

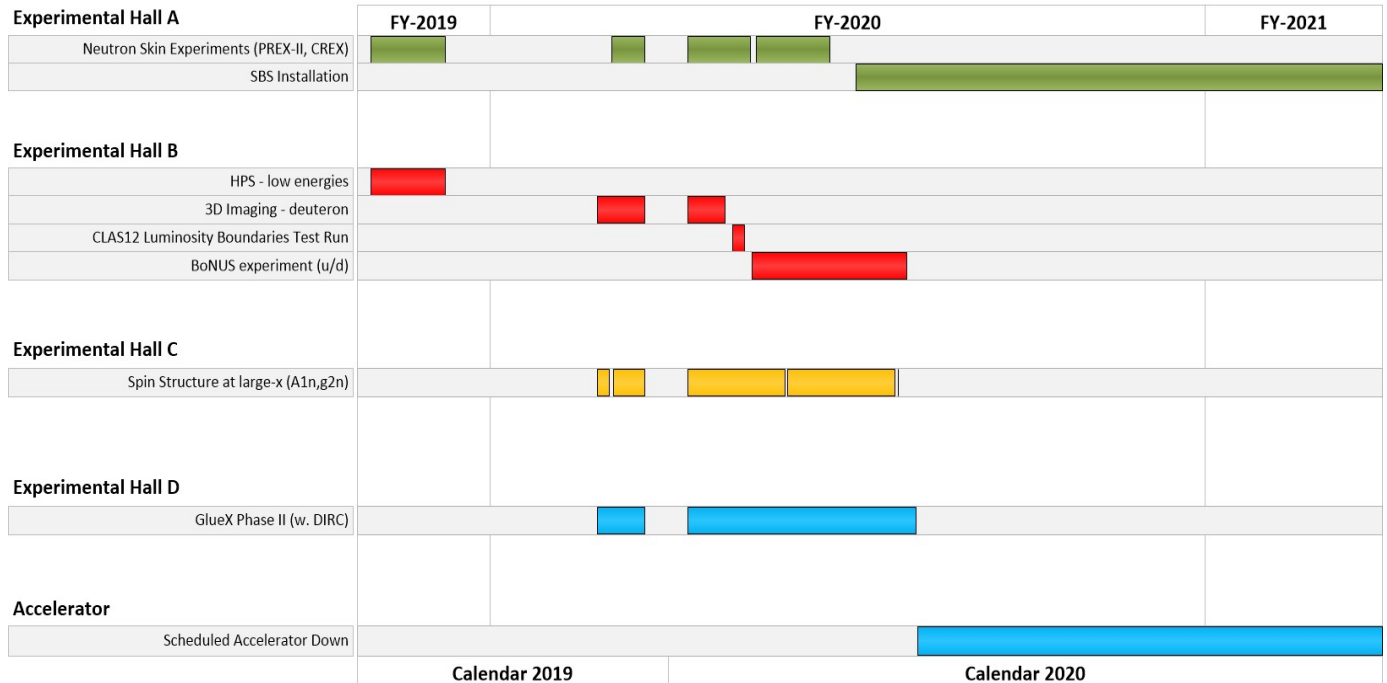
MEMORANDUM

Date: September 12, 2019
 To: Distribution
 From: Rolf Ent and Camille Ginsburg for the Nuclear Physics Experiment Scheduling Committee
 Subject: Updated Accelerator Schedule through December 2020

Attached is the updated accelerator operations schedule through December 2020. It has also been posted at http://www.jlab.org/div_dept/physics_division/experiments/schedule.html. Access to the database format of the same schedule, as used by the beam accounting system, can be found at <https://cebaf.jlab.org/btm/schedule>.

The experiment schedule has been updated to reflect a recently completed summer 2019 run longer than initially anticipated. The longer summer run requires we also make adjustments to the remainder of the experiment schedule to keep all the experiments already scheduled, perform the necessary accelerator maintenance and upgrade tasks (e.g. replacing cryomodules to reach the desired beam energies) while keeping the May 2020 down to replace one of the Central Helium Liquefier 2K compressor trains (“cold box”).

The updated schedule has the various experiments starting November 25 instead of November 1 followed by a reduced Christmas break (experiments start back January 10 instead of the 22nd). The amount of contingency before the May 2020 down has been reduced. The graph below summarizes the experiment schedule.



The longer than anticipated summer run period was brought by a combination of a few major hardware failures, tight beam requirements and lowest energy gain per pass since the 12 GeV upgrade. The last two led to the uncovering of several subtleties of the machine affecting beam delivery and quality, e.g., machine failure to reproduce settings because some magnets were operating outside of their measured field ranges. Among the hardware issues encountered were those related to an unexpected loss of electrical power to the accelerator complex and an arc power supply failure.

