The new microbarometer MB3 with remote calibration capability

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The development of high-sensitivity, high-resolution, low-noise and low-consumption infrasound sensors with remote calibration is still needed to install CTBTO operational infrasound station, as well as for research purpose through temporary measurements. To address this issue, a new sensor called MB3 has been developed by the CEA/DASE. This new kind of microbarometer is composed of metallic bellows used as the pressure sensitive element, and a magnet / coil device is used as an electromagnetic transducer. Thanks to a secondary coil, remote calibration is possible and allows MLS analysis processing for high quality transfer function: on site measurement. Its performances in terms of noise floor (solves the LNM on IMS bandwidth), sensitivity, resolution, pass band and full range scale are detailed. Analog (adaptable to any digitizer) and digital (all packed low consumption 24 bit digitizer encapsulated for friendly user deployment) versions are available.