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A CORRECTION ON "SOME NONDIFFEOMORPHIC HOMEOMORPHIC HOMOGENEOUS 7-MANIFOLDS WITH POSITIVE SECTIONAL CURVATURE"

MATTHIAS KRECK & STEPHAN STOLZ

As was pointed out to us by L. Astey, E. Micha & G. Pastor the homeomorphism result in [3] Theorem 3.1 is not correct. They have examples [1] of two non-homeomorphic smooth spin manifolds as in Theorem 3.1 with fourth cohomology group of the same order where the invariants $\bar{s}_i$ for $1 \leq i \leq 3$ agree. In these examples the invariant s_2 is different suggesting that the statement has to be modified by requesting instead of the equality of $\bar{s}_2$ the equality of s_2 (recall that $\bar{s}_2$ was simply defined as $2s_2$). Theorem 3.1 is based on Proposition 3.2 which in [2] was originally only proved in the smooth category. We assumed that the proof also works in the topological category; this is not true and Proposition 3.2 only holds in the smooth category. At the moment we do not have a classification for topological manifolds. As we will explain below, at least for smooth manifolds the invariant s_2 is a homeomorphism invariant and one can obtain a homeomorphism classification of smooth manifolds from their diffeomorphism classification. A correct formulation of Theorem 3.1 is:

Theorem 1. *Let M and M' be smooth manifolds of type (2.1) such that $|H^4(M;\mathbb{Z})| = |H^4(M';\mathbb{Z})|$ which are both spin or both nonspin. Then M is diffeomorphic (homeomorphic) to M' if and only if $s_i(M) = s_i(M')$ for $i = 1,2,3$ (resp. $28s_1(M) = 28s_1(M')$ and $s_i(M) = s_i(M')$ for $i = 2,3$).*

Note that the applications to the homeomorphism and diffeomorphism classification of the Wallach spaces is not affected by the mistake

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