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Title: Moduli spaces of proper  $G$ -manifolds

Abstract: For any Lie group  $G$  we define moduli spaces resp. spectra  $D_d^G(X)$  of proper  $G$ -manifolds of dimension  $d$  which are properly and equivariantly parametrized by a proper  $G$ -space  $X$ , generalizing moduli spaces of manifolds introduced by Galatius/Randal-Williams. The resulting spectrum valued functor  $(G, X) \mapsto D_d^G(X)$  defines a locally finite equivariant homology theory which for trivial  $G$  and  $X$  a point partially recovers the identification of Galatius/Madsen/Tillmann/Weiss resp. GRW of the cobordism category with an infinite loop space of a shifted tangential Thom spectrum. As a further application we find a functor from proper  $G$ -spaces to spectra which represents locally finite  $G$ -bordism.