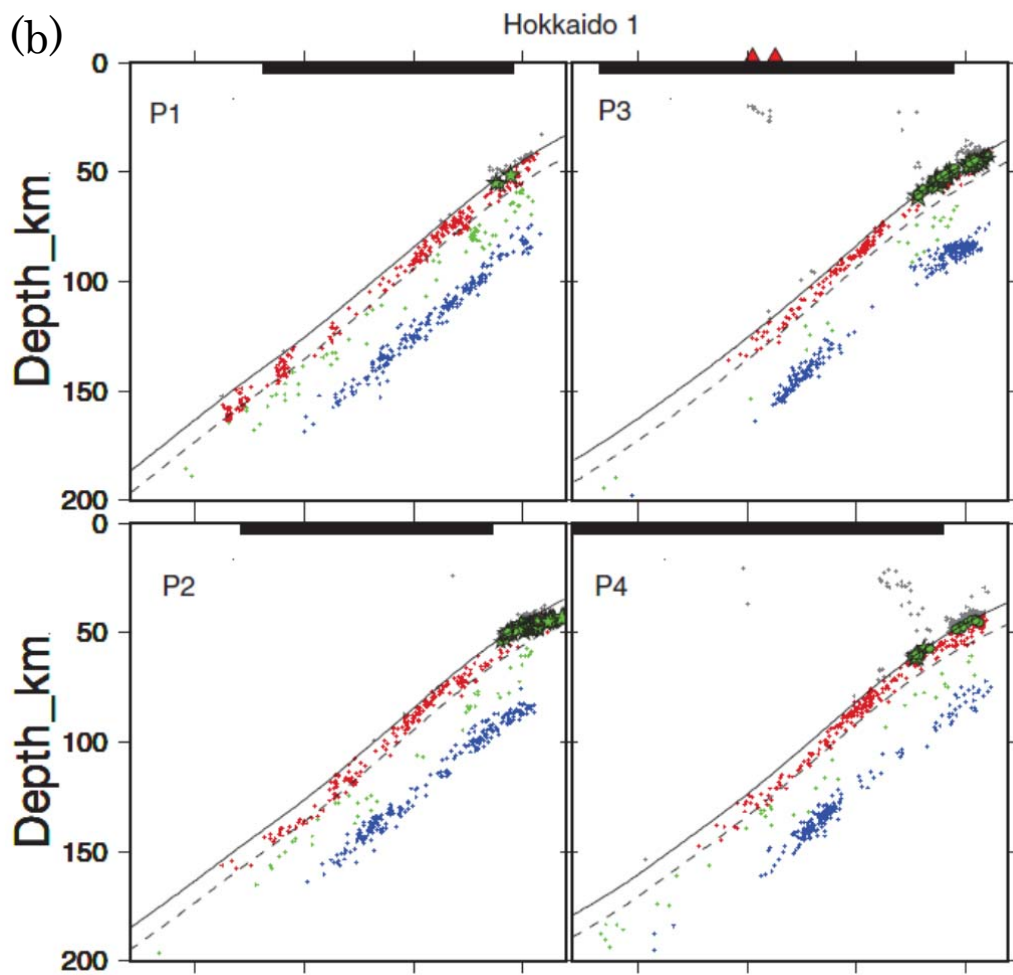
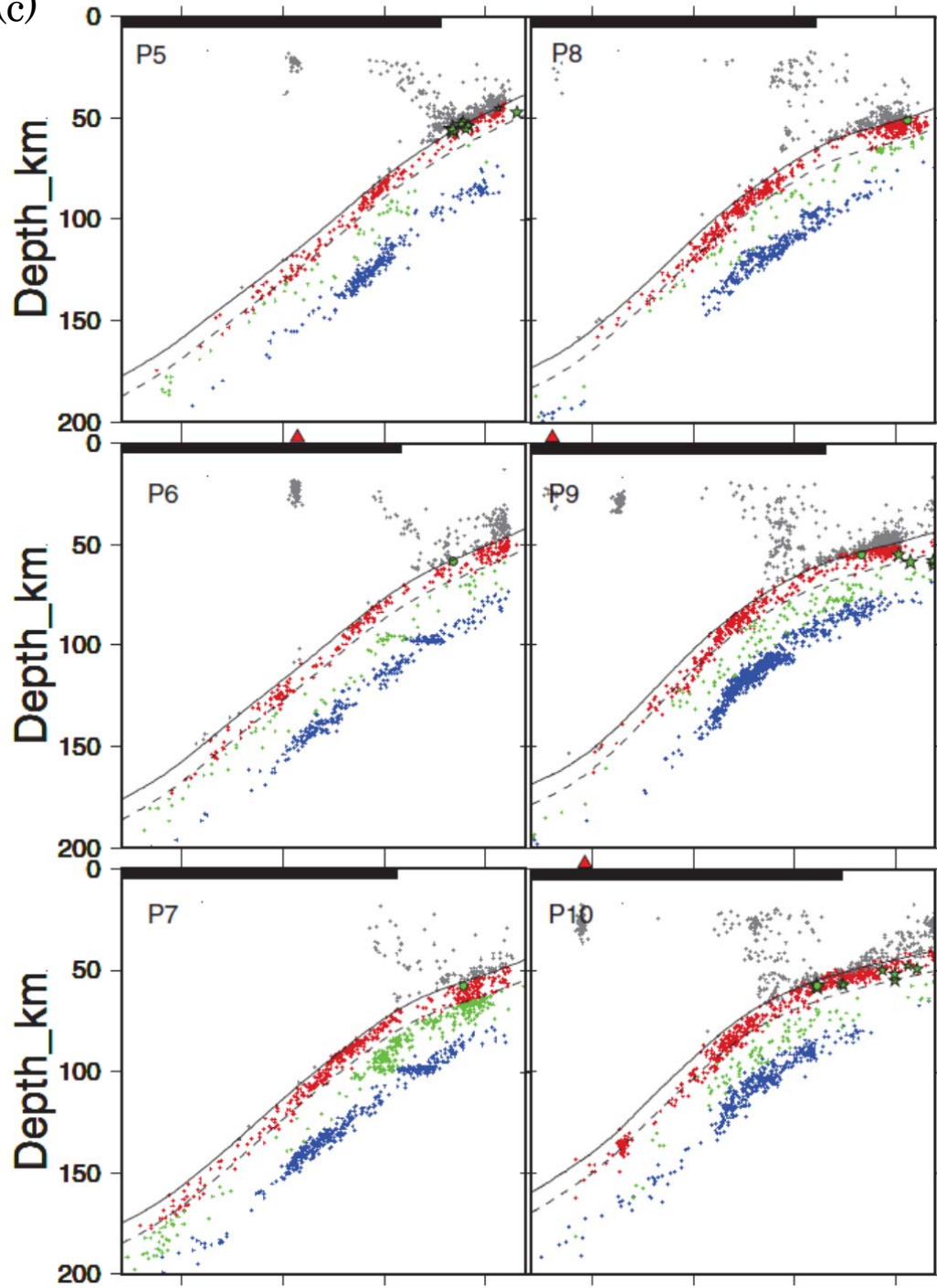


