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BOUNDARY VALUES IN RANGE SPACES OF CO-ANALYTIC TRUNCATED TOEPLITZ OPERATORS

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Abstract: Functions in backward shift invariant subspaces have nice analytic continuation properties outside the spectrum of the inner function defining the space. Inside the spectrum of the inner function, Ahern and Clark showed that under some distribution condition on the zeros and the singular measure of the inner function, it is possible to obtain non-tangential boundary values of every function in the backward shift invariant subspace as well as for their derivatives up to a certain order. Here we will investigate, at least when the inner function is a Blaschke product, the non-tangential boundary values of the functions of the backward shift invariant subspace after having applied a co-analytic (truncated) Toeplitz operator. There appears to be a smoothing effect.

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