INTERNATIONAL HYDROGRAPHIC ORGANIZATION	INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

UNDERSEA FEATURE NAME PROPOSAL

(Sea **NOTE** overleaf)

Note: The boxes will expand as you fill the form.

Name Proposed:	Kikai Caldera	**Ocean or Sea:**	North West Pacific

Geometry that best defines the feature (Yes/No) : ellipsoid						
Point	Line	Polygon	Multiple points	Multiple lines*	Multiple polygons*	Combination of geometries*
		yes				

** Geometry should be clearly distinguished when providing the coordinates below.*

	Lat. (e.g. 63°32.6'N)	Long. (e.g. 046°21.3'W)
Coordinates:	30°48.5'N	130°20'E
	30°48'N	130°18'E
	30°47'N	130°16.5'E
	30°45'N	130°16.5'E
	30°42'N	130°19'E
	30°39'N	130°22'E
	30°39'N	130°24'E
	30°41'N	130°27.5'E
	30°43'N	130°28.5'E
	30°46'N	130°29'E
	30°48'N	130°27'E
	30°48.5'N	130°24'E

Feature Description:	Maximum Depth:	590 m in depth	Steepness :	
	Minimum Depth :	690 m in height	Shape :	ellipsoid
	Total Relief :	1280 m	Dimension/Size :	64 sq km

Associated Features:	Central cone and post caldera volcanoes (as islands)

Chart/Map References:	Shown Named on Map/Chart:	
	Shown Unnamed on Map/Chart:	W215, W1222
	Within Area of Map/Chart:	

Reason for Choice of Name (if a person, state how associated with the feature to be named)**:**	This feature is named after "Kikai-ga-Shima Island" (old name of Satsuma-Io-Shima Island), which is one of the post caldera volcanoes and consisting a part of the caldera rim.

Discovery Facts:	Discovery Date:	1943
	Discoverer (Individual, Ship):	Tadaiti MATSUMOTO, 1943, Japanese Journal of Geology and Geography, Vol 19, Special number, pp 1-57. (In Japanese)

Supporting Survey Data, including Track Controls:	Date of Survey:	2006-2008
	Survey Ship:	The Japanese survey vessel "Meiyo"

	Sounding Equipement:	Seabeam2000 (2006-2007) and EM302 (2008)
	Type of Navigation:	GPS without Selective Availability (patly DGPS)
	Estimated Horizontal Accuracy (nm):	GPS: 0.008 (nm), DGPS: 0.001 (nm)
	Survey Track Spacing:	0.25 nm
	Supporting material can be submitted as Annex in analog or digital form.	

Proposer(s):	Name(s):	Hydrographic and Oceanographic Department of Japan
	Date:	15 July 2009
	E-mail:	
	Organization and Address:	Hydrographic and Oceanographic Department, Japan Coast Guard Tsukiji 5-3-1, Chuo-ku, Tokyo 104-0045, Japan
	Concurrer (name, e-mail, organization and address):	

Remarks:	About the 60-70 % of the feature is located within the territorial sea. However, since this feature is well known amoung the scientific community for its notorious catastrophic volcanic eruptions (see Fig. 6 for the past volcanic activity of which volcanic ashes covered the most part of the mainland of Japan), we decided to propose this feature name to SCUFN.

NOTE : This form should be forwarded, when completed :

a) **If the undersea feature is located inside the external limit of the territorial sea** :-
to your "National Authority for Approval of Undersea Feature Names" (see page 2-9) or, if this does not exist or is not known, either to the IHB or to the IOC (see addresses below);

b) **If at least 50 % of the undersea feature is located outside the external limits of the territorial sea** :-
to the IHB or to the IOC, at the following addresses :

International Hydrographic Bureau (IHB) 4, Quai Antoine 1er B.P. 445 MC 98011 MONACO CEDEX Principality of MONACO Fax: +377 93 10 81 40 E-mail: info@ihb.mc	Intergovernmental Oceanographic Commission (IOC) UNESCO Place de Fontenoy 75700 PARIS France Fax: +33 1 45 68 58 12 E-mail: info@unesco.org

