Japan Sea opening process and related geodynamics

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This talk aims to present a dynamic model for the opening of the Japan Sea on the basis of our present understanding of the origin of major tectonic lines of the Japanese Islands and of tectonic erosion along the trench axis in front of an advancing island arc. The talk will further discuss the plastic behavior of lithosphere, dynamic conditions, igneous activity, and paleogeography during the opening of the Japan Sea. Finally the talk emphasizes the importance of tectonic erosion that supplies huge amount of eroded rocks and water to deep into the Earth and exert critical influences on geochemical and geophysical phenomena in the wedge mantle and core-mantle boundary.