

Carlos' report group meeting 09/29/21

- GTS (Bubba+Carlos)
 - Replaced burnt HV 350kV cable
 - Recovered from water inside the HVPS SF6 tank due to failure in instrument air compressor
 - Replaced broken resistor inside R30 pig. Found resistor broken in half
 - Revamping SF6 transfer system to make it like the one at LERF (Vane compressor to push gas both ways, Pfeiffer scroll pump to pump SF6 to the lowest possible pressure (30 inHg))
- 18" gun
 - What else is required to make a decision? I recommend keeping the large (GTS) shield and tilting the anode 3 deg.
- U-Wien
 - Tallied up components. All parts on hand expect for Macor ceramic breaks which are being manufactured.
 - J. Meyers: window of opportunity for magnet measurements is start on November.
 - Bubba to take on magnet assembly and coordination with Magnet Test.
 - S. Philip: Resistor that was removed from UITF for the CEBAF Wien magnet PS can be installed by early Dec.
 - Bubba polished two single piece spline electrodes. Ready for HV cleaning, need to arrange for degassing.
 - Working on Wien spin angle parameter space exploration (What E needed for B determined by coils -> spin angle)
- 500 kV FOA
 - On schedule considering a granted 6-month no cost extension. See Gabriel's slide for technical details
 - Working with M. Bevins on finding DA to preform pneumatic (He) pressure test to 18 PSIG.
- P3 workshop
 - Check out the agenda! Registration is now open and is FREE: [P3 Workshop 2021 hosted remotely by SLAC](#)
 - Still, all wishing to attend/present need a TA. Let Crystal know.

Wien angle spin angle parameter space (E, B) exploration

15 mm gap					15 mm gap				
V applied per electrode [kV]					Maximum spin angle [deg]				
B [T]	0.0092	0.013	0.0159	0.0174	B [T]	0.0092	0.013	0.0159	0.0174
coil current [A]	10.47	14.84	18.11	19.81	coil current [A]	10.47	14.84	18.11	19.81
KE [keV]					KE [keV]				
130	12.46	17.60	21.53	23.56	130	100.24	141.65	173.25	189.59
200	14.35	20.27	24.79	27.13	200	70.74	99.96	122.26	133.80
250	15.29	21.60	26.42	28.91	250	57.94	81.88	100.14	109.59
300	16.02	22.64	27.69	30.30	300	48.69	68.80	84.14	92.08
400	17.08	24.13	29.52	32.30	400	36.19	51.14	62.55	68.45
7000	20.58	29.08	35.57	38.93	7000	0.44	0.62	0.76	0.84

14 mm gap					14 mm gap				
V applied per electrode [kV]					Maximum spin angle [deg]				
B [T]	0.0092	0.013	0.0159	0.0174	B [T]	0.0092	0.013	0.0159	0.0174
coil current [A]	10.47	14.84	18.11	19.81	coil current [A]	10.47	14.84	18.11	19.81
KE [keV]					KE [keV]				
130	11.63	16.43	20.09	21.99	130	100.24	141.65	173.25	189.59
200	13.39	18.92	23.14	25.32	200	70.74	99.96	122.26	133.80
250	14.27	20.16	24.66	26.99	250	57.94	81.88	100.14	109.59
300	14.95	21.13	25.84	28.28	300	48.69	68.80	84.14	92.08
400	15.94	22.53	27.55	30.15	400	36.19	51.14	62.55	68.45
7000	19.21	27.15	33.20	36.33	7000	0.44	0.62	0.76	0.84

13 mm gap					13 mm gap				
V applied per electrode [kV]					Maximum spin angle [deg]				
B [T]	0.0092	0.013	0.0159	0.0174	B [T]	0.0092	0.013	0.0159	0.0174
coil current [A]	10.47	14.84	18.11	19.81	coil current [A]	10.47	14.84	18.11	19.81
KE [keV]					KE [keV]				
130	10.79	15.25	18.66	20.42	130	100.24	141.65	173.25	189.59
200	12.43	17.57	21.49	23.51	200	70.74	99.96	122.26	133.80
250	13.25	18.72	22.90	25.06	250	57.94	81.88	100.14	109.59
300	13.88	19.62	24.00	26.26	300	48.69	68.80	84.14	92.08
400	14.80	20.92	25.58	28.00	400	36.19	51.14	62.55	68.45
7000	17.84	25.21	30.83	33.74	7000	0.44	0.62	0.76	0.84

06/30/21

09/30/21

Tasks Year 1	Q1	Q2	Q3	Q4
1. Hire postdoctoral appointee	■			
2. Purchase and install software packages	■			
3. Electrostatic design: electrodes + long insulator + SF6 intervening layer		■		
4. Engineering design		■		
5. Fabricate components			■	
6. Assemble components			■	
7. Test high voltage assembly in SF6				■
8. Test high voltage assembly in vacuum				■