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SVC050-P04

Room:Convention Hall

Time:May 23 16:15-18:45

## Tilt response of broadband seismometer

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Recently, we often use broadband seismometers to measure long period motion near the volcano. We know clearly broadband seismometers have enough sensitivity to tilt change. We can calculate the trace under the equation of motion of the seismometer. The trace is given to convolve a tilt motion with a response function of tilt change. On the other hand, tilt motion is given to deconvolve a trace with that. In this study, to ascertain whether the trace of broadband seismometer on tilt change consists previous calculated result.

To estimate tilt motion at the Kirishima volcano in the future, I used Trillium40, Trillium120 and CMG3T. I will express how to check below. First, I put seismometer on one side of 1m plate. Second, I move the other hand fluctuation. If the displacement is smaller than the length of the plate, I can approximate the tilt by displacement. I measure the displacement with a dial gauge and a laser. I gave a few micro radian.

I resulted that the trace of horizontal component consists the result calculated from the equation of motion. And vertical component is smaller than that. The application of this result to real observed data is the future work.