

MEMORANDUM

Date: November 22, 2021
To: Distribution
From: Rolf Ent and Camille Ginsburg for the Nuclear Physics Experiment
Scheduling Committee
Subject: Accelerator Schedule through March 2023

Schedule

Attached is the accelerator operations schedule through March 2023. 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 operations schedule is based on expected fiscal 2022 and 2023 funding. It may be subject to adjustments due to actual funding or other major forces like developments related to the COVID-19 virus.

Since the last long-term schedule was released March 16, 2021, the Scheduled Accelerator Down (SAD) was successfully completed and experiments started taking data in earnest around September 13, 2021 as indicated on the short-term schedule update of October 4, 2021.

For fiscal year 2022, we expect 33 weeks of operations starting October 1, 2021. Two of those weeks correspond to Accelerator restore. Operations will cease over the holidays. Beam restore is expected to begin early January 2022 and continue running until February 8, 2022 to complete the experimental program started in 2021 requiring special machine energies. Installation of several new cryomodules to increase the energy reach of the machine will take place during the Scheduled Accelerator Down (SAD) of February 8 – June 1, 2022, together with many other maintenance activities. The physics program is scheduled to start June 8, 2022 and run non-stop to December 21, 2022. A short recess in operations has also been scheduled for the 2022 holidays. The intent is to begin beam restore January 9th, 2023 followed by experiments on January 16th until March 15, 2023 when the next SAD starts. The schedule has 11.6 weeks of physics operation in Q1 FY2023 and 9.3 weeks in Q2 FY2023 of which one week is for beam restore.

As already indicated on the last two released schedules, the run cycle between September 2021 and March 2022 has been scheduled at lower, non-standard, energies per pass (1.82 GeV/pass and 1.96 GeV/pass) to be able to carry out measurements of longitudinal-transverse pion cross sections in Hall C. The remaining portion of the experiment schedule extending until March 2023, is at a machine energy of 2.1 GeV/pass.

Several of the experiments scheduled for Fall 2021 and into Winter 2021, require extracting beam at machine passes lower than the 5th - pass. With four halls operating simultaneously, this represents a challenge since Hall D can only receive beam if one of the other halls is at 5th - pass. Changes in the schedule of the halls made it necessary to rearrange the order that the halls must take their energies to maximize the up-time of Hall D as already indicated on the short-term schedule update of October 4, 2021. Even with these changes, Hall D is expected to stop early December 2021.

The present schedule has Hall A performing G_M^n (E12-09-019) in Fall 2021 and early 2022. Hall A expects then to perform E12-09-016 (Neutron G_E^n/G_M^n ratio using a polarized ^3He target) later in CY2022, followed by the wide-angle pion photoproduction (E12-20-008) experiment. Experiment E12-17-004 (G_E^n -RP) is expected to take data early CY2023.

During the latter part of 2021, Hall B did acquire additional data on the Heavy Photon Search – HPS experiment (Run Group I). Measurements of electron scattering cross sections from multiple nuclear targets to study short range correlations in nuclei and benchmark neutrino event selection, energy reconstruction and event generators (Run Group M) are being performed now. From the end of the 2022 SAD and until the 2023 SAD, Hall B expects to perform measurements using a longitudinally polarized target to study the 3D structure of the nucleon (Run Group C).

Hall C is taking measurements of longitudinal – transverse pion cross sections and of the charged pion form-factor at large Q^2 (E12-19-006) until the beginning of the 2022 SAD. These measurements will complement the data taken during summer 2019 by experiments E12-06-101 and E12-07-105. For CY2022, Hall C expects to perform measurements of short-range pairing mechanisms (E12-17-005), nuclear dependence of F_2 (E12-10-008), inclusive scattering from nuclei at $x > 1$ (E12-06-105) as well as the remaining sets of measurements needed to complete the of longitudinal – transverse pion cross sections and of the charged pion form-factor at large Q^2 experiment (E12-19-006). The deuteron electro-disintegration experiment (E12-10-003) will follow. About a week of beam scheduling contingency is left before the 2023 SAD begins.

For late calendar year 2021, Hall D acquired additional data on the η radiative decay width via the Primakoff effect (E12-10-011). Measurements of short-range correlations with real photons (E12-19-003) will follow. Unfortunately, this experiment will be cut short because none of the other halls will be at 5th pass, a necessary condition for Hall D to operate. For CY2022, Hall D plans to measure the charged pion polarizability (E12-13-008), the final set of measurements of E12-10-011 (η radiative decay width via the Primakoff effect) followed by a continuation of the study the decays of mesons and baryons to final states containing strange quarks (E12-12-002) using the newly added DIRC (Detection of Internally Reflected Cherenkov) particle detector.

Figure 1 summarizes graphically the experiment schedule. Tables 1- 4 later in this memo, list those experiments that have been run to completion, partially run, scheduled for this run period and those yet to be scheduled in the “12 GeV era”.

