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*Action of intertwining operators on pseudo-spherical K-types and automorphic forms on metaplectic groups.*

In this paper, we give a concrete description of the two-fold cover of a simply connected, split real reductive group and its maximal compact subgroup as Chevalley groups. We study a small genuine representation of the maximal compact subgroup called pseudospherical representation, which appear with multiplicity one in the principal series representation. We introduce a family of canonically defined intertwining operators and compute the action of them on pseudospherical K-types, obtaining explicit formulas of the Harish-Chandra c-function. It has potential applications in the study of automorphic forms on metaplectic groups. (Received July 18, 2016)