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First GPS results in northern Myanmar: constant and localised slip rate along the Sagaing fault

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We present the first recorded Global Positioning System (GPS) data from Myanmar measured at the northern tip of the Sagaing Fault. This area is setting in a very complex geodynamic context where rigid and semi rigid plates interact. The twelve GPS sites measured in 2005 and 2008 in northern Myanmar show that the slip rate is 18mm/yr and is localised along a single active narrow fault trace (<20km wide). The same rate was previously demonstrated and re-measured, 500km southward, in central Myanmar. Despite of the geodynamic regional complexity induced by interaction between Sunda and India plates, the Burma microplate and the highly deformable eastern Himalayan syntaxis, the slip rate remains surprisingly constant along this fault. However, the modelled locking depth varies from 20km in central Myanmar to 5km into the north.