

The initiation of EARTHTIME-CN

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Inspired by the success of EARTHTIME, EARTHTIME-CN was initiated on Dec.15th., 2013 in Beijing to improve the accuracy and precision of Chinese geochronology laboratories. There are four working groups in EARTHTIME-CN, isotopic dating, paleomag, orbital tuning and paleontology. Four Chinese ⁴⁰Ar/³⁹Ar labs, one SIMS lab and one ID-TIMS lab join in the EARTHTIME-CN. The 2014 working plan of isotopic dating group are mainly focused on the standardization of the ID-TIMS and ⁴⁰Ar/³⁹Ar laboratories.

Under the guidance of Prof. Sam Bowring, we are establishing the ID-TIMS U-Pb geochronology at the Institute of Geology and Geophysics, Chinese Academy of Sciences.

Air standard measurements are the first step to inter-calibration between the participating ⁴⁰Ar/³⁹Ar labs. Mineral standards measurements and pipette experiments will be the next. Our petrology study indicate that there are tiny amount of quartz and plagioclase in FCT-2 sanidine separation, which may explain the disturbed age spectrum reported by Phillips and Matchan [1]. The possibility to irradiate ⁴⁰Ar/³⁹Ar samples with deuteron-deuteron (D-D) fusion neutrons in China was discussed.

[1] Phillips and Matchan (2013). Ultra-high precision ⁴⁰Ar/³⁹Ar ages for Fish Canyon Tuff and Alder Creek Rhyolite sanidine: New dating standards required? *Geochimica et Cosmochimica Acta*, **221**:229 - 239