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Vaibhav Pandey* (pandey@math.utah.edu), 947 East, 400 South, Apt #11, Salt Lake City, UT 84102. *Homological properties of pinched veronese rings.*

A pinched veronese ring is obtained by removing an algebra generator of the corresponding veronese subring of a polynomial ring. The veronese subrings are well-known to be Cohen-Macaulay and F-regular.

We present an analysis of the Cohen-Macaulay and Gorenstein properties for pinched veronese rings by exploiting the combinatorics of the underlying affine semigroup structure and by using the tool of local cohomology modules, especially for the pinched Veronese rings of a polynomial ring in two indeterminates. This gives a more concrete and simplified perspective to the work of Ornella Greco and Ivan Martino who studied the Cohen-Macaulayness of these rings by calculating the betti numbers of these rings using the reduced homology of squarefree divisor complexes. Time permitting, we will also comment on the F-singularity class of these rings. This is joint work with Kyle Maddox. (Received September 20, 2021)