1147-32-681Takeo Ohsawa* (ohsawa@math.nagoya-u.ac.jp), Chikusaku Miyanokoshicho 4-1, Nagoya,
464-0091, Japan. Splitting theorems on complete K'ahler manifolds by the L2 method.

It is known that given a Stein manifold M with a surjective holomorphic map π from M to the unit disc \mathbb{D} in \mathbb{C} without critical points such that $\pi^{-1}(t) \cong \mathbb{C}$ for all $t \in \mathbb{D}, \pi : M \to \mathbb{D}$ is equivalent to the projection $\mathbb{D} \times \mathbb{C} \to \mathbb{D}$. The first proof of this result appeared in 1969 in Toshio Nishino's paper. An alternate proof by the L^2 method will be given in the talk as well as some extensions of the result including a generalization which replaces the Steinness condition for M by the existence of a complete K² ahler metric on M. (Received January 28, 2019)