# Preliminary Results from the Yala-Xiangbo Leucogranite Dome, SE Tibet

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The Yala-Xiangbo Leucogranite dome is situated in southeastern Tibet, ~60 km south of the Indus-Tsangpo Suture, and is broadly similar in style, position and age to other North Himalayan domes. The area comprises ~25 km$^2$ aerial exposure of predominantly coarse-grained micaceous leucogranite, emplaced into garnet-mica and graphitic schists. Penetrative fabrics associated with emplacement of the leucogranite dip broadly away from the core, whereas stretching lineations appear to be oriented approximately N-S, similar to those seen in the Kangmar Dome (Lee et. al. 2001). Preliminary thermochronological data indicate that the leucogranites were emplaced at ca. 18 Ma, and cooled through the muscovite closure window at ca. 13.5 Ma. Microstructural analysis suggests that formation of penetrative fabrics was frequently associated with a period of growth and recrystallisation. Relative to fabric formation, initiation of this growth event occurred progressively later with increasing structural height, suggesting upward migration of a thermal anomaly. Thermometric analysis indicates peak temperatures in surrounding schists were above 500 °C even several kilometres structural section from the core of the dome. Preliminary studies on zircons from the Yala-Xiangbo Leucogranite show several populations that are significantly younger than those found in the Greater Himalaya and could represent southward migration of Tibetan middle-crustal material by ductile flow (e.g. Beaumont et. al. 2001, 2004, Jamieson et. al. 2004). Alternatively, they may be attributed to reworking of underthrusted components of the former Gandese Arc.

## References

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