7	9.6								
BEV			-2.3	8.1	no KCRV							
LNE			-0.3	8.1								
NCM			1.3	4.4								
KIM-LIPI			2.9	12.8	no KCRV							
NPLI			5.3	15.6								

Black: CCAUV.V-K1  
Red: CCAUV.V-K1.1  
Blue: EUROMET.AUV.V-K1  
Orange: EUROMET.AUV.V-K1.1  
Purple: APMP.AUV.V-K1.2

No data

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.



CCAU.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1 & K1.1, and APMP.AUV.V-K1.2  
 Matrix of equivalence  
 Frequency: 40 Hz  
 Transfer standard : Back-to-back (BB) accelerometer type 8305

Black: CCAUV.V-K1  
 Red: CCAUV.V-K1.1  
 Blue: EUROMET.AUV.V-K1  
 Orange: EUROMET.AUV.V-K1.1  
 Purple: APMP.AUV.V-K1.2

Lab j →

Lab i ↓	$D_i$ $U_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		PTB		BNM-CESTA		CSIRO-NML		CMI		CSIR-NML		CENAM		NRC		KRISS	
	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$
PTB	0.6	0.8			-0.6	6.5	-0.6	5.2	1.6	6.0	-8.5	11.5	2.4	6.4	1.8	4.0	1.7	4.7
BNM-CESTA	1.2	6.3	0.6	6.5			0.0	8.1	2.1	8.6	-8.0	13.1	2.9	8.9	2.3	7.4	2.3	7.8
CSIRO-NML	1.2	5.0	0.6	5.2	0.0	8.1			2.1	7.7	-8.0	12.5	2.9	8.1	2.3	6.3	2.3	6.8
CMI	-0.9	5.7	-1.6	6.0	-2.1	8.6	-2.1	7.7			-10.1	12.9	0.8	8.6	0.2	7.0	0.2	7.4
CSIR-NML	9.2	11.4	8.5	11.5	8.0	13.1	8.0	12.5	10.1	12.9			10.9	13.1	10.3	12.1	10.3	12.3
CENAM	-1.7	6.2	-2.4	6.4	-2.9	8.9	-2.9	8.1	-0.8	8.6	-10.9	13.1			-0.6	7.4	-0.6	7.8
NRC	-1.1	3.7	-1.8	4.0	-2.3	7.4	-2.3	6.3	-0.2	7.0	-10.3	12.1	0.6	7.4			-0.1	5.9
KRISS	-1.1	4.5	-1.7	4.7	-2.3	7.8	-2.3	6.8	-0.2	7.4	-10.3	12.3	0.6	7.8	0.1	5.9		
NMIJ	-2.9	5.2	-3.6	5.5	-4.1	8.3	-4.1	7.3	-2.0	7.9	-12.1	12.6	-1.2	8.3	-1.8	6.5	-1.8	7.0
VNIIM	-5.4	5.0	-6.1	5.2	-6.6	8.1	-6.6	7.1	-4.5	7.7	-14.6	12.5	-3.7	8.1	-4.3	6.3	-4.3	6.8
NIST	1.2	3.7	0.6	4.0	0.0	7.4	0.0	6.3	2.1	7.0	-8.0	12.1	2.9	7.4	2.3	5.4	2.3	5.9
NMI-VSL	-0.9	3.1	-1.5	3.5	-2.0	7.1	-2.0	6.0	0.1	6.7	-10.0	11.9	0.9	7.1	0.3	5.0	0.3	5.6
NIM	0.3	6.5	-0.3	6.5	-0.8	9.0	-0.8	8.1	1.3	8.6	-8.8	13.1	2.1	9.0	1.5	7.4	1.5	7.8
NPLI	1.2	9.0	0.6	9.0	0.1	10.9	0.1	10.2	2.2	10.6	-7.9	14.5	3.0	10.9	2.4	9.7	2.4	10.0
INMETRO	0.0	3.3	-0.6	3.4	-1.1	7.1	-1.1	6.0	1.0	6.6	-9.1	11.9	1.8	7.1	1.2	4.9	1.2	5.5
GUM	-0.3	7.7	-0.9	7.7	-1.5	9.9	-1.5	9.2	0.6	9.6	-9.5	13.8	1.4	9.9	0.8	8.5	0.8	8.9
DPLA	-2	4.5	-2.6	4.6	-3.2	7.7	-3.2	6.7	-1.1	7.3	-11.2	12.3	-0.3	7.7	-0.9	5.9	-0.9	6.4
INRIM	-1.6	4.5	-2.2	4.5	-2.8	7.7	-2.8	6.7	-0.7	7.3	-10.8	12.3	0.1	7.7	-0.5	5.8	-0.5	6.3
SP	3.3	5.2	2.7	5.3	2.2	8.2	2.2	7.2	4.3	7.8	-5.8	12.6	5.1	8.1	4.5	6.4	4.5	6.9
INETI	-1.6	10.7	-2.2	10.7	-2.8	12.4	-2.8	11.8	-0.7	12.1	-10.8	15.7	0.1	12.4	-0.5	11.3	-0.5	11.6
UME	0.7	6.4	0.1	6.5	-0.5	9.0	-0.5	8.1	1.6	8.6	-8.5	13.1	2.4	9.0	1.8	7.4	1.8	7.8
BEV	-3.8	7.7	-4.4	7.7	-5.0	9.9	-5.0	9.1	-2.9	9.6	-13.0	13.8	-2.1	9.9	-2.7	8.5	-2.7	8.9
CEM	2.2	7.7	1.6	7.8	1.0	9.9	1.0	9.2	3.1	9.6	-7.0	13.8	3.9	9.9	3.3	8.6	3.3	8.9
METAS	-6.8	9.3	-7.4	9.3	-8.0	11.2	-8.0	10.5	-5.9	10.9	-16.0	14.7	-5.1	11.2	-5.7	10.0	-5.7	10.3
INETI	5.9	6.6	5.3	6.8	4.8	9.2	4.8	8.4	6.9	8.8	-3.2	13.3	7.7	9.2	7.1	7.7	7.1	8.1
BEV	0.1	7.7	-0.5	7.8	-1.0	10.0	-1.0	9.2	1.1	9.7	-9.0	13.8	1.9	10.0	1.3	8.6	1.3	9.0
LNE	0.3	7.7	-0.3	7.8	-0.8	10.0	-0.8	9.2	1.3	9.7	-8.8	13.8	2.1	10.0	1.5	8.6	1.5	9.0
NCM	1.6	3.1	1.0	3.3	0.5	7.0	0.5	5.9	2.6	6.6	-7.5	11.9	3.4	7.0	2.8	4.9	2.8	5.5
KIM-LIPI	-3.8	12.7	-4.5	12.7	-5.0	13.1	-5.0	12.9	-2.9	13.0	-13.0	13.9	-2.1	13.1	-2.7	12.8	-2.7	12.9
NPLI	5.9	12.8	5.2	12.8	4.7	13.2	4.7	12.9	6.8	13.1	-3.3	13.5	7.6	13.2	7.0	12.9	7.0	13.0

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

CCAU.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Matrix of equivalence - continued