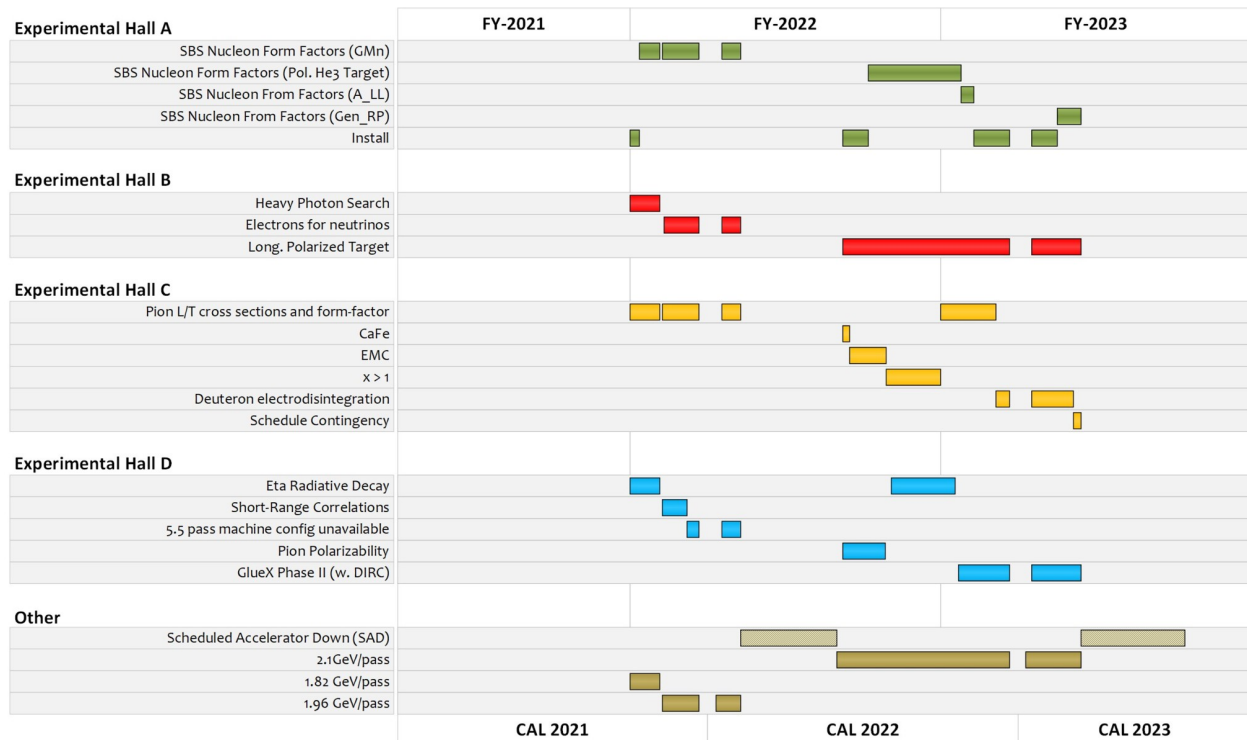


Figure 1 – Experiment schedule summary

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 allows for 4 hours of beam-off time for maintenance, and 8 hours of beam-off time for SRF maintenance. It also accounts for a total of up to 12 hours a week of scheduled beam studies 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 136 hours a week, 87 % of beam-on time, is scheduled as research.

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

Scheduling Status of Experiments

Table 1 - Completed Experiments

Experiment	Hall	Contact	Beam Req. Submitted
Run Group F	B	S. Kuhn	28-Jul-2017
E12-06-102	D	C. Meyer	1-Aug-2014
E12-06-110	C	X. Zheng	30-May-2018
E12-06-121	C	B. Sawatzky	30-May-2018
E12-07-108	A	B. Wojtsekhowski	20-Aug-2014
E12-09-002	C	K. Hafidi	2-Jul-2015
E12-09-017	C	R. Ent	2-Jul-2015
E12-10-002	C	S. Malace	21-Aug-2014
E12-10-103	A	G. Petratos	1-Sept-2014
E12-11-101	A	K. Paschke	28-Jul-2017
E12-11-106	B	A. Gasparian	22-Jun-2015
E12-12-004	A	K. Paschke	28-Jul-2017
E12-14-011	A	L. Weinstein	24-Jun-2015
E12-14-012	A	C. Mariani	26-Jun-2015
E12-15-001	C	N. Sparveris	19-Jul-2017
E12-17-003	A	L. Tang	27-Jul-2017

Table 2 - Partially Completed Experiments

Experiment	Hall	Contact	Beam Req. Submitted
Run Group A	B	L. Elouadrhiri	1-Jul-2015
Run Group B	B	S. Niccolai	31-Jul-2016
Run Group I	B	S. Stepanyan	27-Jul-2017
Run Group K	B	A. D'Angelo	13-Jul-2017
E12-06-101	C	G. Huber	1-Aug-2016
E12-06-107	C	D. Dutta	6-Aug-2014
E12-06-114	A	C. Hyde	6-Aug-2014
E12-07-105	C	T. Horn	1-Aug-2016
E12-09-011	C	T. Horn	2-Jul-2015
E12-10-003	C	W. Boeglin	6-Aug-2014
E12-10-008	C	D. Gaskell	6-Aug-2014
E12-10-009	A	B. Wojtsekhowski	27-Jul-2016
E12-10-011	D	A. Gasparian	1-Aug-2017
E12-11-008	LERF	P. Fisher	6-Jul-2015
E12-11-112	A	D. Higinbotham	30-Jul-2014

