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**Hannah Altmann\*** (haltmann@morris.umn.edu), **Eloisa Grifo**, **Jonathan Montano**,  
**William Sanders** and **Thanh Vu**. *Lower Bounds on Projective Levels of  
Complexes*. Preliminary report.

For an associative ring  $R$ , the projective level of a complex  $F$  is the smallest number of mapping cones needed to build  $F$  from the projective  $R$ -modules. We will discuss finding lower bounds on the projective level of a complex. In particular, we will show that the length of the largest gap in the homology of a complex  $F$  gives a lower bound for the projective level of  $F$ . We will then discuss an application of this result to the New Intersection Theorem. (Received February 27, 2017)