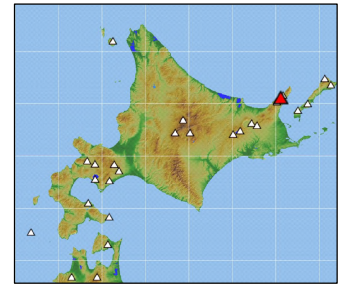


## 2.Rausudake

Latitude: 44°04'33" N, Longitude: 145°07'20" E, Elevation: 1,661 m (Rausudake)  
(GSI Measuring Point)



Overview of Rausudake taken from northwest side on June 6, 2003 by the Japan Meteorological Agency

### Summary

This volcano is located in the middle of the Shiretoko Peninsula in eastern Hokkaido. The basement rock, rhyolite and andesite from the Neogene period, are exposed to 800m above sea level. It has been active since 100,000 years ago. The diameter of the volcano's basement rock is approximately 5km, and the majority of it is a stratovolcano composed of pyroxene andesite lava and pyroclastic rock (The SiO<sub>2</sub> content is between 57.2 and 65.8 wt %). The summit is a lava dome. Three more similar volcanoes are located to the northeast, along the center of the Shiretoko Peninsula, as well as Shiretoko-lozan, located further northeast. Hot springs exist at the foot of the volcano (Doi et al., 1970; Goto et al., 2000).

## Photos



Summit from southwest side on October 19, 2011 by the Japan Meteorological Agency

## Red Relief Image Map

See the Shiretoko-lozan.

## Chronology of Eruptions

### • Volcanic Activity in the Past 10,000 Years

Within the past 2300 years, the volcano has been active from 2200 to 2300 years ago, 1400 to 1600 years ago, and 500 to 700 years ago. Relatively large-scale eruptions occurred from 2200 to 2300 years ago, discharging falling tephra and pyroclastic flows. The activity between 1400 and 1600 years ago consisted of plinian eruptions discharging falling tephra and pyroclastic flows, which were also ejected during the eruptions 500 to 700 years ago. There are still fresh surfaces on the lava flow and lava dome located near the summit, and it is highly likely that they were formed during some or all of these 3 periods (Miyaji et al., 2000; Goto, 2009). The eruption history of the volcano beyond 2300 years ago is still unclear. Currently, no fumarolic activity is observed.

Period	Area of Activity	Eruption Type	Main Phenomena / Volume of Magma
2.2ka (exact age unclear)	Unknown	Magmatic eruption	Relatively large-scale eruptions occurred, resulting in tephra sedimentation and 6 pyroclastic flows. The amount of ejecta is unknown.
1.4ka	Unknown	Magmatic eruption	Ra-2 and Rafl-2 eruptions: Large-scale plinian eruptions occurred, resulting in tephra sedimentation. This fallen tephra reached the center of Kunashiri Island. This was followed by explosive eruptions which ejected a large amount of volcanic projectiles, and the emission of a pyroclastic flow. Magma eruption volume = 0.08 km <sup>3</sup> DRE (fallen pyroclastic material only). (VEI 4)
0.5←→0.7ka	Summit area	Magmatic eruption	Ra-1 and Rafl-1 eruptions: Fallen tephra and pyroclastic flow were discharged. Magma eruption volume = 0.016 km <sup>3</sup> DRE. (VEI 3)

\* Reference documents have been appended with reference to the catalog of eruptive events during the last 10,000 years in Japan, database of Japanese active volcanoes, and AIST (Kudo and Hoshizumi, 2006) for eruptive period, area of activity and eruption type. All years are noted in calendar years. "ka" within the table indicates "1000 years ago", with the year 2000 set as 0 ka.

A←→B: Eruption events taking place at some point between year A and year B

## • Historical Activity

Year	Phenomenon	Activity Sequence, Damages, etc.
1964 (Showa 39)	Earthquake	Between January and March felt earthquakes occurred at Rausu Spa (over 160 in January, 18 in February and 3 in March). On January 20, the largest earthquake occurred (M4.6, seismic intensity of 4 on JMA scale), resulting in minor damage to Rausu Spa.

\* Reference documents have been appended with reference to the catalog of eruptive events during the last 10,000 years in Japan, database of Japanese active volcanoes, and AIST (Kudo and Hoshizumi, 2006 ) for eruptive period, area of activity and eruption type.

