

**Sistema Inter-Americano de Metrologia
Inter-American System of Metrology**

Report of Metrology Working Group 9: Acoustics and Vibration
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1 INTER-LABORATORY COMPARISONS

1.1 SIM.AUV.A-K1 (LS1P microphones)

The pilot laboratory, NRC, is working to add the linking of the SIM intercomparison to CCAUV.A-K1 for the Draft B report. CENAM has already supplied a suggested analysis of the degrees of equivalence between the SIM laboratories, but degrees of equivalence between other laboratories are yet to be calculated. BIPM is assisting with the calculations. Hopefully a report can be presented during the coming CCAUV meeting at BIPM at the end of September.

1.2 SIM.AUV.V-K1 (accelerometers)

The pilot laboratory, NIST, is working on the Draft B report. A preliminary version had been circulated to MWG9 members and minor corrections were implemented. CENAM had recalculated the results using a weighted mean method, but D Evans pointed out that the maximum likelihood estimation method used in the current draft is more suitable for this comparison. NIST is working to add the linking of the SIM comparison to CCAUV.V-K1 for the Draft B report.

1.3 SIM.AUV.A-S1 (pistonphones)

The pilot laboratory, CENAM, is working on the draft B report.

1.4 SIM.AUV.V-S1 (LF calibration of accelerometers)

The pilot laboratory, CENAM, is working on a draft protocol and schedule and analyzing the stability of different accelerometers. It is known that many laboratories from other RMOs have expressed interest in participating, such that the idea of a CCAUV intercomparison in low frequency has been discussed during the 4th CCAUV meeting. This subject should be raised again during this 5th meeting because the participation of non-SIM members is still unclear.

1.5 SIM.AUV.V-K1.1 (accelerometers: complex sensitivity)

This bilateral comparison between INMETRO and CENAM has been registered and the protocol is available on the BIPM website. The measurements, of two back-to-back accelerometers from 10 Hz to 10 kHz, have been completed and the results are being analyzed. The results for sensitivity magnitude can be linked through CENAM to CCAUV.V-K1.

2 CALIBRATION AND MEASUREMENT CAPABILITIES

2.1 Revision of SIM CMCs

No requests for revision were received in 2006. NIST may request to update/delete some CMCs. INMETRO may request to update/add some CMCs in 2007. NRC is awaiting accreditation to ISO 17025, having completed the assessment visits in 2004. At the moment NRC is operating under the “self declared” mode until the accreditation letters are received.

2.2 Inter-regional CMC revisions

SIM recently approved the CMC entries (APMP.AUV.2.2006) submitted by China for comparison calibration, traceable to Germany, of shock accelerometers.

SIM questioned the designation of a bilateral comparison between Germany and China as a CCAUV intercomparison because this one was very similar to the bilateral comparison SIM.AUV.V-K1.1 carried out between Mexico and Brazil.