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SCG063-P11

会場:コンベンションホール

時間:5月26日 10:30-13:00

北海道で発生する千島前弧スリバーの運動に伴う小地震の断層面解の決定 Determination of fault plane solutions of small events in Hokkaido associated with the motion of Kuril fore-arc sliver

菅原 宗¹, 平塚 晋也^{1*}, 佐藤 魂夫¹

Sou Sugawara¹, Shinya Hiratsuka^{1*}, Tamao Sato¹

¹ 弘前大学理工学研究科

¹Sci. and Tech., Hirosaki Univ.

In order to find the evidence of transcurrent movement of fore-arc sliver along the southern Kuril trench, we determined the fault plane solutions of smaller events using the method developed by Imanishi et al.(2006). We used P- and SH-wave amplitudes as well as P-wave polarity and determined fault plane solutions with magnitude range from 2.0 to 3.5 and the numbers of P-wave polarity data are 10 or greater. Especially we focused on the fault plane solutions along the estimated boundary of the fore-arc sliver in Hokkaido. We find the fault plane solutions of strike-slip type with the nodal plane of right-lateral slip along the volcanic front. While strike-slip events determined by F-net from 1997 to 2009 concentrate around Teshikaga area, those events determined by this study are distributed along the volcanic front continuously. Around the central Hokkaido where the Hidaka Mountains and volcanic front intersect, strike-slip types with P-axis trending E-W direction were also determined.

In the western side of Hidaka Mountains, we find the fault plane solutions of thrust and strike-slip type with P-axis parallel to the trench. Thrust events are distributed along the Conrad discontinuity or within the lower crust of Northeastern Japan arc inferred from seismic refraction/wide-angle reflection experiments by Iwasaki et al.(2004). On the other hand, Events of strike-slip type are distributed within mantle wedge of Northeastern Japan arc. In the eastern side of Hidaka Mountains, we find the fault plane solutions of reverse type of events with P-axis parallel to the dip direction of descending lower crust due to the delamination of the crust of Kuril arc.