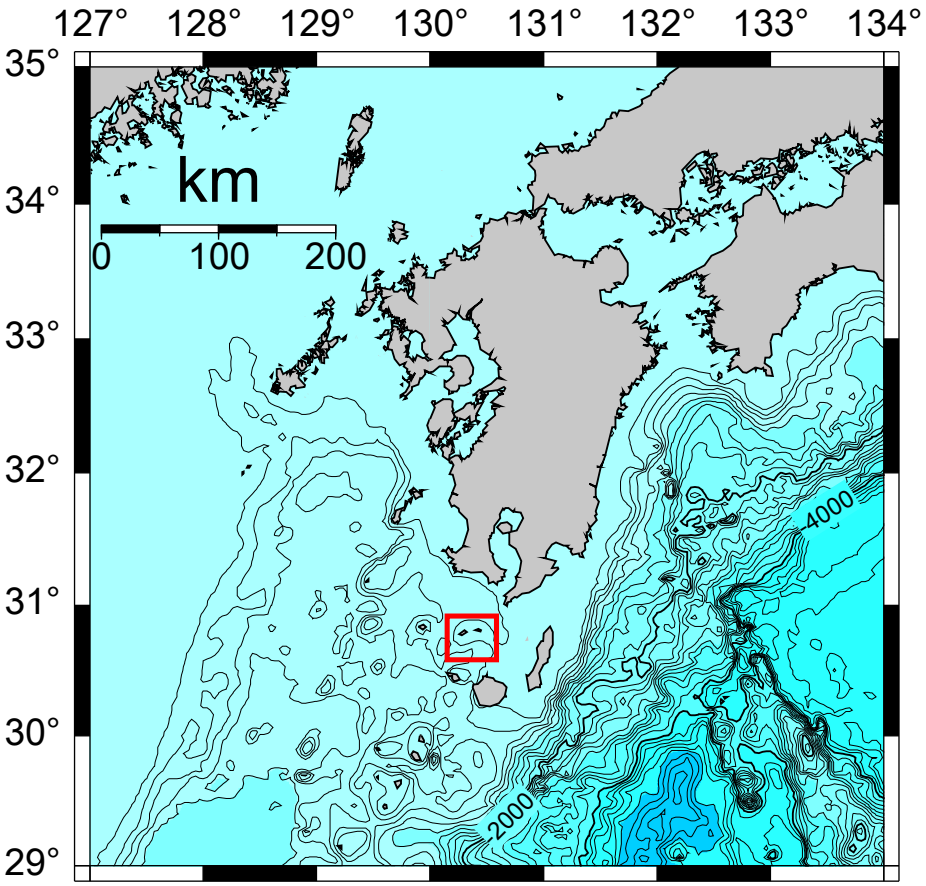

Fig. 1 Index map
Bathymetric data from ETOPO2.

