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Title: Extension of compact groups with uniformly continuous cross sections

Abstract: If K is a closed subgroup of a topological group G and p the natural projection from G to G/K , the cross section from G/K to G is a continuous map s which composed with p equals the identity on G/K . We show that when K is compact, s uniformly continuous, and K acts freely on the universal minimal flow of G , then the phase space of the universal minimal flow of G is homeomorphic to the product of the phase space of the universal minimal flow of G/K and K . In particular, if G is a totally disconnected locally compact, non-compact, non-discrete Polish group with a compact normal open subgroup, then the universal minimal flow of G is homeomorphic to the product of the universal minimal flow of a discrete countable group and the Cantor space.