

On the Estimation of Three-Dimensional Density Structure of the Active Volcano in the Sea Area

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A three-dimensional non-uniform density modeling is proposed to obtain more detailed and accurate information about the active volcano. The structure of volcano in the sea area was divided into many blocks modeled by layered and rectangular prisms, and parameters were assigned to each block describing the density fluctuation from the average one which corresponded to the density for the terrain and Bouguer corrections. A set of linear equations for the Bouguer anomalies was formulated in terms of the medium parameters. The solution was obtained by using the conjugate gradients method because of its fast and accurate advantages of calculation.