

## 三浦半島の海岸における 1703 年元禄地震以前の地震性隆起運動の地形学的証拠 Geomorphologic Evidence of Uplifting Associated with Old Kanto Earthquakes Before 1703 in a Coast of Miura Peninsula, Japan

金 幸隆<sup>1\*</sup>, 熊木 洋太<sup>2</sup>, 佐竹 健治<sup>1</sup>

KIM, Haeng Yoong<sup>1\*</sup>, KUMAKI, Yohta<sup>2</sup>, SATAKE, Kenji<sup>1</sup>

<sup>1</sup>ERI, Univ. Tokyo, <sup>2</sup>Geography, Senshu Univ.

<sup>1</sup>ERI, Univ. Tokyo, <sup>2</sup>Geography, Senshu Univ.

We need to know the amount of the vertical crustal movement and the occurrence date for the Kanto earthquake prior to 1703, for better understanding the earthquake cycle, and thus to estimate the average recurrence time and the magnitude of earthquake for estimating the future earthquake hazard. So we sought the trace of the crustal movement along the coastal region in the southwestern Miura Peninsula. To identify the uplifts associated with recent great Kanto earthquakes, we made a high-density (50 cm mesh) digital elevations map by aerial measurements of the Light Detection and Ranging (LiDAR) in southwestern coast of the Peninsula. In addition, we analyzed air photos taken in 1946, 1963 and 1966.

As a result, five to six steps of marine terrace surface were observed between the Nobi 3 surface and the present coastline, including the 1923 and 1703 emerged terrace surfaces, in the alluvial valley. These terrace surfaces are edged in a small cliff of the height of 1-2 m. In addition, LiDAR data indicate flights of wave-cut-bench on rocky coast (8 m above MSL) in Jogashima, southernmost tip of Miura. These marine terrace surfaces may indicate additional evidence of the uplift associated with the Kanto earthquakes.

Compared the 1:25,000 of old topographic map made in 1921 by Land Survey Department and in 1966 by Geography Survey Institute, the regradation of the coastline is identified in the coast area of Miura. The coastline was shifted from the land side to the sea side, thus the zone between 1921 and 1966 coastlines was dried from the sea to the land. At the bay head of Koajiro, the sea was dried up approx. 300 m in the length. The lowest level of terrace surface which was identified from LiDAR Data and old topographic map have been formed by 1923.

キーワード: 関東地震, 履歴, 隆起量, 海成段丘面, 海岸線

Keywords: Pre-1703 Kanto Earthquake, Recurrence time, Amount of Uplift, Marine terrace surface, Coastline