## Whole Rock Chemical Composition

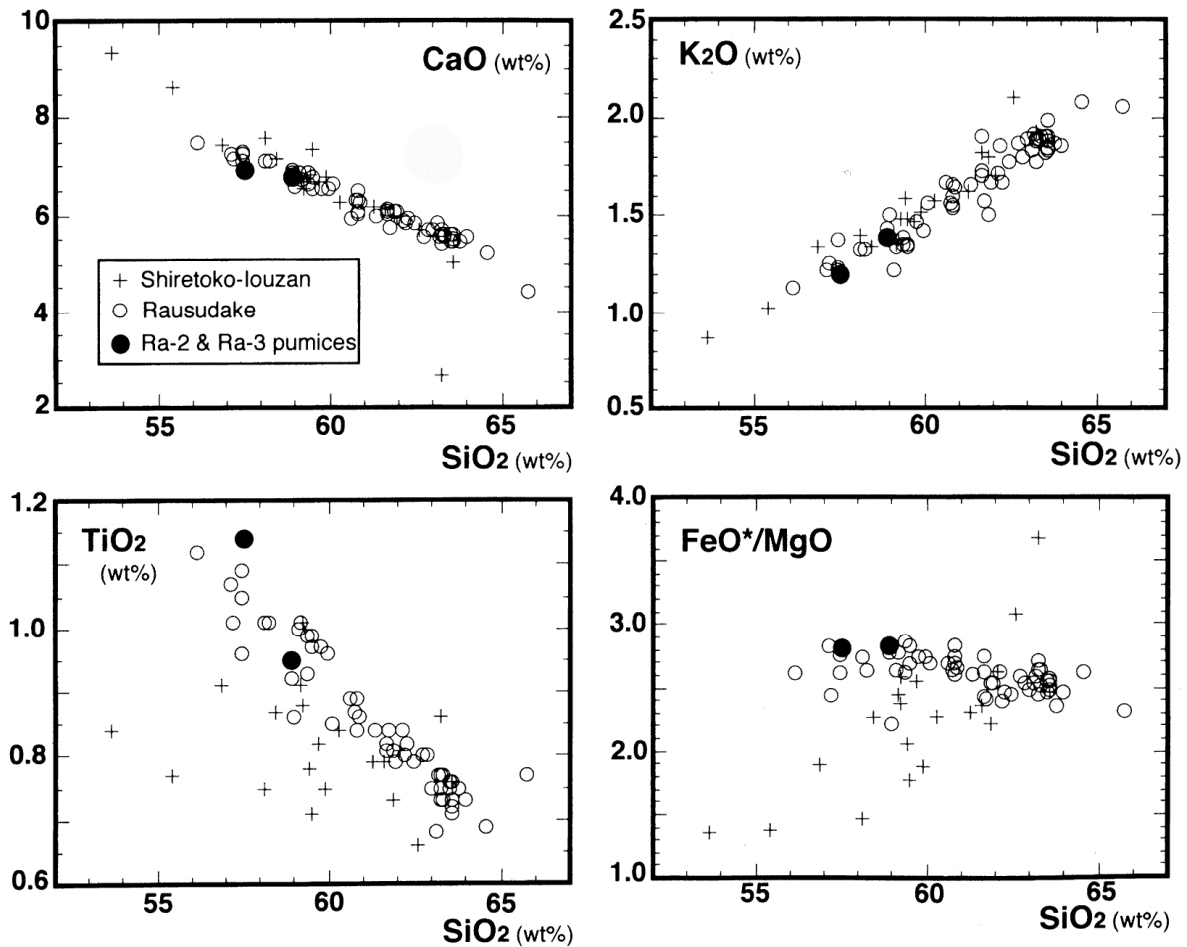


Figure 2-1 Whole rock chemical composition Harker diagram (Miyaji et al., 2000).

### Major Volcanic Activities

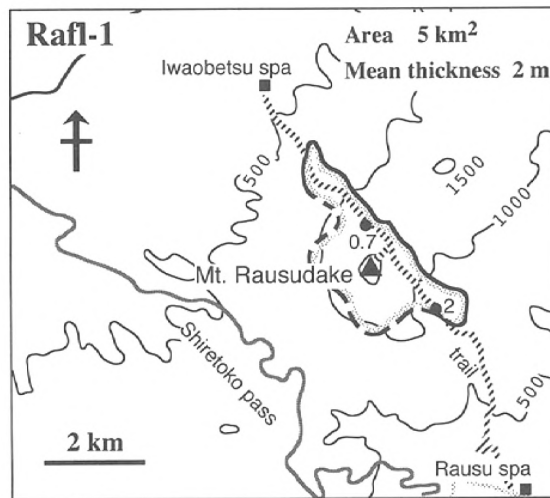
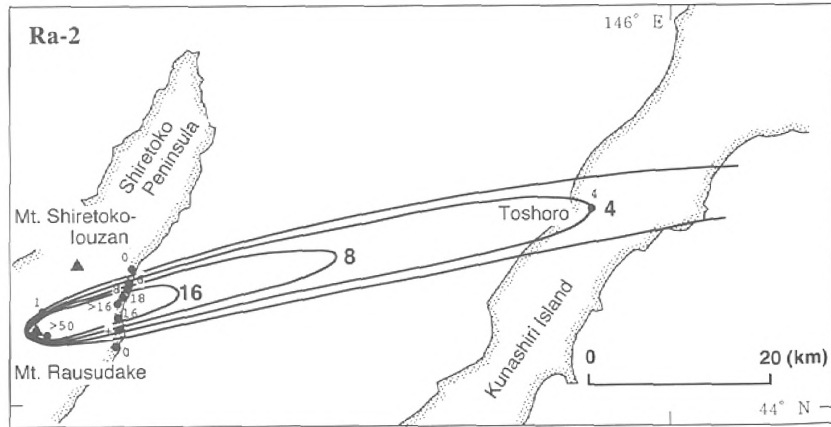


