



The importance of the space geodetic measurements in the South Pacific area

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The South Pacific area has the largest number of isolated and low-elevation islands in the world. The tsunami hazard in Indian Ocean is just similar problem for the South Pacific area. It has been reported that the ruined areas by the tsunami well accorded with the vulnerable places by sea level rises in the global warming.

The importance of the space geodetic measurements in the South Pacific area will be as follows:

- (1) It is possible to produce the systematic error because present VLBI and GPS observation points lean to the Northern Hemisphere.
- (2) More precisely, there is great difference of the observation point distribution between the land hemisphere and the water hemisphere. And the South Pacific area is located in the center of the water hemisphere.
- (3) The strengthening of space geodetic observations in the South Pacific will improve the unbalance of the observation distribution effectively.
- (4) Such observations will need the capacity building of the IT infrastructure in the South Pacific area.

Using the author's experience of the stay in the University of South Pacific, this paper simulates of the improvement of the systematic error on the space geodesy as well as earth orientation observation.