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UK Ocean-Bottom Instrumentation Consortium (OBIC): a new seafloor geophysical equipment facility

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The UK Ocean-Bottom Instrumentation Consortium comprises the University of Southampton, Durham University, and Imperial College. The Consortium was set up to acquire and operate a fleet of ocean-bottom geophysical instruments for Consortium members and the international academic community. Our current instrument pool consists of 33 instruments: 18 LC2000 two-component ocean-bottom seismographs built by the Scripps Institution of Oceanography, 10 seismographs built using existing housings and LC2000 data loggers and 5 LEMUR electromagnetic receivers. The seismographs are two-component (hydrophone and 2 Hz vertical geophone) and four-component (hydrophone and three-axis 4.5 Hz geophone) instruments. The four-component instruments are also equipped with differential pressure gauges for broad-band seismic recording. We have modified the two-component seismographs to operate as seafloor electric field detectors by adding electric field amplifiers and an additional chassis section accommodating AuCl electrodes mounted in two orthogonal 12-m dipoles. We are currently constructing high-frequency data loggers for four-channel seismic acquisition. Future instrumentation development includes instruments capable of simultaneous seismic and electric field recording, and extending the bandwidth of seismic recording by the addition of broad-band seismometers. Potential users of our instruments are invited to contact us at info@obs.ac.uk for more information on operational availability. Further technical information can be found on our web site: http://www.obs.ac.uk .