1132-55-194 Elizabeth Vidaurre* (elizabeth.vidaurre@rochester.edu). On Some Applications of Topology Based on Polyhedral Product Spaces.

Certain subspaces of a product of spaces whose factors are labeled by the vertices of a simplicial complex are referred to as "polyhedral product spaces". Polyhedral products are given by taking the union of subproducts depending on the face category of a fixed simplicial complex on \( m \) vertices and a labelled family of \( m \) topological pairs. Such polyhedral products are realized by objects studied in combinatorics, commutative algebra and algebraic geometry. Real moment-angle complexes, where the pairs are intervals and their boundaries, play a key role. We will study how the cohomology of polyhedral products can be given in terms of the underlying simplicial complex. We will illustrate this by considering different classes of simplicial complexes. (Received July 21, 2017)