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Ralph J Bremigan* (bremigan@bsu.edu), Department of Mathematical Sciences, Ball State University, Muncie, IN 47306-0490. *A hyperkähler structure on the cotangent bundle of a complex semisimple Lie group.* Preliminary report.

Let G be a complex semisimple group, the complexification of a compact Lie group K . P.B. Kronheimer (1988 MSRI preprint) used Nahm's equations to prove the existence of a $K \times K$ -invariant hyperkähler structure on the cotangent bundle of G . We will report on progress in describing this hyperkähler structure using elementary Lie theory. (Received September 22, 2012)