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Reinhard Schultz* (schultz@math.ucr.edu), Department of Mathematics, University of California, Riverside, Riverside, CA 92521, and **Slawomir Kwasik**. *Tangential thickness of homotopy lens spaces.*

Let p be an odd prime and let M and N be closed $(2n + 1)$ -manifolds that are homotopy equivalent to a lens space with fundamental group Z/p . For each $k \geq 2$ we give necessary and sufficient conditions for $M \times R^{2k}$ and $N \times R^{2k}$ to be homeomorphic, extending well known results in cases where $k > n$. The proof uses surgery theory, the Cohen-Moore-Neisendorfer machinery for proving the p -primary exponent theorems for homotopy groups of odd-dimensional spheres, and the p -primary *EHP* exact couple. (Received September 19, 2005)