Figure R1: Vertical sections of seismicity and upper surface of the subducting Pacific plate (thin black curve). (a) Map for locations of vertical sections. (b)-(g) Vertical sections. Gray, red, green and blue dots show seismicity above the slab, upper-plane, interplane (between double seismic planes), and lower-plane of double seismic zones, respectively. Green circles and green stars show repeating earthquakes estimated by Uchida et al. [2003] and low-angle thrust fault events, respectively. Red and blue lines show P and T axes, respectively. Red triangles and black thick lines in the top show volcanoes and land area, respectively. Seismicity within 10 km from each line in (a) is plot to each section.



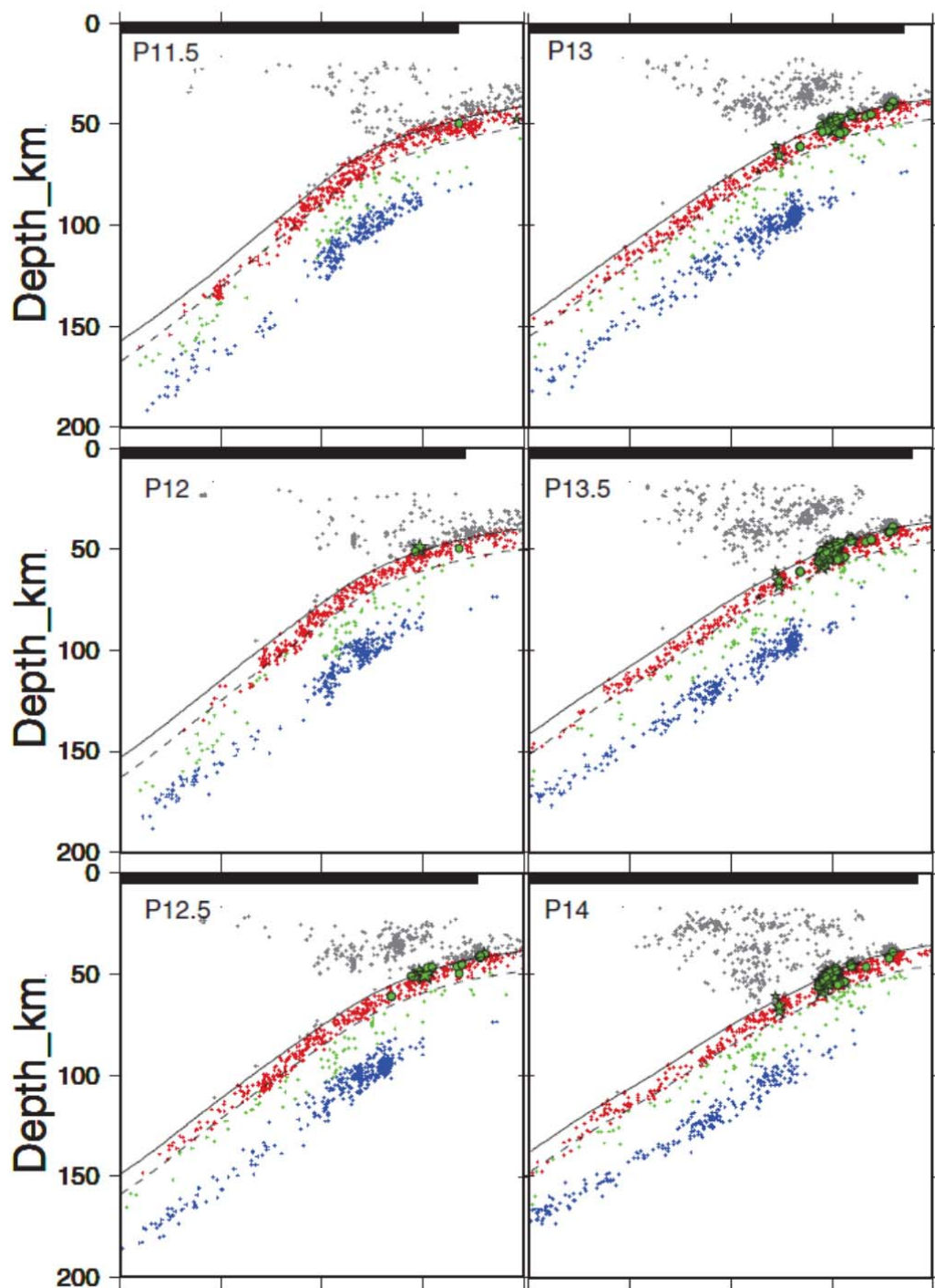
Hokkaido 2

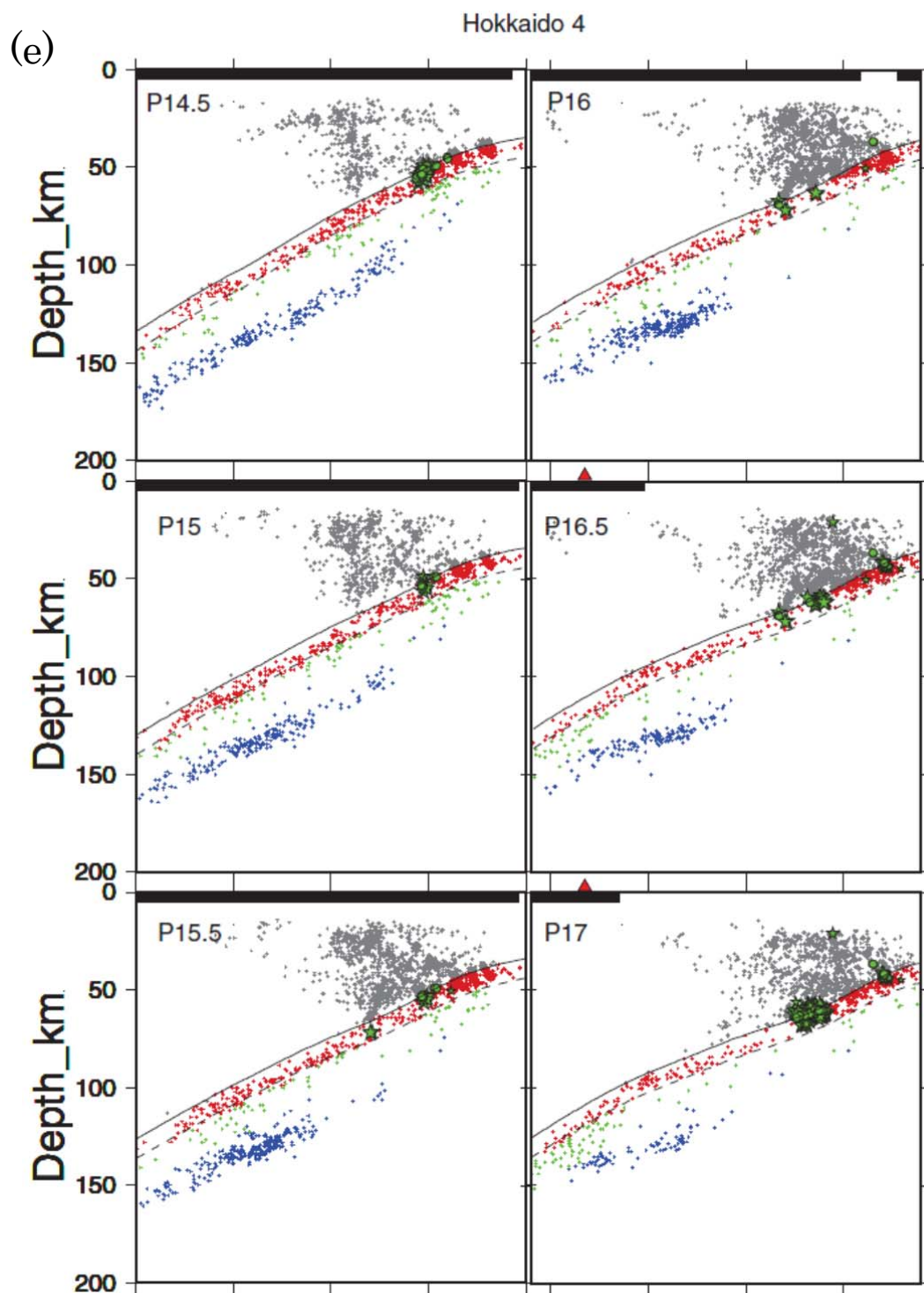
(c)

