

1125-11-2257 **Lucia Mocz*** (lmocz@math.princeton.edu). *A New Northcott Property for Faltings' Heights.*

We develop explicit techniques to study the change in Falting's height within an isogeny class of CM abelian varieties. When combined with the Colmez conjecture, this yields a new CM Northcott property in the cases when the Colmez conjecture is known to be true. On the Hilbert Modular variety we are moreover able to use the techniques to develop a new Colmez-like conjectural formula for the Falting's height for all points on the moduli space. The techniques developed in this paper introduce a new computational tool from integral p-adic Hodge theory, namely Kisin modules. (Received September 20, 2016)