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Section:

7. Lie Groups and Lie Algebras

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A classification of Poisson homogeneous spaces of complex reductive Poisson-Lie groups

Let G be a complex reductive connected algebraic group equipped with the Sklyanin bracket. A classification of Poisson homogeneous G-spaces with connected isotropy subgroups is given. This result is based on Drinfeld's correspondence between Poisson homogeneous Gspaces and Lagrangian subalgebras in the double $D(\mathfrak{g})$ (here $\mathfrak{g} = \operatorname{Lie} G$). A geometric interpretation of some of Poisson homogeneous G-spaces is also proposed.