Prospects of Ocean Bottom Seismographic Observations in the era of High-density Seismic Networks

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Vast amount of high-quality seismic data provided by dense seismic networks recently deployed on land have bought about many discoveries advancing our understandings of the subdcution processes taking places beneath the Japan islands. We are in the stage of building comprehensive models of geodynamic processes in subduction zones based on these findings, however, these efforts await another discoveries beneath the offshore area because the interaction between the land and oceanic lithospheres mostly occurs there. Although we expect offshore seismic observations to provide such new discoveries, deployment opportunities of seismic networks as dense as those on land are limited in sub-sea areas. Therefore tactics and strategies of the observations should be carefully planned. In this paper, I will review the present status of offshore seismic observations both in technological and geoscientific point of views and raise some prospects for a coming decade.