1122-46-235 **Konrad Aguilar*** (konrad.aguilar@du.edu) and **Frederic Latremoliere**. *Quantum ultrametrics on AF algebras and the Gromov-Hausdorff propinquity.*

We construct quantum metric structures on unital AF algebras with a faithful tracial state, and prove that for such metrics, AF algebras are limits of their defining inductive sequences of finite-dimensional C*-algebras for the quantum propinquity metric. We then study the geometry, for the quantum propinquity, of three natural classes of AF algebras equipped with our quantum metrics: the UHF algebras and the Effros—Shen AF algebras, which both form continuous images of the Baire space, and the Cantor space, on which our construction recovers traditional ultrametrics. Lastly, we will discuss possible new generalizations and applications, which may provide more continuity results with respect to the quantum propinquity topology. (Received August 15, 2016)