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**Li-An Daniel Wang\*** (lwang3@uoregon.edu), Eugene, OR 97405. *Multiplier theorems on Anisotropic Hardy Space*. Preliminary report.

We study multiplier theorems on the anisotropic Hardy space  $H_A^p(\mathbb{R}^n)$  associated with a dilation matrix  $A$ . When given a multiplier  $m$  satisfying the anisotropic Mihlin condition, we show that it is the Fourier transform of a Calderon-Zygmund operator. Using previous work by M. Bownik, we conclude that such a multiplier gives rise to a bounded operator on  $H^p$ . Since the isotropic (classical) case is a special case of setting  $A = 2I_n$  as our dilation matrix, this extends the classical results to the anisotropic setting. (Received January 29, 2010)