

1063-60-141

Jorge Aarao and **Mike O'Neill*** (moneill@cmc.edu), Department of Mathematics, Claremont McKenna College, Claremont, CA 91711. *Sharp inequalities of Zygmund type for Riesz transforms.*

The theory of stochastic integration for the Background Radiation process is used to obtain sharp constants in some endpoint inequalities of Zygmund type for the Riesz Transforms. Applications to estimates for Marcinkiewicz integrals will be discussed. The ideas come from works by Gundy-Varopoulos, Banuelos-Wang and Brian Cole. (Received August 13, 2010)