Abstract. The squared distance curvature is a kind of two-point curvature the sign of which turned out crucial for the smoothness of optimal transportation maps on Riemannian manifolds. Positivity properties of that new curvature have been established recently for all the simply connected compact rank one symmetric spaces, except the Cayley plane. Direct proofs were given for the sphere, an indirect one (via the Hopf fibrations) for the complex and quaternionic projective spaces. Here, we present a direct proof of a property implying all the preceding ones, valid on every positively curved Riemannian locally symmetric space.