

# Limits and deformation types of hyper-Kähler manifolds

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We show that a family of projective hyper-Kähler manifolds over the punctured disk, with finite monodromy on  $H^2$ , can be filled in with a smooth family of hyper-Kähler manifolds over the whole disk. This can be used to recover the deformation type of many explicit hyper-Kähler manifolds built by algebraic geometry. This is joint work with Kollár, Laza and Saccà.