Frequency: 40 Hz

Transfer standard : Back-to-back (BB) accelerometer type 8305

Lab <i>i</i> ↓			Lab <i>j</i> →													
	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	NMIJ		VNIIM		NIST		NMI-VSL		NIM		NPLI		INMETRO	
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>
PTB	0.6	0.8	3.6	5.5	6.1	5.2	-0.6	4.0	1.5	3.5	0.3	6.5	-0.6	9.0	0.6	3.4
BNM-CESTA	1.2	6.3	4.1	8.3	6.6	8.1	0.0	7.4	2.0	7.1	0.8	9.0	-0.1	10.9	1.1	7.1
CSIRO-NML	1.2	5.0	4.1	7.3	6.6	7.1	0.0	6.3	2.0	6.0	0.8	8.1	-0.1	10.2	1.1	6.0
CMI	-0.9	5.7	2.0	7.9	4.5	7.7	-2.1	7.0	-0.1	6.7	-1.3	8.6	-2.2	10.6	-1.0	6.6
CSIR-NML	9.2	11.4	12.1	12.6	14.6	12.5	8.0	12.1	10.0	11.9	8.8	13.1	7.9	14.5	9.1	11.9
CENAM	-1.7	6.2	1.2	8.3	3.7	8.1	-2.9	7.4	-0.9	7.1	-2.1	9.0	-3.0	10.9	-1.8	7.1
NRC	-1.1	3.7	1.8	6.5	4.3	6.3	-2.3	5.4	-0.3	5.0	-1.5	7.4	-2.4	9.7	-1.2	4.9
KRISS	-1.1	4.5	1.8	7.0	4.3	6.8	-2.3	5.9	-0.3	5.6	-1.5	7.8	-2.4	10.0	-1.2	5.5
NMIJ	-2.9	5.2			2.5	7.3	-4.1	6.5	-2.1	6.2	-3.3	8.3	-4.2	10.4	-3.0	6.2
VNIIM	-5.4	5.0	-2.5	7.3			-6.6	6.3	-4.6	6.0	-5.8	8.1	-6.7	10.2	-5.5	5.9
NIST	1.2	3.7	4.1	6.5	6.6	6.3			2.0	5.0	0.8	7.4	-0.1	9.7	1.1	4.9
NMI-VSL	-0.9	3.1	2.1	6.2	4.6	6.0	-2.0	5.0			-1.2	7.2	-2.1	9.5	-0.9	4.5
NIM	0.3	6.5	3.3	8.3	5.8	8.1	-0.8	7.4	1.2	7.2			-0.9	10.8	0.3	7.0
NPLI	1.2	9.0	4.2	10.4	6.7	10.2	0.1	9.7	2.1	9.5	0.9	10.8			1.2	9.3
INMETRO	0.0	3.3	3.0	6.2	5.5	5.9	-1.1	4.9	0.9	4.5	-0.3	7.0	-1.2	9.3		
GUM	-0.3	7.7	2.6	9.3	5.1	9.1	-1.5	8.5	0.6	8.3	-	-	-	-	-	-
DPLA	-2	4.5	0.9	6.9	3.4	6.7	-3.2	5.8	-1.1	5.5	-	-	-	-	-	-
INRIM	-1.6	4.5	1.3	6.9	3.8	6.7	-2.8	5.8	-0.7	5.5	-	-	-	-	-	-
SP	3.3	5.2	6.3	7.4	8.8	7.2	2.2	6.4	4.2	6.1	-	-	-	-	-	-
INETI	-1.6	10.7	1.3	11.9	3.8	11.8	-2.8	11.3	-0.7	11.1	-	-	-	-	-	-
UME	0.7	6.4	3.6	8.3	6.1	8.1	-0.5	7.4	1.6	7.2	-	-	-	-	-	-
BEV	-3.8	7.7	-0.9	9.3	1.6	9.1	-5.0	8.5	-2.9	8.3	-	-	-	-	-	-
CEM	2.2	7.7	5.1	9.3	7.6	9.2	1.0	8.5	3.1	8.3	-	-	-	-	-	-
METAS	-6.8	9.3	-3.9	10.7	-1.4	10.5	-8.0	10.0	-5.9	9.8	-	-	-	-	-	-
INETI	5.9	6.6	8.9	8.5	11.4	8.3	4.8	7.7	6.8	7.4	-	-	-	-	-	-
BEV	0.1	7.7	3.1	9.4	5.6	9.2	-1.0	8.6	1.0	8.4	-	-	-	-	-	-
LNE	0.3	7.7	3.3	9.4	5.8	9.2	-0.8	8.6	1.2	8.4	-	-	-	-	-	-
NCM	1.6	3.1	4.6	6.1	7.1	5.9	0.5	4.9	2.5	4.5	-	-	-	-	-	-
KIM-LIPI	-3.8	12.7	-0.9	12.9	1.6	12.9	-5.0	12.8	-3.0	12.8	-	-	-	-	-	-
NPLI	5.9	12.8	8.8	13.2	11.3	13.1	4.7	12.9	6.7	12.9	-	-	-	-	-	-

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

Transfer standard : Back-to-back (BB) accelerometer type 8305

Lab <i>i</i> ↓			Lab <i>j</i> →													
	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	GUM		DPLA		INRIM		SP		INETI		UME			
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>		
			/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>			
PTB	0.6	0.8	0.9	7.7	2.6	4.6	2.2	4.5	-2.7	5.3	2.2	10.7	-0.1	6.5		
BNM-CESTA	1.2	6.3	1.5	9.9	3.2	7.7	2.8	7.7	-2.2	8.2	2.8	12.4	0.5	9.0		
CSIRO-NML	1.2	5.0	1.5	9.2	3.2	6.7	2.8	6.7	-2.2	7.2	2.8	11.8	0.5	8.1		
CMI	-0.9	5.7	-0.6	9.6	1.1	7.3	0.7	7.3	-4.3	7.8	0.7	12.1	-1.6	8.6		
CSIR-NML	9.2	11.4	9.5	13.8	11.2	12.3	10.8	12.3	5.8	12.6	10.8	15.7	8.5	13.1		
CENAM	-1.7	6.2	-1.4	9.9	0.3	7.7	-0.1	7.7	-5.1	8.1	-0.1	12.4	-2.4	9.0		
NRC	-1.1	3.7	-0.8	8.5	0.9	5.9	0.5	5.8	-4.5	6.4	0.5	11.3	-1.8	7.4		
KRISS	-1.1	4.5	-0.8	8.9	0.9	6.4	0.5	6.3	-4.5	6.9	0.5	11.6	-1.8	7.8		
NMIJ	-2.9	5.2	-2.6	9.3	-0.9	6.9	-1.3	6.9	-6.3	7.4	-1.3	11.9	-3.6	8.3		
VNIIM	-5.4	5.0	-5.1	9.1	-3.4	6.7	-3.8	6.7	-8.8	7.2	-3.8	11.8	-6.1	8.1		
NIST	1.2	3.7	1.5	8.5	3.2	5.8	2.8	5.8	-2.2	6.4	2.8	11.3	0.5	7.4		
NMi-VSL	-0.9	3.1	-0.6	8.3	1.1	5.5	0.7	5.5	-4.2	6.1	0.7	11.1	-1.6	7.2		
NIM	0.3	6.5	-	-	-	-	-	-	-	-	-	-	-	-		
NPLI	1.2	9.0	-	-	-	-	-	-	-	-	-	-	-	-		
INMETRO	0.0	3.3	-	-	-	-	-	-	-	-	-	-	-	-		
GUM	-0.3	7.7			1.7	8.9	1.3	8.8	-3.7	9.2	1.3	13.2	-1.0	10.0		
DPLA	-2	4.5	-1.7	8.9			-0.4	6.2	-5.4	6.8	-0.4	11.6	-2.7	7.8		
INRIM	-1.6	4.5	-1.3	8.8	0.4	6.2			-5.0	6.7	0.0	11.6	-2.3	7.7		
SP	3.3	5.2	3.7	9.2	5.4	6.8	5.0	6.7			5.0	11.9	2.7	8.2		
INETI	-1.6	10.7	-1.3	13.2	0.4	11.6	0.0	11.6	-5.0	11.9			-2.3	12.5		
UME	0.7	6.4	1.0	10.0	2.7	7.8	2.3	7.7	-2.7	8.2	2.3	12.5				
BEV	-3.8	7.7	-3.6	10.9	-1.9	8.9	-2.3	8.8	-7.3	9.2	-2.3	13.2	-4.6	10.0		
CEM	2.2	7.7	2.5	10.9	4.2	8.9	3.8	8.9	-1.2	9.3	3.8	13.2	1.5	10.0		
METAS	-6.8	9.3	-6.6	12.1	-4.9	10.3	-5.3	10.3	-10.3	10.7	-5.3	14.2	-7.6	11.3		
INETI	5.9	6.6	-	-	-	-	-	-	-	-	-	-	-	-		
BEV	0.1	7.7	-	-	-	-	-	-	-	-	-	-	-	-		
LNE	0.3	7.7	-	-	-	-	-	-	-	-	-	-	-	-		
NCM	1.6	3.1	-	-	-	-	-	-	-	-	-	-	-	-		
KIM-LIPI	-3.8	12.7	-	-	-	-	-	-	-	-	-	-	-	-		
NPLI	5.9	12.8	-	-	-	-	-	-	-	-	-	-	-	-		

