

## — Observatoires sismiques sur le fond de la mer —



Detecting and localizing nuclear blasts was an essential stimulus of the actions undertaken in the 1960's to replace seismological observatories on the seafloor. The plate-tectonic theory, in which the oceanic areas play a major role, greatly accelerated the evolution of modern oceanology. The contribution of Ifremer's department of Marine Geosciences, in helping to advance this area of research, has been significant since 1972. The need for refraction studies to explore the deep structure of the margins and ocean-continent transition zones led us to design a deep-sea Ocean Bottom Seismograph (OBS) MK I in 1975, rated to 6,000 metres depth. This system introduced, for the first time, the concept of "isolated seismic sensors". This principle was adopted later on by other instrument designers. The OBS MK II was constructed in 1978, namely to study interferences between the instrument and the "isolated seismic sensors" as well as to test, under real operating conditions, an instrumental design which makes use of the "long inverted pendulum" concept. A series of four instruments were built, which also incorporated some innovative features

in OBS technology, such as high density digital recording. A new system, the Ocean Bottom Seismic System (OBSS), was designed in August 1990 aiming at the construction of a variety of instruments from basic modules.

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