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Environment change records of delta and sand wedge of lakeshore at LingGo Co of Qiangtang plateau

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Abstract Environment information from the river delta is very complex. Whereas, according to the sedimentary structure of the river delta, sediments can be judged belong to lacustrine deposition or river deposition, then can conform sedimentary environment, a stream sedimentary environment or lake sedimentary environment. There is the biggest delta in the inlet of the biggest river of Linggo Co, at the delta in the northeast of the lake, found one section, the height of the section is 4.56 meter, it recorded the different environment. optically stimulated luminescence (OSL), can be used to gain an insight into both when lake rise and when lake back. Seven samples were collected, the ages are 5.90±0.50,7.30±1.00,3.30±0.30,3.30±0.30,5.90±0.80,4.80±0.40,10.70±1.00 Ka B.P., from up to down at the section. These data can be divided into four groups. The results indicate that: (1) the first two data get from river sedimentary environment which make up of coarse and gravel, suggesting that signal retreated incompletely. (2) Behind three groups of data show that positions of these data were lacustrine deposition, than modern lakeshore, and the lake level is higher, may be warmer and wetter climate.

Sand wedge can write down the ancient temperature on the whole.in the east coast of the lake ,one sand wedge were found,about 1.5 meter high. Three samples were get from this sand wedge section. Optically stimulated luminescence (OSL) measurements also were made use of for the ages, its show 1.50±0.20 ,1.40± 0.10 6.5±0.50 respectively , these data illustrate the annual average temperature is about -5°8°,1500 6500 years ago,and the lake level is lower than the sand wedge section,belonging to cool period.

Keywords Linggo Co, river delta ,sand wedge ,OSL dating