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
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The canonical class of a symplectic four manifold

of

R.Fintushel-R.Stern:

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Abstract: In this article we present examples of simply connected symplectic 4-manifolds X whose canonical classes are represented by complicated disjoint unions of symplectic submanifolds of X : Theorem. Given finite collections $\{g_i\}, \{m_i\}, i=1, \dots, n$, of positive integers, there is a minimal symplectic simply connected 4-manifold X whose canonical class is represented by a disjoint union of embedded symplectic surfaces $K \sim S_{g_1,1} \# \dots \# S_{g_1,m_1} \# \dots \# S_{g_n,1} \# \dots \# S_{g_n,m_n}$ where $S_{g_i,j}$ is a surface of genus g_i . Furthermore, $c_1^2(X) = c_h(X) - (2+b)$ where $b = \sum_{i=1}^n m_i$ is the total number of connected components of the symplectic representative of the canonical class.



math@tubitak.gov.tr

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