Daniel J. Ford* (dford1@providence.edu), Department of Mathematics, 196 Auditorium Road, U3009, Storrs, CT, and Benjamin Steinhurst (steinhurst@math.uconn.edu), Department of Mathematics, 196 Auditorium Road, U3009, Storss, CT. Spectral Decimation on the m-Branch Tree.

We calculate by spectral decimation the spectrum of the Laplacian on *m*-branch trees. Since these are graph approximations to a p.c.f. fractal it is known that they converge to a smooth Laplacian on the fractal. We show what the spectrum of this continuous Laplacian is and comment on the behavior of these spectra as the number of branches increases without bound. (Received August 15, 2008)