1041-33-171   **Stephen C Milne*** (`milne@math.ohio-state.edu`), Department of Mathematics, The Ohio
State University, 231 West 18-th Avenue, Columbus, OH 43210-1174, and **Sheldon L
Degenhardt**. *A nonterminating q-Dougall summation theorem for hypergeometric series in
$U(n)$.* Preliminary report.

In this talk we extend important classical one-variable summations and transformations of Bailey to multiple basic
hypergeometric series very-well-poised on unitary groups $U(n+1)$. In particular, we derive multivariable generalizations
of Bailey's 3-term transformation formula for $_8\phi_7$ series, and Bailey's nonterminating q-Dougall summation formula. As
pointed out by Michael Schlosser, our nonterminating $U(n+1)$ q-Dougall summation formula yields a natural multivariable
extension of Jacobi's classical identity for eighth powers of theta functions. All of this work is a consequence of the
nonterminating $U(n+1)$ q-Whipple transformation formula of Milne and Newcomb. (Received August 10, 2008)

1