1067-57-1530 **Joel Louwsma*** (louwsma@caltech.edu), Department of Mathematics 253-37, California Institute of Technology, Pasadena, CA 91125. *Extremality of the rotation quasimorphism on the modular group.* Preliminary report.

It follows from work of Bavard that $\mathrm{scl}(A) \geq \mathrm{rot}(A)/2$ for any element A of the modular group $\mathrm{PSL}(2,\mathbb{Z})$, where scl denotes *stable commutator length* and rot denotes the *rotation quasimorphism*. Sometimes this bound is sharp, and sometimes it is not. We study which elements $A \in \mathrm{PSL}(2,\mathbb{Z})$ have the property that $\mathrm{scl}(A) = \mathrm{rot}(A)/2$. First we describe some experimental results based on computation of stable commutator length. Then we discuss the following stability theorem: for any element of the modular group, the product of this element with a sufficiently large power of a parabolic element satisfies scl = rot/2. This is joint work with Danny Calegari. (Received September 21, 2010)