E12-12-002	D	M.Shepherd	23-May-2019
E12-14-009	A	D. Higinbotham	29-Jun-2015
E12-16-007	C	Z.E. Meziani	27-Jul-2017

Table 3 - Scheduled Experiments

1 = TBD, passed ERR

2 = Pending ERR completion

3 = Pending results of nuclear target tests in CLAS12

Experiment	Hall	Contact	Beam Req. Submitted
Run Group C	B	S. Kuhn	*1*
Run Group M	B	O. Hen & L. Weinstein	14-Aug-2019
Run Group I	B	S. Stepanyan	27-Jul-2017
E12-06-105	C	J. Arrington	28-Jul-2017
E12-10-003	C	W. Boeglin	6-Aug-2014
E12-10-008	C	D. Gaskell	6-Aug-2014
E12-10-011	D	A. Gasparian	1-Aug-2017
E12-12-002	D	M.Shepherd	23-May-2019
E12-13-008	D	R. Miskimen	*2*
E12-19-003	D	O. Hen	9-Sep-2020
E12-19-006	C	T. Horn & G. Huber	1-Aug-2016
E12-09-016	A	B. Wojtsekhowski	*2*
E12-09-019	A	B. Wojtsekhowski	31-Jul-2017
E12-17-004	A	B. Sawatzky	10-Nov-2020
E12-17-005	C	O. Hen	31-Jul-2017
E12-20-008	A	A. Puckett	14-Dec-2020

Table 4 - New Experiments to be Scheduled

Note that partially completed experiments are also considered for re-scheduling

1 = TBD, passed ERR

2 = Pending ERR completion

3 = Pending results of nuclear target tests in CLAS12

Experiment	Hall	Contact	Beam Req. Submitted
Run Group D	B	L. El Fassi	29-July-2017
Run Group L	B	Z. Meziani	*2*
E12-06-104	C	P. Bosted	15-Aug-2019
E12-06-107	C	D. Dutta	19-Aug-2019
E12-11-107	C	S. Wood	15-Dec-2020
E12-13-003	D	C. Meyer	29-Jul-2016

E12-13-007	C	R. Ent	16-Aug-2019
E12-13-010	C	C. Muñoz Camacho	16-Aug-2019
E12-14-003	C	B. Wojtsekhowski	*1*
E12-14-005	C	D. Dutta	*1*
E12-20-010	A	E. Fuchey	10-Dec-2020

Supplementary Scheduling Information

Reminders

- On the schedule, daily status changes take place at the end of the owl shift (~ 7 AM) unless otherwise indicated.
- Operating one or more of Halls A, B and C at five passes together with Hall D at 5.5 passes requires a polarized gun laser frequency of 249.5 MHz for those halls. A laser frequency of 499 MHz can be used otherwise. For the same average beam current, the charge per micro-bunch when operating the laser at 249.5 MHz will be twice that of 499 MHz. For each hall, the energy, current, polarization column now also includes the laser frequency.

The Meaning of Priority on the Accelerator Schedule

Generally, the assignment of priority to a hall means that the identified hall will have the primary voice in decisions on beam quality and/or changes in operating conditions. We will do our best to deliver the beam conditions identified in the schedule for the priority hall. It will not, however, mean that the priority hall can demand changes in beam energy that would affect planned running in the other halls without the consent of the other halls. Of course, final authority for decisions about unplanned changes in machine operation will rest with the laboratory management.

The operation of more than one hall at Jefferson Lab substantively complicates the interaction between the experimenters and the accelerator operations group. It is in the interests of the entire physics community that the laboratory be as productive as possible. Therefore, we require that the run coordinators for all operating halls do their best to respond flexibly to the needs of experiments running in other halls. The run coordinators for all experiments either receiving beam or scheduled to receive beam that day should meet with the Program Deputy at 7:45 AM in the MCC on weekdays and at the Program Deputy's discretion on weekends.

To provide some guidance and order to the process of resolving the differing requirements of the running halls, we have assigned a "priority hall" for each day beam delivery has been scheduled. We outline here the meaning of priority and its effect on accelerator operations.

The priority hall has the right to:

- require a re-tune of the accelerator to take place immediately when beam quality is not acceptable
- insist that energy changes occur as scheduled
- obtain hall access as desired
- request that beam delivery interruptions for experiment-related operations which temporarily block normal beam delivery to all other halls take place as requested. Mott

measurements of the beam polarization or pulsed operation for current monitor calibrations represent examples of such interruptions. Interruptions of this type require, at a minimum, 24 hours advance notification and coordination with the Program Deputy and the other halls.

These interruptions shall be limited by a sum rule - the total time lost to the non-priority hall(s) due to such requests shall not exceed 2.5 hours in any 24-hour period. It is, of course, highly preferred that these measurements be scheduled at the morning meeting of the run coordinators whenever possible, and coordinated between halls whenever possible.

