

## Key comparison CCAUV.V-K3, APMP.AUV.V-K3, AFRIMETS.AUV.V-K3 and EURAMET.AUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

### CCAUV.V-K3

MEASURAND : Acceleration complex sensitivity: magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.6 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The laboratory individual measurements,  $x_i$ , and uncertainties,  $u_i$ , may be found in Section 7.1 and 7.2 (pp. 12 to 15) of the CCAUV.V-K3 Final Report.

### APMP.AUV.V-K3

MEASURAND : Acceleration complex sensitivity: magnitude

FREQUENCIES : 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.6 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The laboratory individual measurements,  $x_i$ , and uncertainties,  $u_i$ , may be found in Section 7 of the APMP.AUV.V-K3 Final Report.

### AFRIMETS.AUV.V-K3

MEASURAND : Acceleration complex sensitivity: magnitude

FREQUENCIES : 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.6 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The laboratory individual measurements,  $x_i$ , and uncertainties,  $u_i$ , may be found in Section 9 of the AFRIMETS.AUV.V-K3 Final Report.

### EURAMET.AUV.V-K3

MEASURAND : Acceleration complex sensitivity: magnitude

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.6 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The laboratory individual measurements,  $x_i$ , and uncertainties,  $u_i$ , may be found in Section of the EURAMET.AUV.V-K3 Final Report.

## Key comparison CCAUV.V-K3, APMP.AUV.V-K3, AFRIMETS.AUV.V-K3 and EURAMET.AUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

CCAUV.V-K3

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### MAGNITUDE

The computation of the key comparison reference value for magnitude,  $x_{R,M}$ , and of its expanded uncertainty ( $k = 2$ ),  $U_{R,M}$ , is explained in Section 8 of the Final Report and is based on a weighted mean.

<b>0.1 Hz</b>		<b>0.125 Hz</b>		<b>0.16 Hz</b>		<b>0.2 Hz</b>	
$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$
mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
136.75	0.15	136.71	0.15	136.69	0.15	136.72	0.12
<b>0.25 Hz</b>		<b>0.315 Hz</b>		<b>0.4 Hz</b>		<b>0.5 Hz</b>	
$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$
mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
136.68	0.12	136.66	0.12	136.64	0.10	136.58	0.08
<b>0.63 Hz</b>		<b>0.8 Hz</b>		<b>1 Hz</b>		<b>1.25 Hz</b>	
$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$
mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
136.56	0.08	136.55	0.08	136.54	0.08	136.54	0.08
<b>1.6 Hz</b>		<b>2 Hz</b>		<b>2.5 Hz</b>		<b>3.15 Hz</b>	
$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$
mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
136.54	0.08	136.54	0.08	136.55	0.08	136.55	0.08

## Key comparison CCAUV.V-K3, APMP.AUV.V-K3, AFRIMETS.AUV.V-K3 and EURAMET.AUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

CCAUV.V-K3

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

MAGNITUDE (continued)

The computation of the key comparison reference value for magnitude,  $x_{R,M}$ , and of its expanded uncertainty ( $k = 2$ ),  $U_{R,M}$ , is explained in Section 8 of the Final Report and is based on a weighted mean.

<b>4 Hz</b>		<b>5 Hz</b>		<b>6.3 Hz</b>		<b>8 Hz</b>	
$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$
mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
136.57	0.08	136.59	0.08	136.62	0.08	136.61	0.08
<b>10 Hz</b>		<b>12.5 Hz</b>		<b>16 Hz</b>		<b>20 Hz</b>	
$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$
mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
136.63	0.07	136.71	0.07	136.82	0.07	137.06	0.08
<b>25 Hz</b>		<b>31.5 Hz</b>		<b>40 Hz</b>			
$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$	$x_{R,M}$	$U_{R,M}$		
mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )			
137.36	0.08	137.77	0.07	138.47	0.07		

## Key comparison CCAUV.V-K3, APMP.AUV.V-K3, AFRIMETS.AUV.V-K3 and EURAMET.AUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

The degree of equivalence of laboratory  $i$  with respect to the key comparison reference value is given by a pair of terms:  $D_i$  where  $D_i = x_i - x_{R,M}$ , and its expanded uncertainty  $U_i$  ( $k = 2$ ), computed as explained in Section 8 of the Final Report.

### Linking of APMP.AUV.V-K3 to CCAUV.V-K3

MEASURAND : Acceleration complex sensitivity: magnitude

FREQUENCIES : 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.6 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The linking was made via NIM, NMIA, NMISA, KRIS and NMIJ/AIST, having participated in both comparisons.

### Linking of AFRIMETS.AUV.V-K3 to CCAUV.V-K3

MEASURAND : Acceleration complex sensitivity: magnitude

FREQUENCIES : 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.6 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The linking was made via NMISA, having participated in both comparisons.

### Linking of EURAMET.AUV.V-K3 to CCAUV.V-K3

MEASURAND : Acceleration complex sensitivity: magnitude

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.160 Hz, 0.200 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.6 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The linking was made via BKSVDPLA, GUM, LNE, METAS and PTB, having participated in both comparisons.

Key comparison CCAUV.V-K3, APMP.AUV.V-K3, AFRIMETS.AUV.V-K3 and EURAMET.AUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

MAGNITUDE

Lab <i>i</i> ↓	0.1 Hz		0.125 Hz		0.16 Hz		0.2 Hz		0.25 Hz		0.315 Hz		0.4 Hz		0.5 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>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>
	mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
NIM	-0.62	0.66	-0.41	0.67	-0.27	0.67	-0.23	0.67	-0.15	0.68	-0.11	0.68	-0.07	0.26	0.05	0.26
LNE	-	-	-	-	-	-	-	-	-	-	-	-	0.20	0.40	0.10	0.40
PTB	-0.20	0.67	-0.12	0.67	-0.13	0.67	-0.15	0.39	-0.13	0.40	-0.12	0.40	-0.11	0.26	-0.13	0.26
BKSV-DPLA	0.34	0.67	0.13	0.67	0.06	0.67	0.00	0.53	-0.02	0.54	-0.01	0.54	-0.01	0.54	-0.03	0.54
GUM	-	-	-	-	-	-	1.31	1.24	0.88	1.23	0.58	1.23	0.40	0.68	0.27	0.68
METAS	-	-	-	-	-	-	-0.20	0.41	-0.10	0.41	-0.02	0.41	0.02	0.42	0.03	0.42
NMISA	4.21	0.86	2.53	0.84	1.64	0.84	0.99	0.82	0.63	0.82	0.37	0.82	0.22	0.82	0.00	0.40
INMETRO	-	-	-	-	-	-	0.12	0.32	0.07	0.33	0.03	0.33	-0.01	0.33	-0.03	0.33
CENAM	0.22	0.95	0.23	0.95	0.17	0.95	0.09	0.67	0.02	0.68	-0.03	0.68	-0.01	0.68	-0.21	0.40
NMIA	0.28	0.23	0.17	0.23	0.11	0.23	0.04	0.25	0.04	0.26	0.04	0.26	0.03	0.26	-0.01	0.26
NMIJ	-0.10	0.14	-0.06	0.14	-0.04	0.14	-0.07	0.17	-0.04	0.18	-0.02	0.18	-0.01	0.19	-0.04	0.19
KRISS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	0.11
A*STAR	-0.45	0.75	-0.16	0.69	0.02	0.68	0.05	0.53	0.07	0.54	0.07	0.54	0.05	0.36	0.05	0.36
NMISA	-	-	-	-	-	-	-	-	-	-	-	-	-0.08	0.21	-0.04	0.21
INMETRO	-	-	-	-	-	-	-	-	-	-	-	-	0.08	0.21	0.04	0.21
NIM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	0.22
NMIA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.09	0.21
NMISA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.28	0.37
KRISS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	0.66
CMS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59	3.71
NMIJ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.72	2.74
CMI	2.73	2.42	1.79	1.60	1.34	1.21	0.77	0.75	0.61	0.62	0.45	0.61	0.41	0.59	0.25	0.58
RISE	-	-	-	-	-	-	-	-	-	-	-1.24	2.45	-0.77	1.51	-0.49	1.10
INRiM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.33	0.58
CEM	-	-	-	-	-	-	-	-	-	-	-	-	0.02	0.72	-0.03	0.71
MIKES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## Key comparison CCAUV.V-K3, APMP.AUV.V-K3, AFRIMETS.AUV.V-K3 and EURAMET.AUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### MAGNITUDE (continued)

