

1084-52-198

Susanna Dann* (danns@missouri.edu). *The Busemann-Petty Problem in Complex Hyperbolic Space.*

The Busemann-Petty problem asks whether origin-symmetric convex bodies in \mathbb{R}^n with smaller central hyperplane sections necessarily have smaller volume. The answer is affirmative if $n \leq 4$ and negative if $n \geq 5$. We study this problem in the complex hyperbolic space and prove that the answer is affirmative if $n \leq 2$ and negative if $n \geq 3$. (Received September 01, 2012)