When the priority hall has requested a re-tune, if the re-tune degrades a previously acceptable beam for one of the other, lower priority running halls, then the re-tune shall continue until the beam is acceptable to both the priority hall and the other running halls that had acceptable beam at the time the re-tune began.

Non-priority halls can:

- require that a retune of the accelerator take place within 2.5 hours of the desired time (it will nominally occur at the earliest convenient break in the priority hall's schedule)
- require access to the hall within 1 hour of the desired time (again, it will nominally occur at the earliest convenient break in the priority hall's schedule)
- request that beam delivery interruptions for experiment-related operations which temporarily block normal beam delivery to all other halls occur within 2.5 hours of the desired time. Interruptions of this type require, at a minimum, 24 hours advance notification and coordination with the Program Deputy and the other halls.

The ability of non-priority halls to request retunes and accesses shall be limited by a sum rule - the total time lost to the priority hall due to such requests shall not exceed 2.5 hours in any 24-hour period. (To facilitate more extended tuning associated with complex beam delivery, with the agreement of the run coordinators for all operating halls, the sum rule may be applied over a period as long as three days, so long as the average impact is less than 2.5 hours/day.) In the event that two non-priority halls are running, the 2.5 hours shall be split evenly between them in the absence of mutual agreement on a different split.

All Halls:

Can negotiate with other halls, and with the Accelerator and Physics Division for changes in scheduled energy changes (either direction).

Halls should plan to avoid non-emergency requests for beam delivery modifications (e.g., for target changes) during accelerator shift changes, nominally 7:30-8:30 am, 3:30-4:30pm, and 11:30pm-12:30am. Please strictly avoid 8:00-8:15am, 4:00-4:15pm, and 12:00-12:15am to improve focus on safe fulfillment of hall requests.

Initial Tune-up of New Beams:

Normally one and one half shifts (12 hours) is set aside for tune-up whenever a new beam setup is being tuned (for unusual beam setups more time may be scheduled explicitly for tuning at the discretion of the scheduling committee). It is understood that beam tune-ups shall *always* be done in the order that the accelerator operations group believes will minimize the *total* time needed to tune *all* scheduled beams (i.e., the "priority hall" beam is not necessarily tuned first). In the event that obtaining the new beam setup requires more than the scheduled time, the Accelerator Program Deputy is authorized to spend up to one additional shift of tuning in an effort to deliver all scheduled beams instead of just the "priority hall" beam

Maintenance/Beam Studies. Accelerator Division may request up to sixteen hours per week. Users will be consulted in deciding how these sixteen hours per week are placed on the calendar, i.e. five shorter or three long blocks of time.

Accomplishments and Expectations

Accelerator

The two cryomodules installed into the North Linac during the FY21 shutdown are performing well and have added about 110 MeV to the North Linac energy reach. The new neutron detectors (NDX) are also performing very well, and have allowed for fine tuning of cavity gradients which has recovered about 38 MeV of energy gain, split about evenly between North and South Linacs, and reduced the neutron dose rate by a factor of 2-4 in some areas of the machine. These two improvements to energy reach have led to lower fault rates and thus higher reliability for beam delivery to the experiments.

The 2022 SAD, currently planned for Feb-Apr 2022 pending funding decisions, will include work on both the North and South Linacs. Elastomer seal gate valves will be replaced to the extent the schedule permits. Two more modules will be swapped in the North Linac and one in the South Linac in support of the 1050 MeV/linac needed to support polarization in Hall B at fifth pass and Hall A on second, third and fourth passes in parallel. Hall C will have nearly full polarization as well although the scheduled experiments do not require it.

Between two and four more modules will be refurbished each year through 2026, funding permitting, as part of the CEBAF Performance Plan, with the goal of achieving adequate headroom to keep fault rate low or deal with another cryomodule failure while operating at the design energy of 1090 MeV/linac.

During the 2020 run it was discovered that the injector energy lock did not adequately maintain the energy defined by the injector spectrometer (an invasive device). Beam loss monitor trips near the end of the injector (OR08) frequently led to turning off the injector energy lock. The arc 1 energy lock maintained the sum of the Injector and North Linac, and the Hall A energy lock kept that energy and therefore polarization for the parity experiment fixed, but polarization to Halls B and C varied a few percent as the contribution of the North Linac changed. The 2022 Hall A experiments will be more sensitive to this effect than the 2020 run so efforts will be made to mitigate it during beam studies during the upcoming run.

Work has begun to determine the changes needed to increase current capability of CEBAF to allow for desired beam currents to all halls during the MOLLER and SoLID eras. Phase one, which includes an increased available gun voltage, improved Wien filters and injector solenoids, was completed in the 2021 SAD. Phase two, which includes installation of a new booster cryomodule, which has been extensively tested at the UITF during the 2021 SAD, will be completed in the 2023 SAD. The increased current is non-trivial due to the 460 μA maximum current chosen for cryomodule design in 2005, before the 2007 Environmental Assessment concluded that 1 MW each to Halls A and C would not have a significant impact. In concert with the Physics Division, a goal of 730 μA in the North Linac has been defined. This corresponds to a total of 140 μA to Halls A, B and C and 5 μA to D. Currently, a 1000 kW limit applies for CEBAF operation. Work is ongoing with ESH to improve the safety documentation to allow for

up to 900 kW per hall for Halls A and C. The 900 kW per hall limit would remain for Halls A and C to provide a safety margin for the beam dump.

