HEREDITARY (BI)COREFLECTIVE SUBCATEGORIES IN CERTAIN CATEGORIES OF SEMITOPOLOGICAL GROUPS

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Let **A** be an epireflective subcategory of the category **STopGr** of all semitopological groups and continuous homomorphisms (all subcategories of **STopGr** are assumed to be full and ismorphism-closed). It is well-known that a subcategory of **A** is monocoreflective in **A** if and only if it is closed under the formation of coproducts and extremal quotient objects in **A**. Every hereditary (closed under the formation of subgroups) coreflective subcategory of **A** is monocoreflective. Moreover, in the categories **STopGr** and **QTopGr** (the category of all quasitopological groups) every hereditary coreflective subcategory **B** that contains a group with the non-indiscrete topology is also bicoreflective (i.e. every **B**-coreflection is simultaneously a monomorphism and an epimorphism). In the talk we will present other examples of epireflective subcategories of **STopGr** with this property.

Next we will focus on such epireflective subcategories **A** of **STopGr** that the **A**-reflection of the discrete group of integers is one of the following:

1. a discrete group,
2. a group with a topology that is not T_0,
3. the group of integers with the topology generated by all of its non-trivial subgroups.

We will present new results on hereditary bicoreflective subcategories of **A** and we will describe maximal hereditary coreflective subcategories of **A** that are not bicoreflective in **A**.