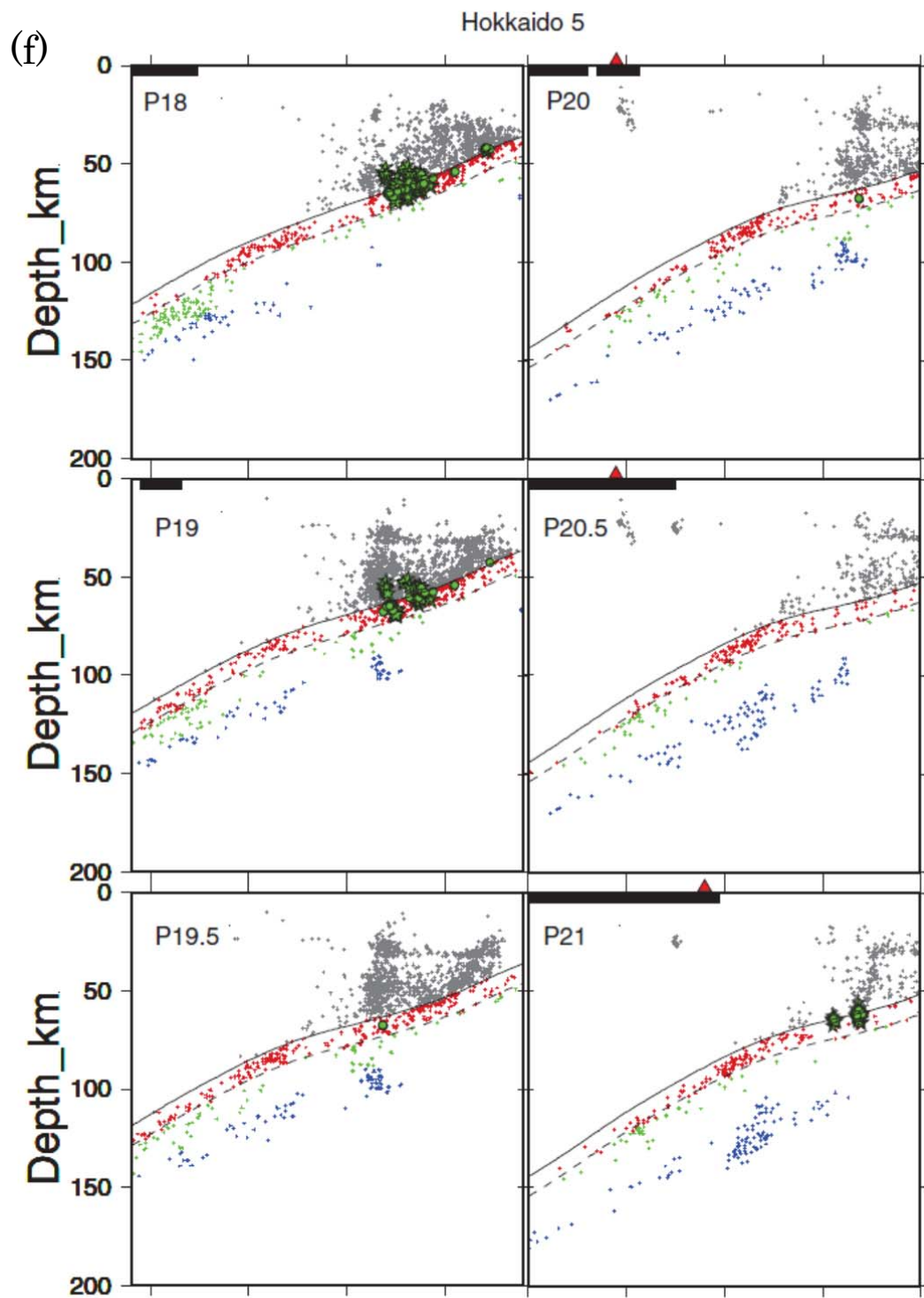


(d)

