1113-22-101 **Dorette Pronk*** (pronkd@dal.ca), Department of Mathematics and Statistics, Dalhousie University, Halifax, NS B3H 4R2, Canada, and **Laura Scull**. *Mapping Groupoids for Orbispaces.*

We consider orbispaces as modeled by étale topological groupoids with a proper diagonal (i.e., combined source and target map). When we consider the category of topological groupoids with topological functors and natural transformations represented by appropriate continuous functions, there is a notion of mapping groupoid which we denote by $\mathrm{GMap}(G, H)$ for any two topological groupoids G and H, which again has a topological structure.

However, for the category of orbifolds, we want to consider generalized maps obtained by formally inverting Morita equivalences; these are built out of the topological functors, but are more complicated structures. We will discuss the groupoid $\mathrm{OMap}(G, H)$ which models generalized maps and 2-cells between them. We will present this groupoid as a pseudo colimit of groupoids of the form $\mathrm{OMap}(G', H)$ for a chosen small family of groupoids G' which are Morita equivalent to G. This presentation allows us to show that the resulting groupoid $\mathrm{OMap}(G, H)$ is again an orbispace groupoid. We will illustrate this with several examples. This is joint work with Laura Scull. (Received August 13, 2015)