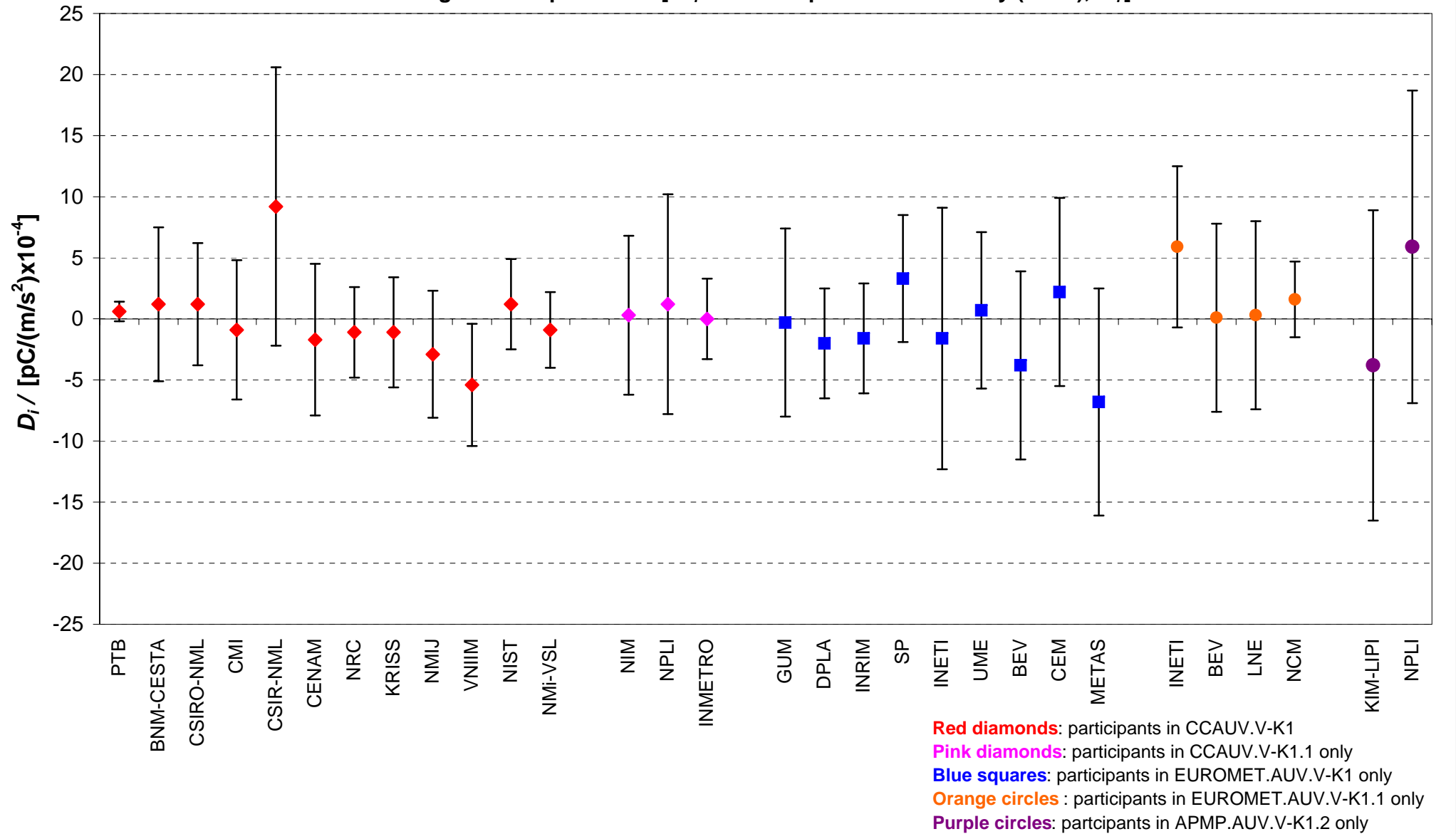
BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

Lab j →

Lab i ↓	$D_i$ $U_i$		BEV		CEM		METAS		INETI		BEV		LNE		NCM		KIM-LIPI		NPLI	
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$
PTB	0.6	0.8	4.4	7.7	-1.6	7.8	7.4	9.3	-5.3	6.8	0.5	7.8	0.3	7.8	-1.0	3.3	4.5	12.7	-5.2	12.8
BNM-CESTA	1.2	6.3	5.0	9.9	-1.0	9.9	8.0	11.2	-4.8	9.2	1.0	10.0	0.8	10.0	-0.5	7.0	5.0	13.1	-4.7	13.2
CSIRO-NML	1.2	5.0	5.0	9.1	-1.0	9.2	8.0	10.5	-4.8	8.4	1.0	9.2	0.8	9.2	-0.5	5.9	5.0	12.9	-4.7	12.9
CMI	-0.9	5.7	2.9	9.6	-3.1	9.6	5.9	10.9	-6.9	8.8	-1.1	9.7	-1.3	9.7	-2.6	6.6	2.9	13.0	-6.8	13.1
CSIR-NML	9.2	11.4	13.0	13.8	7.0	13.8	16.0	14.7	3.2	13.3	9.0	13.8	8.8	13.8	7.5	11.9	13.0	13.9	3.3	13.5
CENAM	-1.7	6.2	2.1	9.9	-3.9	9.9	5.1	11.2	-7.7	9.2	-1.9	10.0	-2.1	10.0	-3.4	7.0	2.1	13.1	-7.6	13.2
NRC	-1.1	3.7	2.7	8.5	-3.3	8.6	5.7	10.0	-7.1	7.7	-1.3	8.6	-1.5	8.6	-2.8	4.9	2.7	12.8	-7.0	12.9
KRISS	-1.1	4.5	2.7	8.9	-3.3	8.9	5.7	10.3	-7.1	8.1	-1.3	9.0	-1.5	9.0	-2.8	5.5	2.7	12.9	-7.0	13.0
NMIJ	-2.9	5.2	0.9	9.3	-5.1	9.3	3.9	10.7	-8.9	8.5	-3.1	9.4	-3.3	9.4	-4.6	6.1	0.9	12.9	-8.8	13.2
VNIIM	-5.4	5.0	-1.6	9.1	-7.6	9.2	1.4	10.5	-11.4	8.3	-5.6	9.2	-5.8	9.2	-7.1	5.9	-1.6	12.9	-11.3	13.1
NIST	1.2	3.7	5.0	8.5	-1.0	8.5	8.0	10.0	-4.8	7.7	1.0	8.6	0.8	8.6	-0.5	4.9	5.0	12.8	-4.7	12.9
NMI-VSL	-0.9	3.1	2.9	8.3	-3.1	8.3	5.9	9.8	-6.8	7.4	-1.0	8.4	-1.2	8.4	-2.5	4.5	3.0	12.8	-6.7	12.9
NIM	0.3	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NPLI	1.2	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INMETRO	0.0	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GUM	-0.3	7.7	3.6	10.9	-2.5	10.9	6.6	12.1	-	-	-	-	-	-	-	-	-	-	-	-
DPLA	-2	4.5	1.9	8.9	-4.2	8.9	4.9	10.3	-	-	-	-	-	-	-	-	-	-	-	-
INRIM	-1.6	4.5	2.3	8.8	-3.8	8.9	5.3	10.3	-	-	-	-	-	-	-	-	-	-	-	-
SP	3.3	5.2	7.3	9.2	1.2	9.3	10.3	10.7	-	-	-	-	-	-	-	-	-	-	-	-
INETI	-1.6	10.7	2.3	13.2	-3.8	13.2	5.3	14.2	-	-	-	-	-	-	-	-	-	-	-	-
UME	0.7	6.4	4.6	10.0	-1.5	10.0	7.6	11.3	-	-	-	-	-	-	-	-	-	-	-	-
BEV	-3.8	7.7			-6.0	10.7	3.0	11.9	-	-	-	-	-	-	-	-	-	-	-	-
CEM	2.2	7.7	6.0	10.7			9.0	11.9	-	-	-	-	-	-	-	-	-	-	-	-
METAS	-6.8	9.3	-3.0	11.9	-9.0	11.9			-	-	-	-	-	-	-	-	-	-	-	-
INETI	5.9	6.6	-	-	-	-	-	-	5.8	9.9	5.6	9.9	4.3	6.9	-	-	-	-	-	-
BEV	0.1	7.7	-	-	-	-	-	-5.8	9.9	-0.2	10.6	-1.5	7.9	-	-	-	-	-	-	-
LNE	0.3	7.7	-	-	-	-	-	-5.6	9.9	0.2	10.6	-1.3	7.9	-	-	-	-	-	-	-
NCM	1.6	3.1	-	-	-	-	-	-4.3	6.9	1.5	7.9	1.3	7.9	-	-	-	-	-	-	-
KIM-LIPI	-3.8	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-9.7	12.6
NPLI	5.9	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7	12.6	-	-

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

CCAUV.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2  
 Charge sensitivity, BB accelerometer, frequency: 40 Hz  
 Degrees of equivalence [ $D_i$  and its expanded uncertainty ( $k = 2$ ),  $U_i$ ]



