Properties of the Invariants of Solvable Lie Algebras

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Abstract. We generalize to a field of characteristic zero certain properties of the invariant functions of the coadjoint representation of solvable Lie algebras with abelian nilradicals, previously obtained over the base field $\mathbb{C}$ of complex numbers. In particular we determine their number and the restricted type of variables on which they depend. We also determine an upper bound on the maximal number of functionally independent invariants for certain families of solvable Lie algebras with arbitrary nilradicals.