1078-53-156 **Takashi Hashimoto*** (thashi@uec.tottori-u.ac.jp), 4-101, Koyama-Minami, Tottori, Tottori 6808550, Japan. *A twisted moment map and its equivariance.*

Let G be a linear connected complex reductive Lie group with Lie algebra $\mathfrak{g}$. Fixing λ in the dual of a Cartan subalgebra of $\mathfrak{g}$, take a parabolic subgroup Q of G whose Levi factor is the isotropy subgroup of λ in G, and $\{U_\sigma\}_\sigma$ the open covering of G/Q indexed by W/W_λ, where W_λ is the isotropy subgroup of λ in the Weyl group W. Then we construct holomorphic isomorphisms $\mu_{\lambda;\sigma}$ from T^*U_σ into $\Omega_\lambda := G.\lambda$ for σ, which will become G-equivariant if we let G act on the bundles by affine transformation. Hence we glue $\{T^*U_\sigma\}$ together by transition functions induced from the affine action of G to form $T^*(G/Q)_\lambda$. It is locally isomorphic to the cotangent bundle, so we define local isomorphisms from $T^*(G/Q)_\lambda|_{U_\sigma}$ into Ω_λ by the same formula as $\{\mu_{\lambda;\sigma}\}$, which now satisfy the compatibility condition. Patching together $\mu_{\lambda;\sigma}$'s, we obtain an holomorphic isomorphism μ_λ from $T^*(G/Q)_\lambda$ onto Ω_λ. Moreover, this map preserves the symplectic forms on $T^*(G/Q)_\lambda$ and Ω_λ, which are naturally defined. (Received December 05, 2011)