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Laura Scull* (scull_l@fortlewis.edu), 1000 Rim Drive, Durango, CO 81301. *A new definition of orbifold atlas.*

Orbifolds are spaces which are locally modeled by quotients of finite groups acting smoothly on open subsets of \mathbb{R}^n . Conceived as generalizations of manifolds, they were originally described in the same way that manifolds are, using the language of charts and atlases. However, modern mathematicians generally model them using topological groupoids with nice geometric properties. In the effective case, these points of view are equivalent and lead to the same category. However, in the non-effective case, this correspondence no longer holds, and the non-effective groupoids do not match with the current definition of non-effective orbifold atlas. I will discuss a project to create a new definition of orbifold atlas that does correspond to the groupoid definition in the non-effective case, and generalizes the effective case. This is joint work with D. Pronk and M. Tommasini. (Received August 13, 2015)