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**Singularities of Intertwining Operators and Decompositions of Principal Series Representations**

We show that, under certain assumptions, a parabolic induction  $\text{Ind}_B^G \lambda$  from the Borel subgroup  $B$  of a (real or  $p$ -adic) reductive group  $G$  decomposes into a direct sum of the form:

$$\text{Ind}_B^G \lambda = (\text{Ind}_P^G \text{St}_M \otimes \chi_0) \oplus (\text{Ind}_P^G \mathbf{1}_M \otimes \chi_0),$$

where  $P$  is a parabolic subgroup of  $G$  with Levi subgroup  $M$  of semi-simple rank 1,  $\mathbf{1}_M$  is the trivial representation of  $M$ ,  $\text{St}_M$  is the Steinberg representation of  $M$  and  $\chi_0$  is a certain character of  $M$ . We construct examples of this phenomenon for all simply-connected simple groups of rank at least 2.

**Keywords:** Representation theory, Lie groups,  $p$ -adic groups, principle series, intertwining operators.

**MSC:** 22E50, 47G10, 22E46.