Title: A note on trans-Sasakian manifolds

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In this paper, we obtain a necessary and sufficient condition for a 3-dimensional compact connected positively curved trans-Sasakian manifold of type (α, β), to be homothetic to a Sasakian manifold. The necessary and sufficient condition is that the smooth function $\alpha \neq 0$ and satisfies the differential equation $H_\alpha(\xi, \xi) = 0$. Similarly, using the smooth function β, necessary and sufficient conditions are found for a trans-Sasakian manifold to be homothetic to a Sasakian manifold.

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