1145-AD-631 **Daniel E. Martin*** (daniel.e.martin@colorado.edu). *Galactic vistas from imaginary quadratic fields.* Preliminary report.

For a Euclidean imaginary quadratic field K, continued fractions have been used to give K-rational approximations to complex numbers since the late 19^{th} century. We will see how this can be done in any imaginary quadratic field. The tool that illuminates our path is a fractal arrangement of circles arising from an action of $\mathrm{PSL}_2(\mathcal{O}_K)$ on the Riemann sphere. These galactic vistas prove to be the road map leading us to the desired approximations. Along the way we will find surprising connections to the class group of $\mathcal{O}_K$ and the study of Apollonian circle packings. (Received September 11, 2018)