Lab j →

Lab i ↓	$D_i$ $U_i$		PTB		BNM-CESTA		CSIRO-NML		CMI		CSIR-NML		CENAM		NRC		KRISS	
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$
PTB	0.3	0.9																
BNM-CESTA	3.1	6.4	2.8	6.6			4.0	7.5	3.0	8.8	6.0	9.1	4.4	9.1	1.6	7.5	5.0	8.0
CSIRO-NML	-0.9	3.7	-1.2	4.1	-4.0	7.5			-1.0	7.1	2.0	7.5	0.4	7.5	-2.4	5.4	1.0	6.0
CMI	0.1	5.9	-0.3	6.1	-3.0	8.8	1.0	7.1			3.0	8.8	1.4	8.8	-1.4	7.0	2.0	7.5
CSIR-NML	-2.9	6.4	-3.2	6.6	-6.0	9.1	-2.0	7.5	-3.0	8.8			-1.6	9.1	-4.4	7.5	-1.0	7.9
CENAM	-1.3	6.4	-1.6	6.6	-4.4	9.1	-0.4	7.5	-1.4	8.8	1.6	9.1			-2.8	7.5	0.6	7.9
NRC	1.5	3.6	1.2	4.0	-1.6	7.5	2.4	5.4	1.4	7.0	4.4	7.5	2.8	7.5			3.4	6.0
KRISS	-1.9	4.5	-2.2	4.8	-5.0	8.0	-1.0	6.0	-2.0	7.5	1.0	7.9	-0.6	7.9	-3.4	6.0		
NMIJ	-2.1	5.5	-2.4	5.7	-5.2	8.5	-1.2	6.8	-2.2	8.1	0.8	8.5	-0.8	8.5	-3.6	6.7	-0.3	7.2
VNIM	-1.7	5.1	-2.0	5.3	-4.8	8.3	-0.8	6.4	-1.8	7.9	1.2	8.2	-0.4	8.3	-3.2	6.4	0.2	6.9
NIST	1.1	3.8	0.8	4.1	-2.0	7.5	2.0	5.5	1.0	7.1	4.0	7.5	2.4	7.5	-0.4	5.4	3.0	6.0
NMI-VSL	-0.5	4.3	-0.7	4.6	-3.5	7.8	0.5	5.8	-0.5	7.4	2.5	7.8	0.9	7.8	-1.9	5.8	1.5	6.4
NIM	1.8	2.9	1.5	3.1	-1.3	7.0	2.7	4.8	1.7	6.6	4.7	7.0	3.1	7.0	0.3	4.8	3.7	5.4
NPLI	3.7	9.2	3.4	9.2	0.6	11.2	4.6	9.9	3.6	10.9	6.6	11.1	5.0	11.1	2.2	9.9	5.6	10.2
INMETRO	1.1	3.5	0.8	3.6	-2.0	7.3	2.0	5.1	1.0	6.8	4.0	7.3	2.4	7.3	-0.4	5.1	3.0	5.7
GUM	-1.3	7.8	-1.6	7.9	-4.4	10.1	-0.4	8.7	-1.4	9.8	1.6	10.1	0.0	10.1	-2.8	8.6	0.6	9.0
DPLA	-0.1	2.9	-0.4	3.0	-3.2	7.0	0.8	4.7	-0.2	6.5	2.8	7.0	1.2	7.0	-1.6	4.7	1.8	5.4
INRIM	-2.1	4.6	-2.4	4.6	-5.2	7.8	-1.2	5.9	-2.2	7.4	0.8	7.8	-0.8	7.8	-3.6	5.8	-0.2	6.4
SP	0.1	7.9	-0.1	7.9	-2.9	10.2	1.1	8.7	0.1	9.8	3.1	10.1	1.5	10.1	-1.3	8.7	2.0	9.1
INETI	-2.9	7.9	-3.2	8.0	-6.0	10.2	-2.0	8.8	-3.0	9.9	0.0	10.2	-1.6	10.2	-4.4	8.7	-1.0	9.1
UME	-1.6	6.7	-1.8	6.8	-4.6	9.3	-0.6	7.7	-1.6	8.9	1.4	9.2	-0.2	9.3	-3.0	7.6	0.3	8.1
BEV	0.4	5.7	0.1	5.8	-2.7	8.6	1.3	6.8	0.3	8.2	3.3	8.6	1.7	8.6	-1.1	6.8	2.3	7.3
CEM	0.4	8.0	0.1	8.0	-2.7	10.2	1.3	8.8	0.3	9.9	3.3	10.2	1.7	10.2	-1.1	8.8	2.3	9.2
METAS	1.4	9.0	1.1	9.0	-1.7	11.0	2.3	9.7	1.3	10.7	4.3	11.0	2.7	11.0	-0.1	9.7	3.3	10.1
INETI	2.3	3.9	2.0	4.1	-0.8	7.5	3.2	5.5	2.2	7.1	5.2	7.5	3.6	7.5	0.8	5.5	4.2	6.0
BEV	-2.7	7.5	-3.0	7.6	-5.8	9.9	-1.8	8.5	-2.8	9.6	0.2	9.9	-1.4	9.9	-4.2	8.5	-0.8	8.8
LNE	0.1	8.1	-0.2	8.2	-3.0	10.3	1.0	8.9	0.0	10.0	3.0	10.3	1.4	10.3	-1.4	8.9	2.0	9.3
NCM	-0.2	3.2	-0.5	3.4	-3.3	7.2	0.7	5.0	-0.3	6.7	2.7	7.2	1.1	7.2	-1.7	5.0	1.7	5.6
KIM-LIPI	-0.2	11.5	-0.5	11.5	-3.3	11.9	0.7	11.6	-0.3	11.8	2.7	11.9	1.1	11.9	-1.7	11.6	1.7	11.7
NPLI	2.8	11.2	2.5	11.2	-0.3	11.6	3.7	11.4	2.7	11.6	5.7	11.6	4.1	11.6	1.3	11.4	4.7	11.4

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

CCAU.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Matrix of equivalence - continued

Frequency: 160 Hz

Transfer standard : Single-ended (SE) accelerometer type 8305

Lab <i>i</i> ↓			Lab <i>j</i> →													
	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	NMIJ		VNIIM		NIST		NMI-VSL		NIM		NPLI		INMETRO	
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>
PTB	0.3	0.9	2.4	5.7	2.0	5.3	-0.8	4.1	0.7	4.6	-1.5	3.1	-3.4	9.2	-0.8	3.6
BNM-CESTA	3.1	6.4	5.2	8.5	4.8	8.3	2.0	7.5	3.5	7.8	1.3	7.0	-0.6	11.2	2.0	7.3
CSIRO-NML	-0.9	3.7	1.2	6.8	0.8	6.4	-2.0	5.5	-0.5	5.8	-2.7	4.8	-4.6	9.9	-2.0	5.1
CMI	0.1	5.9	2.2	8.1	1.8	7.9	-1.0	7.1	0.5	7.4	-1.7	6.6	-3.6	10.9	-1.0	6.8
CSIR-NML	-2.9	6.4	-0.8	8.5	-1.2	8.2	-4.0	7.5	-2.5	7.8	-4.7	7.0	-6.6	11.1	-4.0	7.3
CENAM	-1.3	6.4	0.8	8.5	0.4	8.3	-2.4	7.5	-0.9	7.8	-3.1	7.0	-5.0	11.1	-2.4	7.3
NRC	1.5	3.6	3.6	6.7	3.2	6.4	0.4	5.4	1.9	5.8	-0.3	4.8	-2.2	9.9	0.4	5.1
KRISS	-1.9	4.5	0.3	7.2	-0.2	6.9	-3.0	6.0	-1.5	6.4	-3.7	5.4	-5.6	10.2	-3.0	5.7
NMIJ	-2.1	5.5			-0.4	7.6	-3.2	6.8	-1.7	7.1	-3.9	6.3	-5.8	10.7	-3.2	6.6
VNIIM	-1.7	5.1	0.4	7.6			-2.8	6.4	-1.3	6.8	-3.5	5.9	-5.4	10.5	-2.8	6.1
NIST	1.1	3.8	3.2	6.8	2.8	6.4			1.5	5.8	-0.7	4.8	-2.6	9.9	0.0	5.1
NMI-VSL	-0.5	4.3	1.7	7.1	1.3	6.8	-1.5	5.8			-2.2	5.2	-4.1	10.1	-1.5	5.5
NIM	1.8	2.9	3.9	6.3	3.5	5.9	0.7	4.8	2.2	5.2			-1.9	9.6	0.7	4.2
NPLI	3.7	9.2	5.8	10.7	5.4	10.5	2.6	9.9	4.1	10.1	1.9	9.6			2.6	9.7
INMETRO	1.1	3.5	3.2	6.6	2.8	6.1	0.0	5.1	1.5	5.5	-0.7	4.2	-2.6	9.7		
GUM	-1.3	7.8	0.8	9.5	0.4	9.3	-2.4	8.7	-0.9	8.9	-	-	-	-	-	-
DPLA	-0.1	2.9	2.0	6.2	1.6	5.8	-1.2	4.7	0.3	5.2	-	-	-	-	-	-
INRIM	-2.1	4.6	0.0	7.1	-0.4	6.8	-3.2	5.9	-1.7	6.2	-	-	-	-	-	-
SP	0.1	7.9	2.3	9.6	1.9	9.4	-0.9	8.7	0.6	9.0	-	-	-	-	-	-
INETI	-2.9	7.9	-0.8	9.6	-1.2	9.4	-4.0	8.8	-2.5	9.0	-	-	-	-	-	-
UME	-1.6	6.7	0.6	8.6	0.2	8.4	-2.6	7.7	-1.1	8.0	-	-	-	-	-	-
BEV	0.4	5.7	2.5	7.9	2.1	7.6	-0.7	6.8	0.8	7.2	-	-	-	-	-	-
CEM	0.4	8.0	2.5	9.7	2.1	9.4	-0.7	8.8	0.8	9.1	-	-	-	-	-	-
METAS	1.4	9.0	3.5	10.5	3.1	10.3	0.3	9.8	1.8	10.0	-	-	-	-	-	-
INETI	2.3	3.9	4.4	6.9	4.0	6.4	1.2	5.5	2.7	5.8	-	-	-	-	-	-
BEV	-2.7	7.5	-0.6	9.4	-1.0	9.1	-3.8	8.5	-2.3	8.7	-	-	-	-	-	-
LNE	0.1	8.1	2.2	9.8	1.8	9.6	-1.0	8.9	0.5	9.2	-	-	-	-	-	-
NCM	-0.2	3.2	1.9	6.5	1.5	6.1	-1.3	5.0	0.2	5.4	-	-	-	-	-	-
KIM-LIPI	-0.2	11.5	1.9	11.8	1.5	11.8	-1.3	11.6	0.2	11.7	-	-	-	-	-	-
NPLI	2.8	11.2	4.9	11.5	4.5	11.5	1.7	11.4	3.2	11.4	-	-	-	-	-	-

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

CCAU.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Matrix of equivalence - continued

