

Liouville-type results for the CR Yamabe equation in the Heisenberg group

JOSHUA FLYNN AND JÉRÔME VÉTOIS

Abstract. We obtain Liouville-type results for the solutions to the CR Yamabe equation in $\mathbb{H}^n$, which extend a result obtained by Jerison and Lee for solutions in $L^{2+2/n}(\mathbb{H}^n)$. We obtain our results under either pointwise conditions or integral conditions at infinity. In particular, our results hold for all bounded solutions when $n = 2$ and for solutions satisfying a pointwise decay assumption when $n \geq 3$. The proofs rely on integral estimates combined with a suitable divergence formula.

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