KISAP: New in situ seafloor velocity measurement tool

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The KISAP (KIGAM Seafloor Acoustic Prober) is an instrument developed to obtain in situ compressional wave velocity and attenuation profiles for upper several meters of sedimentary layer at the sediment-seawater interface. This instrument consists of independent recording channels (NI cDAQ-9132, National Instruments) with a linear array of receivers (5 Hz-20 kHz, GeoSpectrum Technologies Inc) with depth below acoustic source (acoustic pinger, 1-50 kHz frequency, GeoSpectrum Technologies Inc). It provides in situ recording of full waveforms to determine interval velocity and attenuation. The system can be attached to a corer (gravity and/or piston corer) or to a specially designed prober. The experiments for in situ test were carried out in east coast of Korea and Songjeong beach, Pusan, Korea. We collected good waveform data to be calculated in situ velocity from KISAP test. Therefore KISAP can be used to collect in situ acoustic data. In addition, it can be effectively used to calibrate previous laboratory data to in situ data.