Response curve of tsunami in the 1946 Nankai earthquake

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We observed seiches, secondary undulations, of 14bays in the coast of Shikoku Island facing to the west Pacific, southwest Japan in the use of a pressure gauge of semiconductor. The gauge was set at quays of the bay heads for 6 hours with sampling time of 1 minute. From the amplitude spectra a period showing the maximum amplitude was taken as a predominant period. The predominant periods 8 to 93 minutes were compared with amplification factor of tsunami observed in the same bays for the 1946 Nankai earthquake. The incident wave height was assumed to be 1.31m from the maximum wave heights observed at the open coast. The amplification factor vs the predominant period shows the maximum at about 15 minutes of the period. Thus we succeeded to obtain a tsunami response curve to the tsunami period normalized by the predominant periods in the 1946 Nankai earthquake tsunami. This suggests that the maximum tsunami wave height is determined under a resonance of bays.
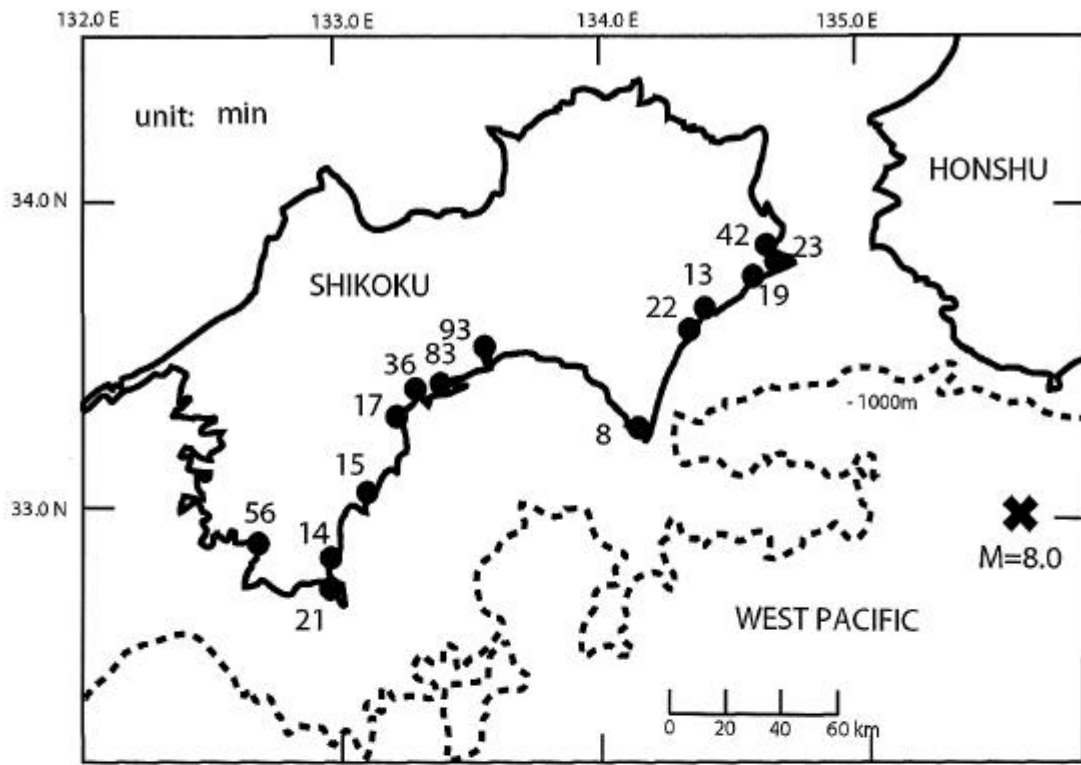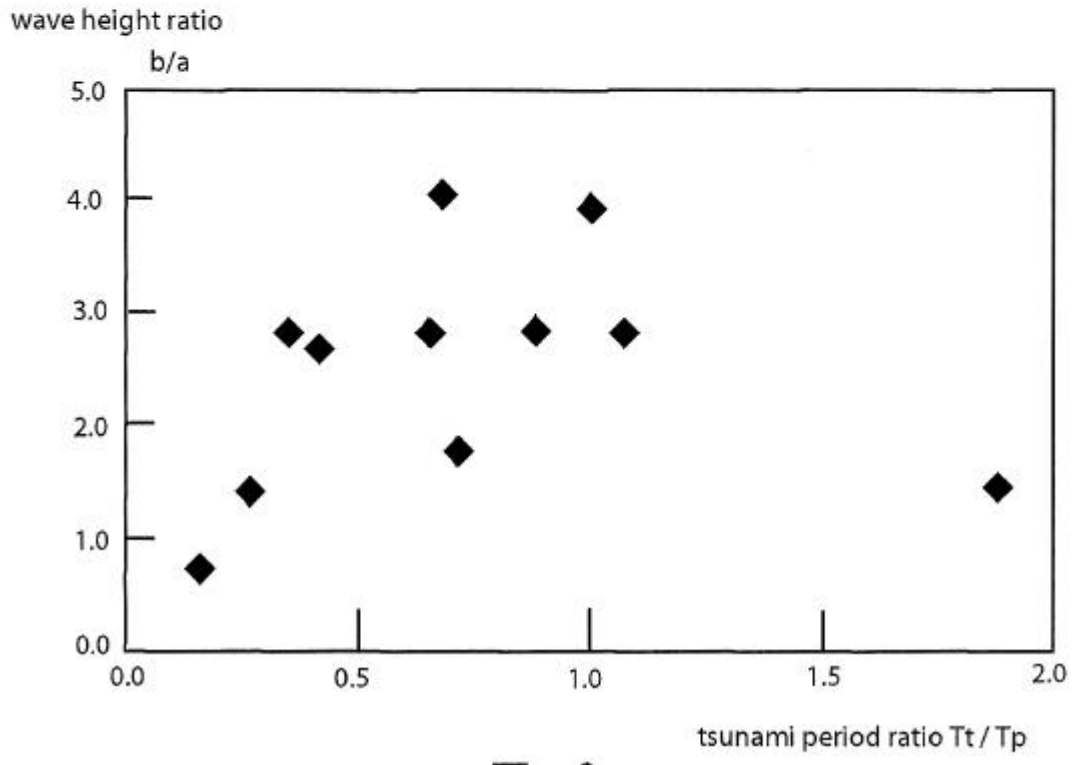
図　1

図　2