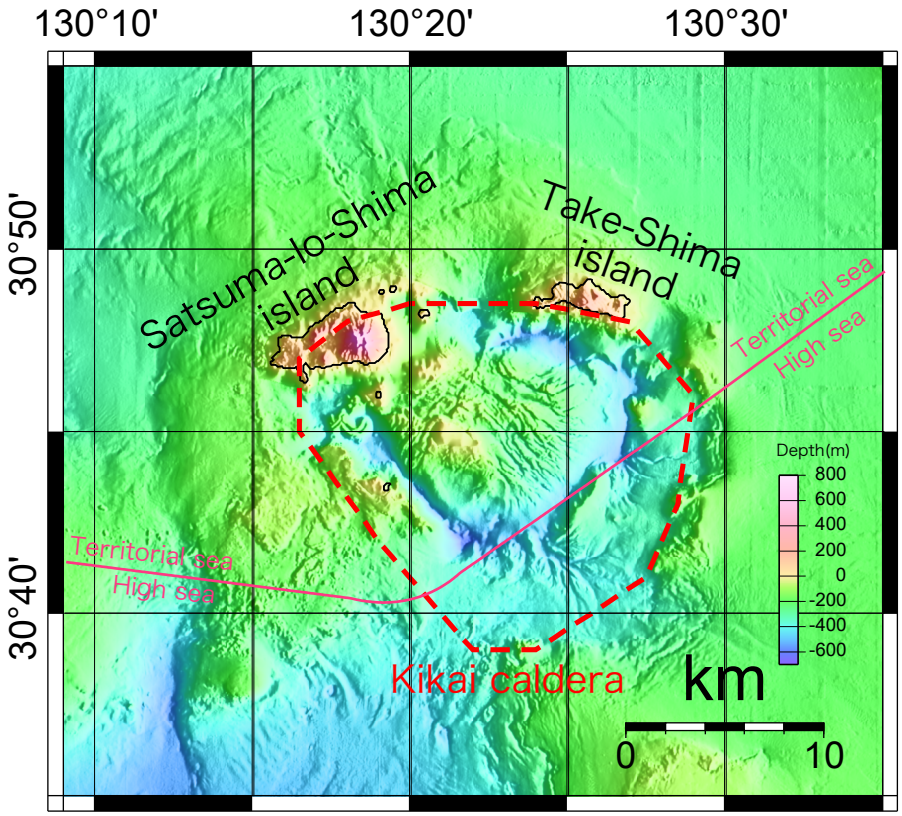

Fig. 2 Topography of Kikai caldera
Land elevation from Geographical Survey Institute of Japan.

