

## **Studies on the blueschist belt in the Shuanghu region, central northern Tibet and its tectonic significance**

<sup>1</sup>Bao Peisheng   <sup>1</sup>Xiao Xuchang   <sup>1</sup>Wang Jun   <sup>2</sup>Li Cai   <sup>2</sup>Hu Ke  
<sup>1</sup>Institute of Geology, CAGS, Beijing, China;   <sup>2</sup>Academy of Earth Sciences, Changchun University of Science and Technology

The blueschist blocks extend intermittently more than 300 km, from the East Shuanghu town, central northern Tibet, to the west Longmucuo (Lake). The blueschist blocks are newly discovered, associated with ophiolite melange and olistostrome.

The protoliths of blueschist are mainly of the Late Carboniferous sedimentary-volcanic rock series at the margin of the Gondwana land, including basic volcanic rock, argillaceous sandstone, sandy-argillaceous limestone etc.

The H.P/T minerals mainly consist of crossite, secondary of magnesio-riebeckite, with minor winchite and associate with epidote, chlorite, albite, sericite, calcite and quartz.

The metamorphic pressure of the blueschist varies from 0.67~0.75GPa and metamorphic temperature from 410~460°C, corresponding to the transitional facies between blueschist and greenschist. The <sup>40</sup>Ar/<sup>39</sup>Ar isotope dating of crossite is  $222.5 \pm 3.7$ Ma.

The high pressure metamorphic zone and the associated ophiolite melange may be as a tectonic symbol of the subduction of a rift trough or an "initial limited oceanic basin" at the northern side of the Gondwana land and a boundary of Gondwana and Eurasian land.