Frequency: 160 Hz

Transfer standard : Single-ended (SE) accelerometer type 8305

Lab j →

Lab i ↓	$D_i$ $U_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		GUM		DPLA		INRIM		SP		INETI		UME	
	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$
PTB	0.3	0.9	1.6	7.9	0.4	3.0	2.4	4.6	0.1	7.9	3.2	8.0	1.8	6.8
BNM-CESTA	3.1	6.4	4.4	10.1	3.2	7.0	5.2	7.8	2.9	10.2	6.0	10.2	4.6	9.3
CSIRO-NML	-0.9	3.7	0.4	8.7	-0.8	4.7	1.2	5.9	-1.1	8.7	2.0	8.8	0.6	7.7
CMI	0.1	5.9	1.4	9.8	0.2	6.5	2.2	7.4	-0.1	9.8	3.0	9.9	1.6	8.9
CSIR-NML	-2.9	6.4	-1.6	10.1	-2.8	7.0	-0.8	7.8	-3.1	10.1	0.0	10.2	-1.4	9.2
CENAM	-1.3	6.4	0.0	10.1	-1.2	7.0	0.8	7.8	-1.5	10.1	1.6	10.2	0.2	9.3
NRC	1.5	3.6	2.8	8.6	1.6	4.7	3.6	5.8	1.3	8.7	4.4	8.7	3.0	7.6
KRISS	-1.9	4.5	-0.6	9.0	-1.8	5.4	0.2	6.4	-2.0	9.1	1.0	9.1	-0.3	8.1
NMIJ	-2.1	5.5	-0.8	9.5	-2.0	6.2	0.0	7.1	-2.3	9.6	0.8	9.6	-0.6	8.6
VNIM	-1.7	5.1	-0.4	9.3	-1.6	5.8	0.4	6.8	-1.9	9.4	1.2	9.4	-0.2	8.4
NIST	1.1	3.8	2.4	8.7	1.2	4.7	3.2	5.9	0.9	8.7	4.0	8.8	2.6	7.7
NMI-VSL	-0.5	4.3	0.9	8.9	-0.3	5.2	1.7	6.2	-0.6	9.0	2.5	9.0	1.1	8.0
NIM	1.8	2.9	-	-	-	-	-	-	-	-	-	-	-	-
NPLI	3.7	9.2	-	-	-	-	-	-	-	-	-	-	-	-
INMETRO	1.1	3.5	-	-	-	-	-	-	-	-	-	-	-	-
GUM	-1.3	7.8	-	-	-1.2	8.0	0.8	8.7	-1.4	10.7	1.6	10.7	0.2	9.9
DPLA	-0.1	2.9	1.2	8.0	-	-	2.0	5.0	-0.2	8.0	2.8	8.1	1.4	6.9
INRIM	-2.1	4.6	-0.8	8.7	-2.0	5.0	-	-	-2.2	8.7	0.8	8.8	-0.6	7.7
SP	0.1	7.9	1.4	10.7	0.2	8.0	2.2	8.7	-	-	3.0	10.8	1.7	10.0
INETI	-2.9	7.9	-1.6	10.7	-2.8	8.1	-0.8	8.8	-3.0	10.8	-	-	-1.3	10.0
UME	-1.6	6.7	-0.2	9.9	-1.4	6.9	0.6	7.7	-1.7	10.0	1.3	10.0	-	-
BEV	0.4	5.7	1.7	9.3	0.5	6.0	2.5	6.9	0.2	9.4	3.2	9.4	1.9	8.4
CEM	0.4	8.0	1.7	10.8	0.5	8.1	2.5	8.8	0.2	10.8	3.2	10.8	1.9	10.0
METAS	1.4	9.0	2.7	11.5	1.5	9.1	3.5	9.7	1.2	11.6	4.2	11.6	2.9	10.8
INETI	2.3	3.9	-	-	-	-	-	-	-	-	-	-	-	-
BEV	-2.7	7.5	-	-	-	-	-	-	-	-	-	-	-	-
LNE	0.1	8.1	-	-	-	-	-	-	-	-	-	-	-	-
NCM	-0.2	3.2	-	-	-	-	-	-	-	-	-	-	-	-
KIM-LIPI	-0.2	11.5	-	-	-	-	-	-	-	-	-	-	-	-
NPLI	2.8	11.2	-	-	-	-	-	-	-	-	-	-	-	-

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.



CCAU.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Matrix of equivalence - continued Frequency: 160 Hz

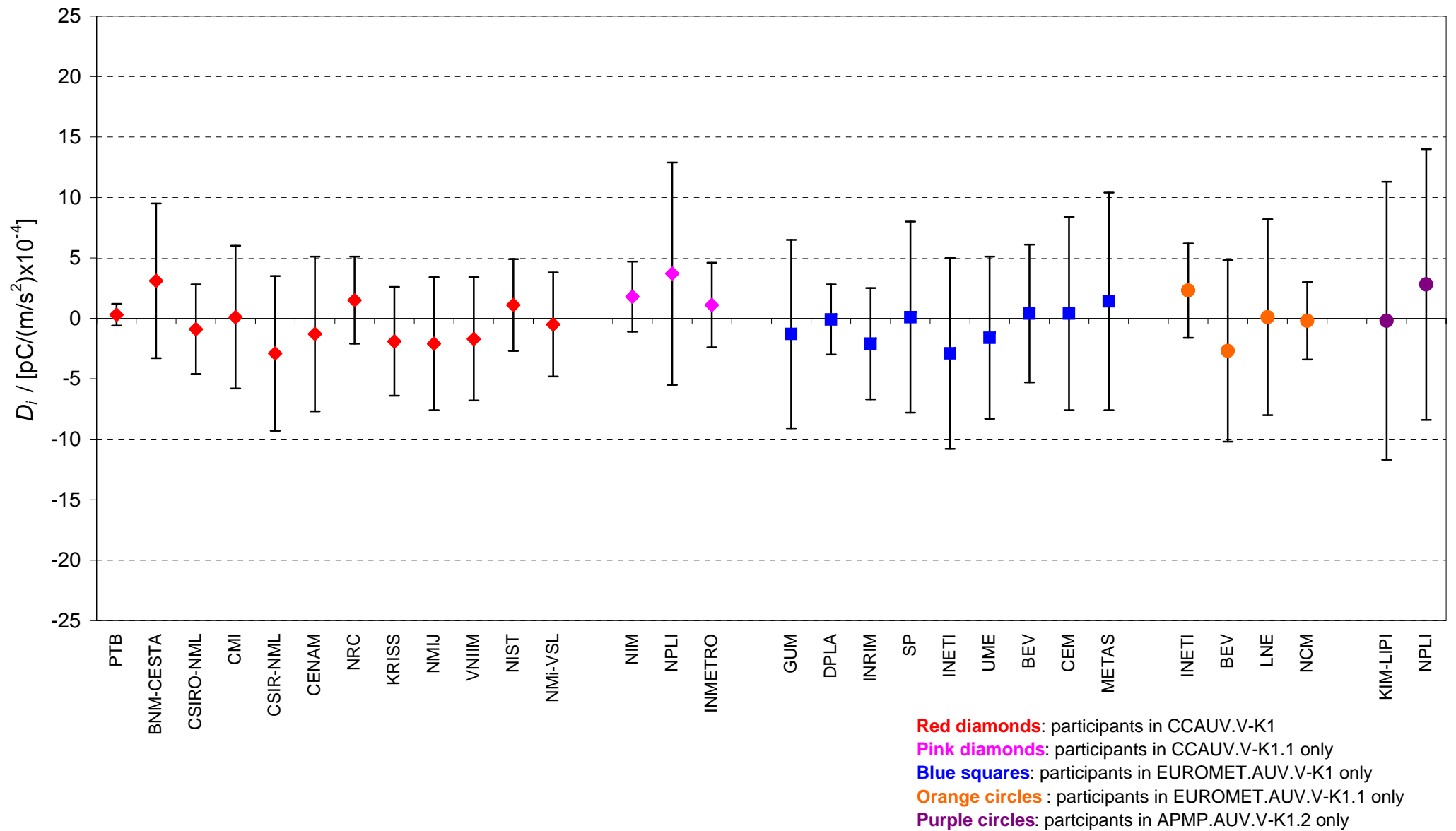
Transfer standard : Single-ended (SE) accelerometer type 8305

