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Heat flow distribution in the western margin of the Pacific

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Heat flow distribution in the western margin of the Pacific has been surveyed, because it is one of the important geophysical observations in the region. Particularly, the compilation of heat flow data in Southeast Asia and its marginal seas is the subject of our main concern.

In the present paper, we present an updated heat flow map of the western margin of the Pacific, north of 12°S. Special attentions are paid to the Southeast Asia part (95° to 120°E) x (10° to 20°N). Maps showing the temperature values at 1, 3, and 5 km depths are also produced, estimated from simple assumptions of the crustal heat generation and thermal conductivity. Although there remain large uncertainty of the assumptions and also data coverage is rather poor in some part, those maps are clearly indicative of the significant lateral differences of temperature, which may have a large impact on the assessment of hydrocarbon and other mineral resources in the region.

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