Lab <i>i</i> ↓	0.63 Hz		0.8 Hz		1 Hz		1.25 Hz		1.6 Hz		2 Hz		2.50 Hz		3.15 Hz	
	$D_i$ mV / (m/s <sup>2</sup> )	$U_i$ mV / (m/s <sup>2</sup> )	$D_i$ mV / (m/s <sup>2</sup> )	$U_i$ mV / (m/s <sup>2</sup> )	$D_i$ mV / (m/s <sup>2</sup> )	$U_i$ mV / (m/s <sup>2</sup> )	$D_i$ mV / (m/s <sup>2</sup> )	$U_i$ mV / (m/s <sup>2</sup> )	$D_i$ mV / (m/s <sup>2</sup> )	$U_i$ mV / (m/s <sup>2</sup> )	$D_i$ mV / (m/s <sup>2</sup> )	$U_i$ mV / (m/s <sup>2</sup> )	$D_i$ mV / (m/s <sup>2</sup> )	$U_i$ mV / (m/s <sup>2</sup> )	$D_i$ mV / (m/s <sup>2</sup> )	$U_i$ mV / (m/s <sup>2</sup> )
NIM	0.08	0.26	0.04	0.26	0.05	0.26	0.03	0.26	0.02	0.26	-0.02	0.26	0.02	0.26	0.03	0.26
LNE	0.12	0.40	0.04	0.40	0.02	0.40	0.05	0.40	0.05	0.40	0.04	0.40	0.03	0.40	0.03	0.40
PTB	-0.10	0.26	-0.08	0.26	-0.06	0.26	-0.06	0.26	-0.06	0.26	-0.05	0.26	-0.08	0.26	-0.08	0.26
BKSV-DPLA	0.01	0.54	0.01	0.54	-0.02	0.54	0.00	0.54	0.00	0.54	-0.01	0.54	-0.02	0.54	0.00	0.54
GUM	0.24	0.68	0.17	0.68	0.16	0.54	0.14	0.54	0.13	0.54	0.13	0.54	0.12	0.54	0.11	0.54
METAS	0.07	0.42	0.07	0.42	0.09	0.40	0.08	0.40	0.08	0.40	0.10	0.39	0.08	0.39	0.09	0.39
NMISA	-0.04	0.40	-0.06	0.40	-0.04	0.40	-0.03	0.40	-0.04	0.40	-0.03	0.40	-0.05	0.40	-0.06	0.40
INMETRO	0.00	0.33	-0.03	0.33	-0.03	0.33	-0.04	0.33	-0.05	0.33	-0.05	0.33	-0.05	0.33	-0.04	0.33
CENAM	-0.26	0.40	-0.26	0.40	-0.19	0.40	-0.15	0.40	-0.16	0.40	-0.12	0.40	-0.12	0.40	-0.10	0.40
NMIA	0.00	0.26	0.01	0.26	0.01	0.26	0.02	0.26	0.02	0.26	0.02	0.26	0.01	0.26	0.01	0.26
NMIJ	-0.02	0.19	-0.01	0.19	0.00	0.19	0.00	0.19	0.00	0.19	0.00	0.19	0.00	0.19	0.00	0.19
KRISS	0.01	0.11	0.01	0.11	0.01	0.11	0.01	0.11	0.00	0.11	0.01	0.11	0.00	0.11	0.02	0.11
A*STAR	0.11	0.36	0.06	0.36	0.04	0.39	0.06	0.39	0.05	0.39	0.06	0.39	0.06	0.40	0.07	0.40
NMISA	-0.07	0.21	-0.05	0.21	-0.01	0.21	-0.03	0.21	-0.04	0.21	-0.03	0.21	-0.03	0.21	-0.03	0.21
INMETRO	0.07	0.21	0.05	0.21	0.01	0.21	0.03	0.21	0.04	0.21	0.03	0.21	0.03	0.21	0.03	0.21
NIM	0.15	0.22	0.14	0.22	0.07	0.22	0.07	0.22	0.08	0.22	0.06	0.22	0.06	0.22	0.10	0.22
NMIA	-0.05	0.22	-0.05	0.22	-0.04	0.22	-0.03	0.22	-0.02	0.22	-0.06	0.22	-0.06	0.22	-0.02	0.22
NMISA	-0.25	0.37	-0.21	0.38	-0.08	0.37	-0.06	0.38	-0.04	0.38	-0.08	0.38	-0.07	0.38	-0.14	0.38
KRISS	0.12	0.66	0.04	0.38	0.06	0.66	0.01	0.38	0.03	0.52	0.10	0.38	0.06	0.38	-0.02	0.38
CMS	0.97	3.72	0.89	3.30	1.35	3.18	1.04	3.17	1.39	3.18	0.69	3.16	0.37	3.02	0.41	0.70
NMIJ	-0.21	1.08	-0.27	1.08	-0.18	1.22	-0.32	0.94	-0.27	0.66	-0.21	0.94	-	-	-	-
CMI	0.20	0.58	0.19	0.58	0.16	0.58	0.22	0.58	0.22	0.58	0.16	0.58	0.20	0.58	0.18	0.58
RISE	-0.26	0.71	-0.14	0.58	-0.11	0.45	-0.08	0.45	-0.06	0.45	-0.03	0.45	0.04	0.45	0.01	0.45
INRiM	-	-	-0.44	0.58	-0.57	0.57	-0.44	0.57	-0.30	0.57	-0.22	0.58	-0.21	0.57	-0.21	0.57
CEM	-0.02	0.72	0.00	0.71	-0.03	0.71	-0.03	0.71	-0.03	0.71	-0.03	0.71	-0.02	0.71	-0.02	0.71
MIKES	-	-	-	-	-0.11	0.71	-0.08	0.71	-0.08	0.71	-0.11	0.71	-0.07	0.71	0.01	0.71

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DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

MAGNITUDE (continued)

Lab <i>i</i> ↓	4 Hz		5 Hz		6.3 Hz		8 Hz		10 Hz		12.5 Hz		16 Hz		20 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>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>
	mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
NIM	0.01	0.26	-0.03	0.26	-0.02	0.26	0.02	0.26	0.06	0.26	0.07	0.26	0.16	0.26	-0.15	0.26
LNE	0.03	0.40	0.01	0.40	0.00	0.40	0.03	0.40	0.06	0.40	0.05	0.40	0.08	0.40	0.04	0.40
PTB	-0.09	0.26	-0.12	0.26	-0.13	0.26	-0.08	0.26	-0.07	0.12	-0.07	0.12	-0.02	0.12	-0.02	0.11
BKSV-DPLA	-0.02	0.54	-0.02	0.54	-0.04	0.54	0.01	0.54	0.04	0.54	0.04	0.54	0.07	0.54	0.04	0.54
GUM	0.10	0.54	0.11	0.40	0.10	0.40	0.15	0.40	0.20	0.40	0.14	0.40	0.18	0.40	0.14	0.40
METAS	0.09	0.39	0.07	0.32	0.04	0.32	0.10	0.32	0.14	0.50	0.08	0.50	0.12	0.50	0.06	0.50
NMISA	-0.03	0.40	-0.07	0.40	-0.08	0.40	-0.02	0.40	0.02	0.40	0.04	0.40	0.05	0.40	0.07	0.40
INMETRO	-0.07	0.33	-0.09	0.33	-0.07	0.33	-0.09	0.33	-0.07	0.33	-0.06	0.33	-0.12	0.33	-0.09	0.33
CENAM	-0.09	0.40	-0.11	0.40	-0.10	0.40	-0.06	0.40	-0.02	0.40	-0.07	0.40	0.05	0.40	-0.03	0.40
NMIA	0.00	0.26	-0.01	0.26	-0.02	0.26	0.03	0.26	0.06	0.26	0.05	0.26	0.08	0.26	0.03	0.26
NMIJ	-0.01	0.19	-0.01	0.19	-0.03	0.19	0.01	0.19	0.04	0.19	0.04	0.19	0.07	0.19	0.03	0.19
KRISS	0.02	0.11	0.04	0.11	0.06	0.11	-0.03	0.11	-0.03	0.12	-0.01	0.12	-0.12	0.12	-0.35	0.16
A*STAR	0.07	0.40	0.09	0.42	0.08	0.42	0.12	0.42	0.13	0.45	0.13	0.43	0.14	0.47	0.09	0.47
NMISA	-0.02	0.21	-0.02	0.21	-0.01	0.21	0.01	0.21	0.02	0.21	0.02	0.21	0.03	0.21	0.05	0.21
INMETRO	0.02	0.21	0.02	0.21	0.01	0.21	-0.01	0.21	-0.02	0.21	-0.02	0.21	-0.03	0.21	-0.05	0.21
NIM	0.09	0.22	0.09	0.22	0.10	0.22	0.10	0.22	0.06	0.22	0.10	0.22	0.13	0.22	0.12	0.21
NMIA	-0.04	0.22	-0.05	0.22	-0.03	0.22	-0.04	0.22	0.03	0.22	-0.05	0.22	-0.04	0.22	-0.07	0.21
NMISA	-0.05	0.38	-0.07	0.38	-0.06	0.38	-0.08	0.37	-0.08	0.37	-0.06	0.37	-0.15	0.38	-0.10	0.37
KRISS	-0.04	0.38	-0.01	0.38	-0.09	0.38	-0.10	0.52	-0.18	0.52	-0.12	0.52	-0.04	0.38	-0.14	0.45
CMS	0.83	0.71	0.37	0.70	0.60	0.70	0.59	0.71	0.14	0.70	0.71	0.57	0.84	0.71	0.56	0.71
NMIJ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMI	0.16	0.58	0.15	0.57	0.17	0.57	0.22	0.57	0.25	0.56	0.25	0.56	0.24	0.56	0.26	0.56
RISE	0.02	0.45	0.02	0.45	0.04	0.45	0.03	0.45	0.11	0.43	0.14	0.43	0.10	0.43	0.10	0.43
INRiM	-0.28	0.57	-0.26	0.57	-0.26	0.57	-0.24	0.57	-0.19	0.56	-0.19	0.56	-0.14	0.56	-0.12	0.56
CEM	-0.03	0.71	-0.01	0.70	-0.02	0.70	0.01	0.70	0.06	0.69	0.03	0.69	0.05	0.69	0.04	0.70
MIKES	-0.03	0.71	-0.01	0.70	0.01	0.70	0.01	0.70	0.06	0.69	0.03	0.69	0.02	0.69	-0.01	0.70