Lab j →

Lab i ↓			BEV		CEM		METAS		INETI		BEV		LNE		NCM		KIM-LIPI		NPLI	
	$D_i$	$U_i$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	
PTB	0.3	0.9	-0.1	5.8	-0.1	8.0	-1.1	9.0	-2.0	4.1	3.0	7.6	0.2	8.2	0.5	3.4	0.5	11.5	-2.5	11.2
BNM-CESTA	3.1	6.4	2.7	8.6	2.7	10.2	1.7	11.0	0.8	7.5	5.8	9.9	3.0	10.3	3.3	7.2	3.3	11.9	0.3	11.6
CSIRO-NML	-0.9	3.7	-1.3	6.8	-1.3	8.8	-2.3	9.7	-3.2	5.5	1.8	8.5	-1.0	8.9	-0.7	5.0	-0.7	11.6	-3.7	11.4
CMI	0.1	5.9	-0.3	8.2	-0.3	9.9	-1.3	10.7	-2.2	7.1	2.8	9.6	0.0	10.0	0.3	6.7	0.3	11.8	-2.7	11.6
CSIR-NML	-2.9	6.4	-3.3	8.6	-3.3	10.2	-4.3	11.0	-5.2	7.5	-0.2	9.9	-3.0	10.3	-2.7	7.2	-2.7	11.9	-5.7	11.6
CENAM	-1.3	6.4	-1.7	8.6	-1.7	10.2	-2.7	11.0	-3.6	7.5	1.4	9.9	-1.4	10.3	-1.1	7.2	-1.1	11.9	-4.1	11.6
NRC	1.5	3.6	1.1	6.8	1.1	8.8	0.1	9.7	-0.8	5.5	4.2	8.5	1.4	8.9	1.7	5.0	1.7	11.6	-1.3	11.4
KRISS	-1.9	4.5	-2.3	7.3	-2.3	9.2	-3.3	10.1	-4.2	6.0	0.8	8.8	-2.0	9.3	-1.7	5.6	-1.7	11.7	-4.7	11.4
NMIJ	-2.1	5.5	-2.5	7.9	-2.5	9.7	-3.5	10.5	-4.4	6.9	0.6	9.4	-2.2	9.8	-1.9	6.5	-1.9	11.8	-4.9	11.5
VNIIM	-1.7	5.1	-2.1	7.6	-2.1	9.4	-3.1	10.3	-4.0	6.4	1.0	9.1	-1.8	9.6	-1.5	6.1	-1.5	11.8	-4.5	11.5
NIST	1.1	3.8	0.7	6.8	0.7	8.8	-0.3	9.8	-1.2	5.5	3.8	8.5	1.0	8.9	1.3	5.0	1.3	11.6	-1.7	11.4
NMI-VSL	-0.5	4.3	-0.8	7.2	-0.8	9.1	-1.8	10.0	-2.7	5.8	2.3	8.7	-0.5	9.2	-0.2	5.4	-0.2	11.7	-3.2	11.4
NIM	1.8	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NPLI	3.7	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INMETRO	1.1	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GUM	-1.3	7.8	-1.7	9.3	-1.7	10.8	-2.7	11.5	-	-	-	-	-	-	-	-	-	-	-	-
DPLA	-0.1	2.9	-0.5	6.0	-0.5	8.1	-1.5	9.1	-	-	-	-	-	-	-	-	-	-	-	-
INRIM	-2.1	4.6	-2.5	6.9	-2.5	8.8	-3.5	9.7	-	-	-	-	-	-	-	-	-	-	-	-
SP	0.1	7.9	-0.2	9.4	-0.2	10.8	-1.2	11.6	-	-	-	-	-	-	-	-	-	-	-	-
INETI	-2.9	7.9	-3.2	9.4	-3.2	10.8	-4.2	11.6	-	-	-	-	-	-	-	-	-	-	-	-
UME	-1.6	6.7	-1.9	8.4	-1.9	10.0	-2.9	10.8	-	-	-	-	-	-	-	-	-	-	-	-
BEV	0.4	5.7			0.0	9.4	-1.0	10.3	-	-	-	-	-	-	-	-	-	-	-	-
CEM	0.4	8.0	0.0	9.4			-1.0	11.6	-	-	-	-	-	-	-	-	-	-	-	-
METAS	1.4	9.0	1.0	10.3	1.0	11.6			-	-	-	-	-	-	-	-	-	-	-	-
INETI	2.3	3.9	-	-	-	-	-	-	5.0	8.1	2.2	8.5	2.5	4.3	-	-	-	-	-	-
BEV	-2.7	7.5	-	-	-	-	-	-5.0	8.1			-2.8	10.7	-2.5	7.8	-	-	-	-	-
LNE	0.1	8.1	-	-	-	-	-	-2.2	8.5	2.8	10.7			0.3	8.3	-	-	-	-	-
NCM	-0.2	3.2	-	-	-	-	-	-2.5	4.3	2.5	7.8	-0.3	8.3			-	-	-	-	-
KIM-LIPI	-0.2	11.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-3.0	12.7
NPLI	2.8	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0	12.7			

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

**CCAUV.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2**  
**Charge sensitivity, SE accelerometer, frequency: 160 Hz**  
**Degrees of equivalence [  $D_i$  and its expanded uncertainty ( $k = 2$ ),  $U_i$  ]**



Lab j →

Lab i ↓

	$D_i$ $U_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		PTB		BNM-CESTA		CSIRO-NML		CMI		CSIR-NML		CENAM		NRC		KRISS	
	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$
PTB	-0.3	1.7			-1.6	5.8	-0.2	8.2	1.4	9.4	0.3	10.7	0.4	14.2	-1.2	6.1		
BNM-CESTA																		
CSIRO-NML	1.4	4.8	1.6	5.8					1.5	9.3	3.0	10.4	1.9	11.6	2.0	14.9	0.4	7.6
CMI	-0.2	7.5	0.2	8.2			-1.5	9.3			1.5	11.9	0.4	12.9	0.5	16.0	-1.1	9.6
CSIR-NML	-1.6	8.8	-1.4	9.4			-3.0	10.4	-1.5	11.9			-1.1	13.7	-1.0	16.6	-2.6	10.6
CENAM	-0.6	10.2	-0.3	10.7			-1.9	11.6	-0.4	12.9	1.1	13.7			0.1	17.4	-1.5	11.7
NRC	-0.7	13.8	-0.4	14.2			-2.0	14.9	-0.5	16.0	1.0	16.6	-0.1	17.4			-1.6	15.0
KRISS	0.9	5.2	1.2	6.1			-0.4	7.6	1.1	9.6	2.6	10.6	1.5	11.7	1.6	15.0		
NMIJ	-0.6	17.0	-0.3	17.3			-1.9	17.8	-0.4	18.8	1.1	19.3	0.0	20.0	0.1	22.0	-1.5	18.0
VNIIM	13.8	9.1	14.0	9.3			12.4	10.3	13.9	11.8	15.4	12.7	14.3	13.6	14.4	16.5	12.8	10.5
NIST	-1.6	15.4	-1.4	15.7			-3.0	16.3	-1.5	17.3	0.0	17.9	-1.1	18.6	-1.0	20.8	-2.6	16.5
NMI-VSL	-0.8	48.8	-0.5	48.9			-2.1	49.1	-0.6	49.5	0.9	49.7	-0.3	50.0	-0.2	50.8	-1.7	49.2
NIM	-3.3	6.6	-3.1	7.0			-4.7	8.3	-3.2	10.1	-1.7	11.1	-2.8	12.2	-2.7	15.4	-4.3	8.6
NPLI	-50.6	12.5	-50.4	12.7			-52.0	13.5	-50.5	14.7	-49.0	15.4	-50.1	16.2	-50.0	18.7	-51.6	13.7
INMETRO	-2.7	13.0	-2.5	13.2			-4.1	13.9	-2.6	15.1	-1.1	15.8	-2.2	16.6	-2.1	19.0	-3.7	14.1
GUM	-1.8	8.1	-1.6	8.3			-3.2	9.5	-1.7	11.1	-0.2	12.0	-1.3	13.0	-1.2	16.0	-2.8	9.7
DPLA	-2.4	4.6	-2.2	4.9			-3.8	6.6	-2.3	8.8	-0.8	10.0	-1.9	11.2	-1.8	14.5	-3.4	7.0
INRIM	-3.8	7.6	-3.5	7.8			-5.2	9.0	-3.7	10.7	-2.2	11.7	-3.3	12.7	-3.2	15.8	-4.8	9.3
SP	4.1	17.1	4.4	17.1			2.7	17.7	4.2	18.6	5.7	19.2	4.6	19.9	4.7	21.9	3.1	17.8
INETI																		
UME	5.6	13.2	5.9	13.3			4.2	14.1	5.7	15.2	7.2	15.9	6.1	16.7	6.2	19.1	4.6	14.2
BEV	1.0	9.4	1.3	9.5			-0.4	10.5	1.1	12.0	2.6	12.9	1.5	13.8	1.6	16.7	0.1	10.7
CEM	0.0	9.4	0.3	9.5			-1.4	10.5	0.1	12.0	1.6	12.9	0.5	13.8	0.6	16.7	-0.9	10.7
METAS	-9.0	12.6	-8.7	12.7			-10.4	13.5	-8.9	14.7	-7.4	15.4	-8.5	16.2	-8.4	18.7	-10.0	13.6
INETI	2.7	9.2	2.9	9.5			1.3	10.5	2.8	12	4.3	12.9	3.2	13.8	3.3	16.7	1.7	10.8
BEV	-5.3	8.9	-5.1	9.3			-6.7	10.3	-5.2	11.8	-3.7	12.7	-4.8	13.6	-4.7	16.6	-6.3	10.6
LNE	-5.2	8.2	-5.0	8.6			-6.6	9.7	-5.1	11.3	-3.6	12.2	-4.7	13.2	-4.6	16.2	-6.2	10
NCM	-0.2	7.0	0.0	7.5			-1.6	8.7	-0.1	10.5	1.4	11.4	0.3	12.5	0.4	15.6	-1.2	9
KIM-LIPI	11.1	14.1	11.3	14.1			9.7	14.3	11.2	14.5	12.7	14.7	11.6	14.9	11.7	15.7	10.1	14.3
NPLI	12.9	18.3	13.1	18.4			11.5	18.5	13.0	18.7	14.5	18.9	13.4	19.0	13.5	19.6	11.9	18.5

BNM-CESTA was a participant in the CIPM MRA at the time of CCAUV.V-K1 and EUROMET.AUV.V-K1 comparisons.

