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The dual space of precompact groups

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Abstract: For any topological group G the dual object \widehat{G} is defined as the set of equivalence classes of irreducible unitary representations of G equipped with the Fell topology. If G is compact, \widehat{G} is discrete. In an earlier paper we proved that \widehat{G} is discrete for every metrizable precompact group, i.e. a dense subgroup of a compact metrizable group. We generalize this result to the case when G is an almost metrizable precompact group.

Keywords: compact group, precompact group, representation, Pontryagin–van Kampen duality, compact-open topology, Fell dual space, Fell topology, Kazhdan property (T)

AMS Subject Classification: Primary 43A40; Secondary 22A25, 22C05, 22D35, 43A35, 43A65, 54H11

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