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Vanishing of Poincare series, revisited

Let H be the complex vector space of holomorphic sections of the k -th tensor power of the canonical bundle on a compact ball quotient. It is well known that if k is sufficiently large, then the Poincare series map $P : W \rightarrow H$ is surjective (here W is the corresponding weighted Bergman space on the ball). I will discuss a criterion for $f \in W$ to be in $\ker(P)$.