1154-65-1212 **Jacob D Moorman***, 520 Portola Plaza, Los Angeles, CA 90095, and **Denali Molitor**, **Robert M Gower** and **Deanna Needell**. *On Comparing Adaptive Sampling Rules for Sketch-and-Project Methods.*

We derive a partial order on the guaranteed convergence rates of adaptive sampling rules for sketch-and-project methods for solving linear systems. The partial order is inherited from a partial order on the sampling rules themselves. As a direct result, we conclude that the max-distance rule has the fastest guaranteed convergence rate among all adaptive sampling rules. Applying this result to Kaczmarz and coordinate descent methods for solving linear systems shows that Motzkin's method and the Gauss-Southwell rule have the fastest guaranteed convergence rates among their respective families of adaptive sampling rules. (Received September 13, 2019)