1005-55-35 **Donald M Davis** (`dmd1@lehigh.edu`), Dept. of Mathematics, E. Packer Ave, Bethlehem, PA 18015, and **Katarzyna Potocka*** (`kpotocka@ramapo.edu`), 505 Ramapo Valley Road, Mahwah, NJ 07430. *The 2-primary v_1-periodic homotopy groups of $SU(n)$ revisited.* Preliminary report.

The v_1-periodic homotopy groups can be roughly described as the portions of the actual homotopy groups localized at a prime p that are detected by K-theory. In 1991 Bendersky and Davis published the paper 2-*primary v_1-periodic homotopy groups of $SU(n)$*. In the present work we make some significant refinements of the 1991 paper using a new K-theoretic approach. Namely, we determine the number of summands in the 2-primary groups of $v_1^{-1}\pi_{2k-1}(SU(n))$. We also prove the existence of the summands of certain sizes in such groups. Moreover, we determine explicit formulas for the existence of some differentials in the spectral sequence for $SU(n)$, which give us an additional information about the actual homotopy groups. (Received January 17, 2005)