

Meromorphic limits of automorphisms

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Let X be a compact complex manifold in the Fujiki class C . We study the compactification of the connected component of $\text{Aut}(X)$ given by its closure in Barlet cycle space. The boundary points give rise to non-dominant meromorphic self-maps of X . Moreover convergence in cycle space yields convergence of the corresponding meromorphic maps. There are analogous compactifications for reductive subgroups acting trivially on $\text{Alb } X$. If X is Kahler, these compactifications are projective. Finally we give applications to the action of $\text{Aut}(X)$ on the set of probability measures on X . In particular we obtain an extension of Furstenberg lemma to manifolds in the class C .

This is a joint work with Prof. Alessandro Ghigi of University of Pavia