## Key comparison CCAUV.V-K3, APMP.AUV.V-K3, AFRIMETS.AUV.V-K3 and EURAMET.AUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### MAGNITUDE (continued)

Lab <i>i</i>	25 Hz		31.5 Hz		40 Hz	
	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$
	mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )		mV / (m/s <sup>2</sup> )	
NIM	-0.10	0.26	0.05	0.27	0.09	0.27
LNE	0.01	0.40	0.06	0.41	0.02	0.41
PTB	0.01	0.11	0.11	0.12	0.16	0.12
BKSV-DPLA	-0.04	0.68	0.03	0.69	0.46	0.69
GUM	0.13	0.40	0.16	0.41	0.12	0.41
METAS	0.03	0.49	0.10	0.49	0.02	0.49
NMISA	0.07	0.40	0.09	0.41	0.12	0.41
INMETRO	-0.07	0.33	-0.08	0.34	-0.16	0.34
CENAM	-0.08	0.40	-0.06	0.41	-0.11	0.41
NMIA	0.02	0.36	0.06	0.27	0.02	0.27
NMIJ	0.02	0.19	0.00	0.27	0.00	0.27
KRISS	-0.38	0.16	-0.18	0.12	-0.22	0.12
A*STAR	0.07	0.42	0.11	0.42	0.12	0.40
NMISA	0.04	0.21	0.09	0.21	0.12	0.22
INMETRO	-0.04	0.21	-0.09	0.21	-0.12	0.21
CMI	0.31	0.56	0.34	0.57	0.25	0.57
RISE	0.09	0.43	0.10	0.43	0.03	0.43
INRiM	-0.15	0.56	-0.12	0.56	-0.11	0.57
CEM	0.04	0.70	0.04	0.70	0.03	0.70
MIKES	0.01	0.70	-0.01	0.70	-0.08	0.70



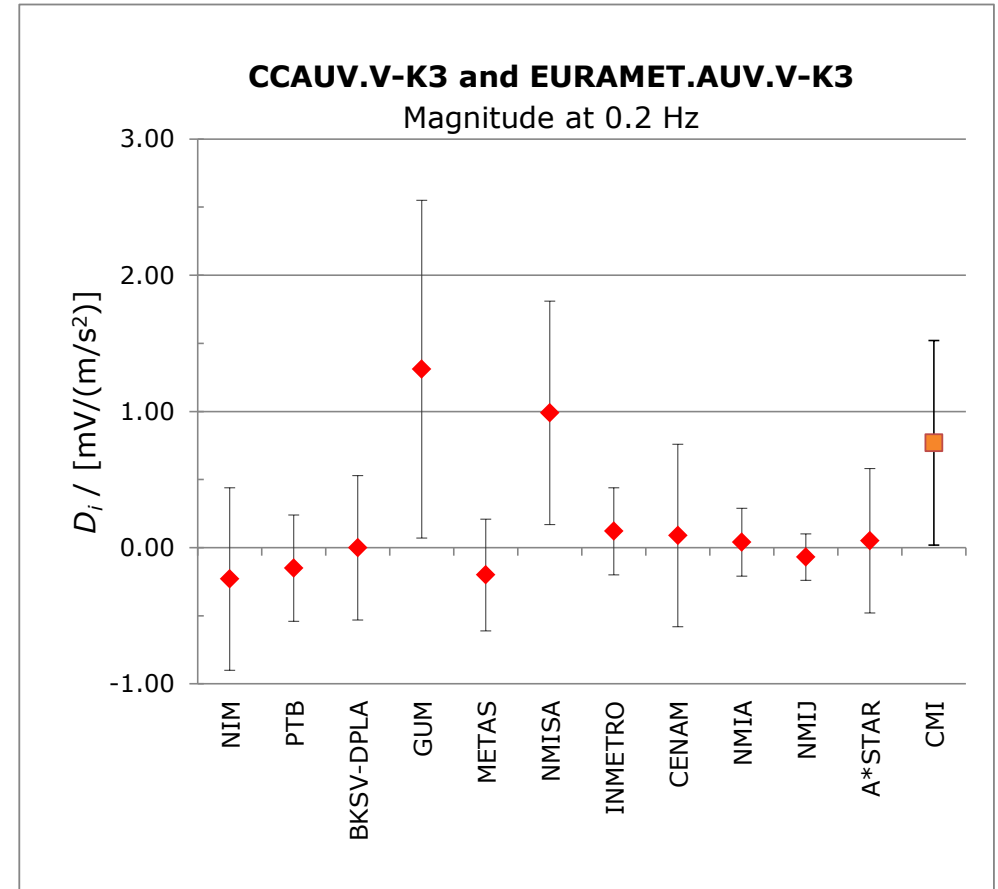
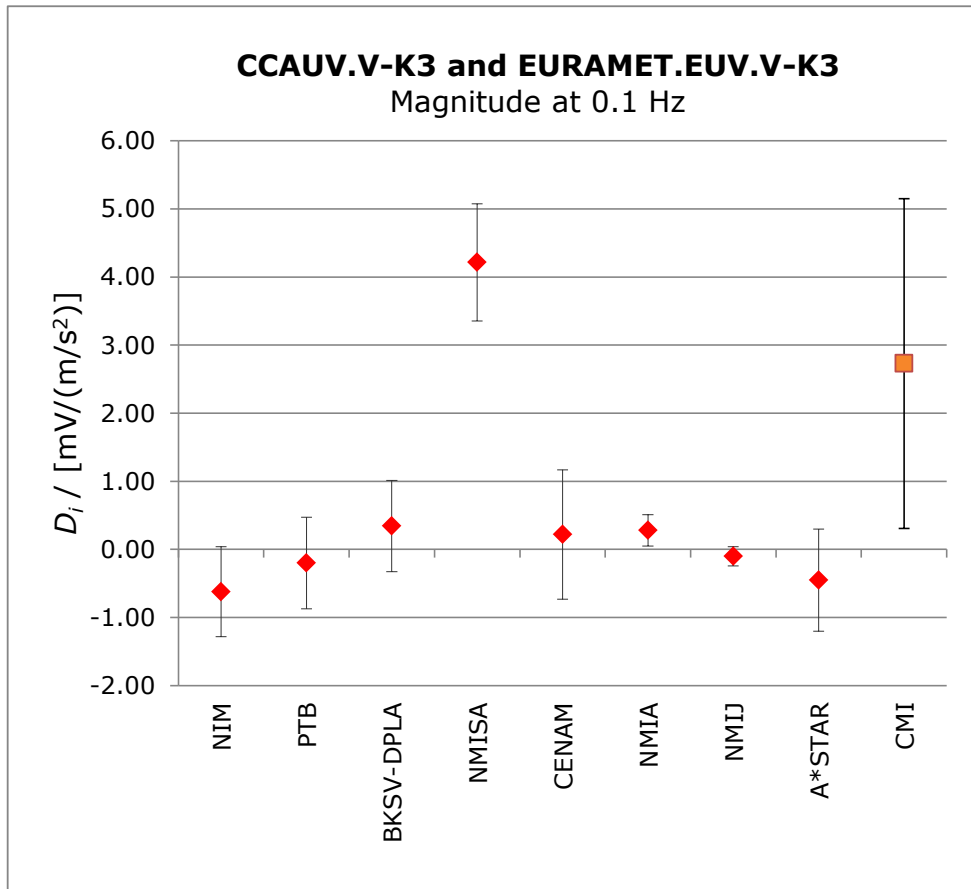
## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

