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PII: S0301-9268(17)30342-X
DOI: http://dx.doi.org/10.1016/j.precamres.2017.08.004
Reference: PRECAM 4851

To appear in: *Precambrian Research*

Received Date: 16 June 2017
Revised Date: 1 August 2017
Accepted Date: 2 August 2017

Please cite this article as: A.D. Hawkins, S. Xiao, G. Jiang, X. Wang, X. Shi, New biostratigraphic and chemostratigraphic data from the Ediacaran Doushantuo Formation in intra-shelf and upper slope facies of the Yangtze platform: Implications for biozonation of acanthomorphic acritarchs in South China, *Precambrian Research* (2017), doi: http://dx.doi.org/10.1016/j.precamres.2017.08.004

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Key Words: Ediacaran Period, Doushantuo Formation, acritarch, silicification, carbon isotopes

Abstract

Carbon isotopic and microfossil records of the Doushantuo Formation in South China provide a valuable window onto major perturbations of the Ediacaran carbon cycle and the evolution of morphologically complex acanthomorphic acritarchs. Both records exhibit significant geographic heterogeneity related to environmental, taphonomic, and diagenetic variations. Absolute $\delta^{13}C_{carb}$ values vary by as much as 10‰ between sections of