1125-11-933   **Sneha Chaubey**, **Elena Fuchs**, **Robert Hines*** (`robert.hines@colorado.edu`) and **Katherine Stange**. *Super-Apollonian continued fractions.* Preliminary report.

We consider a pair of dynamical systems on the complex plane inspired by the action of the super-Apollonian group, realized here as reflections in the sides of a right-angled ideal hyperbolic octahedron. These systems are "reflective" versions of Asmus Schmidt's continued fraction algorithms over $\mathbb{Q}(i)$. We study aspects of the dynamics including the natural extension, invariant measure, action on rational points, and restriction to the real line. (Received September 13, 2016)