

## Distribution and activities of submarine active faults along the northern coast of Noto Peninsula

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The Noto Peninsula is located in a tectonic contraction zone, and many earthquakes have recently occurred in the region, including the 1993 Off Noto Peninsula Offshore Earthquake and the 2007 Noto Peninsula Earthquake. Among them, the Noto Peninsula earthquake on 1st, January 2024 (the 2024 Noto Peninsula earthquake) was the largest seismic event with a 7.5 magnitude ( $M_w$ ) mainshock.

Geological Survey of Japan (GSJ) had conducted seismic reflection profiling surveys using an air gun system in the sea area around the Noto Peninsula to construct of marine geological maps around Japan (Okamura, 2002, 2007). In response to the 2007 Noto Peninsula earthquake, high-resolution reflection surveys using a boomer source were conducted in the coastal area around the northern Noto Peninsula in 2007 and 2008, and the distribution of active faults in shallow marine area around the northern part of Noto Peninsula has been clarified (Inoue and Okamura, 2010).

In response to occurrence of the 2024 Noto Peninsula earthquake, we conducted seismic reflection profiling surveys using the same sources on same survey lines of the 2007 and 2008 surveys and compared between new 2024 data and existing 2007 and 2008 data, in order to clarify the "new" distribution and displacements of active faults along the northern coast of Noto Peninsula.

In this presentation, we introduce the survey methods of offshore active faults, distribution of the known submarine active faults along the northern coast of Noto Peninsula, and results of newly surveys by GSJ along around the Noto Peninsula after the 2024 earthquake.

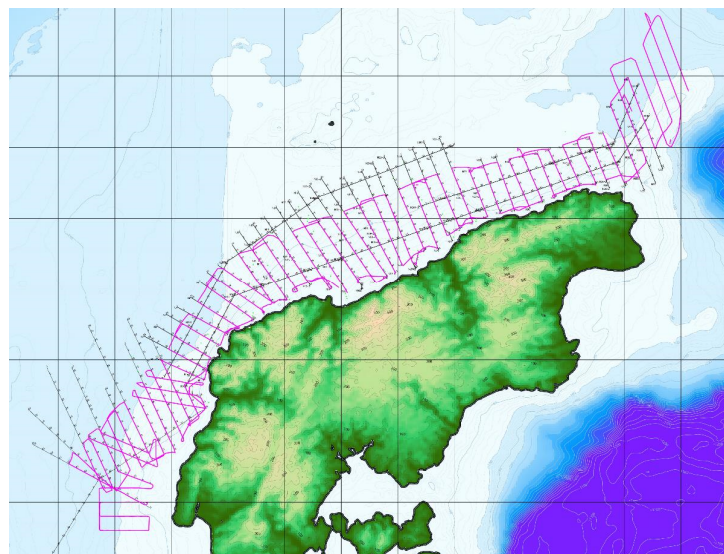


Fig 1. Track lines along the northern coast of Noto Peninsula. Old data: black lines; new data: pink lines