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On a theorem of W.W. Comfort and K.A. Ross

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Abstract: A well known theorem of W.W. Comfort and K.A. Ross, stating that every pseudocompact group is C -embedded in its Weil completion [5] (which is a compact group), is extended to some new classes of topological groups, and the proofs are very transparent, short and elementary (the key role in the proofs belongs to Lemmas 1.1 and 4.1). In particular, we introduce a new notion of canonical uniform tightness of a topological group G and prove that every G_δ -dense subspace Y of a topological group G , such that the canonical uniform tightness of G is countable, is C -embedded in G .

Keywords: topological group, pseudocompact, Frechet-Urysohn, G_δ -dense, C -embedded, Moscow space, canonical uniform tightness, Hewitt completion, Rajkov completion, bounded set, extremally disconnected, normal space, k_1 -space

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