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Title: Stability of measures on Kähler manifolds

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Abstract: Let (M, ω) be a Kähler manifold and let K be a compact group that acts on M in a Hamiltonian fashion. We will study the action of K and $K^{\mathbb{C}}$ on the space of probability measures on M . First of all we identify an abstract setting for the momentum mapping and give numerical criteria for stability, semi-stability and polystability. Next we apply this setting to the action of $K^{\mathbb{C}}$ on measures. We get various stability criteria for measures on Kähler manifolds. The same circle of ideas gives a very general surjectivity result for a map originally studied by Hersch and Bourguignon-Li-Yau.

This is a joint work with and Alessandro Ghigi.