Figure 2-2 Distribution of tephra produced by eruptions approximately 1400 to 1600 years ago (top) and pyroclastic flow produced by eruptions approximately 500 to 700 years ago (bottom) (Miyaji et al., 2000).

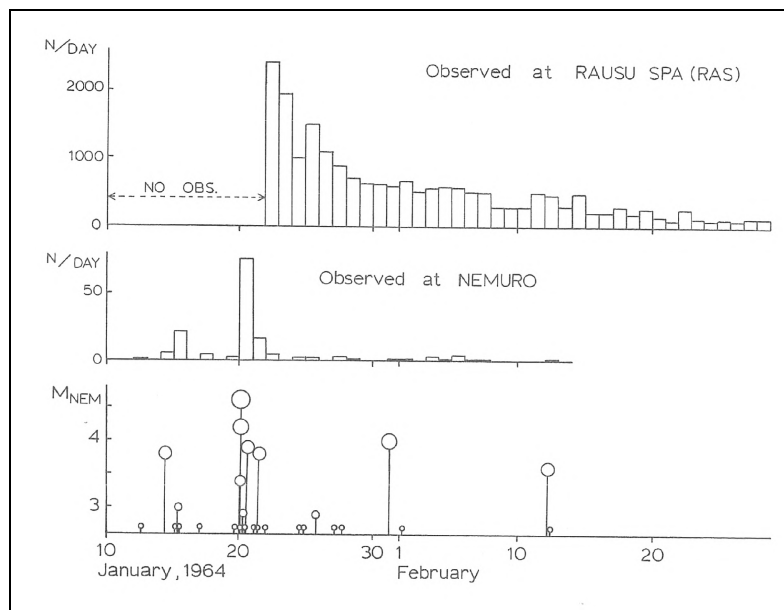


Figure 2-3 January to February, 1964, daily earthquake frequency trends. (Top: Results of special observation by Hokkaido University School of Science Middle and Bottom: Nemuro Weather Station materials) and time series of earthquake activity (Katsui et al., 1982)

## Recent Volcanic Activity

See the Shiretoko-lozan

## Information on Disaster Prevention

### ① Hazard Map

See the Shiretoko-lozan

## Social Circumstances

### ① Populations

- Rausu side: Rausu Town population 5,955, 108 of which live in Yunosawa area  
(as of November 30, 2011, according to family registers)
- Shari side: Shari Town population 12,600 (as of November 30, 2011, according to basic resident registers)

### ② National Parks / Quasi-National Parks / Number of Climbers

- Shiretoko National Park

Rausu side - Number of sightseers per year: 599,275 (according to 2010 sightseer admission number survey)

Shari side - Number of sightseers per year: Approx. 1,200,000 (according to 2010 Commerce, Industry and Tourism

Section, Town of Shari)

Rausu side - Number of mountain-climbers per year: Unknown

Shari side - Number of mountain-climbers per year: Approx. 4,600

(Abashiri Nanbu Forest Office: according to 2010 Forestry Agency Report of entrance into Mt. Rausu)

### ③ Facilities

- Rausu Town  
Rausu Visitor Center
- Shari Town  
Shiretoko National Park Nature Center  
Shiretoko World Heritage Conservation Center

## Monitoring Network

See the Shiretoko-lozan

## Bibliography

- Doi S. et al. (1970): 1:50000 Geological map of Rausu and Chienbetsu, Hokkaido Development Agency, 34p(in Japanese with English Abstract).
- Goto, Y. (2009): Geology of Shiretoko, Shiretoko Library, Hokkaido Press., 30-55 (in Japanese).
- Goto, Y., et al. (2000): Island Arc, 9, 204-218.
- Katsui, Y. et al. (1982): Shiretoko-Iwaozan, Hokkaido Disaster Management Council, 98p (in Japanese).
- Miyaji, N. et al. (2000): Bull. Volcanol. Soc. Jap., **45**, 75-85 (in Japanese with English Abstract).
- Sasaki, Y. and Motoya, Y. (1964): Geophys. Bull. Hokkaido Univ., **12**, 69-80 (in Japanese with English Abstract).

(Nakagawa, M.)