Laboratory results at this frequency excluded from the calculation of the reference value  
 No data

Lab <i>i</i> ↓			Lab <i>j</i> →													
	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	NMIJ		VNIIM		NIST		NMI-VSL		NIM		NPLI		INMETRO	
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>	<i>D<sub>ij</sub></i>	<i>U<sub>ij</sub></i>
			/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>	
PTB	-0.3	1.7	0.3	17.3	-14.0	9.3	1.4	15.7	0.5	48.9	3.1	7.0	50.4	12.7	2.5	13.2
BNM-CESTA											-	-	-	-	-	-
CSIRO-NML	1.4	4.8	1.9	17.8	-12.4	10.3	3.0	16.3	2.1	49.1	4.7	8.3	52.0	13.5	4.1	13.9
CMI	-0.2	7.5	0.4	18.8	-13.9	11.8	1.5	17.3	0.6	49.5	3.2	10.1	50.5	14.7	2.6	15.1
CSIR-NML	-1.6	8.8	-1.1	19.3	-15.4	12.7	0.0	17.9	-0.9	49.7	1.7	11.1	49.0	15.4	1.1	15.8
CENAM	-0.6	10.2	0.0	20.0	-14.3	13.6	1.1	18.6	0.3	50.0	2.8	12.2	50.1	16.2	2.2	16.6
NRC	-0.7	13.8	-0.1	22.0	-14.4	16.5	1.0	20.8	0.2	50.8	2.7	15.4	50.0	18.7	2.1	19.0
KRISS	0.9	5.2	1.5	18.0	-12.8	10.5	2.6	16.5	1.7	49.2	4.3	8.6	51.6	13.7	3.7	14.1
NMIJ	-0.6	17.0			-14.3	19.2	1.1	23.1	0.3	51.8	2.8	18.3	50.1	21.1	2.2	21.4
VNIIM	13.8	9.1	14.3	19.2			15.4	17.9	14.5	49.7	17.1	11.0	64.4	15.3	16.5	15.7
NIST	-1.6	15.4	-1.1	23.1	-15.4	17.9			-0.9	51.3	1.7	16.8	49.0	19.9	1.1	20.2
NMI-VSL	-0.8	48.8	-0.3	51.8	-14.5	49.7	0.9	51.3			2.6	49.3	49.9	50.4	2.0	50.6
NIM	-3.3	6.6	-2.8	18.3	-17.1	11.0	-1.7	16.8	-2.6	49.3			47.1	13.9	-0.6	14.4
NPLI	-50.6	12.5	-50.1	21.1	-64.4	15.3	-49.0	19.9	-49.9	50.4	-47.1	13.9			-47.7	17.8
INMETRO	-2.7	13.0	-2.2	21.4	-16.5	15.7	-1.1	20.2	-2.0	50.6	0.6	14.4	47.7	17.8		
GUM	-1.8	8.1	-1.3	18.8	-15.6	11.9	-0.2	17.4	-1.1	49.5	-	-	-	-	-	-
DPLA	-2.4	4.6	-1.9	17.6	-16.2	9.8	-0.8	16.1	-1.7	49.0	-	-	-	-	-	-
INRIM	-3.8	7.6	-3.3	18.6	-17.6	11.6	-2.2	17.2	-3.1	49.4	-	-	-	-	-	-
SP	4.1	17.1	4.6	24.1	-9.7	19.1	5.7	23.0	4.9	51.7	-	-	-	-	-	-
INETI											-	-	-	-	-	-
UME	5.6	13.2	6.1	21.5	-8.2	15.8	7.2	20.3	6.3	50.6	-	-	-	-	-	-
BEV	1.0	9.4	1.5	19.4	-12.8	12.8	2.6	18.0	1.8	49.7	-	-	-	-	-	-
CEM	0.0	9.4	0.5	19.4	-13.8	12.8	1.6	18.0	0.8	49.7	-	-	-	-	-	-
METAS	-9.0	12.6	-8.5	21.1	-22.8	15.3	-7.4	19.9	-8.3	50.4	-	-	-	-	-	-
INETI	2.7	9.2	3.2	19.4	-11.1	12.8	4.3	18	3.4	49.7	-	-	-	-	-	-
BEV	-5.3	8.9	-4.8	19.2	-19.1	12.6	-3.7	17.9	-4.6	49.7	-	-	-	-	-	-
LNE	-5.2	8.2	-4.7	18.9	-19	12.1	-3.6	17.5	-4.5	49.6	-	-	-	-	-	-
NCM	-0.2	7.0	0.3	18.5	-14	11.3	1.4	17	0.5	49.4	-	-	-	-	-	-
KIM-LIPI	11.1	14.1	11.6	16.4	-2.7	14.7	12.7	16.0	11.8	28.2	-	-	-	-	-	-
NPLI	12.9	18.3	13.4	20.2	-0.9	18.8	14.5	19.9	13.6	30.5	-	-	-	-	-	-

Transfer standard : Back-to-back (BB) accelerometer type 8305

Lab j →

Lab i ↓

	$D_i$ $U_i$ / pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		GUM		DPLA		INRIM		SP		INETI		UME	
	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$
PTB	-0.3	1.7	1.6	8.3	2.2	4.9	3.5	7.8	-4.4	17.1			-5.9	13.3
BNM-CESTA														
CSIRO-NML	1.4	4.8	3.2	9.5	3.8	6.6	5.2	9.0	-2.7	17.7			-4.2	14.1
CMI	-0.2	7.5	1.7	11.1	2.3	8.8	3.7	10.7	-4.2	18.6			-5.7	15.2
CSIR-NML	-1.6	8.8	0.2	12.0	0.8	10.0	2.2	11.7	-5.7	19.2			-7.2	15.9
CENAM	-0.6	10.2	1.3	13.0	1.9	11.2	3.3	12.7	-4.6	19.9			-6.1	16.7
NRC	-0.7	13.8	1.2	16.0	1.8	14.5	3.2	15.8	-4.7	21.9			-6.2	19.1
KRISS	0.9	5.2	2.8	9.7	3.4	7.0	4.8	9.3	-3.1	17.8			-4.6	14.2
NMIJ	-0.6	17.0	1.3	18.8	1.9	17.6	3.3	18.6	-4.6	24.1			-6.1	21.5
VNIM	13.8	9.1	15.6	11.9	16.2	9.8	17.6	11.6	9.7	19.1			8.2	15.8
NIST	-1.6	15.4	0.2	17.4	0.8	16.1	2.2	17.2	-5.7	23.0			-7.2	20.3
NMi-VSL	-0.8	48.8	1.1	49.5	1.7	49.0	3.1	49.4	-4.9	51.7			-6.3	50.6
NIM	-3.3	6.6	-	-	-	-	-	-	-	-	-	-	-	-
NPLI	-50.6	12.5	-	-	-	-	-	-	-	-	-	-	-	-
INMETRO	-2.7	13.0	-	-	-	-	-	-	-	-	-	-	-	-
GUM	-1.8	8.1			0.6	8.7	2.0	10.7	-6.0	18.8			-7.5	15.3
DPLA	-2.4	4.6	-0.6	8.7			1.4	8.3	-6.6	17.5			-8.1	13.7
INRIM	-3.8	7.6	-2.0	10.7	-1.4	8.3			-8.0	18.6			-9.5	15.0
SP	4.1	17.1	6.0	18.8	6.6	17.5	8.0	18.6					-1.5	21.5
INETI														
UME	5.6	13.2	7.5	15.3	8.1	13.7	9.5	15.0	1.5	21.5				
BEV	1.0	9.4	2.1	12.2	2.7	10.1	4.1	11.9	-3.9	19.4			-5.4	16.1
CEM	0.0	9.4	1.1	12.2	1.7	10.1	3.1	11.8	-4.9	19.4			-6.4	16.1
METAS	-9.0	12.6	-8.0	14.8	-7.4	13.2	-6.0	14.6	-14.0	21.2			-15.5	18.2
INETI	2.7	9.2	-	-	-	-	-	-	-	-	-	-	-	-
BEV	-5.3	8.9	-	-	-	-	-	-	-	-	-	-	-	-
LNE	-5.2	8.2	-	-	-	-	-	-	-	-	-	-	-	-
NCM	-0.2	7.0	-	-	-	-	-	-	-	-	-	-	-	-
KIM-LIPI	11.1	14.1	-	-	-	-	-	-	-	-	-	-	-	-
NPLI	12.9	18.3	-	-	-	-	-	-	-	-	-	-	-	-

