V: Carbon Inelastic Spectrum and False Asymmetry

Goal: Take full spectrum of carbon, covering the elastic and accessible inelastic region. See Table ?? for spectrometer and septa settings. **Do not modify the septa current prior to receiving instruction on how to do so by an expert.**

1. Modify spectrometer momentum setting and septa current as needed. Request beam off during septa modifications to avoid beam steering. Change Septa current in 50A increments. Left and Right Septa should be set to same setting whenever beam is on.
2. Insert/Remove 10 mil carbon foil target as needed. Request beam off for any change. in target
3. Request CW beam. 1 μA is the maximum current permitted.
4. Adjust prescalers to obtain deadtime about 10%. Make halog entry noting deadtime and daq rate for both arms. Current can be reduced to control Deadtime if needed.
5. Stay on each kinematic setting for one hour each.
6. Fast raster settings : 2 x 2 mm^2. Slow raster settings: 2 cm diameter.
7. Note: It may be necessary to skip settings requiring slow raster until the device is fully checked out.

#	Spectrometer P_0 (GeV)	Septa Current (A)	A (L / R, RASTER OFF) Nevts	B (L / R, FAST RASTER ON) Nevts	C Nevts	D (L / R) Nevts
1	1.716	480	15M / 16M	10M / 10M		1.8 / 1.9
2	1.680	470	4.8 / 7.8	5M / 7.8	1832 / 2.958	2.2 / 2.6
3	1.556	435	4 / 4.1	5.4 / 5.2		2m / 2m
4	1.431	402	/3	/1.3		/4M
5	1.317	372		4M / 4M		
6	1.211	342	4m / 4m	4m / 4m		1.2 / 1.5m
7	1.115	314	4m / 4m	4m / 4m		1.3 / 2.6M
8	1.025	290	4M / 4M	4M / 6.3M		1.0 / 1.7M
9	0.943	266	3.7M / X			1M / X
10	0.868	246	3.5M / 4.6M			1M / 1.5M
11	0.798	226	3.1M / X			1M / X
12	0.735	208	3.4M / 5M			1M / 1.6M
13	0.676	191	3.5M / X			.87M / X
14	0.622	176	1.8M / 6.9M			— / 2.8M
15	0.572	163				
16	0.526	149				
17	0.484	137				
18	0.445	126				
19	0.410	116				

1832 : 1833, 2987

NO LHRS HAVE HAPPEX
17:40 →
20:15 →
23:00 →

KEEP RASTER OFF (D-ARV)

Karl + Alexandre (22:30, 16 Dec 2011)
- NO MORE THAN 30 min per place
- step thru all L, every 2nd R (let settle while L is on alternate)

SKIP for now (sometime)

ALWAYS KEEP SEPTAS the same!

A: Carbon target: IN. Slow raster OFF, Fast raster OFF.
B: Carbon target: IN. Slow raster OFF, Fast raster ON.
~~C: Carbon target: IN. Slow raster ON, Fast raster ON.~~
D: Carbon target: OUT. Slow raster OFF, Fast raster ON.

$Q_1 = 499.8725 * P_0$

$Q_2 = 408.5654 * P_0$

$Q_3 = 481.5663 * P_0$

Fast Raster MCC reading

$X = 1.5$

$y = 0.8$