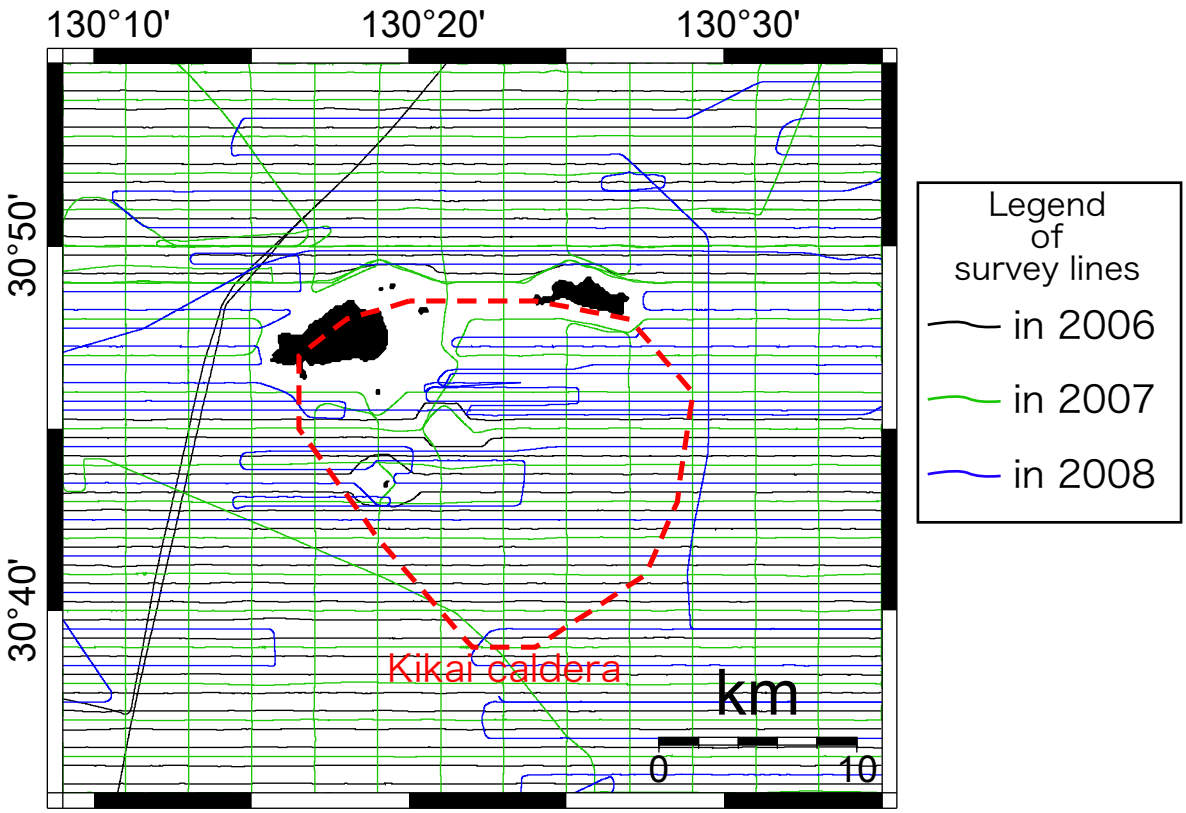

Fig. 3 Survey lines

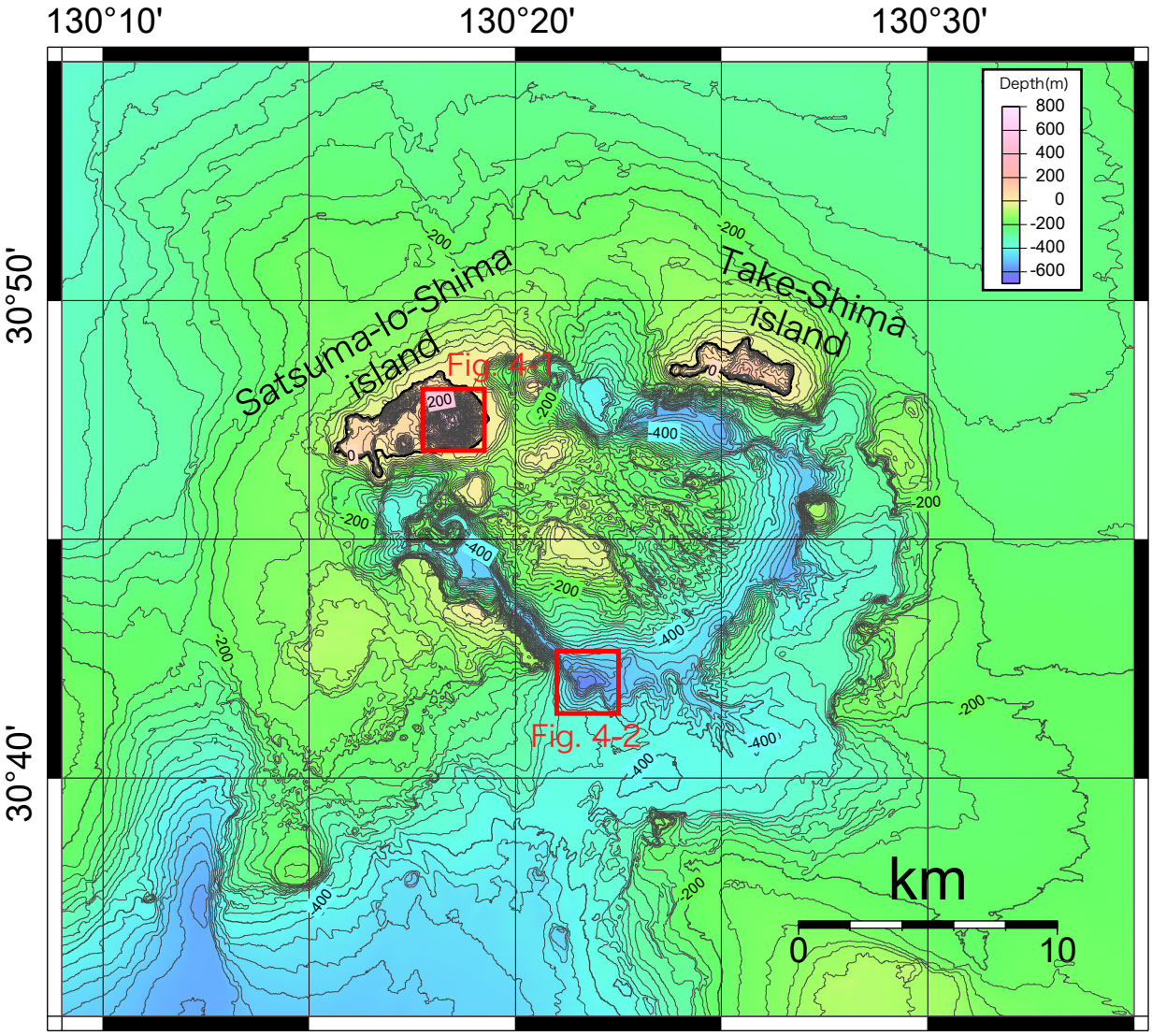

Fig. 4 Contour map of Kikai caldera

Sub figures are in next