

# Beurling-Lax theorems for Bergman and Dirichlet shifts

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## Abstract

Beurling-Lax theorems are proved for the Bergman and Dirichlet shifts on the right half-line, showing that their invariant subspaces correspond to the common invariant subspaces of the right shift operators on certain weighted Lebesgue spaces on the half-line. As a partial instance, we deduce the corresponding result for shift invariant subspace of the Bergman spaces on the unit disc. Finally, cyclic vectors for the Bergman and Dirichlet shifts are also studied.

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