

1084-57-187

Adam Simon Levine* (levinea@brandeis.edu), **Daniel Ruberman** (ruberman@brandeis.edu) and **Saso Strle** (saso.strle@fmf.uni-lj.si). *Embeddings of non-orientable surfaces in $L(p, q) \times I$* . Preliminary report.

We use Heegaard Floer homology correction terms to study embeddings of non-orientable surfaces into $L \times I$, where L is a homology lens space. If a non-orientable surface S embeds into $L \times I$ and represents the nontrivial element of $H_2(L \times I; \mathbb{Z}/2)$, we show that the differences between the d -invariants of certain spin^c structures on L are bounded by the d -invariants of the unit normal bundle of S . Using this approach, we show that if L is a lens space for which $\mathbb{R}P^3$ embeds into $L \times I$, then $L \cong L(2, 1)$. (Received August 31, 2012)