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Concept and Instrumentation of a cable based Tsunami early warning system for South Korea

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In 2006, a consortium of German companies developed, manufactured, and installed a seabed long term observatory for the Korean Meteorological Administration. The observatory is connected to its land station via an optical underwater cable, 20 km long.

The observatory comprises a data acquisition system, which connects a set of 3C Full-Tilt 4.5 Hz geophones, a set of 3C MEMS accelerometers, and two absolute pressure sensors used for Tsunami detection. It was deployed in 2200 m water depth south of Ulleung-Do island off the east coast of Korea. Since November 2006, the observatory delivers real-time data continuously.

The design concept of the system will be presented. First performance experiences will be discussed as well as extension plans with respect to adding additional nodes and additional sensors.