Each end-station has an Accelerator Physicists Experimental Liaison (APEL) that serves to aid the Nuclear Physicists in beam related issues during all phases of an experiment, proposals, commissioning, operating and analysis. The APELs with input from the end-station scientist, injector, and diagnostics have developed a beam parameter table for the 12 GeV era (JLAB-TN-18-022). Experiments requiring more stringent beam parameters should consult the APEL of the end-station in question. What is not in this document is that there are additional constraints that need to be applied during the scheduling process. Most of these constraints derive from the new 4-hall system and are as follows:

- 4-hall operations requires at least one of the original halls (ABC) to receive 5th pass beam.
 - It is strongly preferred that the original halls be A or C. Coupling B-D, while possible, places additional constraint on B & D currents.
 - Any of the original halls receiving 5th pass beam concurrently with Hall-D will receive beam with a 249.5 MHz repetition rate.
 - 499 MHz repetition rate is available when a hall is receiving pass 1-4 beam.
- Hall-D must be at 249.5 MHz repetition rate whenever an original hall is simultaneously receiving 5th pass beam.
- Hall-D can only receive 499 MHz beam when only two of the original halls are receiving beam on the lower passes (1-4).). In this case, only three halls are in operation.
- Work is underway to allow lower frequency sub-harmonics of 499 MHz, albeit not as low as some proposals have requested, to allow time-of-flight measurement due to space charge concerns.

Hall A

The Super Big-bite Spectrometer (SBS) program has started in Hall A. This multi-faceted program includes four measurements of the proton and neutron form factors, a semi-inclusive measurement aimed at transverse momentum distributions within the nucleon, and tagged measurements of pion and kaon structure functions. The plan is to start with elastic scattering measurements of the neutron magnetic and electric elastic form factors G_M^n (Experiment E12-09-019). E12-09-016 (Neutron G_E^n/G_M^n ratio using a polarized ^3He target) and wide-angle charged pion photoproduction (E12-20-008) will follow later in CY2022. G_E^n -RP (Experiment E12-17-004) will take data early CY2023.

Hall B

Five run groups collected data in Hall-B since 2018. The first, Run Group A (RG-A), a collection of 13 individual experiments, took data at 10.6 GeV and 10.2 GeV beam energies at three settings. The RG-A is approved to run for 139 days: so far it used 55 PAC days (40%) and accumulated about 280 mC of beam charge. A short, opportunistic run for RG-K took place in December of 2018 using low energy beams in Hall-B at 7.5 GeV and 6.5 GeV. The RG-K is composed of three individual experiments and is approved for 100 PAC days. The run was 18 calendar days long and accumulated an integrated charge of 50 mC. In spring and fall of 2019 and January 2020, the RG-B took data at three beam energies, 10.6 GeV, 10.2 GeV, and 10.4 GeV. This run group serves 7 individual experiments approved to run for 90 PAC days, all using liquid deuterium as target material. RG-B used 39 PAC days and accumulated 155 mC of beam charge. In between RG-B runs, during summer 2019, RG-I (HPS) took data at 4.4 GeV beam energy utilizing about 31 PAC days of beam time. At the end of the RG-B, a short test run with nuclear targets took place to validate the neutron flux estimates and verify the performance of the CLAS12 CVT. The fifth run to take data in Hall-B was RG-F. At the beginning of February 2020, the BONUS12 tracking detector was installed inside the CLAS12 solenoid magnet. The experiment used 39 PAC days from February 12 to March 24 and 35 PAC days between August 2 to September 21 for a total of 74 PAC days (over 80 PAC days approved). The RG-F collected the full expected beam charge. In Fall 2021 in a second run, RG-I collected data for 27 PAC days at low energy (3.7 GeV).

From November 10 2021 till January 31 2022, RG-M (SRC in nuclei and nuclear for neutrino experiments) will collect data running for 31 PAC days (over 45 assigned).

In CY 2022, starting from June 1st, Hall B expects to perform measurements using a longitudinally polarized target to study the 3D structure of the nucleon for a total of 120 PAC days assigned. The run is expected to end on February 28 2023.

Hall C

In the fall of 2021, the Hall has been running E12-19-006, a study of L-T separated pion electroproduction cross sections and measurement of the pion form factor to high Q^2 . In 2022, the hall expects to perform measurements of short-range pairing mechanisms (E12-17-005), nuclear dependence of F_2 (E12-10-008), inclusive scattering from nuclei at $x > 1$ (E12-06-105) as well as the remaining sets of measurements needed to complete the of longitudinal – transverse pion cross sections and of the charged pion form-factor at large Q^2 experiment (E12-19-006). The deuteron electro-disintegration experiment (E12-10-003) will follow. About a week of beam scheduling contingency is left before the 2023 SAD begins.

