

ポスター会場（1日目） | 一般セッション：S06. 地殻構造

📅 2025年10月20日(月) 17:15 ~ 19:00 📍 P06会場 (502+503)(502+503)

[P06] 地殻構造**[P06-19] Spatial variation of crustal anisotropy around active volcanoes in Japan derived from shear wave splitting analysis**

*Muhammad Haikal Gunarya¹, Junichi Nakajima¹, Faiz Muttaqy² (1. Department of Earth and Planetary Sciences, Institute of Science Tokyo, Japan, 2. Research Center for Geological Disaster, National Research and Innovation Agency (BRIN), South Tangerang, Indonesia)

The spatial variation of crustal anisotropy was examined through shear wave splitting analysis. This research seeks to map crustal anisotropy and differentiate the impact of regional tectonic stress fields from the influence of local volcanic features. The analysis was performed using 20 years of local earthquake data between 2005 and 2025. By utilizing the MFAST program from Savage et al (2010) and applying rigorous quality standards, which include maintaining an incidence angle of less than 35 degrees, we acquired a dependable set of separation parameters. The findings reveal notable spatial variations in anisotropic characteristics throughout the arc. Northeast Japan exhibits the most pronounced and consistent percentage of anisotropy, with the orientation of fast polarization remaining uniform and aligned with the direction of the regional maximum compressive stress (SHmax) resulting from Pacific Plate subduction. Conversely, different areas exhibit a more varied pattern. The recorded delay times are uniformly minimal (below 0.3 s), suggesting that the primary source of anisotropy is located within the shallow upper crust. Moreover, stations near volcanoes display a distinct radial configuration, indicating that the gravitational influence of volcanic structures locally modifies the regional stress field. This research presents a detailed, high-resolution map of crustal anisotropy around active volcanoes in Japan, which is essential for testing geodynamic models and evaluating seismic hazards.