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Chuan-lin¹, Y

U - Pb Hf
±1.3Ma U - Pb 630.6±1.3Ma Hf 2
650-615Ma

4.3 P597.1 1.2552 2014 05- 0606- 08

Li X T, Li H K. The northern margin of the Tarim Craton. *Geologi-*
of China, 2014, 33(5):

Zircon U - Pb dating reveals that the northern margin of the
craton crystallized at 630.1±1.3 Ma. These rocks were
derived from partial melting of a mafic protolith. The results
on a comprehensive analysis of the zircon U - Pb dating data
in Quruqtagh were the latest phase of the Neoproterozoic
supercontinent, i.e., they had nothing to do with the
supercontinent. The rocks in Quruqtagh exhibited typical
features of a continental margin that had never incorporated into the Gondwana
supercontinent.
Keywords: Tarim; Neoproterozoic granitoid

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60×10⁴km²

2013- 12- 02 2014- 03- 05

607

3-5%

2009KR 015

2009KR 016

41°49'15" E 86°12'15" N 41°49'33" E 86°11'

(1000

) 200

U-

1 a 650-615Ma c^[10]
b

Fig. 1 Distribution of Precambrian strata in Tarim Basin (a), 650-615Ma basic dykes and granitic intrusive rocks with sampling sites (b) and composite columnar section of Neoproterozoic strata in Quruqtagh area c

2 U - Pb

Fig. 2 U - Pb concordia diagram of zircons from Neoproterozoic K - feldspar granite and granodiorite in Quruqtagh area of Tarim Basin

Bi— Hb— Pl— Mc— Or— Q— Mt—

-Th
Ispar

b/²³⁸U

1031
1016
1028
1030
1029
1030
1026
1025
1024
1023
1028
1025
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1024
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0.
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0.49
0.63
0.56
0.54

5
60
3
55
22
70
0
9
2
60
2
40
53
39

33	5		
32	Hf		
2	Hf		
- 8.9-- 4.2			
630Ma)			
- 5-- 3			
Hf			
24Ga			
4			
41			

630Ma)

Hf(=

Hf()

- 6-- 4

Hf()

~25Ga

22-

4 3Ma [25-26] 2-

Zhu [21] [26-27]

700Ma 760Ma 740-730Ma 820-800Ma 780-

615Ma 650-

[22] 650-615Ma Rodinia

R odinia

5

1 820Ma

615Ma 650-615Ma

3

2 650-615Ma Rodinia

R odinia

740Ma 740Ma

[11]

Zhu

760Ma

820-760Ma

Li

[1] [M].

1991.

[2] [M].

[324] 1984.

630Ma [3] [J].

[J].1992 (26/27) 1- 15

[4]Lu S N, Li H K, Zhang C L, et al. Geological and geochronological evidence for the Precambrian evolution of the Tarim craton and surrounding continental fragments[J]. Precambrian Research, 2008, 160 94- 107.

[5]Zhang C L, Li H K, Santosh M, et al. Precambrian evolution and

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