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Chelsea Walton, Elizabeth Wicks and Robert Won* (robwon@uw.edu). *Algebraic structures in comodule categories over weak bialgebras.*

A weak bialgebra is both an algebra and a coalgebra satisfying compatibility conditions which are weaker than those defining a bialgebra. These weakened compatibility conditions still ensure that the categories of modules and comodules over a weak bialgebra admit a monoidal structure. We will discuss algebra objects and coalgebra objects in comodule categories over weak bialgebras, and their relationships to comodule algebras and comodule coalgebras. This work is joint with Chelsea Walton and Elizabeth Wicks. (Received August 19, 2020)