1015-42-90 **Wael N. AbuShamala*** (wabusham@indiana.edu), 404, S. Dunn St. #12, Bloomington, IN 47401. *Spaces betwwen H^1 and L^1.*

The Hady-Lorentz spaces $H^{1,q}(R^n)$ are the intermediate spaces between the Hardy space $H^p(R^n)$, $0 < p < 1$, and $L^\infty(R^n)$. The spaces $H^{1,q}(R^n)$ and X_s lie between, and close to, $H^1(R^n)$ and $L^1(R^n)$. I discuss the atomic decomposition of the elements in these spaces and the behavior of maximal functions and singular integrals acting on them. (Received January 27, 2006)