Meeting: 1000, Albuquerque, New Mexico, SS 8A, Special Session on Interactions in Riemannian Geometry

1000-53-118 **G Grantcharov***, Department of Mathematics, Florida International University, Miami, FL 33199, **H. Pedersen** (henrik@imada.sdu.dk), Department of Math and Computer Science, SDU, Odense, Denmark, and **Y.S. Poon**, Department of Mathematics, UC Riverside, Riverside, CA 92521. *Deformations of Hypercomplex Structures associated to Heisenberg Groups.* Preliminary report.

Let X be a compact quotient of the product of the real Heisenberg group H_{4m+1} of dimension $4m+1$ and the 3-dimensional real Euclidean space $\mathbf{R}^3$. A left invariant hypercomplex structure on $H_{4m+1} \times \mathbf{R}^3$ descends onto the compact quotient X. The space X is a hyperholomorphic fibration of 4-tori over a $4m$-torus. We calculate the parameter space and obstructions to deformations of this hypercomplex structure on X. Using our calculations we show that there are hypercomplex structures on X which are not invariant. This is in contrast to the spaces. (Received August 20, 2004)