1036-35-70 **Gabriella Tarantello*** (tarantel@axp.mat.uniroma2.it), University Rome Tor Vergata, Via della Ricerca Scientifica 1, 00133 Rome, Italy. *Symmetry properties of extremals for the Caffarelli-Kohn-Nirenberg inequality in dimension two.*

I present a weighted inequality of Onofri type over the two-dimensional Euclidean space and discuss its connections to the symmetry breaking phenomenon for extremals of the Hardy-Sobolev inequality introduced by Caffarelli-Kohn-Nirenberg. In this way it is possible to identify a "sharp" region in the set of parameters that signs the transition from symmetry to symmetry breaking situations. (Received January 10, 2008)