Hall D

During the Fall run of 2019 the commissioning of the DIRC detector was completed. In spring 2020 the GlueX-II experiment E12-12-002 (with the DIRC) ran for nearly 11 weeks. The DAQ system has been upgraded and ran reliably at about 80kHz event rate and 1.1 GB/s data rate. In summer-fall 2020 the same experiment continued taking data for 6 weeks (in total the experiment is about 33% complete). During the fall 2020 – summer 2021 shutdown Hall D has done a part of the modifications to the downstream platform needed for the E12-13-008 (pion polarizability) experiment. The schedule for 2021 is to run E12-19-003 till completion (just started), at 10.9 GeV, and E12-10-011 at 10.1 GeV for completion of the LHe target data taking (finished). The current plan for 2022 is to run E12-13-008 to completion, E12-10-011 to completion, and E12-12-002, depending on the total accelerator running time in 2022.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Date	Weekday	(GeV/pass)	Operations Status	Hall A Experiment	Hall A GeV/μA/Pol/MHz	Hall B Experiment	Hall B GeV/nA/Pol/MHz	Hall C Experiment	Hall C GeV/μA/Pol/MHz	Hall D Experiment	Hall D GeV/nA/Pol/MHz	Priority Hall	Pass A/B/C/D	Notes
2															
3															
4	Scheduled for FY2022														
5	Restore days (weeks)		14	2											
6	Science days (weeks)		218	31.1											
7	Total days (weeks)		232	33.1											
8															
9	10/01/21	Friday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	-/2/5/5.5	
10	10/02/21	Saturday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	-/2/5/5.5	
11	10/03/21	Sunday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	-/2/5/5.5	
12	10/04/21	Monday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	-/2/5/5.5	
13	10/05/21	Tuesday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	D/C/B/A	-/2/5/5.5	
14	10/06/21	Wednesday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	D/C/B/A	-/2/5/5.5	
15	10/07/21	Thursday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	D/C/B/A	-/2/5/5.5	
16	10/08/21	Friday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	D/C/B/A	-/2/5/5.5	
17	10/09/21	Saturday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	D/C/B/A	-/2/5/5.5	
18	10/10/21	Sunday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	D/C/B/A	-/2/5/5.5	
19	10/11/21	Monday	1.82	Physics	INSTALL		Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	D/C/B/A	-/2/5/5.5	
20	10/12/21	Tuesday	1.82	Physics	E12-09-019	1.9/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	C/B/A/D	1/2/5/5.5	
21	10/13/21	Wednesday	1.82	Physics	E12-09-019	1.9/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	C/B/A/D	1/2/5/5.5	
22	10/14/21	Thursday	1.82	Physics	E12-09-019	1.9/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	C/B/A/D	1/2/5/5.5	
23	10/15/21	Friday	1.82	Physics	E12-09-019	1.9/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	C/B/A/D	1/2/5/5.5	
24	10/16/21	Saturday	1.82	Physics	E12-09-019	1.9/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	C/B/A/D	1/2/5/5.5	
25	10/17/21	Sunday	1.82	Physics	E12-09-019	1.9/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	C/B/A/D	1/2/5/5.5	
26	10/18/21	Monday	1.82	Physics	PASS CHANGE		PASS CHANGE		E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	C/B/A/D	2/1/5/5.5	
27	10/19/21	Tuesday	1.82	Physics	E12-09-019	3.7/40/-/500	Run Group I	1.9/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	B/A/D/C	2/1/5/5.5	
28	10/20/21	Wednesday	1.82	Physics	E12-09-019	3.7/40/-/500	Run Group I	1.9/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	B/A/D/C	2/1/5/5.5	
29	10/21/21	Thursday	1.82	Physics	E12-09-019	3.7/40/-/500	Run Group I	1.9/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	B/A/D/C	2/1/5/5.5	
30	10/22/21	Friday	1.82	Physics	PASS CHANGE	Reconfigure	PASS CHANGE		E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	B/A/D/C	2/1/5/5.5	
31	10/23/21	Saturday	1.82	Physics	E12-09-019	7.4/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	B/A/D/C	4/2/5/5.5	
32	10/24/21	Sunday	1.82	Physics	E12-09-019	7.4/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	B/A/D/C	4/2/5/5.5	
33	10/25/21	Monday	1.82	Physics	E12-09-019	7.4/40/-/500	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	B/A/D/C	4/2/5/5.5	
34	10/26/21	Tuesday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
35	10/27/21	Wednesday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
36	10/28/21	Thursday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
37	10/29/21	Friday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
38	10/30/21	Saturday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
39	10/31/21	Sunday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
40	11/01/21	Monday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
41	11/02/21	Tuesday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
42	11/03/21	Wednesday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
