Kasra Rafi* (kasra.rafi@gmail.com), Department of Mathematics, University of Oklahoma, Norman, OK 73019-031, and Moon Duchin and Christopher Leininger. A compactification for the space of singular Euclidean metrics on a surface.

Let $F(S)$ be the space of singular Euclidean metrics of area one on a surface $S$. We provide an embedding of $F(S)$ into the space of geodesic currents on $S$. This is similar to Bonahon’s embedding of Teichmüller space into the space of geodesic currents; the length of a closed curve in a given singular flat metric is equal to the intersection number of this curve with the corresponding geodesic current. The closure of the image of this embedding is a compact set. We also give a description of the boundary at infinity. (Joint work with Moon Duchin and Chris Leininger.) (Received August 14, 2008)