

1100-22-67

Markus Hunziker (markus_hunziker@baylor.edu), Department of Mathematics, One Bear Place #97328, Waco, TX 76798, **Mark Sepanski*** (mark_sepanski@baylor.edu), Department of Mathematics, One Bear Place #97328, Waco, TX 76798, and **Ronald Stanke** (ron_stanke@baylor.edu), Department of Mathematics, One Bear Place #97328, Waco, TX 76798. *A new Schrödinger model for unitary highest weight representations.*

It follows from the classification of unitary highest weight representations and the work of Kashiwara-Vergne that every unitary reduction point of the metaplectic group $Mp(n, \mathbb{R})$ can be embedded in $L^2(M_{n,k})$ for some $k < n$, where $M_{n,k}$ denotes the space of real $n \times k$ matrices. Furthermore, every reduction point can be embedded in a space of sections of a holomorphic vector bundle on the Segal upper halfplane or—via boundary values—in a degenerate principal series representation. In this paper, we give a new realization of unitary highest weight representations in the kernel of a system of Schrödinger equations on the space $M_{n,k} \times Sym_k$, where Sym_k denotes the space of symmetric real $k \times k$ matrices. Our realization has simple intertwining maps to the previously known realizations mentioned above. (Received January 27, 2014)