高松南部の新発見クレータ構造の研究

1994 Fiscal Year Final Research Report Summary

Study of a Crater Structure found in the south of Takamatsu City, Kagawa Prefecture, Japan Professor

Research Project

Project/Area Number

04452063

Research Category

Grant-in-Aid for General Scientific Research (B)

Allocation Type

Single-year Grants

Research Field

固体地球物理学

Research Institution

Kanazawa University

Principal Investigator

KONO Yoshiteru Kanazawa Univ., Faculty of Science, Dept. Earth Sciences, 理学部, 教授 (80019489)

Co-Investigator(Kenkyū-buntansha)

YAMADA Isao Nagoya Univ., Faculty of Science, Dept. Earth Sciences, 理学部, 助教授 (60022670)
NAGAO Toshiyasu Kanazawa Univ., Faculty of Science, Dept. Earth Sciences Research Associate Prof, 自然科学研究科, 助手 (20183890)
FURUMOTO Muneyoshi Kanazawa Univ., Faculty of Science, Dept. Earth Sciences Associate, 理学部, 助教授 (80109264)

Project Period (FY)

1992 – 1994

Keywords

impact crater / gravity anomaly / Takamatsu crater / geomagnetic anomaly / caldera / crater structure

Research Abstract

A crater-like structure was found in the south of Takamatsu city, Kagawa prefecture, western Japan. This may be the first finding of an impact crater in Japan.
The structure was firstly detected by a abnormal value of gravity which is obtained in a course of regional gravity measurements over the Japanese Islands by us. After several tens of gravity measurements around the anomalous data point, depression of gravity anomaly appeared clearly. This crater was named as the Takamatsu crater. Topography around the crater is nearly flat and no geographical manifestation to indicate a crater-like structure beneath the earth's surface.
More than 500 gravity measurements, geomagnetic anomaly measurements at more than 100 points and 2 sections of reflecting seismic wave measurements were carried out over and around the crater.
Gravity and seismological analysis revealed that the crater is 4 km in diameter and 1.5 km in depth. The structure presumably buried by about 100 m thick Quaternary sediments.
There are two hypothesis about origin of the Takamatsu crater. One is meteorite impact origin, i.e., impact crater. The other is volcanic eruption origin, i.e., caldera.
Already some characteristic minerals are found from the crater area suggesting meteoritic impact origin.
This crater also contains great amount of underground water. Since the crater has not only scientific values but also economical values, we hope that deep drillings undertaken in this crater.

Research Products (3 results)

All | Other

All | Publications (3 results)

[Publications] Kono,Y.,: "Geophysical Investigation of the Takamatsu Crater,Kagawa Profecture,Japan21GC01:Proc.27the ISAS Lunan Planetary Symp." 67-70 (1994)

[Publications] 河野芳輝ほか: "日本にも巨大隕石が落下していた?" Newton. 48-53 (1994)

[Publications] KONO,Y., M.FURUMOTO,T.NAGAO,T.KASAYA,T.KUNITOMO,AND M.YAMADA.: "Geophysical Investigation of the Takamatsu Crater, Kagawa Prefecture, Japan." Proc.27th ISAS Lunar Planetary Symposium.67-70

URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-04452063/044520631994kenkyu_seika_hokoku_

Published: 1996-04-14