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Loren Spice* (1.spice@tcu.edu). *Asymptotic expansions for characters of reductive, p -adic groups.*

We combine the ideas of a Harish-Chandra–Howe local character expansion, which can be centred at an arbitrary semisimple element, and a Kim–Murnaghan asymptotic expansion, which so far has been considered only around the identity. We show that, for most smooth, irreducible representations (those containing a good, minimal K -type), Kim–Murnaghan-type asymptotic expansions are valid on explicitly defined neighbourhoods of nearly arbitrary semisimple elements. We then give an explicit, inductive recipe for computing the coefficients in an asymptotic expansion for a tame supercuspidal representation. The only additional information needed in the inductive step is a fourth root of unity, which we expect to be useful in proving stability and endoscopic-transfer identities. (Received August 16, 2018)