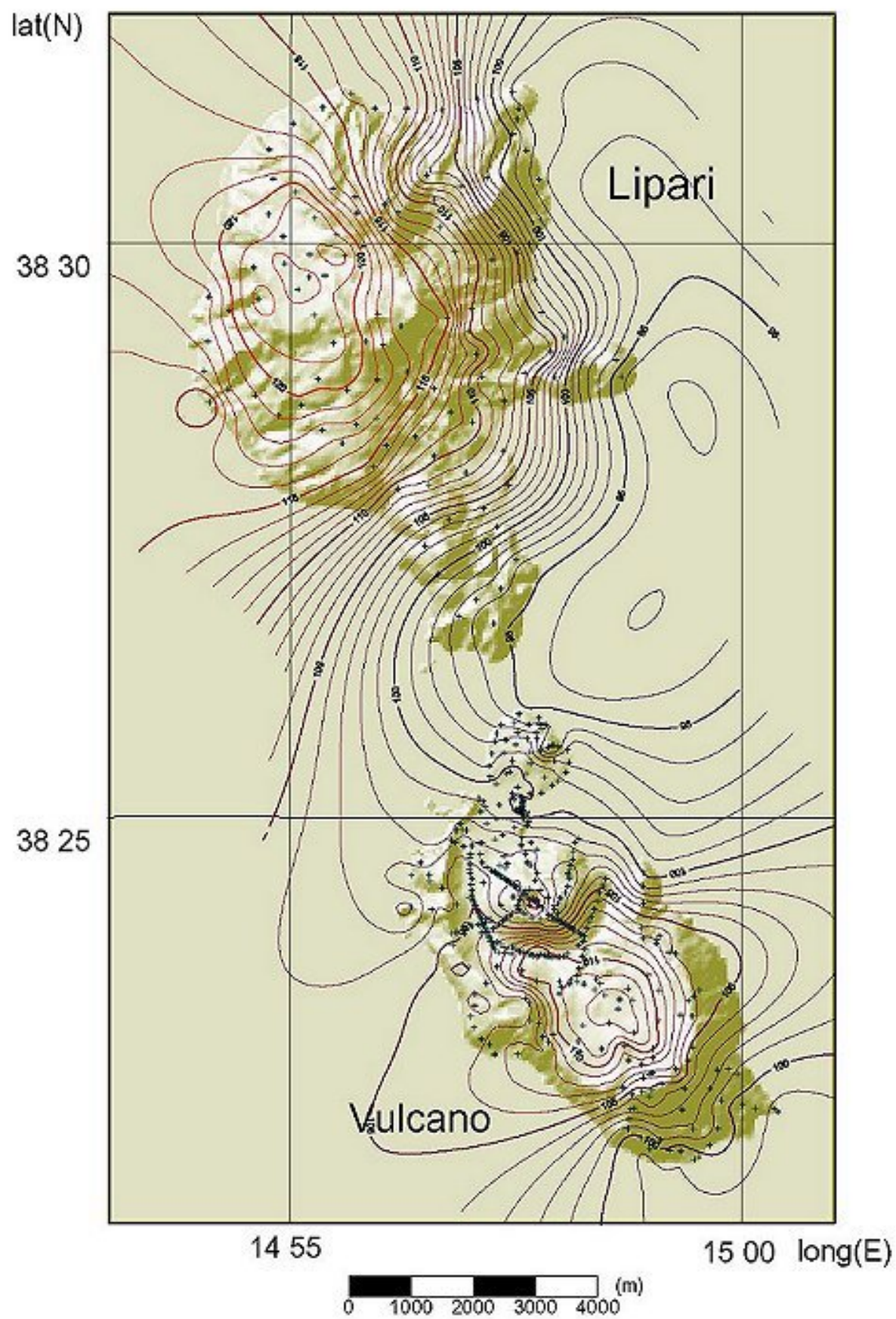


Gravity anomalies of Vulcano and Lipari volcano, Italy

Masao Komazawa[1], Mituhiko Sugihara[2], Shigeo Okuma[3], Tadashi Nakatsuka[4], Shun Nakano[5], Ryuta Furukawa[5]

[1] Geological Survey of Japan, [2] GSJ, [3] GSJ, AIST, [4] Geoinf. Div., GSJ/AIST, [5] AIST

Gravity survey was carried out in the Vulcano volcano and the Lipari volcano, Italy. Two Scintrex gravity meters and one ZLS_Burris gravity meter were used, and they are satisfactory about accuracy. Measurement is carried out for two years. The total number of measurement points amounts to 520, 415 points of Vulcano and 105 points of Lipari. The coordinates of measurement points are obtained by differential GPS and its accuracy, including altitude, is sufficient for gravity survey with less than 1m error. Terrain correction was performed by 20mDEM, and it is considered that the effect of DEM is enough for removing local anomalies. After the Bouguer anomalies were created by some kinds of assumption densities, the optimum density of surface is 1.8g/cm^3 . Compared with the common volcano in Japan, the result is small. But, the surface density of Nijijima and the Kozushima volcano which are considered to be rhyolite volcano is the same as this result. As an outline of the gravity anomalies, half south of the Vulcano island is indicated high and it said that the lava lake existed there in geology so it is suitable. And half west of the Lipari island is high where the geographical feature is high, so it indicates that rhyolite lava was intruded in the western area of Lipari island.



Bouguer anomalies, $\rho = 1.8\text{g/cm}^3$