

## SUMMARY AND CONCLUSION

Under the national programme of the geological research of the continental margin around Japan, the Geological Survey of Japan carried out two geological and geophysical research cruises in the area including the Izu-Ogasawara Arc and Trench for 25 days in order to outline the geological characters of the island arc—trench unit.

The cruises were carried out in June and October–November in 1974 for 20 and 5 days respectively. Both the cruises were made by the research vessel Hakurei-maru chartered from the Metal Mining Agency.

The results of the research cruises were not very fruitfull, because of the limited time of investigations in such a large area and frequent troubles with some of the survey equipment. Nevertheless, the geological data were obtained from several traverse lines across the island arc-trench unit.

The preliminary results of the cruises are summarized as follows.

Geomorphological and seismic data of the Nishi-Shichito, Shichito-Iojima and Ogasawara Ridges imply that these ridges were formed by block fault movement and tilted eastward. The topographical irregularity, thin sediment cover and the dredging of green tuffaceous rocks from the Nishi-Shichito Ridge are of most interest in relation to the origin and process of ridge formation.

The succession of the sediments in the eastern margin of the Shikoku Basin is composed of two alternating units of turbidites and transparent layers and this succession is correlated directly to the known sequence of the sediments in the western part of the basin.

On the bottom of the trench horizontally deposited sediments are about 400 to 750 m thick. The thickness of the sediments increases northward. This infers that the sediments were derived from land through the Sagami Trough or Canyon by turbidity currents.