## 1139-11-130Eva Bayer-Fluckiger\* (eva.bayer@epfl.ch), Tingyu Lee and Raman Parimala. Hasse<br/>Principles for Multinorm Equations.

A classical result of Hasse states that the norm principle holds for finite cyclic extensions of global fields, in other words local norms are global norms. We investigate the norm principle for finite dimensional commutative etale algebras over global fields; since such an algebra is a product of separable extensions, this is often called the multinorm principle. Under the assumption that the etale algebra contains a cyclic factor, we give a necessary and sufficient condition for the Hasse principle to hold, in terms of an explicitly constructed element of a a finite abelian group. This can be seen as an explicit description of the Brauer-Manin obstruction to the Hasse principle. (Received February 05, 2018)