43	11/04/21	Thursday	1.82	Physics	E12-09-019	Down	Run Group I	3.7/200/-/500	E12-19-006	9.2/70/-/250	E12-10-011	10.1/200/-/250	A/D/C/B	4/2/5/5.5	
44	11/05/21	Friday		Reconfigure			Install Run Group M								
45	11/06/21	Saturday		Reconfigure			Install Run Group M								
46	11/07/21	Sunday		Reconfigure			Install Run Group M								
47	11/08/21	Monday	1.96	Physics	E12-09-019	Down			E12-19-006	6.0/70/-/500	E12-19-003	10.9/440/-/250	C/D/A/B	-/3/5/5.5	
48	11/09/21	Tuesday	1.96	Physics	E12-09-019	Down			E12-19-006	6.0/70/-/500	E12-19-003	10.9/440/-/250	C/D/A/B	-/3/5/5.5	
49	11/10/21	Wednesday	1.96	Physics	E12-09-019	Down	Run Group M	6.0/200/-/500	PASS CHANGE		E12-19-003	10.9/440/-/250	C/D/A/B	-/3/5/5.5	
50	11/11/21	Thursday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	C/D/A/B	4/3/5/5.5	
51	11/12/21	Friday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	B/C/D/A	4/3/5/5.5	
52	11/13/21	Saturday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	B/C/D/A	4/3/5/5.5	
53	11/14/21	Sunday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	B/C/D/A	4/3/5/5.5	
54	11/15/21	Monday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	B/C/D/A	4/3/5/5.5	
55	11/16/21	Tuesday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	A/B/C/D	4/3/5/5.5	
56	11/17/21	Wednesday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	A/B/C/D	4/3/5/5.5	
57	11/18/21	Thursday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	A/B/C/D	4/3/5/5.5	
58	11/19/21	Friday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	A/B/C/D	4/3/5/5.5	
59	11/20/21	Saturday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	D/A/B/C	4/3/5/5.5	
60	11/21/21	Sunday	1.96	Physics	E12-09-019	8.0/40/-/500	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	D/A/B/C	4/3/5/5.5	
61	11/22/21	Monday	1.96	Physics	E12-09-019	SBS-11 config change	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	D/A/B/C	-/3/5/5.5	
62	11/23/21	Tuesday	1.96	Physics	E12-09-019	config change	Run Group M	6.0/200/-/500	E12-19-006	9.9/70/-/250	E12-19-003	10.9/440/-/250	D/A/B/C	-/3/5/5.5	
63	11/24/21	Wednesday	1.96	Physics	E12-09-019	9.9/40/-/250	Run Group M	6.0/200/-/500	PASS CHANGE		E12-19-003	10.9/440/-/250	C/D/A/B	5/3/4/5.5	
64	11/25/21	Thursday	1.96	Physics	E12-09-019	9.9/40/-/250	Run Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500	E12-19-003	10.9/440/-/250	C/D/A/B	5/3/4/5.5	
65	11/26/21	Friday	1.96	Physics	E12-09-019	9.9/40/-/250	Run Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500	E12-19-003	10.9/440/-/250	C/D/A/B	5/3/4/5.5	
66	11/27/21	Saturday	1.96	Physics	E12-09-019	9.9/40/-/250	Run Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500	E12-19-003	10.9/440/-/250	C/D/A/B	5/3/4/5.5	
67	11/28/21	Sunday	1.96	Physics	E12-09-019	9.9/40/-/250	Run Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500	E12-19-003	10.9/440/-/250	B/C/D/A	5/3/4/5.5	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
93	12/24/21	Friday													
94	12/25/21	Saturday													
95	12/26/21	Sunday													
96	12/27/21	Monday													
97	12/28/21	Tuesday													
98	12/29/21	Wednesday													
99	12/30/21	Thursday													
100	12/31/21	Friday													
101	01/01/22	Saturday													
102	01/02/22	Sunday													
103	01/03/22	Monday													
104	01/04/22	Tuesday													
105	01/05/22	Wednesday													
106	01/06/22	Thursday													
107	01/07/22	Friday													
108	01/08/22	Saturday													
109	01/09/22	Sunday													
110	01/10/22	Monday	1.96	Restore											
111	01/11/22	Tuesday	1.96	Restore											
112	01/12/22	Wednesday	1.96	Restore											
113	01/13/22	Thursday	1.96	Restore											
114	01/14/22	Friday	1.96	Restore											
115	01/15/22	Saturday	1.96	Restore											
116	01/16/22	Sunday	1.96	Restore		SBS-9 config change									
117	01/17/22	Monday	1.96	Physics	E12-09-019	4.0/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			C/B/A	2/3/4/-	
118	01/18/22	Tuesday	1.96	Physics	E12-09-019	4.0/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			C/B/A	2/3/4/-	
119	01/19/22	Wednesday	1.96	Physics	E12-09-019	4.0/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			C/B/A	2/3/4/-	
120	01/20/22	Thursday	1.96	Physics	E12-09-019	4.0/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			C/B/A	2/3/4/-	
121	01/21/22	Friday	1.96	Physics	E12-09-019	4.0/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			A/C/B	2/3/4/-	
122	01/22/22	Saturday	1.96	Physics	E12-09-019	4.0/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			A/C/B	2/3/4/-	
123	01/23/22	Sunday	1.96	Physics	E12-09-019	4.0/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			A/C/B	2/3/4/-	
124	01/24/22	Monday	1.96	Physics	E12-09-019	SBS-10 config change	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			A/C/B	-/3/4/-	
125	01/25/22	Tuesday	1.96	Physics	PASS CHANGE		Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			B/A/C	5/3/4/-	