Hokkaido 3

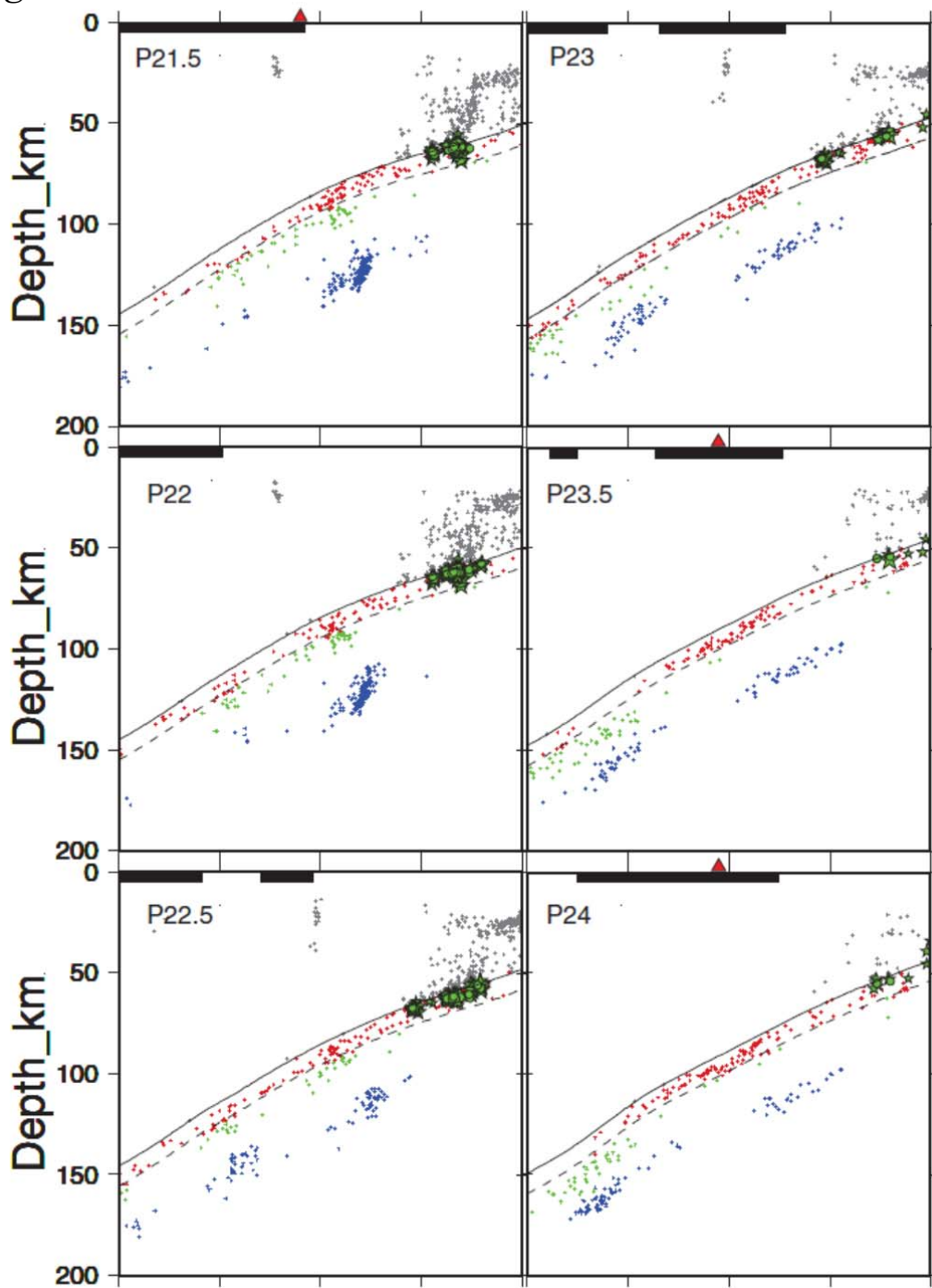






(g)

