1067-11-158   **Steven E Duff*** (`sed020@bucknell.edu`), 17 Indiana Avenue, Sinking Spring, PA 19608, and **Nathan C Ryan** (`nathan.c.ryan@gmail.com`). *A Statistical Look at the Gauss-Kuzmin Distribution.* Preliminary report.

The Gauss-Kuzmin distribution predicts the distribution of terms in the continued fraction expansion of almost all real numbers. Unfortunately, it provides no characterization of the set of full measure for which the distribution holds. Finding elements contained in this set would tell us more about this set and about continued fractions in general. We develop a framework for experiments to determine if a number is contained in the set of full measure. An important part of describing this framework is developing and implementing algorithms that generate random continued fraction expansions. (Received July 28, 2010)