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Simon Bortz, Max Engelstein, Max Goering, Tatiana Toro and Zihui Zhao*,
zzhao@ias.edu. *A two-phase harmonic measure problem via excess decay and singular integrals.*

We give an excess decay estimate for Ahlfors regular set, using tools from geometric analysis. We also study a two-phase harmonic measure problem, and prove an improved free boundary regularity result by combining the excess decay estimate and the theory of singular integrals. (Received January 24, 2019)