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Chi Shing Sidney Tsang* (tsangcs@uci.edu) and **Abel Klein** (aklein@uci.edu). *Bootstrap Eigensystem Multiscale Analysis for the Anderson Model*. Preliminary report.

We use a bootstrap argument to enhance the eigensystem multiscale analysis, introduced by Elgart and Klein for proving localization for the Anderson model at high disorder. The eigensystem multiscale analysis studies finite volume eigensystems, not finite volume Green's functions, obtaining exponential localization of finite volume eigenfunctions with high probability, with the eigenvalues and eigenfunctions labeled by the sites of the box. The bootstrap eigensystem multiscale analysis requires only the verification of polynomial decay of the finite volume eigenfunctions, at some sufficiently large scale, with some minimal probability independent of the scale. It yields exponential localization of finite volume eigenfunctions in boxes of side L , with the eigenvalues and eigenfunctions labeled by the sites of the box, with probability higher than $1 - e^{-L^\zeta}$, for any desired $0 < \zeta < 1$. (Received August 31, 2015)