Journal of Lie Theory
Volume **7** (1997) 121–146

Sur la conjecture de Corwin-Greenleaf

A la mémoire du Professeur Lawrence J. Corwin

Fujiwara Hidenori

Communicated by J. Ludwig

Abstract. Let $G=\exp(\mathfrak{g})$ be a nilpotent Lie group, $H=\exp(\mathfrak{h})$ a closed subgroup of G. Let $\chi=\chi_f$ be a unitary character of H and $\tau=\mathrm{ind}_H^G\chi$ the induced representation of G. Let us suppose that the multiplicities of the irreducible representations occuring in the disintegration of τ are finite. We prove in this note the conjecture of Corwin-Greenleaf, which says that the algebra $D_\tau(G/H)$ of the differential operators which commute with τ is isomorhic to the algebra $\mathbb{C}[\Gamma_\tau]^H$ under the condition that the H-orbits in Γ_τ are of dimension ≤ 1.

Faculté de Technologie à Kyusyu
Université de Kinki
Iizuka 820
Japan
fujiwara@fuk.kindai.ac.jp

Received July 1, 1996
and in final form October 30, 1996

ISSN 0949–5932 / \$2.50