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Isoperimetric inequalities & volume comparison theorems on CR manifolds

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Abstract. In this article we study the Jacobi equation associated with the geodesics in a pseudo-hermitian manifold with vanishing Webster torsion. We develop integral geometric formula generalizing the well known Santalo formula in Riemannian geometry. As applications we obtain volume comparison results under suitable curvature assumptions as well as isoperimetric inequalities for domains in such manifolds.

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