ON COMPLEX KROPINA SPACES

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Dedicated to Bang-Yen Chen

Abstract

In this paper we study the holomorphic curvature of the complex Kropina metrics. We find the conditions such that a complex Kropina space is weakly Kähler or moreover, Kähler. A special attention is devoted to a class of complex Kropina metrics with an additional assumption. We find a necessary and sufficient condition that such a complex Kropina metric should be weakly Kähler and also some outcomes about Kähler-Kropina metrics. At the end our results are applied to some examples, better illustrating the interest for this work.

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