Hokkaido 6



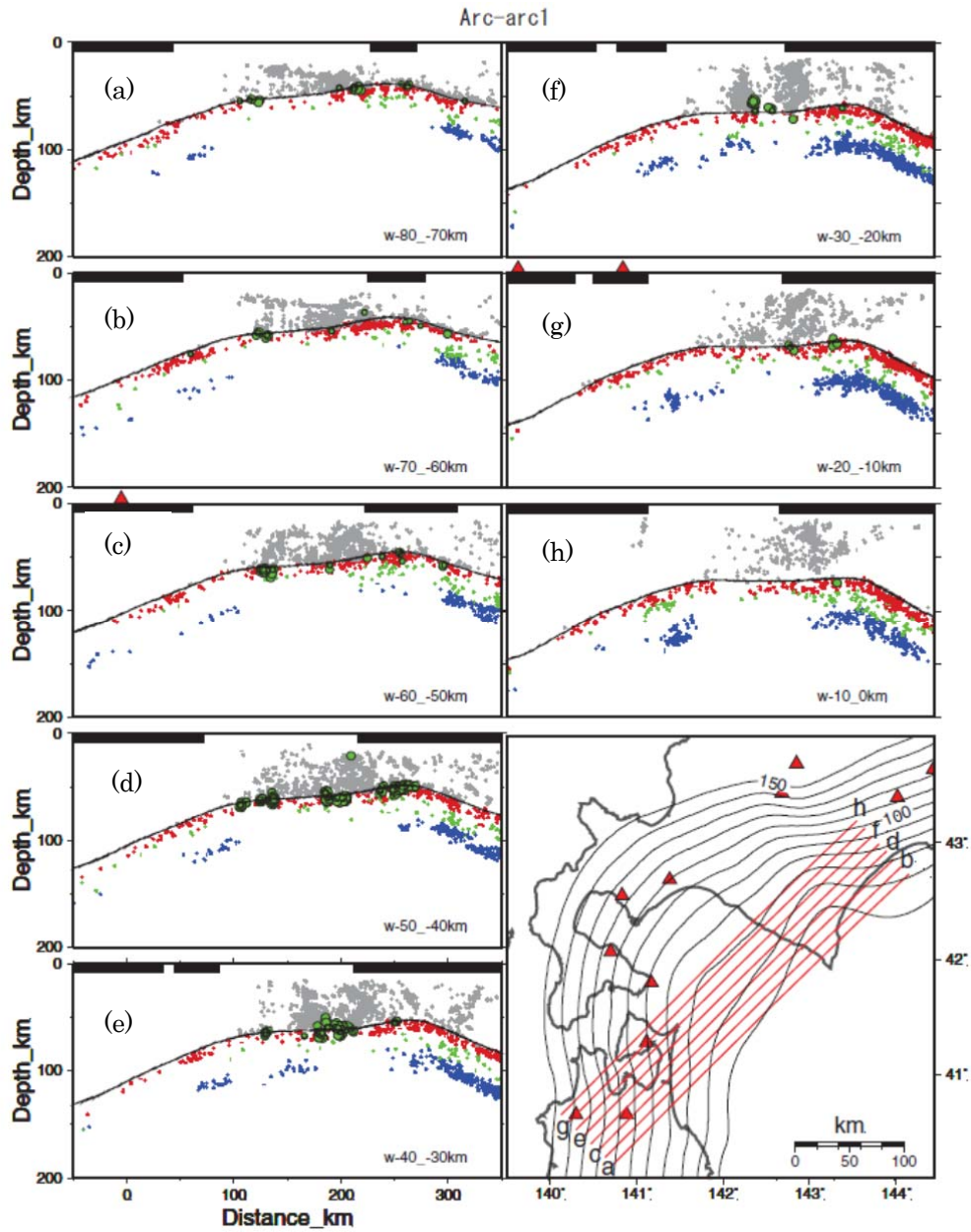
