

## GEOSLICER FOR HIGH-RESOLUTION ACTIVE FAULT STUDIES

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It is a sort of dream among geoscientists to get easily and directly what we want to see from underground. The newly invented equipment named Geoslicer easily extracts undisturbed wide vertical thin section of unconsolidated Quaternary sediments. The basic structure of Geoslicer is very simple. A sampler is made of steel and is composed of a sampling box and its shutter. The box is wide and flat-shaped, having openings at one of the wider sides and bottom. For sampling, we firstly intrude the box vertically down into the ground using a vibrohammer and then its shutter sliding along the thin slits attached to both sides of the box, and pull out them together. Several devices are implemented to the box and the shutter, such as wedge-shaped sidewalls and a stopper at the bottom of the box for easy pullout of the equipment and steady holding of samples. To reinforce the box and shutter strong enough to bear the stress caused by hammering, L-shaped angles are welded on their back. Air pipes, which carry pressurized air to ease the vacuum condition at the time of extraction, are also welded on the back of a slicer. This sampling method is more effective on active fault studies than the conventional trench excavation technique and we will be able to carry out three dimensional analysis of active faulting, restoration of horizontal fault slip and so on.