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**Compact Symmetric Spaces, Triangular Factorization, and Poisson Geometry**

Let $X$ be a simply connected compact Riemannian symmetric space, let $U$ be the universal covering group of the identity component of the isometry group of $X$, and let $\mathfrak{g}$ denote the complexification of the Lie algebra of $U$, $\mathfrak{g} = \mathfrak{u}^{\mathbb{C}}$. Each $\mathfrak{u}$-compatible triangular decomposition $\mathfrak{g} = \mathfrak{n}_- + \mathfrak{h} + \mathfrak{n}_+$ determines a Poisson Lie group structure $\pi_U$ on $U$. The Evens-Lu construction produces a $(U, \pi_U)$-homogeneous Poisson structure on $X$. By choosing the basepoint in $X$ appropriately, $X$ is presented as $U/K$ where $K$ is the fixed point set of an involution which stabilizes the triangular decomposition of $\mathfrak{g}$. With this presentation, a connection is established between the symplectic foliation of the Evens-Lu Poisson structure and the Birkhoff decomposition of $U/K$. This is done through reinterpretation of results of Pickrell. Each symplectic leaf admits a natural torus action. It is shown that the action is Hamiltonian and the momentum map is computed using triangular factorization. Finally, local formulas for the Evens-Lu Poisson structure are displayed in several examples.

**Keywords**: Homogeneous poisson structures, symmetric spaces, momentum map.

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