



Compared with the recent adakites from the Pichincha volcano, the Miocene adakites show similar primitive mantle normalized patterns (Fig. 2).

In the Sr/Y vs Y (ppm) diagram, the hypovolcanic Miocene intrusions show a trend between calc-alkaline rocks and adakitic *s.s.* melts (Fig. 3). This trend is often observed in present-day calc-alkaline adakitic suites.

### Discussion, conclusions

Among the analyzed rocks, most exhibit adakitic affinities. In spite of the lack of complementary chronological data, this suggests that adakitic magmas do not occur only in Recent times, but also probably in the Late Miocene. Therefore, their genesis is not necessarily related to flat slab subduction induced by the subduction of the Carnegie Ridge (Bourdon et al. 2003), which is considered as no older than 5 Ma. Moreover, flat slab subduction does not occur north of 4° S (Guillier et al. 2001).

As a consequence, we propose an alternative hypothesis for the genesis of adakitic melts. The latter could derive from the partial melting of the deep mafic root of the Western Cordillera, as supported by the high geothermal gradient evidenced by metamorphic assemblages (Amórtégui et al., this volume).

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