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Joseph Doolittle and **Bennet Goeckner*** (goeckner@uw.edu). *Resolving Stanley's conjecture on k -fold acyclic complexes.*

In 1993 Stanley showed that if a simplicial complex is acyclic over some field, then its face poset can be decomposed into disjoint rank 1 boolean intervals whose minimal faces together form a subcomplex. Stanley further conjectured that complexes with a higher notion of acyclicity could be decomposed in a similar way using boolean intervals of higher rank. We provide an explicit counterexample to this conjecture. We also prove a weaker version and a special case of the original conjecture. (Received January 15, 2019)