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Keller VandeBogert* (kvandebo@nd.edu). *Products of Ideals and Golod Rings.*

Golod rings are rings for which the associated Poincaré series is as large as possible (depending on data associated to the ring). In this talk, we will explore some results on Golodness for products of proper ideals. We will see that in a 3-dimensional regular local ring (R, \mathfrak{m}) , the ideal $I\mathfrak{m}$ is Golod for any proper ideal I . Moreover, we will give a strong negative answer to this question for higher dimensional rings, showing that for any proper ideal I with grade at least 4, there exists an ideal $J \subset I$ such that IJ is not Golod. (Received August 10, 2021)