

1059-42-37

Ciprian Demeter* (demeterc@indiana.edu), Department of Mathematics, Indiana University,
831 East 3rd St., Bloomington, IN 47401. *SINGULAR INTEGRALS ALONG N DIRECTIONS
IN R^2 .*

We prove optimal bounds in $L^2(R^2)$ for the maximal operator obtained by taking a singular integral along N arbitrary directions in the plane. We also give a new proof for the optimal L^2 bound for the single scale Kakeya maximal function in the plane. (Received February 07, 2010)