page. Contour interval is 20m.

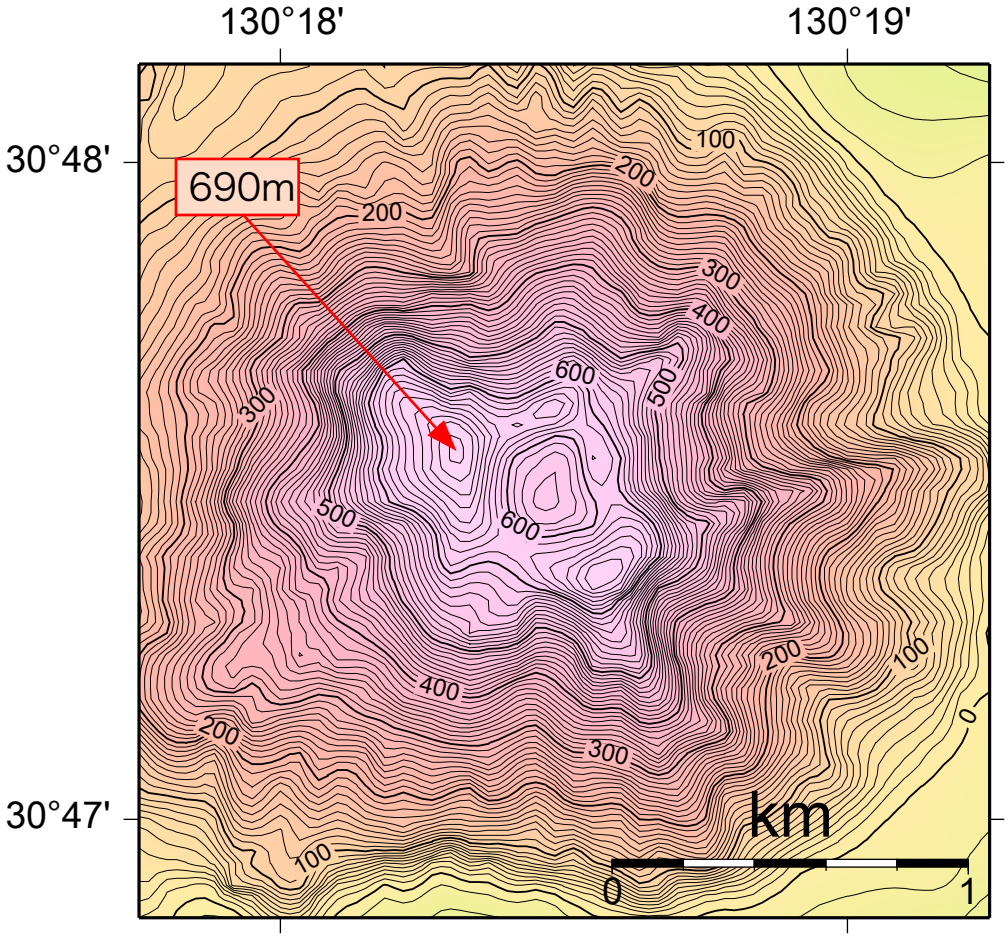

Fig. 4-1 The highest point of Kikai caldera

Contour interval is 10m. Color scale is same as Fig. 4.

