

Dorin Popescu: On the regular local rings.

R. Swan asked if a regular local ring is a filtered inductive limit of regular local rings essentially of finite type over \mathbb{Z} . We showed that this holds for regular local rings (A, m, k) which are in one of the following cases:

- i) A contains a field,
- ii) the characteristic p of k is not in m^2 ,
- iii) A is excellent Henselian (the proof in this case uses the Artin approximation property).

This result has consequences concerning a question of Quillen and the Bass-Quillen conjecture.