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Short title: Generalized Grassmannian coherent states for pseudo-Hermitian n -level systems.

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Review text:

The paper fits in the fashionable context of quantum theory where systems live in a Hilbert space with nontrivial inner product (in my preferred notation of M.Z., SIGMA 5 (2009), 001 with doi: 10.3842/SIGMA.2009.001 this simply means that the Dirac's bra-vectors $\langle\psi|$ must be replaced by certain modified, Θ -metric-dependent brabra-vectors $\langle\langle\psi| := \langle\psi|\Theta$). The authors make use of the Majid's generalized Grassmann variables and recall paper by O. Cherbak et al (J. Phys. A: Math. Theor. 40 (2007), 1835, on fermionic coherent states for two-level systems. They ultimately generalize this construction to an n -level system, offering an appropriate explanation of several subtle technicalities of their project. In particular, the resolution of the identity operator is clarified and, for illustration, the Grassmannian coherent and squeezed states pertaining to the deformed group $SU_q(2)$ are constructed at $n = 3$.