Kazim Buyukboduk and Antonio Lei* (antonio.lei@mat.ulaval.ca), Département de Mathématiques et de Stat., Pavillion Alexandre-Vachon, 1045 Avenue de la Médecine, Québec, Québec G1V 0A6, Canada. Integral Iwasawa theory of p-adic representations at non-ordinary primes.

We study the Iwasawa theory of p-adic representations at non-ordinary primes, over the cyclotomic tower of a number field that is either totally real or CM. In particular, under certain technical assumptions, we construct Sprung-type Coleman maps on the local Iwasawa cohomology groups and use them to define integral p-adic L-functions and cotorsion Selmer groups. This allows us to reformulate Perrin-Riou’s main conjecture in terms of these objects, in the same fashion as Kobayashi’s ±-Iwasawa theory for supersingular elliptic curves. (Received August 18, 2014)