1136-55-574 **Phillip Jedlovec*** (pjedlove@nd.edu). *The generalized homology of $BU\langle 2k\rangle$.*

In their 2001 paper, "Elliptic spectra, the Witten genus and the theorem of the cube," Ando, Hopkins, and Strickland use an algebro-geometric perspective to give a partial description of the generalized homology of the connective covers of BU. For any complex-orientable cohomology theory E they define homology elements $b_{i_1,\dots,i_k}$ in $E_*BU\langle 2k\rangle$, prove the so called "cocycle relations" and "symmetry relations" on these elements, and show that when $E = H\mathbb{Q}$ or $k = 1, 2$, or 3, these are in fact the defining relations for $E_*BU\langle 2k\rangle$. In this talk, I will sketch a new proof of these results that uses no algebraic geometry, but instead uses facts about Hopf rings and the work of Ravenel and Wilson on the homology of the spaces in the Ω-spectrum for Brown-Peterson cohomology. (Received January 22, 2018)