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Christian Rosendal* (rosendal.math@gmail.com), University of Illinois at Chicago, Math., Statistics, and Computer Science, M/C 249, 851 S. Morgan Street, Chicago, IL 60607-7045. *Global and local boundedness properties in Polish groups.*

We present a comprehensive theory of boundedness properties for Polish groups developed with a main focus on Roelcke precompactness (precompactness of the lower uniformity) and Property (OB) (boundedness of all isometric actions on separable metric spaces). In particular, these properties are characterised by the orbit structure of isometric or continuous affine representations on separable Banach spaces. We further study local versions of boundedness properties and the microscopic structure of Polish groups and show how the latter relates to the local dynamics of isometric and affine actions. (Received September 18, 2012)