

阎全人,王宗起.南海北部陆缘地壳结构特征及其构造过程[J].地质论评,2000,46(4):417-423

南海北部陆缘地壳结构特征及其构造过程 [点此下载全文](#)

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基金项目:广西重点科研项目,桂科92171K032,

DOI:

摘要:

根据“北部湾大陆缘地壳结构P S转换波测深”等地球物理测量结果,本文研究了南海北部陆缘的地壳结构特征,讨论了其白垩纪以来的构造过程。地球物理测量表明,由陆向海,南海北部陆缘地壳由陆壳、过渡壳变为洋壳,厚度由34 km减薄至8 km左右。垂向上地壳为3层结构模式。陆壳、过渡壳和洋壳的下地壳P波速度普遍较高。地壳伸展系数的计算表明南海北部陆缘伸展主要发育于陆坡地区。结合区域地质研究,本文认为:南海北部陆缘及

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Crustal Structure of the Northern Margin of the South China Sea and Its Tectonic Processes Since the Cretaceous [Download Fulltext](#)

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Abstract:

Based on geophysical data, the northern margin of the South China Sea since the Cretaceous includes three types of crust: continental, transitional and oceanic. The crustal thickness changes from about 34 km to 8 km from land to sea. Seismically, the crust can be subdivided into three layers and the lower crust shows stronger reflectivity, which indicates the lower crust is on accretion. Its reflective interfaces can be a detachment surfaces. The formation of the northern margin and the basin of the South China Sea experienced two periods of spreading in the early Cretaceous (126-120 Ma) and the early Tertiary (32-17 Ma). Its dynamics is the plume tectonics caused by the subduction of the Australian-Indian oceanic plate down to the South China Sea about 670 km. The northern margin of the South China Sea has similar features to the Atlantic margin. The oceanic crust of the South China Sea originated from the extension of the passive margin. The continental remnants in the South China Sea came from the breaking and shifting of the South China - Indochina convergent plate.

Keywords: [northern margin of the South China Sea](#) [crustal structure](#) [tectonic processes](#)

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