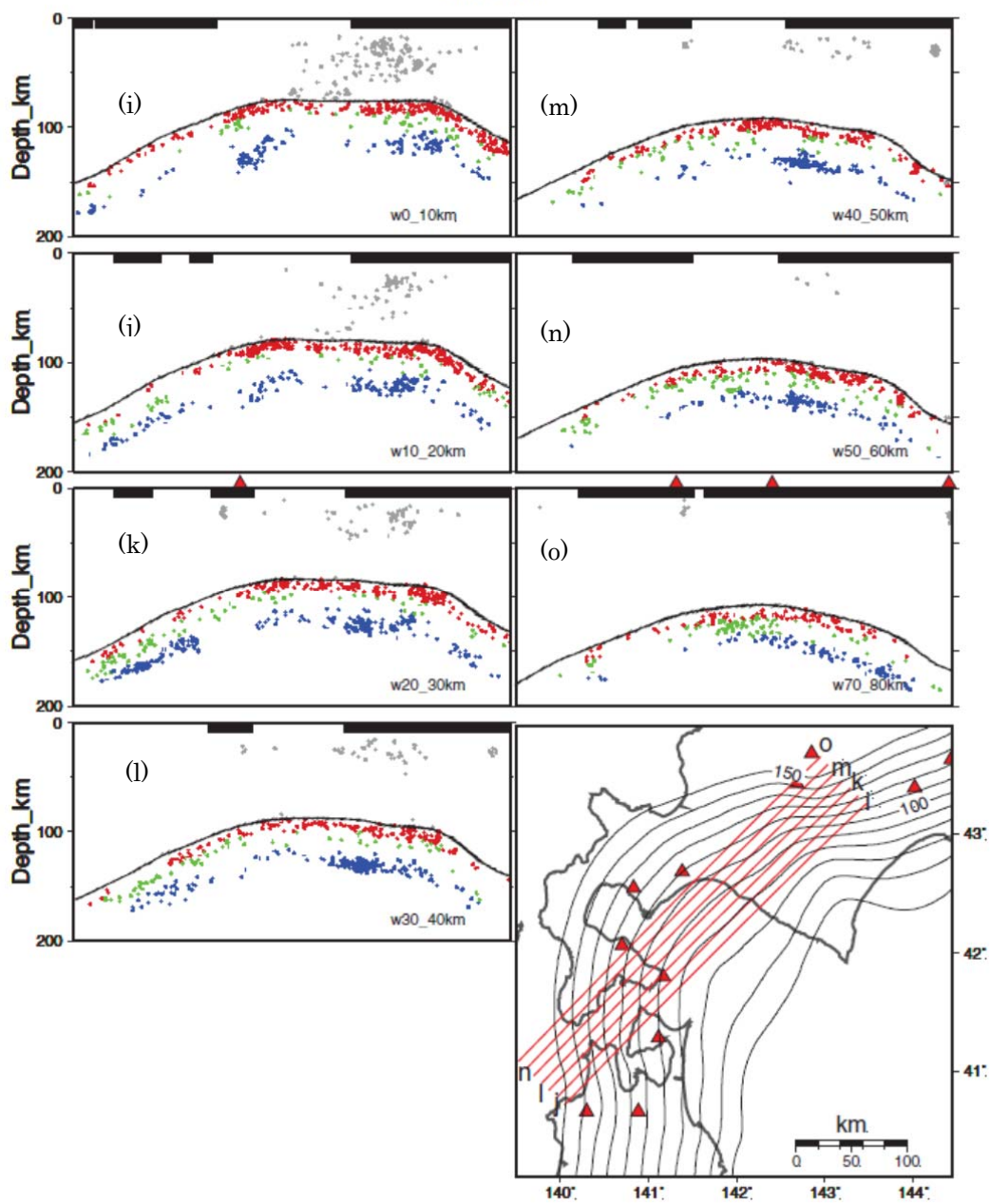


