

## Chemostratigraphy of the Ediacaran Doushantuo Formation in central Guizhou province

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In the Ediacaran period (635 Ma ~ 542 Ma), the Marinoan and Gaskiers glaciations have been widely recognized as drastic climate changes. Because these changes were temporally associated with evolution of the metazoan, the crucial relationships has been discussed actively. The Ediacaran Yangtze platform in south China is a key locality for understanding the relationship due to well-preserved sedimentary rocks of various environments from shallow to deep ocean. Additionally there are many Ediacaran fossil records from this platform.

There are many sections that yield fossils, such as Miaohu biota and Wengan biota from the Ediacaran Yangtze platform. The Wenghui section in central Guizhou province is one of them, and exposes a basal facies (Jiang et al., 2011). The fossils from this section include algae, sponges and annelids and are called the Wenghui biota (Jiang et al., 2011; Wang and Wang 2008, 2010). Despite the importance of this biota, geochemical analyses have never performed for the Wenghui section, and therefore the correlation with other Ediacaran sections is poorly understood.

Wenghui section is about 65 m thick and divided into the Nantuo Formation, the Doushantuo Formation and the Liuchapo Formation in ascending order. The Nantuo Formation is extensively distributed as post-Marinoan diamictite in the Ediacaran Yangtze platform. The Doushantuo Formation consists of carbonate-shale sequence, and the occurrences of pyrite throughout this formation indicate a reductive environment. This formation includes the Wenghui biota in black shale of the upper part (Wang and Wang 2008, 2010). Additionally, we found a new fossil horizon of carbonate rock in lower part, which yields algae and sponge spicules from. These fossils are mainly preserved as apatite. The overlying Liuchapo Formation exposed in the upper section consists of the alteration of black chert and black shale. This Formation is correlated with the Dengying Formation distributed in shallow facies of the Ediacaran Yangtze Platform.

We are analyzing inorganic carbon and oxygen isotopes in order to consider paleoenvironment of Wenghui section and provide chemostratigraphic correlation, and will represent the results.

Keywords: Ediacaran, chemostratigraphy, China