HARDY AND BMO SPACES ON WEYL CHAMBERS

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ABSTRACT. Let W be a finite reflection group associated with root system R in $\mathbb{R}^d$. Let C_+ denote a positive Weyl chamber distinguished by a choice of R_+, a set of positive roots. We define and investigate Hardy and BMO spaces on C_+ in the framework of boundary conditions given by a homomorphism $\eta \in \operatorname{Hom}(W, \hat{\mathbb{Z}}_2)$ which attaches $\pm$ signs to the facets of C_+. Specialized to orthogonal root systems, we provide atomic characterization of the global and local Hardy spaces, and treat the duality problem for those spaces. This is a joint work with Krzysztof Stempak.

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