

## Elongation of kinematic GPS survey by multiple baseline connection

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Long-range kinematic GPS survey is essential when we carry out seafloor deformation measurements using GPS/acoustic technique, because most plate boundaries in and around Japan run 100-200km offshore. We evaluate accuracy decrease of kinematic GPS survey with increasing baseline length. Then we try to improve the accuracy using a new method connecting short-range baselines via moving relay station(s). In this study data obtained at fixed GPS receiver antennas at several different distances are analyzed by KINGS, a kinematic GPS software developed at the National Aerospace Laboratory, to evaluate apparent time fluctuation of kinematic solutions and their deviation from true positions. We reconfirm that precise long-range kinematic survey can be attained by the new method.