

## HEAT FLOW PATTERN OF SOUTH CHINA SEA, A PASSIVE CONTINENTAL MARGIN

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The South China Sea (SCS) Basin is a passive continental margin of the West Pacific. The basin has experienced multiple rifting events and contemporaneous continental rifting and sea floor spreading. Based on 584 heat flow data so far obtained, the heat flow pattern of SCS has been received. Results exhibit that the heat flow pattern of SCS is closely correlated to the tectonics, that is: 1) Low heat flow in Manila Trench and Nansha Trough. Most heat flow value appears to be  $60 \text{ mW/m}^2$  in this area with an average of  $49.1 \pm 26.1 \text{ mW/m}^2$ ; 2) High heat flow in the Central Basin. The average heat flow is  $89.9 \pm 15.7 \text{ mW/m}^2$  with the highest up to  $152 \text{ mW/m}^2$ ; 3) Stable and/or normal heat flow in northern continental shelf basin such as Pearl Mouth Basin, Beibu Bay Basin etc. The average value is of  $67 \text{ mW/m}^2$  ranging from 53 to  $85 \text{ mW/m}^2$ ; 4) High heat flow along NNE extending trending extension zone. It must be noted that a high heat flow zone in NNE direction is well developed in SCS. A few high heat flow ( $100 \text{ mW/m}^2$ ) contour corresponds to the northeastern part, SW Subbasin and Zengmu Basin. Most likely, this zone joins the high heat flow zone of longitudinal rift in the East Taiwan, which further joins the extremely high heat flow zone of Okinawa Trough in East China Sea.