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*Ideals and zero sets for multipliers on the ball*

We study the closed ideals of an algebra of holomorphic functions on the unit ball, namely the multiplier algebra  $\mathcal{A}_d$  of the Drury-Arveson space. Using a recent description of the dual space of  $\mathcal{A}_d$ , we shed some light on the structure of ideals and give an analogue of classical results of Carleson-Rudin and Hedenmalm on the ball algebra. Deeply intertwined with ideals are zero sets of multipliers. We show how a zero set being small with respect to  $\mathcal{A}_d$  reveals a close relationship between the associated ideal and its closure in some weak topology. In general, determining the size of a zero set on the sphere is quite difficult, and we explain how our results may give a new perspective on an old unresolved question of Rudin. This is joint work with Ken Davidson.