1020-35-108   **Y. Ni**, Department of Mathematics, University of Oklahoma, Norman, OK 73019, and **M. Zhu***
(`mzhu@math.ou.edu`), Department of Mathematics, University of Oklahoma, Norman, OK 73019.
Sharp form for improved Moser-Trudinger inequality.

We prove that the improved Moser-Trudinger inequality with optimal coefficient $\alpha = 1/2$ holds for all functions on S^2 with zero moments. (Received August 21, 2006)