1003-58-1134   **Georgios D Daskalopoulos** (`daskal@math.brown.edu`), Department of Mathematics, Brown University, Providence, RI 02912, and **Richard A Wentworth*** (`wentworth@jhu.edu`), Department of Mathematics, Johns Hopkins University, Baltimore, MD 21218. *The Yang-Mills flow on Kaehler manifolds.*

Let E be a hermitian complex vector bundle over a compact Kähler manifold X, and let D be an integrable unitary connection on E defining a holomorphic structure D'' on E. We will discuss convergence properties of the Yang-Mills flow on X with initial condition D. In an appropriate sense which takes into account bubbling phenomena, the limit is related to the Harder-Narasimhan-Seshadri filtration of the holomorphic bundle (E, D''). This generalizes the known result on Riemann surfaces and proves a conjecture of Bando and Siu. The structure of the singular set will also be highlighted. (Received October 04, 2004)