Jane Gilman\*, gilman@rutgers.edu. Discreteness and adjoining roots of primitive generators to a rank two Fuchsian groups.

We give necessary and sufficient discreteness conditions when a root or a rational power of an algorithmic stopping generator is adjoined to a discrete free rank two subgroup of  $PSL(2,\mathbb{R})$ . We also present results for non-free groups. (Received March 05, 2017)