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Geometric sufficient conditions for compactness of the $\bar{\partial}$ -Neumann operator. Preliminary report.

We give sufficient conditions for compactness of the $\bar{\partial}$ -Neumann operator N , which is the inverse of the complex Laplacian, for domains in \mathbb{C}^n , $n \geq 2$. These conditions are a generalization of simple geometric conditions for domains in \mathbb{C}^2 , shown by Straube to be sufficient for compactness of N . This is joint work with Emil J. Straube. (Received September 24, 2006)