Thermochronology, and geodynamics of rifting in the East African System in NW Kenya

The Turkana Depression in northern Kenya defines a complex basin dividing the East Africa Rift System into segments that cross two great uplifted and volcanically active regions, the Ethiopian Dome to the north, and the Kenyan Dome to the south. The origin of this basin, and why it should now be at a much lower elevation, are poorly understood and the broad rifting style contrasts with more clearly defined rift valleys across the neighbouring domes. Low-temperature thermochronology of the Proterozoic Mozambique Belt basement rocks in Kenya provides evidence of a complex history of rifting that gives insight into the evolving geodynamics of this region of northwestern Kenya.