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**Quantization operators and invariants of group representations.** (English) Zbl 1248.53076  
*J. Geom. Symmetry Phys.* 24, 89-102 (2011).

Summary: Let  $G$  be a semisimple Lie group and  $\pi$  some representation of  $G$  belonging to the discrete series. We give interpretations of the constant  $\pi(g)$ , for  $g \in Z(G)$ , in terms of geometric concepts associated with the flag manifold  $M$  of  $G$ . In particular, when  $G$  is compact this constant is related to the action integral around closed curves in  $M$ . As a consequence, we obtain a lower bound for the cardinal of the fundamental group of  $\text{Ham}(M)$ , the Hamiltonian group of  $M$ . We also interpret geometrically the values of the infinitesimal character of  $\pi$  in terms of quantization operators.

**MSC:**

[53D50](#) Geometric quantization

[22E45](#) Representations of Lie and linear algebraic groups over real fields: analytic methods

Cited in 1 Review

**Keywords:**

discrete series; flat manifold; Hamiltonian group; quantization operators