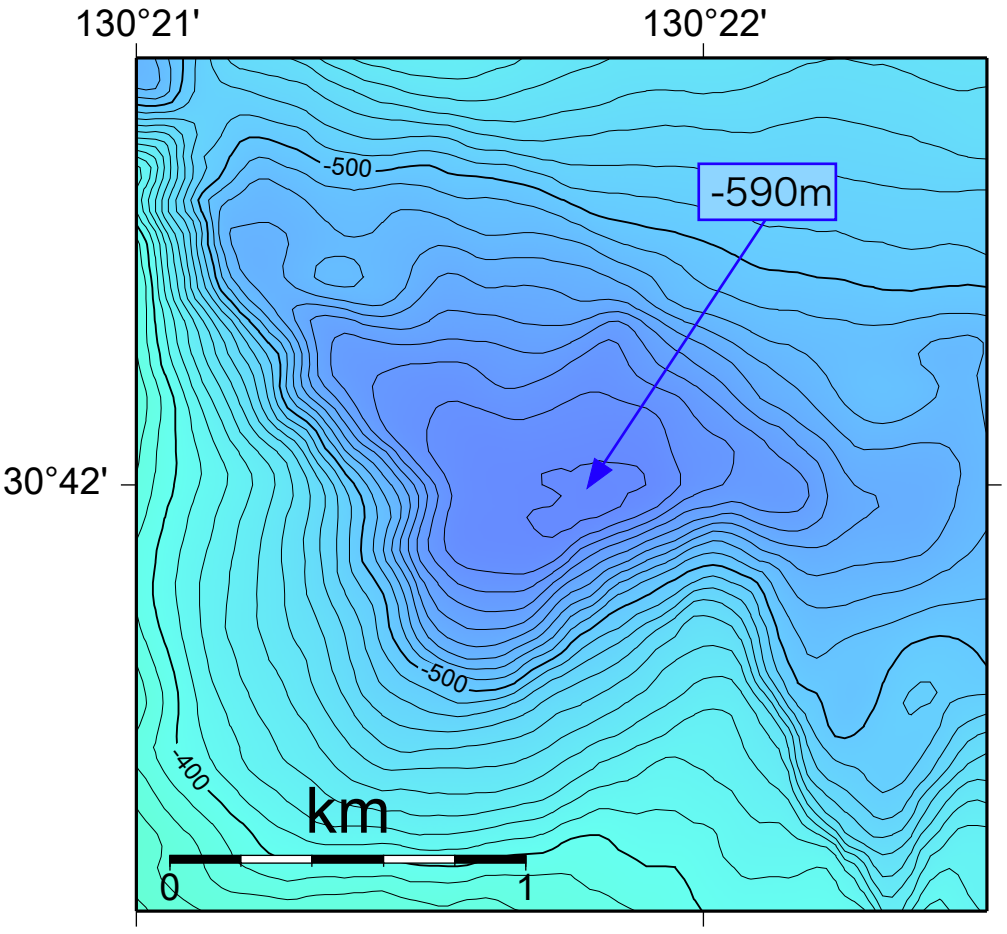

Fig. 4-2 The lowest point of Kikai caldera

Contour interval is 10m. Color scale is same as Fig. 4.