MAGNITUDE *Graphs have been selected to illustrate results at 0.1 Hz, 0.2 Hz, 0.4 Hz, 0.8 Hz, 1.6 Hz, 6.3 Hz, 25 Hz and 40 Hz.*



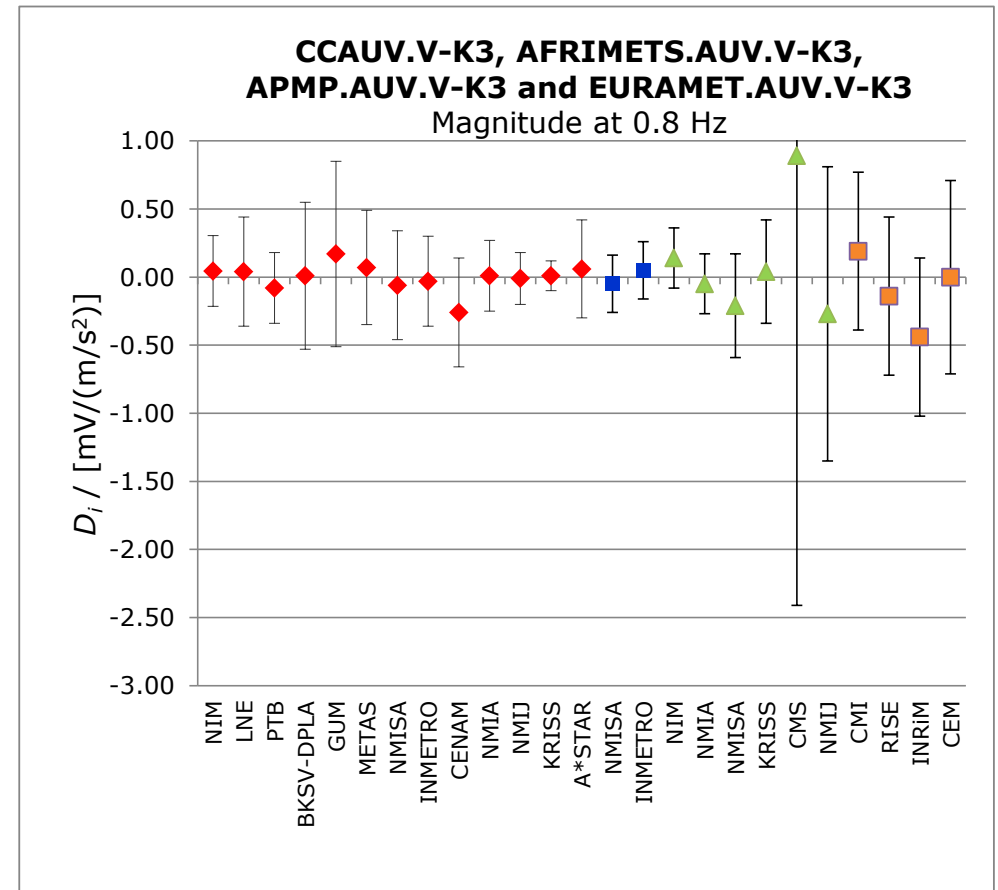
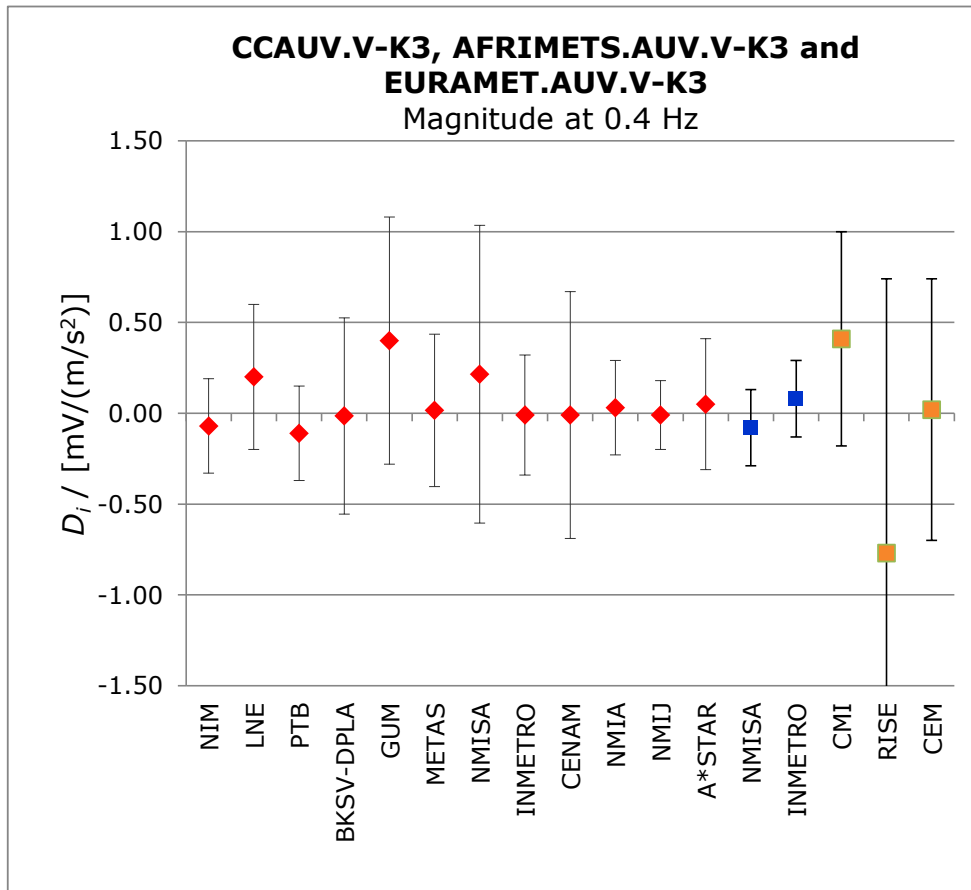
## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

MAGNITUDE *Graphs have been selected to illustrate results at 0.1 Hz, 0.2 Hz, 0.4 Hz, 0.8 Hz, 1.6 Hz, 6.3 Hz, 25 Hz and 40 Hz.*



