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Nickolas A. Castro*, ncastro@math.uga.edu. *Gluing and Stabilizing Relative Trisections.*

A trisection of a smooth, oriented, compact 4-manifold is a decomposition analogous to a Heegaard splittings of a 3-manifold. I will discuss a gluing theorem which ties together trisections of closed manifolds and trisections of manifolds with connected boundary, known as relative trisections. I will also introduce a stabilization operation of relative trisections which induces a stabilization on the induced open book decomposition of the bounding 3-manifold. Finally, I will show that this stabilization is compatible with gluing, which yields interesting results relating trisections and embeddings of separating 3-manifolds. (Received January 19, 2016)