

SYMPLECTIC FILLINGS OF SEIFERT FIBERED SPACES OVER SPHERES

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ABSTRACT. The problem of finding and classifying of symplectic fillings is the following: Given contact structure on an odd dimensional manifold M , under which conditions there is a symplectic manifold X such that $\partial X = M$. In this talk, we deal with symplectic fillings of contact 3-manifold. Firstly, we would like to give an answer for the existence of symplectic fillings. Then, we will introduce different types of symplectic fillings and explain the relation between them. In line this information, we will focus on the main problem for special 3-manifolds: **Seifert fibered spaces**. Our purpose here is to overview the knowledge about fillability of Seifert fibered spaces over S^2 and discuss a few recent results on classifying symplectic fillings of them.