## Key comparison CCAUV.V-K3

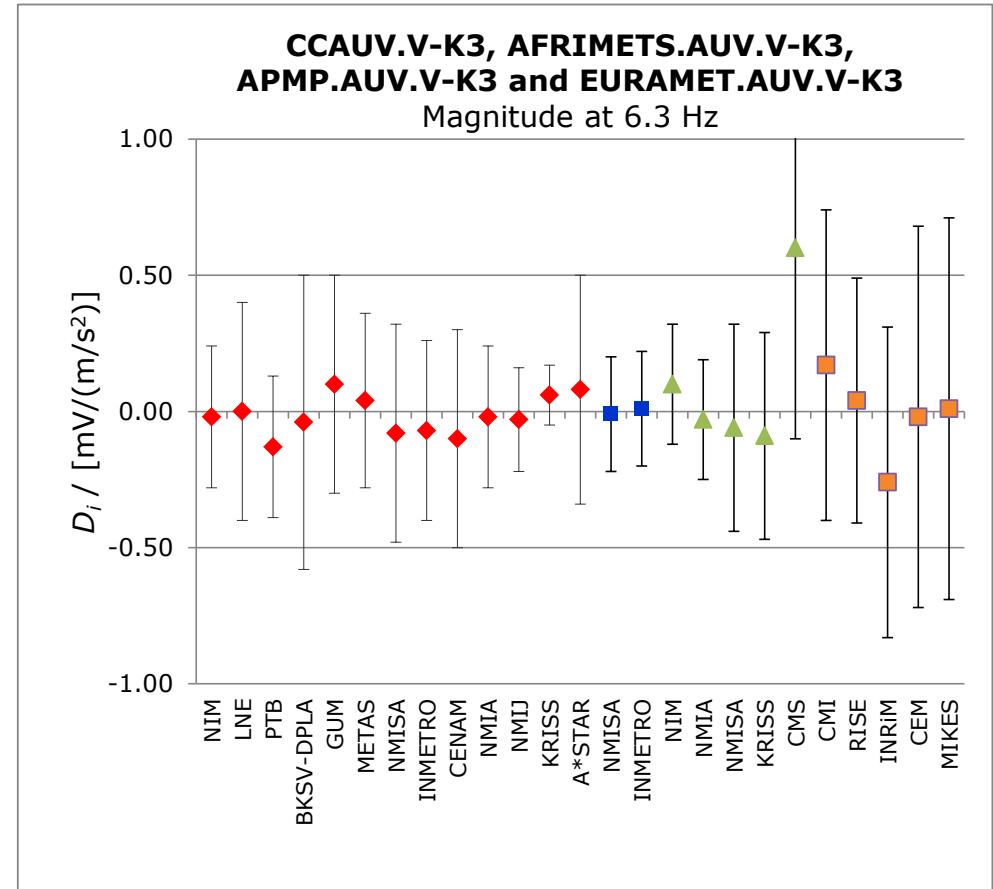
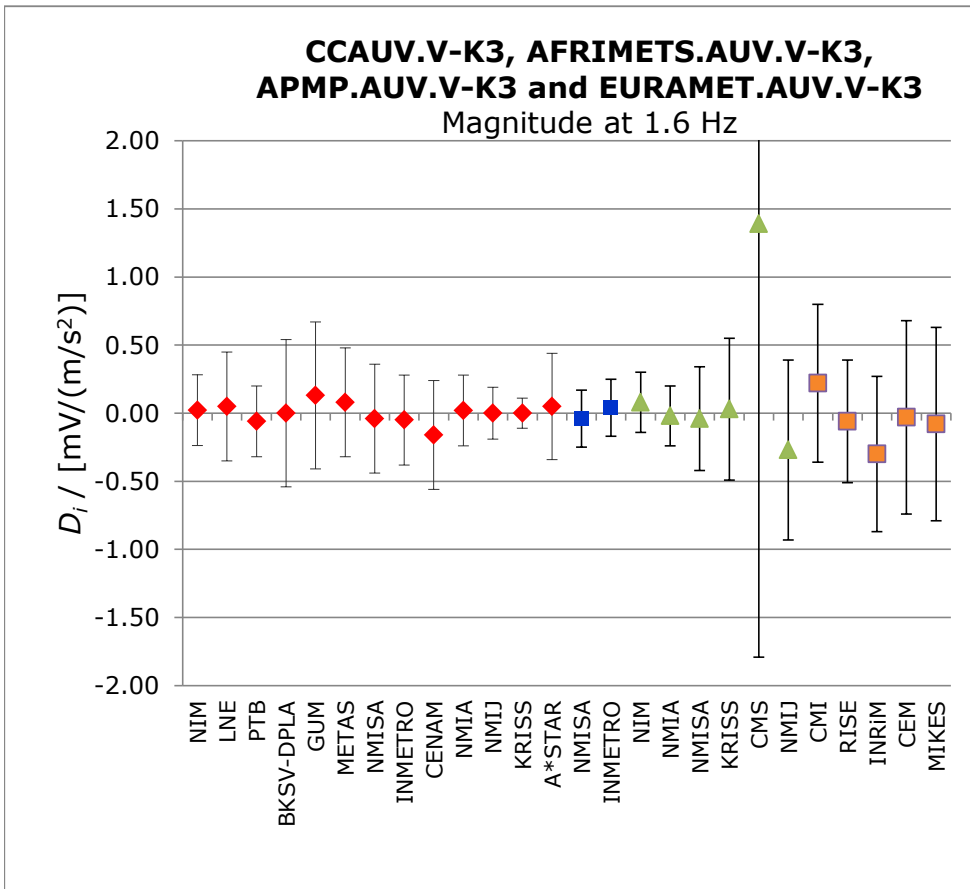
DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### MAGNITUDE

*Graphs have been selected to illustrate results at 0.1 Hz, 0.2 Hz, 0.4 Hz, 0.8 Hz, 1.6 Hz, 6.3 Hz, 25 Hz and 40 Hz.*



## Key comparison CCAUV.V-K3

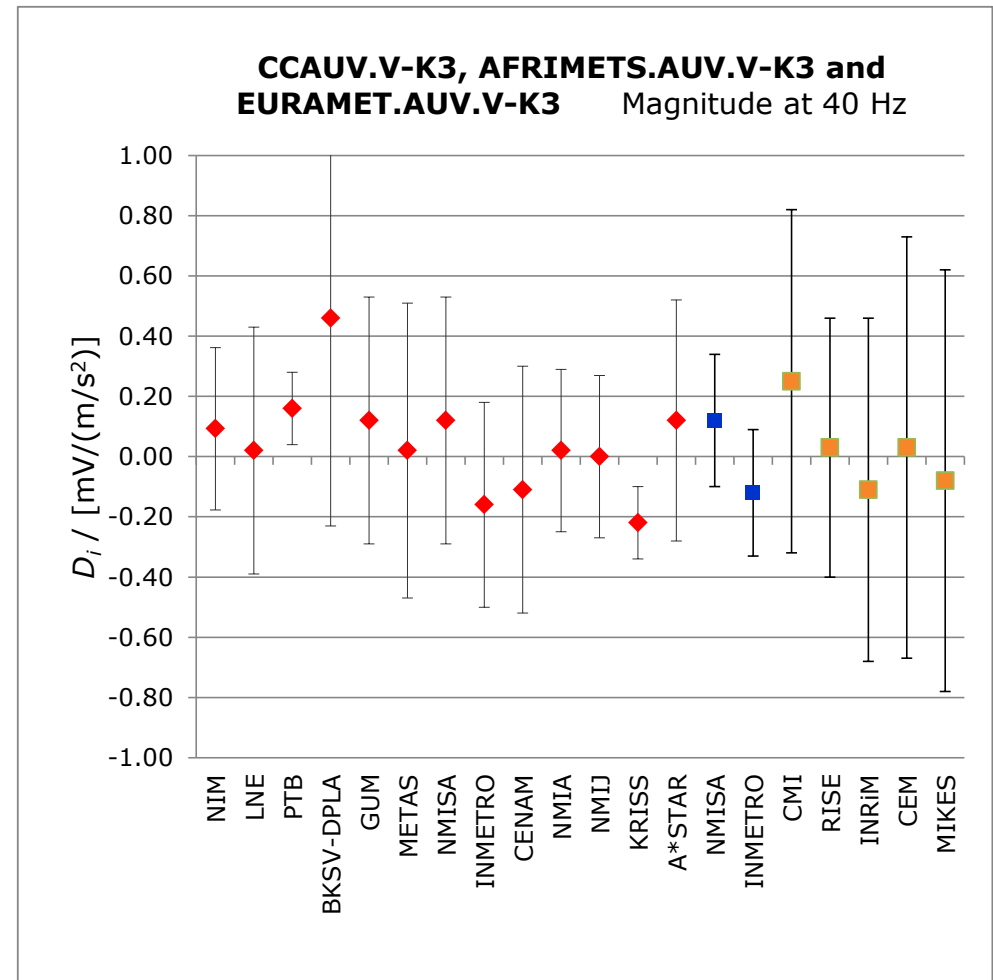
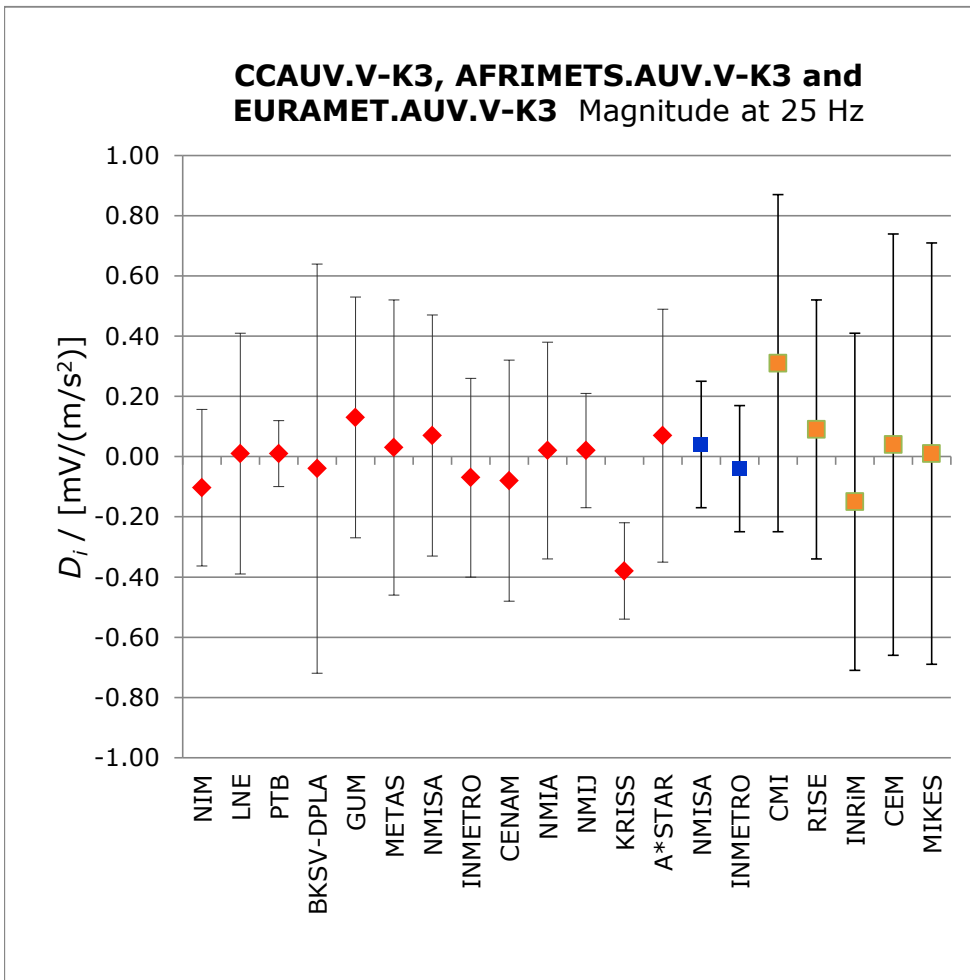
DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### MAGNITUDE

