报告题目：W-entropy, optimal transport and Ricci flow

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报告摘要：In 2002, G. Perelman introduced the W-entropy and proved its monotonicity along Ricci flow. Inspired by Perelman's work, we prove the monotonicity and rigidity theorem of the W-entropy for the heat equation associated with the Witten Laplacian on manifolds with time dependent metrics and potentials. We also introduce the W-entropy and prove its monotonicity and rigidity theorem along the geodesic flow on the Wasserstein space over Riemannian manifolds, which is essentially related to the optimal transport problem on manifolds. This recaptures and improves an earlier result due to Lott and Villani. Finally, we raise some open problems for future work.