

M.S. Santos

Compactness theorems for the Bakry-Emery Ricci tensor on semi-Riemannian manifolds

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Abstract: In this manuscript we provide new extensions for the Myers theorem in weighted Riemannian and Lorentzian manifolds. As application we obtain a closure theorem for spatial hypersurfaces immersed in some time-like manifolds.

Keywords: Bakry-Emery Ricci curvature tensor; closure theorem; Riccati equation

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