*Graphs have been selected to illustrate results at 0.1 Hz, 0.2 Hz, 0.4 Hz, 0.8 Hz, 1.6 Hz, 6.3 Hz, 25 Hz and 40 Hz.*



## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The laboratory individual measurements,  $x_i$ , and uncertainties,  $u_i$ , may be found in Section 7.1 and 7.2 (pp. 12 to 15) of the Final Report.

### PHASE

The computation of the key comparison reference value for phase,  $x_{R,P}$ , and of its expanded uncertainty ( $k = 2$ ),  $U_{R,P}$ , is explained in Section 8 of the Final Report and is based on a weighted mean.

<b>0.1 Hz</b>		<b>0.125 Hz</b>		<b>0.16 Hz</b>		<b>0.2 Hz</b>	
$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$
in °		in °		in °		in °	
-0.34	0.04	-0.42	0.04	-0.54	0.04	-0.67	0.04
<b>0.25 Hz</b>		<b>0.315 Hz</b>		<b>0.4 Hz</b>		<b>0.5 Hz</b>	
$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$
in °		in °		in °		in °	
-0.85	0.04	-1.07	0.04	-1.36	0.04	-0.03	0.04
<b>0.63 Hz</b>		<b>0.8 Hz</b>		<b>1 Hz</b>		<b>1.25 Hz</b>	
$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$
in °		in °		in °		in °	
-0.03	0.04	-0.04	0.04	-0.05	0.04	-0.07	0.04
<b>1.6 Hz</b>		<b>2 Hz</b>		<b>2.5 Hz</b>		<b>3.15 Hz</b>	
$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$
in °		in °		in °		in °	
-0.08	0.04	-0.09	0.04	-0.12	0.04	-0.15	0.04

## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

The laboratory individual measurements,  $x_i$ , and uncertainties,  $u_i$ , may be found in Section 7.1 and 7.2 (pp. 12 to 15) of the Final Report.

### PHASE (continued)

The computation of the key comparison reference value for phase,  $x_{R,P}$ , and of its expanded uncertainty ( $k = 2$ ),  $U_{R,P}$ , is explained in Section 8 of the Final Report and is based on a weighted mean.

4 Hz		5 Hz		6.3 Hz		8 Hz	
$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$
in °		in °		in °		in °	
-0.19	0.04	-0.19	0.04	-0.25	0.07	-0.31	0.07
10 Hz		12.5 Hz		16 Hz		20 Hz	
$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$
in °		in °		in °		in °	
-0.38	0.07	-0.48	0.07	-0.63	0.07	-0.80	0.07
25 Hz		31.5 Hz		40 Hz			
$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$	$x_{R,P}$	$U_{R,P}$		
in °		in °		in °			
-1.03	0.07	-1.37	0.07	-1.87	0.07		

The degree of equivalence of laboratory  $i$  with respect to the key comparison reference value is given by a pair of terms:  $D_i$  where  $D_i = x_i - x_{R,P}$ , and its expanded uncertainty  $U_i$  ( $k = 2$ ), computed as explained in Section 8 of the Final Report.

Pair-wise degrees of equivalence may be calculated taking into account possible correlations.

## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### PHASE

Lab <i>i</i>	0.1 Hz		0.125 Hz		0.16 Hz		0.2 Hz		0.25 Hz		0.315 Hz		0.4 Hz		0.5 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>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>
	in °		in °		in °		in °		in °		in °		in °		in °	
NIM	-0.01	0.19	-0.01	0.19	-0.01	0.19	-0.01	0.20	0.00	0.19	0.00	0.19	0.00	20.00	0.02	20.00
LNE	-	-	-	-	-	-	-	-	-	-	-	-	1.34	0.50	0.01	0.50
PTB	-0.06	0.19	-0.08	0.19	-0.10	0.19	-0.12	0.20	-0.08	0.19	-0.10	0.19	-0.12	0.20	-0.05	0.20
BKSV-DPLA	-0.04	0.30	-0.04	0.30	-0.01	0.30	-0.01	0.30	0.00	0.30	-0.02	0.30	0.00	0.30	0.01	0.30
GUM	-	-	-	-	-	-	-0.10	0.90	-0.09	0.90	-0.08	0.90	-0.06	0.50	-0.05	0.50
METAS	-	-	-	-	-	-	0.09	0.78	0.09	0.78	0.07	0.78	0.06	0.78	0.05	0.78
NMISA	-0.04	0.40	-0.02	0.40	-0.01	0.40	-0.01	0.40	0.00	0.40	0.00	0.40	0.02	0.40	0.01	0.40
INMETRO	-	-	-	-	-	-	-0.01	0.25	0.01	0.25	0.01	0.25	0.01	0.25	0.01	0.25
CENAM	0.06	0.19	0.17	0.19	0.19	0.19	0.25	0.20	0.17	0.50	0.24	0.50	0.30	0.50	-0.31	0.50
NMIA	-0.03	0.30	-0.01	0.30	0.00	0.30	-0.01	0.30	0.00	0.30	0.00	0.30	0.01	0.30	0.01	0.30
NMIJ	0.00	0.02	0.00	0.02	0.00	0.02	-0.01	0.02	0.00	0.02	0.00	0.02	0.01	0.02	0.01	0.02
KRISS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.02	0.09
A*STAR	0.10	0.87	0.11	0.86	-0.03	0.86	-0.02	0.51	0.01	0.51	-0.01	0.51	0.01	0.31	0.02	0.31

## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### PHASE (continued)

Lab <i>i</i>	0.63 Hz		0.8 Hz		1 Hz		1.25 Hz		1.6 Hz		2 Hz		2.50 Hz		3.15 Hz	
	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$
	in °		in °		in °		in °		in °		in °		in °		in °	
NIM	-0.01	0.20	0.05	0.20	0.02	0.20	0.02	0.20	0.02	0.20	0.01	0.20	0.02	0.20	0.03	0.20
LNE	0.01	0.50	0.01	0.50	-	-	-	-	-	-	0.00	0.50	0.01	0.50	0.01	0.50
PTB	-0.05	0.20	-0.05	0.20	-0.03	0.20	-0.03	0.20	-0.04	0.20	-0.06	0.20	-0.02	0.20	-0.02	0.20
BKSV-DPLA	0.01	0.30	0.01	0.30	0.01	0.30	0.02	0.30	0.02	0.30	0.02	0.30	0.03	0.30	0.03	0.30
GUM	-0.04	0.50	-0.03	0.50	-0.02	0.50	0.00	0.50	0.00	0.50	0.00	0.50	0.02	0.50	0.03	0.50
METAS	0.04	0.78	0.04	0.78	0.03	0.46	0.04	0.46	0.04	0.46	0.03	0.46	0.04	0.46	0.05	0.46
NMISA	0.01	0.40	0.01	0.40	0.01	0.40	0.03	0.40	0.02	0.40	0.02	0.40	0.03	0.40	0.04	0.40
INMETRO	0.01	0.25	0.01	0.25	0.01	0.25	0.03	0.25	0.02	0.25	0.02	0.25	0.03	0.25	0.04	0.25
CENAM	-0.39	0.50	-0.52	0.50	-0.63	0.50	-0.86	0.50	-1.09	0.50	-1.26	0.50	-1.47	0.50	-1.98	0.50
NMIA	0.01	0.30	0.01	0.30	0.02	0.30	0.03	0.30	0.03	0.30	0.03	0.30	0.04	0.30	0.05	0.30
NMIJ	0.01	0.03	0.01	0.03	0.01	0.03	0.02	0.03	0.02	0.03	0.02	0.03	0.03	0.03	0.03	0.03
KRISS	-0.04	0.09	-0.05	0.09	-0.05	0.09	-0.06	0.09	-0.09	0.09	-0.11	0.09	-0.13	0.09	-0.16	0.09
A*STAR	0.02	0.31	0.01	0.31	0.02	0.35	0.03	0.35	0.03	0.35	0.02	0.35	0.02	0.35	0.01	0.35



## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### PHASE (continued)

Lab <i>i</i>	4 Hz		5 Hz		6.3 Hz		8 Hz		10 Hz		12.5 Hz		16 Hz		20 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>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>	<i>D<sub>i</sub></i>	<i>U<sub>i</sub></i>
	in °		in °		in °		in °		in °		in °		in °		in °	
NIM	0.03	0.20	0.03	0.20	0.02	0.19	0.00	0.19	0.01	0.19	0.01	0.19	0.01	0.19	0.04	0.19
LNE	0.04	0.50	0.00	0.50	0.00	0.50	0.01	0.50	0.01	0.50	0.01	0.50	0.02	0.50	0.02	0.50
PTB	-0.03	0.20	-0.03	0.20	-0.03	0.19	-0.06	0.19	-0.05	0.19	-0.06	0.19	-0.08	0.19	-0.09	0.19
BKSV-DPLA	0.05	0.30	0.01	0.30	0.02	0.29	0.02	0.29	0.01	0.29	0.01	0.29	0.02	0.29	0.00	0.29
GUM	0.04	0.50	0.01	0.50	0.02	0.50	0.02	0.50	0.01	0.50	0.01	0.50	0.03	0.50	0.03	0.50
METAS	0.05	0.46	0.01	0.46	0.02	0.45	0.02	0.45	0.02	0.39	0.01	0.39	0.03	0.39	0.04	0.40
NMISA	0.05	0.40	0.01	0.40	0.02	0.39	0.02	0.39	0.01	0.80	0.01	0.39	0.03	0.50	0.01	0.50
INMETRO	0.05	0.25	0.01	0.25	0.02	0.24	0.01	0.24	0.00	0.24	0.00	0.24	0.01	0.24	-0.04	0.24
CENAM	-2.51	0.50	-3.18	0.50	-4.11	0.50	-5.06	0.50	-6.33	0.50	-7.89	0.50	-10.09	0.50	-12.61	0.50
NMIA	0.06	0.30	0.03	0.30	0.05	0.29	0.03	0.29	0.04	0.29	0.06	0.29	0.08	0.29	0.11	0.29
NMIJ	0.04	0.03	0.00	0.02	0.00	0.07	0.01	0.07	0.00	0.07	0.00	0.07	0.01	0.07	0.00	0.07
KRISS	-0.20	0.09	-0.29	0.09	-0.35	0.12	-0.45	0.12	-0.57	0.12	-0.70	0.12	-0.92	0.12	-1.12	0.12
A*STAR	0.02	0.35	-0.04	0.35	-0.03	0.34	-0.03	0.34	-0.03	0.34	-0.02	0.34	-0.12	0.34	-0.04	0.34

## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz,  
1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### PHASE (continued)

Lab <i>i</i>	25 Hz		31.5 Hz		40 Hz	
	$D_i$	$U_i$	$D_i$	$U_i$	$D_i$	$U_i$
	in °		in °		in °	
NIM	0.07	0.19	0.09	0.19	0.03	0.39
LNE	0.03	0.50	0.03	0.50	0.05	0.49
PTB	-0.12	0.19	-0.14	0.19	-0.19	0.19
BKSV-DPLA	0.02	0.29	-0.01	0.50	0.11	0.49
GUM	0.03	0.50	0.05	0.50	0.06	0.49
METAS	0.04	0.40	0.07	0.40	0.09	0.40
NMISA	-0.01	0.50	0.00	0.50	-0.03	0.49
INMETRO	-0.03	0.24	-0.01	0.24	-0.04	0.24
CENAM	-15.66	0.50	-19.55	0.50	-24.68	0.50
NMIA	0.13	0.29	0.15	0.29	0.19	0.29
NMIJ	0.01	0.07	-0.01	0.07	0.02	0.07
KRISS	-1.41	0.12	-1.73	0.12	-2.23	0.12
A*STAR	-0.04	0.34	0.00	0.34	0.01	0.34

### Key comparison CCAUV.V-K3

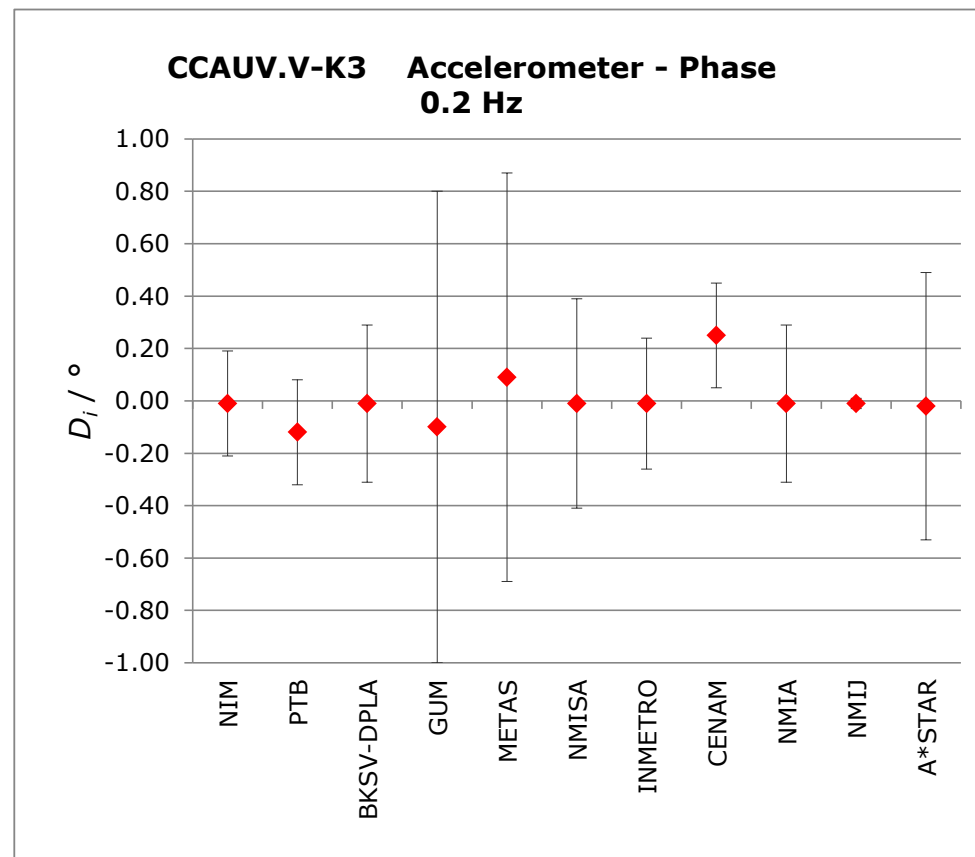
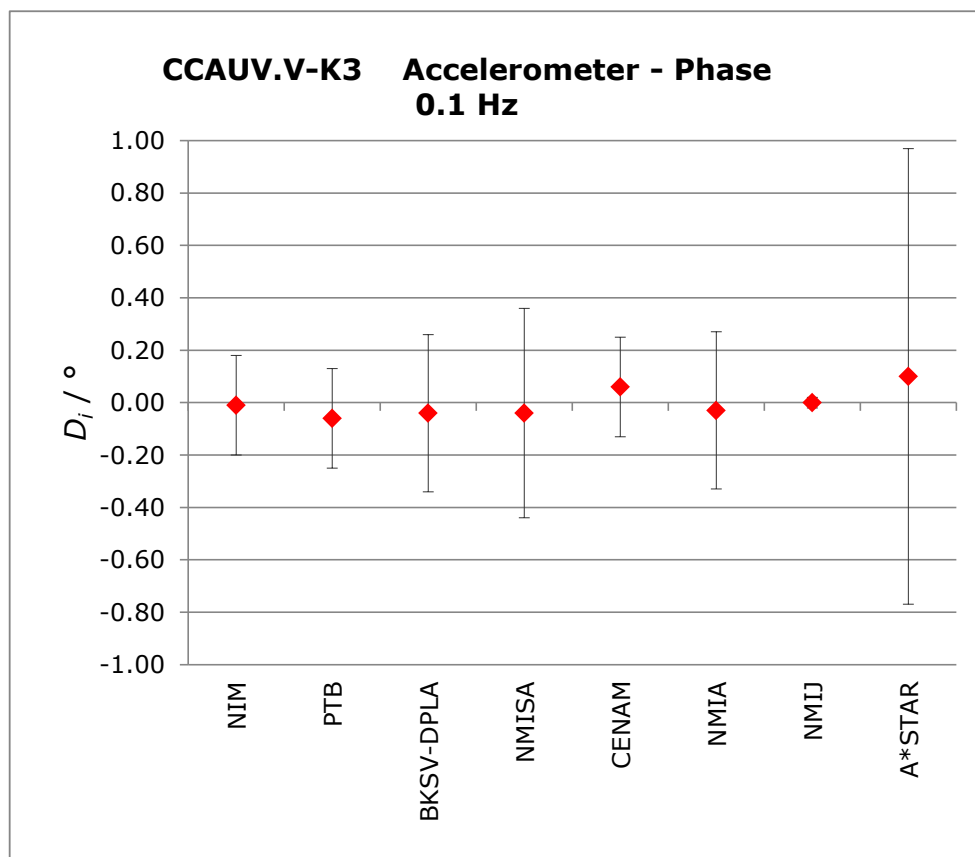
DEVICE : Low-frequency vibration comparison transfer standard

