

L_h^2 FUNCTIONS IN UNBOUNDED BALANCED DOMAINS

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Problems related with the existence of square integrable holomorphic functions on (unbounded) pseudoconvex balanced domains will be discussed. In particular, a solution of the problem of Wiegerinck for balanced domains in dimension two will be given. Also a purely algebraic criterion for homogeneous polynomials to be square integrable in a pseudoconvex balanced domain in dimension 2 will be shown. Applications of this criterion in the theory of the Bergman metric and kernel will also be discussed. The talk is based on a recent work with P. Pflug.