

## **NEOPROTEROZOIC HIATUS IN CENTRAL RODINIA: LEGACY OF A MANTLE PLUME THAT STARTED THE RODINIA BREAKUP**

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A ca 150 My hiatus during the Tonian (1000–850 Ma) is observed in South China, Australia, East Antarctica, and likely to be present in western Laurentia as well as other continental blocks in central Rodinia (e.g. Tarim and India). The hiatus occurs not only along Grenville-aged orogenic belts (e.g. the Sibao and equivalent orogenic belts in South China), but also over major cratons (e.g. Yangtze and Australia). It therefore can not be explained solely by orogeny-related erosion. In South China, the sedimentary hiatus is between late Mesoproterozoic rocks and volcanoclastic rift successions no older than ca. 825 Ma (including the Sinian type section, which probably started slightly younger, i.e. after 800 Ma). However, around the Yangtze craton, there are widespread 830–820 Ma bimodal intrusives that were also erosionally truncated by the rift succession. Similar contact relationships can be found in eastern Australian craton where the  $827 \pm 6$  Ma Gairdner Dyke Swarm is found to be erosionally truncated by the Sturtian (ca 760 Ma?) glacial deposits, although no direct contact between the dykes and the basal Adelaidean units has yet been found. Neoproterozoic sedimentary hiatus in central Rodinia, that of the 850–820 Ma interval in particular, can be interpreted as the results of lithospheric doming above an ascending mantle plume, which initiated the continental rifting that eventually led to the breakup of supercontinent Rodinia.