On the schedule, each Physics Advisory Committee (PAC) day is mapped into two floor days. This factor of two accounts for Accelerator and hall efficiency due to system failures (not experiment overhead). It also accounts for a total of up to 16 hours a week of scheduled beam studies, maintenance, and RF recovery. An additional 8 hours a week is allocated for beam tuning to support program changes, beam tuning to address beam quality issues and to restore beam operations for physics post beam studies/maintenance periods. The remaining 144 hours a week, 86 %, is scheduled as research.

The Jefferson Lab Nuclear Physics Experiment Scheduling Committee developed the schedule. Committee members are: Volker Burkert, Eugene Chudakov, Rolf Ent (Co-Chair), Camille Ginsburg (Co-Chair), Javier Gomez, Cynthia Keppel, Robert McKeown, Matt Poelker, Patrizia Rossi and, Mike Spata. The schedule has been reviewed and approved by the Director.

1	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2	Date	Weekday	(GeV/pass)	Operations	Hall A	Hall A	Hall B	Hall B	Hall C	Hall C	Hall D	Hall D	Priority	Pass	Notes
3				Status	Experiment	GeV/μA/Pol/MHz	Experiment	GeV/nA/Pol/MHz	Experiment	GeV/μA/Pol/MHz	Experiment	GeV/nA/Pol/MHz	Hall	A/B/C/D	Notes
3	08/01/19	Thursday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
4	08/02/19	Friday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
5	08/03/19	Saturday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
6	08/04/19	Sunday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
7	08/05/19	Monday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
8	08/06/19	Tuesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
9	08/07/19	Wednesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
10	08/08/19	Thursday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
11	08/09/19	Friday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
12	08/10/19	Saturday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
13	08/11/19	Sunday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
14	08/12/19	Monday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
15	08/13/19	Tuesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
16	08/14/19	Wednesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
17	08/15/19	Thursday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
18	08/16/19	Friday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
19	08/17/19	Saturday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
20	08/18/19	Sunday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
21	08/19/19	Monday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
22	08/20/19	Tuesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
23	08/21/19	Wednesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
24	08/22/19	Thursday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
25	08/23/19	Friday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
26	08/24/19	Saturday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
27	08/25/19	Sunday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
28	08/26/19	Monday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
29	08/27/19	Tuesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
30	08/28/19	Wednesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
31	08/29/19	Thursday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
32	08/30/19	Friday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
33	08/31/19	Saturday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
34	09/01/19	Sunday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
35	09/02/19	Monday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
36	09/03/19	Tuesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
37	09/04/19	Wednesday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
38	09/05/19	Thursday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
39	09/06/19	Friday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				A/B	1/5/-/-	
40	09/07/19	Saturday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
41	09/08/19	Sunday	0.9	Physics	E12-11-101	0.95/70/p/500	Run Group I	4.55/100/-/500	INSTALL				B/A	1/5/-/-	
42	09/09/19	Monday	OFF						INSTALL						
43	09/10/19	Tuesday							INSTALL						
44	09/11/19	Wednesday							INSTALL						
45	09/12/19	Thursday							INSTALL						
46	09/13/19	Friday							INSTALL						
47	09/14/19	Saturday							INSTALL						
48	09/15/19	Sunday							INSTALL						
49	09/16/19	Monday							INSTALL						
50	09/17/19	Tuesday							INSTALL						
51	09/18/19	Wednesday							INSTALL						
52	09/19/19	Thursday							INSTALL						
53	09/20/19	Friday							INSTALL						
54	09/21/19	Saturday							INSTALL						
55	09/22/19	Sunday							INSTALL						
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59	09/26/19	Thursday							INSTALL						
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64	10/01/19	Tuesday							INSTALL						
65	10/02/19	Wednesday							INSTALL						
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68	10/05/19	Saturday							INSTALL						
69	10/06/19	Sunday							INSTALL						
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71	10/08/19	Tuesday							INSTALL						
72	10/09/19	Wednesday							INSTALL						
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74	10/11/19	Friday							INSTALL						
75	10/12/19	Saturday							INSTALL						
76	10/13/19	Sunday							INSTALL						
77	10/14/19	Monday							INSTALL						
78	10/15/19	Tuesday							INSTALL						
79	10/16/19	Wednesday							INSTALL						
80	10/17/19	Thursday							INSTALL						
81	10/18/19	Friday							INSTALL						
82	10/19/19	Saturday							INSTALL						
83	10/20/19	Sunday							INSTALL						
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86	10/23/19	Wednesday							INSTALL						
87	10/24/19	Thursday							INSTALL						
88	10/25/19	Friday							INSTALL						
89	10/26/19	Saturday							INSTALL						
90	10/27/19	Sunday							INSTALL						
91	10/28/19	Monday							INSTALL						
92	10/29/19	Tuesday							INSTALL						

Table with columns A-O and rows 185-275. Columns include dates, days of the week, experiment numbers (e.g., E12-12-004), physics descriptions, test runs, pass changes, and various parameters and notes. A yellow note at row 190 states: 'Note 1 - Test run to determine CLAS1 luminosity boundaries when running with nuclear targets'. Other rows show 'Run Group F' and 'SBS Install' activities.

