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On covering maps from groups

Recently, K. Eda and V. Matijević presented all equivalence classes of finite-sheeted covering maps from compact connected 2-dimensional abelian groups (toroidal groups for short) to other groups ([1]). Here we consider finite-sheeted covering maps from toroidal groups to Klein bottle weak solenoidal spaces and show that whenever a toroidal group covers Klein bottle weak solenoidal spaces, it covers groups as well. On the other hand we give an example of toroidal groups which cover groups (with any finite number of sheets), but do not cover Klein bottle weak solenoidal spaces.

References

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- [3] V. Matijević. A note on finite-sheeted covering maps from 2-dimensional compact connected abelian groups, *preprint*.
- [4] C. Tezer. Shape classification of Klein-bottle-like continua, *Quart. J. Math. Oxford* (2) **40** (1989), 225–243.