Meromorphic Functions on Cycle'Space and Incidence Divisors

Daniel Barlet

Abstract

The method introduced in [B.Mg.1],[B.Mg.2] and [B.Mg.3] in order to build Cartier divisors on the cycle space and also to produce meromorphic functions with controlled pole orders along these incidence divisors is now an efficient tool in Complex Geometry. As shown in [B.K.] these ideas give some new light on the classical method (introduced by Andreotti and Norguet and developped by Norguet-Siu and myself) for reducing q-convexity to holomorphic convexity. These results have new applications, for instance around some geometric approach to representation theory of semi-simple Lie groups. Because our general constructions need finitness of intersections, which is not always satisfied, Kaddar's deep results, which show that the line bundle associated to the incidence divisor always extends everywhere (i.e. at those points where the incidence divisor is not Cartier from our results), will be very useful for reaching further applications.

[B.K]   Barlet,D. et Koziarz,V. Fonctions holomorphes sur l'espace des cycles la methode d'intersection, Math.Res.Letters 7, (2000), 537-549.

[B.Mg1] Barlet, D. et Magnusson, J. Integration de classes de cohomologie meromorphes et diviseurs d'incidence, Ann.Scient.Ec.Norm.Sup. 4e serie 31, (1998), 811-842.

[B.Mg2] Barlet, D. et Magnusson, J. Transfert de l'amplitude du fibre normal au diviseur d'incidence, J. reine angew.Math.513, (1999), 71-95

[B.Mg3] Barlet, D. et Magnusson, J. Transfert de metrique,in Complex Analysis and Algebraic Geometry,volume in Memory of Michael Schneider,editors Peternell T. and Schreyer F.O., W de Gruyter 2000, 29-39 .