

## SUR LES REPRÉSENTATIONS MIXTES DES GROUPES DE LIE RÉSOLUBLES EXPONENTIELS

A. BAKLOUTI, A. GHORBEL ET H. HAMROUNI

### *Abstract*

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Let  $G$  be an exponential solvable Lie group,  $H$  and  $A$  two closed connected subgroups of  $G$  and  $\sigma$  a unitary and irreducible representation of  $H$ . We prove the orbital spectrum formula of the Up-Down representation  $\rho(G, H, A, \sigma) = \text{Ind}_H^G \sigma|_A$ . When  $G$  is nilpotent, the multiplicities of such representation turns out to be uniformly infinite or finite and bounded. A necessary and sufficient condition for the finiteness of the multiplicities is given. The same results are obtained when  $G$  is exponential solvable Lie group,  $H$  and  $A$  are invariant.

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*Mots-clés.* Groupe exponentiel, représentation unitaire, orbite, désintégration, polarisation, ensemble semi-algébrique.