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When is a Group Homomorphism a Covering Homomorphism?

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Abstract: Let G be a topological group which acts in a continuous and transitive way on a topological space M. Sufficient conditions are given that assure that, for every $m \in M$, the map from G onto M defined by $g \mapsto g \cdot m$ is an open map. Some consequences of the existence of these conditions, concerning spinor groups and covering homomorphisms between Lie groups, are obtained.

Key words: covering, group homomorphism, Lie group, open map, spinor.

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