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Braids and symplectic four-manifolds with abelian fundamental group

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Abstract: We explain how a version of Floer homology can be used as an invariant of symplectic manifolds with $b_1 > 0$. As a concrete example, we look at four-manifolds produced from braids by a surgery construction. The outcome shows that the invariant is nontrivial; however, it is an open question whether it is stronger than the known ones.