Table 2: Excess precession caused by various initial phase space conditions for the particles being tracked. The entries are obtained from Figures 1 through 4. One notes that all SCT values in the table are very short compared to the nominal target value of SCT=1000 s desired for the proton EDM experiment. But the results shown here are for coasting beams; for bunched beams there will be energy averaging accompanying synchrotron oscillations that can be expected to increase the SCT values by, perhaps, two orders of magnitude. Excess precession for examples in the first six rows are expected to be quadratic in initial coordinate offset. Only for the final two rows are the excess precessions expected to be linear in the initial coordinate offset. The only surprise in this table is the dramatic difference between SCT values due to energy offset in the cylindrical and spherical cases; i.e. the two bottom rows. This is discussed in a later section.

initial offsets	Δs_x/turn[Z]	SCT[Z] "cylindrical" s	Δs_x/turn[P1.0]	SCT[P1.0] "spherical" s
0.0005 0 0 0 0 0	-1.1e-7	9	-1.5e-7	7
-0.0005 0 0 0 0 0	-1.1e-7	9	-1.5e-7	7
0 0.0002 0 0 0 0	-1.6e-7	6	-6.3e-7	1.6
0 -0.0002 0 0 0 0	-1.6e-7	6	-6.3e-7	1.6
0 0 0.01 0 0 0	1.8e-7	5.5	2.5e-7	0.4
0 0 0 0.01 0	N/A	N/A	4.1e-6	0.24
0.01 0 0 0 0 5.85e-5	-4.8e-7	2.1	1.4e-3	0.0007
0 0 0 0 0 5.85e-5	-4.6e-7	2.2	1.4e-3	0.0007