Lab j →

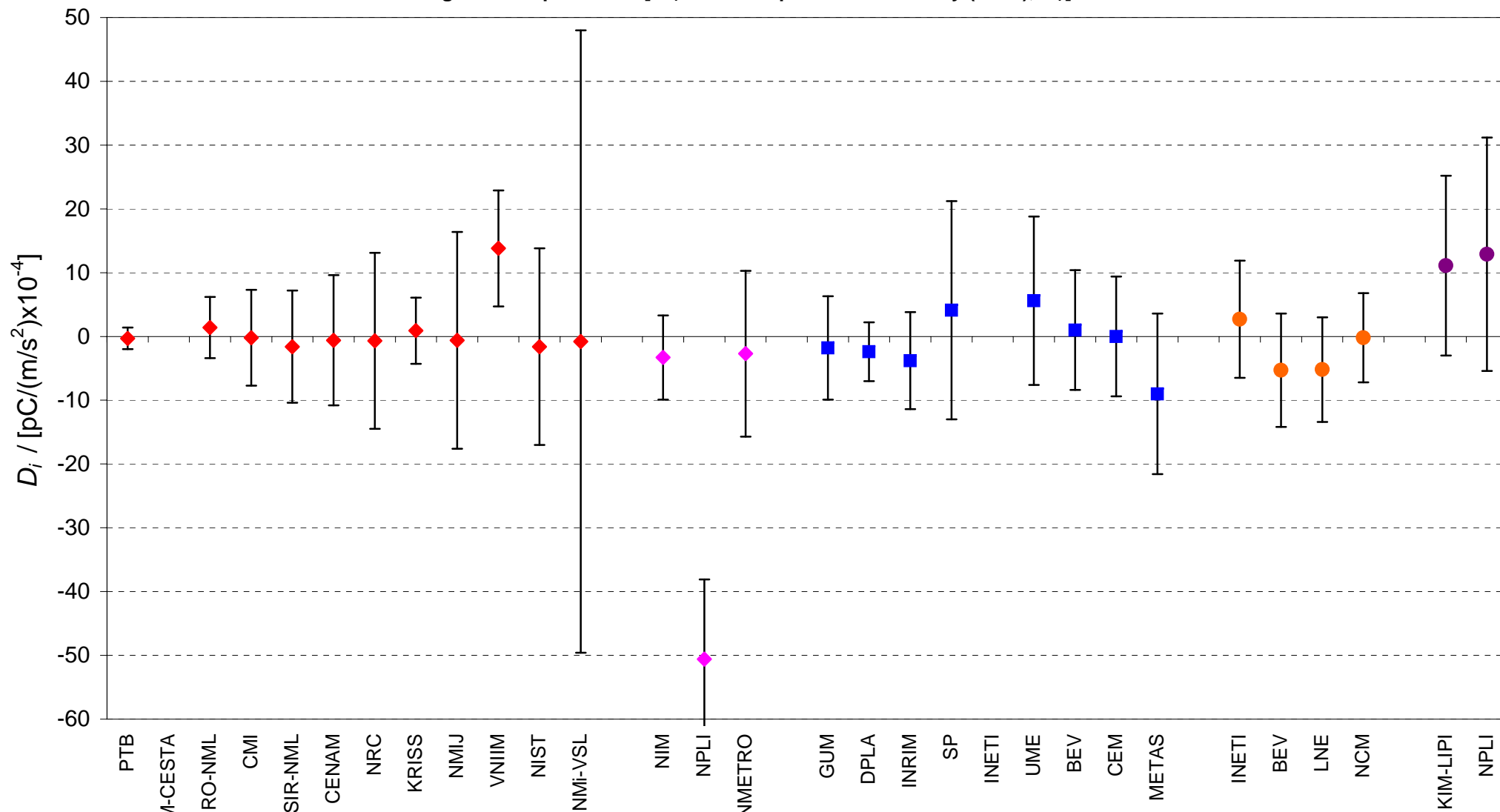
Lab i ↓

	$D_i$ $U_i$		BEV		CEM		METAS		INETI		BEV		LNE		NCM		KIM-LIPI		NPLI	
	/ pC/(m/s <sup>2</sup> )x10 <sup>-4</sup>		$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$	$D_{ij}$	$U_{ij}$
PTB	-0.3	1.7	-1.3	9.5	-0.3	9.5	8.7	12.7	-2.9	9.5	5.1	9.3	5	8.6	0	7.5	-11.3	14.1	-13.1	18.4
BNM-CESTA																				
CSIRO-NML	1.4	4.8	0.4	10.5	1.4	10.5	10.4	13.5	-1.3	10.5	6.7	10.3	6.6	9.7	1.6	8.7	-9.7	14.3	-11.5	18.5
CMI	-0.2	7.5	-1.1	12.0	-0.1	12.0	8.9	14.7	-2.8	12	5.2	11.8	5.1	11.3	0.1	10.5	-11.2	14.5	-13.0	18.7
CSIR-NML	-1.6	8.8	-2.6	12.9	-1.6	12.9	7.4	15.4	-4.3	12.9	3.7	12.7	3.6	12.2	-1.4	11.4	-12.7	14.7	-14.5	18.9
CENAM	-0.6	10.2	-1.5	13.8	-0.5	13.8	8.5	16.2	-3.2	13.8	4.8	13.6	4.7	13.2	-0.3	12.5	-11.6	14.9	-13.4	19.0
NRC	-0.7	13.8	-1.6	16.7	-0.6	16.7	8.4	18.7	-3.3	16.7	4.7	16.6	4.6	16.2	-0.4	15.6	-11.7	15.7	-13.5	19.6
KRISS	0.9	5.2	-0.1	10.7	0.9	10.7	10.0	13.6	-1.7	10.8	6.3	10.6	6.2	10	1.2	9	-10.1	14.3	-11.9	18.5
NMIJ	-0.6	17.0	-1.5	19.4	-0.5	19.4	8.5	21.1	-3.2	19.4	4.8	19.2	4.7	18.9	-0.3	18.5	-11.6	16.4	-13.4	20.2
VNIIM	13.8	9.1	12.8	12.8	13.8	12.8	22.8	15.3	11.1	12.8	19.1	12.6	19	12.1	14	11.3	2.7	14.7	0.9	18.8
NIST	-1.6	15.4	-2.6	18.0	-1.6	18.0	7.4	19.9	-4.3	18	3.7	17.9	3.6	17.5	-1.4	17	-12.7	16.0	-14.5	19.9
NMi-VSL	-0.8	48.8	-1.8	49.7	-0.8	49.7	8.3	50.4	-3.4	49.7	4.6	49.7	4.5	49.6	-0.5	49.4	-11.8	28.2	-13.6	30.5
NIM	-3.3	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NPLI	-50.6	12.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INMETRO	-2.7	13.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GUM	-1.8	8.1	-2.1	12.2	-1.1	12.2	8.0	14.8	-	-	-	-	-	-	-	-	-	-	-	-
DPLA	-2.4	4.6	-2.7	10.1	-1.7	10.1	7.4	13.2	-	-	-	-	-	-	-	-	-	-	-	-
INRIM	-3.8	7.6	-4.1	11.9	-3.1	11.8	6.0	14.6	-	-	-	-	-	-	-	-	-	-	-	-
SP	4.1	17.1	3.9	19.4	4.9	19.4	14.0	21.2	-	-	-	-	-	-	-	-	-	-	-	-
INETI									-	-	-	-	-	-	-	-	-	-	-	-
UME	5.6	13.2	5.4	16.1	6.4	16.1	15.5	18.2	-	-	-	-	-	-	-	-	-	-	-	-
BEV	1.0	9.4			1.0	12.0	10.0	14.7	-	-	-	-	-	-	-	-	-	-	-	-
CEM	0.0	9.4	-1.0	12.0			9.0	14.7	-	-	-	-	-	-	-	-	-	-	-	-
METAS	-9.0	12.6	-10.0	14.7	-9.0	14.7			-	-	-	-	-	-	-	-	-	-	-	-
INETI	2.7	9.2	-	-	-	-	-	-		8.0	12.1	7.9	11.6	2.9	10.8	-	-	-	-	-
BEV	-5.3	8.9	-	-	-	-	-	-	-8.0	12.1		-0.1	11.4	-5.1	10.6	-	-	-	-	-
LNE	-5.2	8.2	-	-	-	-	-	-	-7.9	11.6	0.1	11.4		-5.0	10.0	-	-	-	-	-
NCM	-0.2	7.0	-	-	-	-	-	-	-2.9	10.8	5.1	10.6	5.0	10.0		-	-	-	-	-
KIM-LIPI	11.1	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-1.9	19.0
NPLI	12.9	18.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	19.0		

CCAUV.V-K1, CCAUV.V-K1.1, EUROMET.AUV.V-K1, EUROMET.AUV.V-K1.1, and APMP.AUV.V-K1.2

Charge sensitivity, BB accelerometer, frequency: 5000 Hz

Degrees of equivalence [  $D_i$  and its expanded uncertainty ( $k = 2$ ),  $U_i$  ]



**Red diamonds:** participants in CCAUV.V-K1  
**Pink diamonds:** participants in CCAUV.V-K1.1 only  
**Blue squares:** participants in EUROMET.AUV.V-K1 only  
**Orange circles:** participants in EUROMET.AUV.V-K1.1 only  
**Purple circles:** participants in APMP.AUV.V-K1.2 only

# CCAUV.V-K1 Charge sensitivity

Key comparison reference values,  $x_R$ , versus frequency, and standard uncertainty  $u_R$

