

Fix an integer N ; our goal is to determine an N depending on the dimension d and the associated A_2 weight ν so that if $\varphi \in \text{BMO}_\nu$, then we have

$$\int_{\mathbb{R}^d} \frac{|\varphi(x)|}{1 + |x|^N} dx \lesssim \|\varphi\|_{\text{BMO}_\nu}.$$