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Nahum Zobin* (nzobin@msn.com), Department of Mathematics, College of William and Mary, PO Box 8795, Williamsburg, VA 23187-8795, and **Bo'az Klartag**, School of Mathematics, Institute for Advanced Study, Princeton, NJ 08540. *C^1 extensions and stabilization of Glaeser refinements.*

We study the stabilization properties of Glaeser refinements introduced recently by C. Fefferman in his solution of the old Whitney problem of description of functions on a compact subset of \mathbb{R}^n extendible to C^m functions on the whole space. His solution involves an iterated computation of some objects, called Glaeser refinements, until they stabilize. How many iterations may be needed? We give a rather complete answer to this question, posed by C. Fefferman, in the case of smoothness 1. Namely, we show that in the case of dimension n and smoothness 1 it is always sufficient to compute $n + 1$ iterations, and sometimes no less than n iterations are necessary. We also discuss some related problems. (Received September 16, 2005)