

## Discovery of southern termination of the Sumatran Fault and its tectonic significant

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Sumatran fault is the transverse fault that consumes the dextral slip component due to oblique subduction in the Java Trench. The northern termination extends to the Andaman Sea, causing the opening of the Andaman Sea during the last 11 Ma, while the southern end is still ambiguous, where the obliquity of plate subduction diminishes. Significant topographic lineament was identified off Sunda Strait by the bathymetric survey during the YK01-02 cruise. The seismic profiles show that the lineament is the surface expression of strike-slip fault system and is traceable from the southernmost of the Sumatran fault to near the Java trench, cutting the forearc high of the Java trench system. It is concluded that the Sumatran forearc sliver is independent from the Southeast Asian Sea.

Sumatran fault is the transverse fault crossing the Sumatra, Indonesia, which extends more than a few thousand km. Dextral slip component due to oblique subduction in the Java Trench has been consumed along the fault. The northern termination extends to Andaman Sea where has made the Andaman Sea open since 11 Ma in age. However, the southern termination is still ambiguous, where the obliquity of plate subduction diminishes.

To better understand the southern termination, a survey (YK01-02 cruise) performed in January, 2001, using multi-narrow beam mapping system using R/V Yokosuka. Significant topographic lineament was identified off Sunda Strait. The seismic profiles across the lineament show obviously that the lineament is the surface expression of strike-slip fault system. Furthermore, it can be traced from the southernmost of the Sumatran fault in the Sumatra and obviously cut the forearc high of the Java trench system. The termination of Sumatran fault extends near the Java trench. From the discovery, it is concluded that the Sumatran forearc sliver is independent from the Southeast Asian Sea.