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Aaron David Valdivia* (avaldivi@math.fsu.edu), Aaron Valdivia, 1306 1/2 B MLK Jr Blvd, Tallahassee, FL 32303. *Generalizing Penner's Asymptotics For Minimal Dilatation Pseudo-Anosov Mapping Classes.*

We will consider the mapping class group of an oriented surface with finite genus and number of punctures. The dilatation is a numerical invariant of a pseudo-Anosov mapping class, one which preserves a pair of projective measured laminations. We generalize Penner's proof for the asymptotic behavior of the minimal dilatation on closed surfaces to include sequences in which the genus and number of punctures are related by certain linear equations. We also give evidence that these results may be generalized further. (Received September 19, 2011)