Figure R2: Vertical sections of seismicity (along arc direction) of lines showed in the inserted map. Black curves show the plate upper interface estimated in Kita et al. [2010, EPSL]. Gray, red, green and blue dots show seismicity above the slab, upper-plane, interplane (between double seismic planes), and lower-plane of double seismic zones, respectively. Green circles and green stars show repeating earthquakes estimated by Uchida et al. [2003] and low-angle thrust fault events, respectively. Red triangles and black thick lines in the top show volcanoes and land area, respectively. Seismicity within 10 km from each line in the inserted map is plot to each section.

Arc-arc2



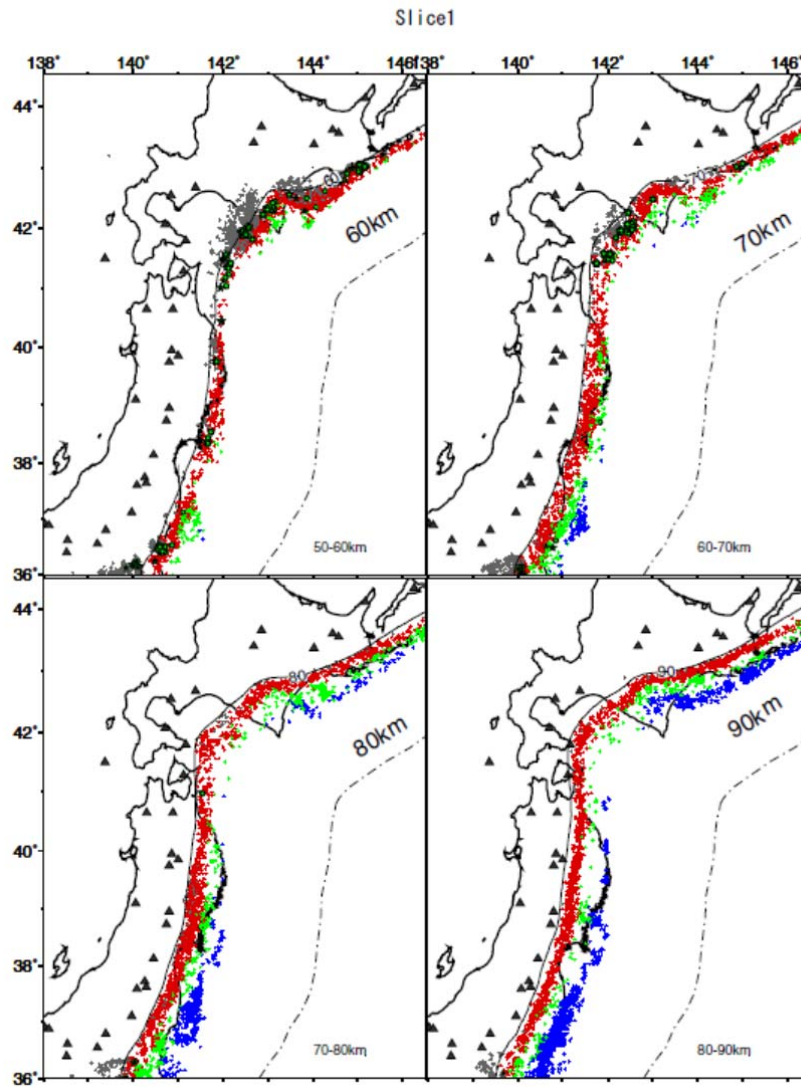
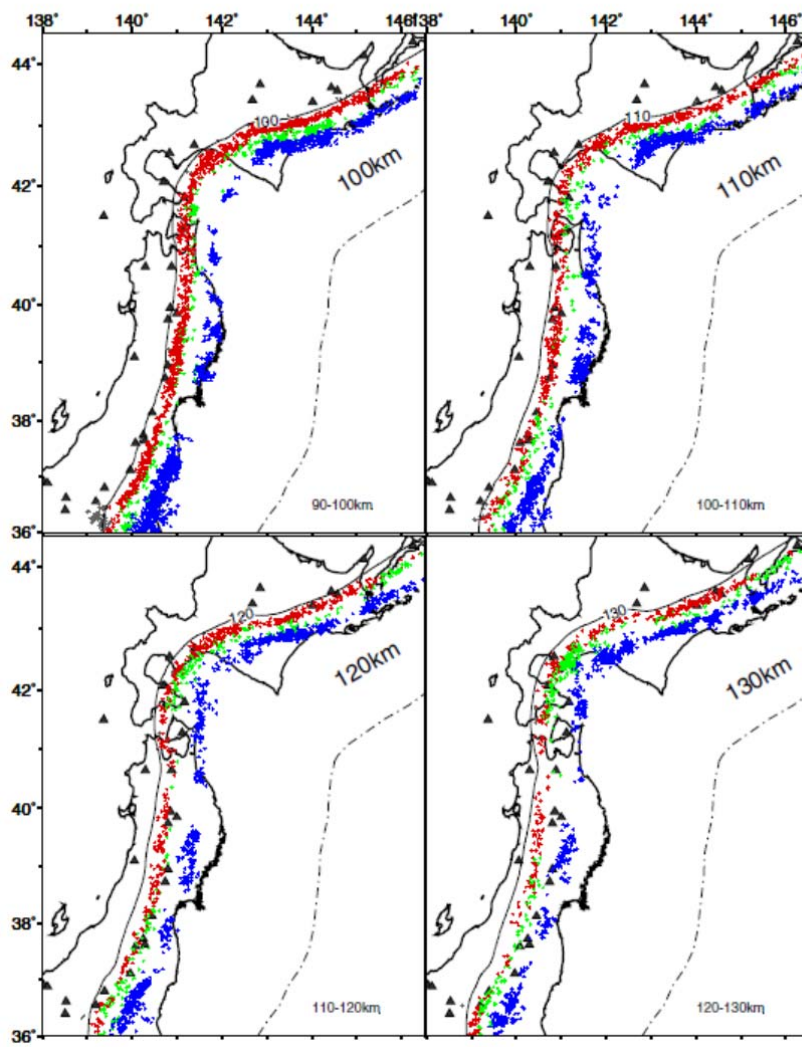


Figure R3: Horizontal sections of seismicity. Black thin curves show the plate upper interface of the Pacific plate estimated in Kita et al. [2010, EPSL] at depth, whose values are shown in the upper right of sections. Black thick lines show the coastal line. Dashed line shows the trench. Gray, red, green and blue dots show seismicity above the slab, upper-plane, interplane (between double seismic planes), and lower-plane of double seismic zones, respectively. Green circles and green stars show repeating earthquakes estimated by Uchida et al. [2003] and low-angle thrust fault events, respectively. Red triangles show volcanoes, respectively. The depth range of seismicity plot in each sections are shown in the right bottom of sections

Slice2



Slice3