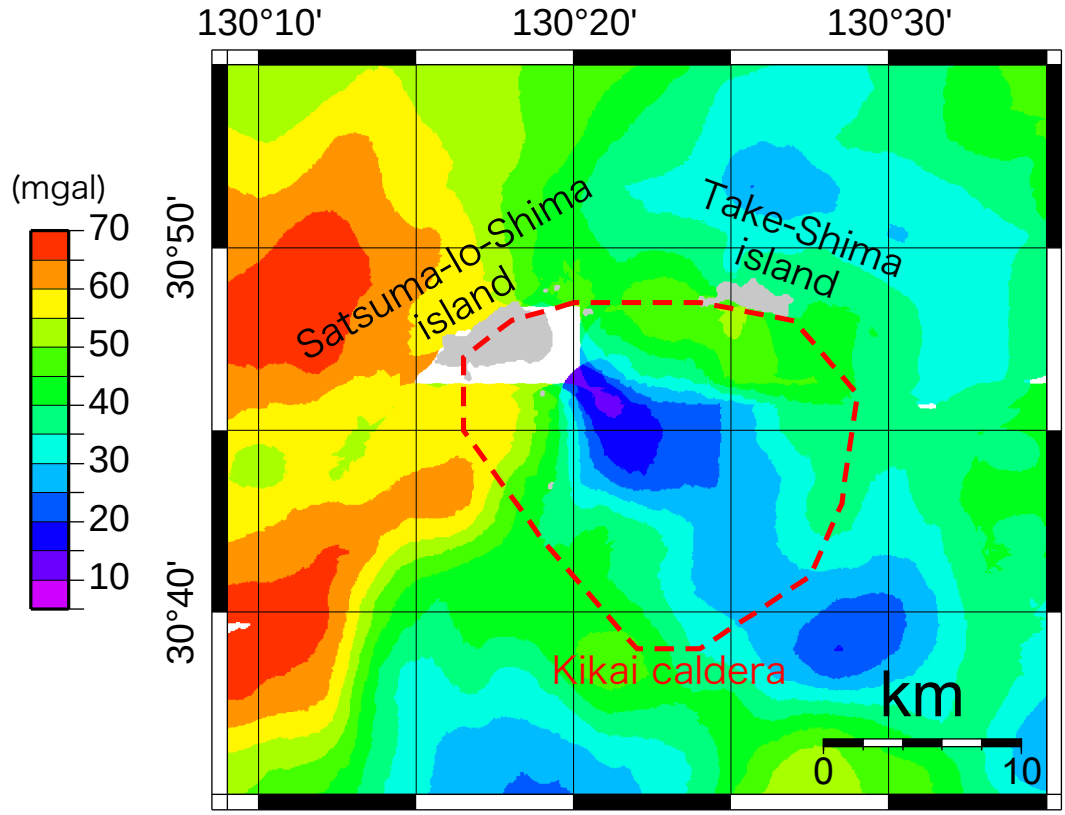

Fig. 5 Bouguer gravity anomaly

A caldera is often filled by low density materials like pumice made by explosive eruption and has low bouguer gravity anomaly in that case.

Table 1 Eruption history of Kikai caldera

	Eruption age	Eruption volume
1	580 Ka	no data
2	140 Ka	no data
3	96 Ka	150 km^3 <
4	7300 years before present	170 km^3 <

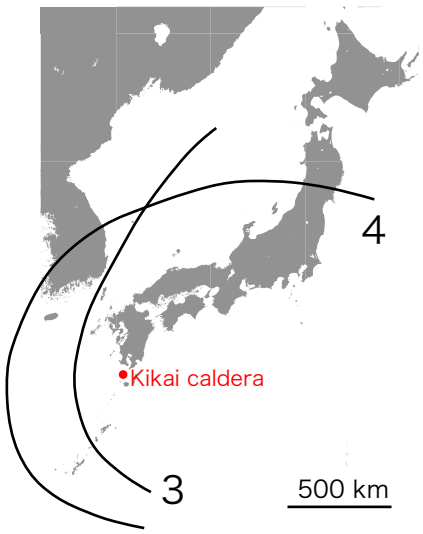

Fig. 6 Distribution map of distal tephra from Kikai caldera

Numbers are shown in Table 1.