Chow-Künneth decomposition for varieties with low cohomological level

Morihiko Saito

Research Institute for Mathematical Sciences, Kyoto University

msaito@kurims.kyoto-u.ac.jp

Abstract

We show that a smooth projective variety admits a Chow-Künneth decomposition if the cohomology has level at most one except for the middle degree. This can be extended to the relative case in a weak sense if the morphism has only isolated singularities, the base space is 1-dimensional, and the generic fiber satisfies the above condition.