

## **Provenance of Cenozoic Myanmar central basins and implications for the SE Asia tectonic setting**

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Knowledge of the evolution of the Myanmar northern central basins (MNCB) deposition is critical to understanding crustal deformation processes and the tectonic setting of SE Asia from the Eocene. The MNCBs are linked to the Tibetan plateau by the eastern end of the Himalayan belt and lie between the Kabaw oblique subduction zone and the regional Sagaing strike-slip fault.

The onset of dextral motion on the Sagaing Fault in Myanmar has been the subject of considerable controversy, with estimates ranging from the Miocene-Pliocene boundary to possibly the Late Eocene, while displacement magnitude estimates range between 100 km and 400+ km. A recently identified syn-kinematic basin which formed at a releasing bend on one of the fault strands in northern Myanmar is dated in this study as mid-Oligocene age (27-28 Ma) in age (based on maximum depositional U-Pb ages from detrital zircons, apatite and titanites). This constrains the onset of motion on the fault zone, and favours the high displacement models with an estimate of  $522 \pm 35$  km offset.

Furthermore, we use new geochronological and geochemical data from zircon, titanite, apatite and rutile to link the significant displacement along the Sagaing Fault and the uplift of the Indo Burma Ranges to the interaction between the MNCB and the Himalayan orogen.