126	01/26/22	Wednesday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			B/A/C	5/3/4/-	
127	01/27/22	Thursday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			B/A/C	5/3/4/-	
128	01/28/22	Friday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			B/A/C	5/3/4/-	
129	01/29/22	Saturday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			C/B/A	5/3/4/-	
130	01/30/22	Sunday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			C/B/A	5/3/4/-	
131	01/31/22	Monday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			C/B/A	5/3/4/-	
132	02/01/22	Tuesday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			C/B/A	5/3/4/-	
133	02/02/22	Wednesday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			A/C/B	5/3/4/-	
134	02/03/22	Thursday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			A/C/B	5/3/4/-	
135	02/04/22	Friday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			A/C/B	5/3/4/-	
136	02/05/22	Saturday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			A/C/B	5/3/4/-	
137	02/06/22	Sunday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			B/A/C	5/3/4/-	
138	02/07/22	Monday	1.96	Physics	E12-09-019	9.9/40/-/500	Run_Group M	6.0/200/-/500	E12-19-006	8.0/70/-/500			B/A/C	5/3/4/-	
139	02/08/22	Tuesday													
140															
141															
142															
143															
144															
145															
146	6/1/2022	Wednesday	2.1	Restore											
147	6/2/2022	Thursday	2.1	Restore											
148	6/3/2022	Friday	2.1	Restore											
149	6/4/2022	Saturday	2.1	Restore											
150	6/5/2022	Sunday	2.1	Restore											
151	6/6/2022	Monday	2.1	Restore											
152	6/7/2022	Tuesday	2.1	Restore											
153	6/8/2022	Wednesday	2.1	Physics	Install		Run_Group C	2.2/200/p/500	E12-17-005	10.6/40/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/1/5/5.5	
154	6/9/2022	Thursday	2.1	Physics	Install		Run_Group C	2.2/200/p/500	E12-17-005	10.6/40/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/1/5/5.5	
155	6/10/2022	Friday	2.1	Physics	Install		Run_Group C	2.2/200/p/500	E12-17-005	10.6/40/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/1/5/5.5	
156	6/11/2022	Saturday	2.1	Physics	Install		Run_Group C	2.2/200/p/500	E12-17-005	10.6/40/-/250	E12-13-008	11.7/60/-/250	C/D/B	-/1/5/5.5	
157	6/12/2022	Sunday	2.1	Physics	Install		PASS CHANGE		E12-17-005	10.6/40/-/250	E12-13-008	11.7/60/-/250	C/D/B	-/5/5/5.5	
158	6/13/2022	Monday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-17-005	10.6/40/-/250	E12-13-008	11.7/60/-/250	C/D/B	-/5/5/5.5	
159	6/14/2022	Tuesday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-17-005	10.6/40/-/250	E12-13-008	11.7/60/-/250	D/B/C	-/5/5/5.5	
160	6/15/2022	Wednesday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-17-005	10.6/40/-/250	E12-13-008	11.7/60/-/250	D/B/C	-/5/5/5.5	
161	6/16/2022	Thursday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	D/B/C	-/5/5/5.5	
162	6/17/2022	Friday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
163	6/18/2022	Saturday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
164	6/19/2022	Sunday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
165	6/20/2022	Monday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
166	6/21/2022	Tuesday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
167	6/22/2022	Wednesday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	C/D/B	-/5/5/5.5	
168	6/23/2022	Thursday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	C/D/B	-/5/5/5.5	
169	6/24/2022	Friday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	C/D/B	-/5/5/5.5	
170	6/25/2022	Saturday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	C/D/B	-/5/5/5.5	
171	6/26/2022	Sunday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	C/D/B	-/5/5/5.5	
172	6/27/2022	Monday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	D/B/C	-/5/5/5.5	
173	6/28/2022	Tuesday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	D/B/C	-/5/5/5.5	
174	6/29/2022	Wednesday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	D/B/C	-/5/5/5.5	
175	6/30/2022	Thursday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	D/B/C	-/5/5/5.5	
176	7/1/2022	Friday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	D/B/C	-/5/5/5.5	
177	7/2/2022	Saturday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
178	7/3/2022	Sunday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
179	7/4/2022	Monday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
180	7/5/2022	Tuesday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
181	7/6/2022	Wednesday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
182	7/7/2022	Thursday	2.1	Physics	Install		Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	B/C/D	-/5/5/5.5	
183	7/8/2022	Friday	2.1	Physics	E12-09-016	4.3/30/p/500	Run_Group C/FT ON	10.6/200/p/250	E12-10-008	10.6/60/-/250	E12-13-008	11.7/60/-/250	A/C/D/B	2/5/5/5.5	
184	7/9/2022	Saturday	2.1	Physics	E12-09-016	4.3/30/p/500	Run_Group C/FT ON	10.6/200/p/250	E12-10-						

