1035-Z1-1870 Colm Mulcahy* (colm@spelman.edu) and Neil Calkin. Bracelets with Magic Applications. Preliminary report.

For each n > 1, one can arrange 1, 2, ..., n(n+1) in a circle, like a bracelet, such that the sum of any n + 1 adjacent beads is one of n consecutive numbers. For instance, when n = 2 we get the unique (up to rotation and reflection) bracelet formed by connecting the ends of 5, 4, 1, 6, 3, 2, for which any three adjacent beads sum to 10 or 11.

We will give preliminary results on our investigations into these bracelets, along with variations on the theme and some magic applications. (Received September 20, 2007)