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*Polish groups involving  $S_\infty$*

Say that a Polish group  $G$  involves a Polish group  $H$  iff there is a closed subgroup  $G_0$  of  $G$  and a closed normal subgroup  $N$  of  $G_0$  such that  $G_0/N \cong H$ . The group  $S_\infty$  is the Polish group of (full-support) permutations of  $\mathbb{N}$ . We show that the non-Archimedean Polish groups involving  $S_\infty$  has a deep and interesting theory, with several formulations that are equivalent. We use this theory to show that the non-Archimedean Polish groups which classify  $=^+$  are exactly those which involve  $S_\infty$ .