The Weil Character of the Unitary Group Associated to a Finite Local Ring

Roderick Gow and Fernando Szechtman

Abstract. Let $R/R$ be a quadratic extension of finite, commutative, local and principal rings of odd characteristic. Denote by $U_n(R)$ the unitary group of rank $n$ associated to $R/R$. The Weil representation of $U_n(R)$ is defined and its character is explicitly computed.