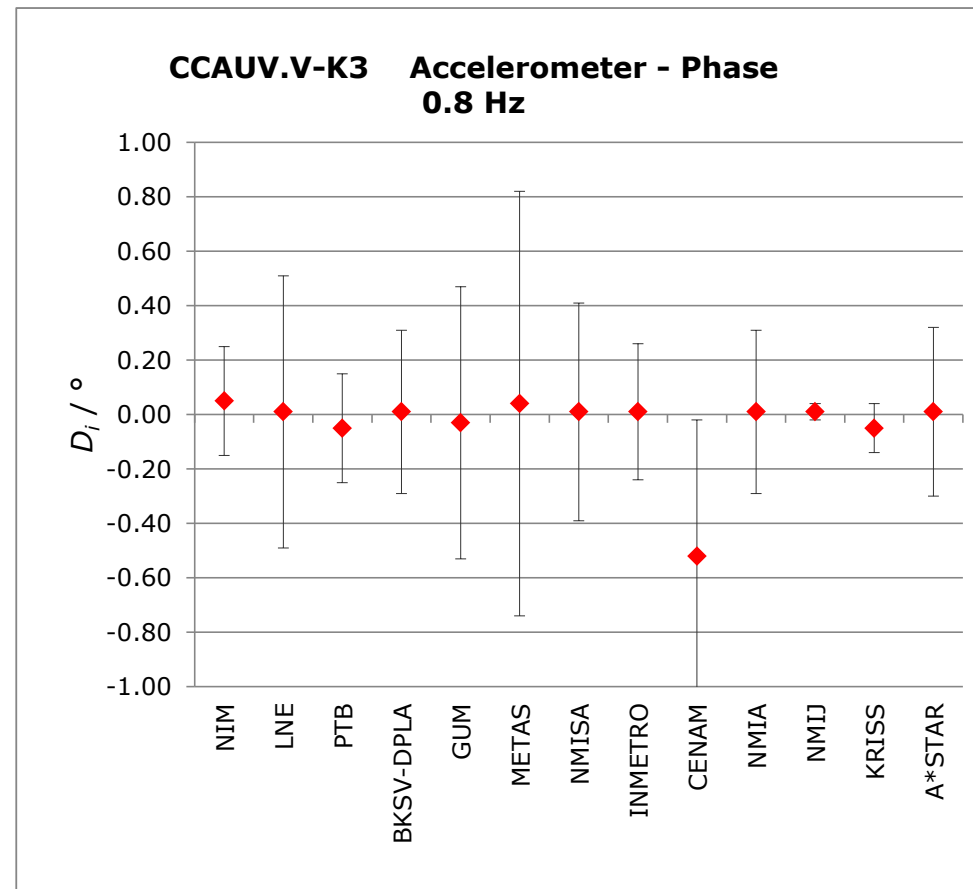
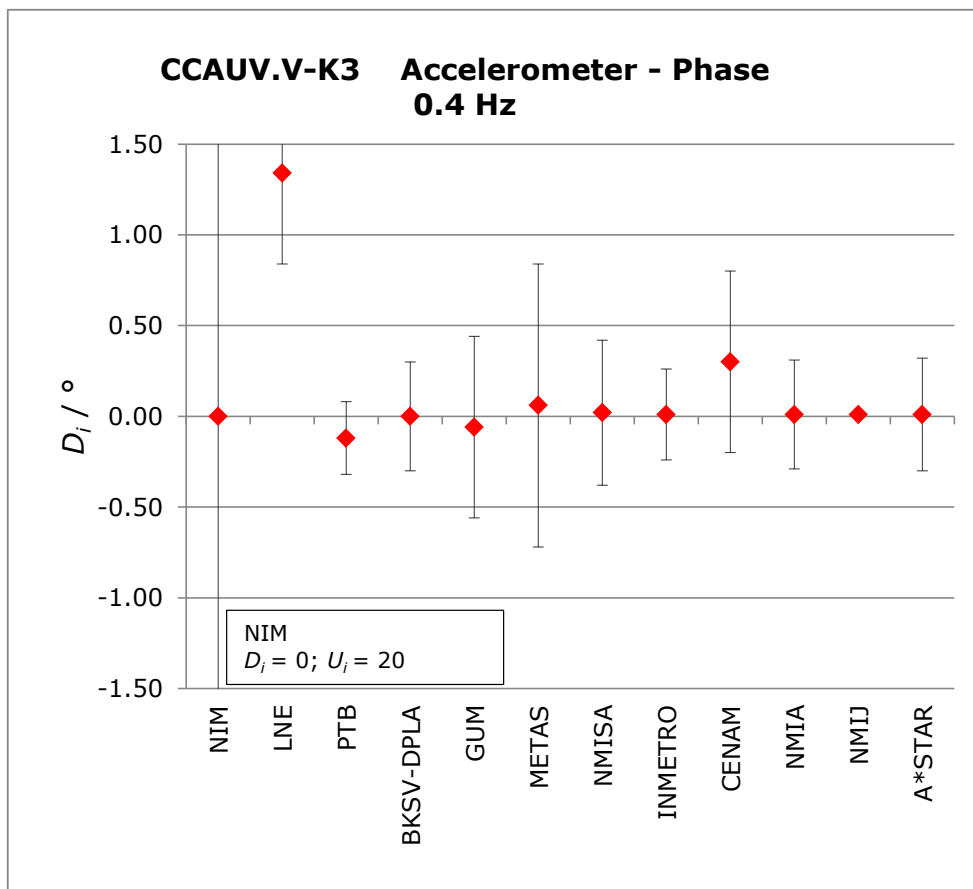
MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### PHASE

Graphs have been selected to illustrate results at 0.1 Hz, 0.2 Hz, 0.4 Hz, 0.8 Hz, 1.6 Hz, 6.3 Hz, 25 Hz and 40 Hz.





## Key comparison CCAUV.V-K3

DEVICE : Low-frequency vibration comparison transfer standard

MEASURAND : Acceleration complex sensitivity covering magnitude and phase

FREQUENCIES : 0.1 Hz, 0.125 Hz, 0.16 Hz, 0.2 Hz, 0.25 Hz, 0.315 Hz, 0.4 Hz, 0.5 Hz, 0.63 Hz, 0.8 Hz, 1 Hz, 1.25 Hz, 1.60 Hz, 2 Hz, 2.5 Hz, 3.15 Hz, 4 Hz, 5 Hz, 6.3 Hz, 8 Hz, 10 Hz, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz

### PHASE

Graphs have been selected to illustrate results at 0.1 Hz, 0.2 Hz, 0.4 Hz, 0.8 Hz, 1.6 Hz, 6.3 Hz, 25 Hz and 40 Hz.

