Erratum to "Conjugation spaces"

by Jean-Claude HAUSMANN, Tara HOLM and Volker PUPPE

As observed by Matthias Franz, Proposition 4.6:

Proposition 4.6 *Let (X_i, f_{ij}) be a directed system of conjugation spaces and τ-equivariant inclusions, indexed by a direct set $\mathcal{I}$. Suppose that each space X_i is T_1. Then $X = \lim_{\to} X_i$ is a conjugation space.*

is false as stated. A counterexample is given by $X = S^1$ with the trivial involution. This is not a conjugation space. But, being first-countable, S^1 is the direct limit of its countable subspaces, which are conjugation spaces. Our proof fails on the second line, since S^1 is compact but not contained in any of its countable subspaces.

However, our proof of Proposition 4.6 works well when $\mathcal{I} = \mathbb{N}$, so the X_i's constitute a nested sequence. This is enough for the applications given in the paper.