

Bounded holomorphic projections for exponentially decreasing weights

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(Communicated by Miroslav Engliš)

2000 Mathematics Subject Classification. 46E15, 47B37.

Keywords and phrases. Projection, analytic function space, weighted norm, Cesàro summation.

Abstract. We construct generalized Bergman projections on a large class of weighted L^∞ -spaces. The examples include exponentially decreasing weights on the unit disc and complex plane.

1. Introduction

The classical Bergman projection $P : f \mapsto \int_{\mathbb{D}} f(\zeta)(1 - z\bar{\zeta})^{-2} dA(\zeta)$, where dA is the normalized 2-dimensional Lebesgue measure on the open unit disc \mathbb{D} of the complex plane, is a bounded operator on $L^p(\mathbb{D}) = L^p(\mathbb{D}, dA)$ for

*Research of Taskinen partially supported by the Academy of Finland Project 50957 and the Vaisala Foundation of the Finnish Academy of Sciences and Letters.