Run Plan for 8/12 to 8/24 time period

1. Assume that 8/12-8/13 until 8:00am will be taken up with beam tune.

2. $Q^2 = 0.5$ GeV^2 , $E_{beam} = 0.942$ GeV. At 4μA predict that we can measure $\frac{G_e}{G_m}$ to 1% in 6 hours. Assuming 50% efficiency then 12 hours.

3. $Q^2 = 0.8$ GeV^2, $E_{beam} = 0.942$ GeV . At 20μA predict that we can measure $\frac{G_e}{G_m}$ to 1% in 8 hours. Assuming 50% efficiency then 16 hours. Hope to finish by end of day shift on 8/14.

4. Assume that 8/14 for swing and 8/15 owl shifts for tuning beam energy of 1.883 GeV and setting up Moller.

5. $Q^2 = 1.2$ GeV^2. At 20μA predict that we can measure $\frac{G_e}{G_m}$ to 1.0% in 24 hours. Assuming 50% efficiency then two days.

6. Assume that 8/17 day and swing shifts for tuning beam energy of 3.615 GeV and setting up Moller.

7. $Q^2 = 1.5$ GeV^2. At 10μA predict that we can measure $\frac{G_e}{G_m}$ to 2.0% in 24 hours. Assuming 50% efficiency then two days.

8. $Q^2 = 1.8$ GeV^2. At 20μA predict that we can measure $\frac{G_e}{G_m}$ to 1.8% in 48 hours. Assuming 50% efficiency then four days. This point would allow an overlap with $Q^2 = 1.9$ GeV^2 data, so that we would have a measurement of $Q^2 = 1.85$ GeV^2 with two different central momentum of the hadron dipole which is another test of our understanding of the spin transport.

   If we can't get 20μA maximum current from the new high polarization source then the run plan has to be modified. If the maximum current is 10μA then we would run the full plan and accept the $\sqrt{2}$ increase in the error bars. If the maxiumum current is 5μA we would leave off the $Q^2 = 1.8$ GeV^2 and increase the running time for the other points. If the maximum current is 1μA then we would just do the $Q^2 = 0.5$, 1.2 and 1.5 GeV^2 points.

E_{beam}	Q^2	p_p	E'	θ_e	T_p	θ_p
0.942	0.500	0.7556	0.676	52.62	0.266	45.265
0.942	0.800	0.9908	0.516	79.83	0.426	30.816
1.833	1.200	1.2684	1.194	43.47	0.639	40.341
3.615	1.500	1.4625	2.816	22.13	0.799	46.496
3.615	1.800	1.6493	2.656	25.01	0.959	42.900

Q^2	I (μA)	rate (/sec)	time (hr)	A_c	eff
0.500	4	1200	6.0	0.5217	.0600
0.800	20	740	8.0	0.3762	.1000
1.200	20	900	24.0	0.2647	.1500
1.500	10	1100	24.0	0.2292	.2400
1.800	20	860	48.0	0.2358	.2700

Q^2	h	χ	$hA_cP_l\sin(\chi)$	hA_cP_t	# of triggers	$\frac{\Delta\frac{G_E}{G_M}}{\frac{G_E}{G_M}}$
0.500	.44	103.59	0.1060	-0.0917	30 x 10^6	0.020
0.800	.55	117.33	0.1415	-0.0888	20 x 10^6	0.013
1.200	.50	135.66	0.0574	-0.0457	72 x 10^6	0.013
1.500	.44	149.41	0.01746	-0.01833	95 x 10^6	0.023
1.800	.44	163.15	0.01214	-0.02024	150 x 10^6	0.021