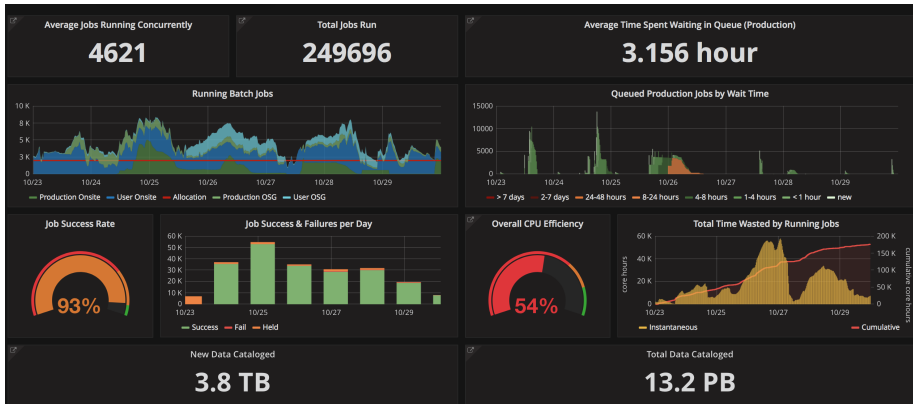# NOvA Experiment Report

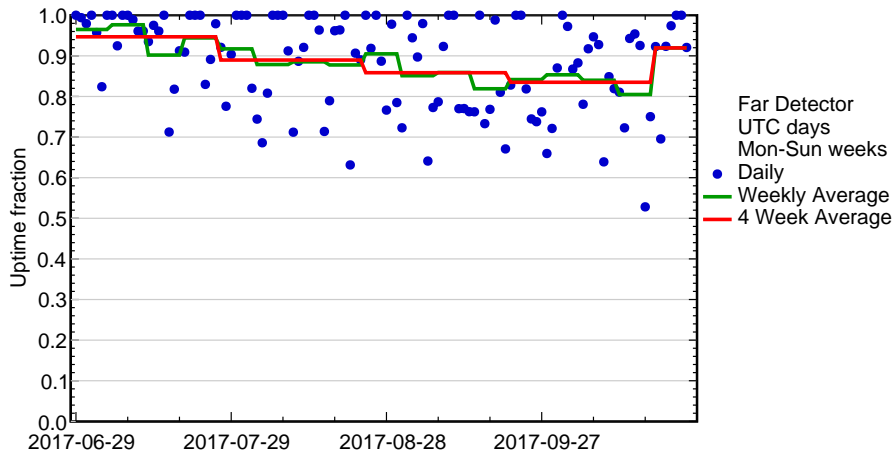Michael Baird

University of Virginia

October 30, 2017

- huge push by analysis groups due to collaboration meeting
- many non-production jobs were submitted where some of the normal procedures were missed – low efficiency as some users didnt ensure files were cached
- Production group is finishing systematic samples for this round of analyses, before Neutrino 2018 conference campaign begins in two weeks

Shutdown Summary

NOvA Beam Shutdown 2017

Shutdown Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	10-Jul	17-Jul	24-Ju	31-Ju	7-Au	14-Au	21-Au	28-Au	4-Sep	11-Se	18-Se	25-Se	2-Oct	9-Oct	16-O	23-O	30-O

	Task
12	Overtemp Loadshed Tests
	DAQ Upgrades
15	DAQ Dashboard Devel.
16	DAQ Dashboard Deployment
17	DAQ Dashboard Documentation
18	Spill server apps heartbeat
19	Convert DAQ/DDT CVS to SVN
20	Absorb daq/ddt ups products in DDT/offline SRT
21	DAQ/Trigger Releases R10-Final
22	DAQ/Trigger Releases R11
23	DAQ/Trigger Releases R12-Beta
24	DAQ/Trigger Releases R12 (Production)
25	Database flattening
26	Expert Desktop Setup
27	Audit novadaq/novadcs users
28	Kernel Updates
29	Multi-partion test R10/R11
30	Multi-partion test R11+
31	Training
32	DSO Scan roll out
33	Ganglia Upgrade
34	Trigger Validation Framework Integration
35	Rewrite daq to switch to internal timing
36	Supernova trigger testing
37	Buffer node replacement (Phase 1)
38	Buffer node replacement (Phase 2)
39	Buffer node replacement (Phase 3)
40	DAQ/DCS Server maintenance
41	Automated Health Checks
42	DAQ On-Call Expert Documentation
43	Deploy Supernova trigger
44	VNC Alignment
45	DCM Timing Offset
46	Stability Testing
47	Puppet Refactoring
48	Gateway Authentication
49	Loadshed Software Dev/Test/Deploy (System Wide)
50	Loadshed Software Dev/Test/Deploy (Single Server)
51	Trigger Framework Upgrades (TFileService)
52	Kill Partition (Multi-Partition)

Shutdown Uptime

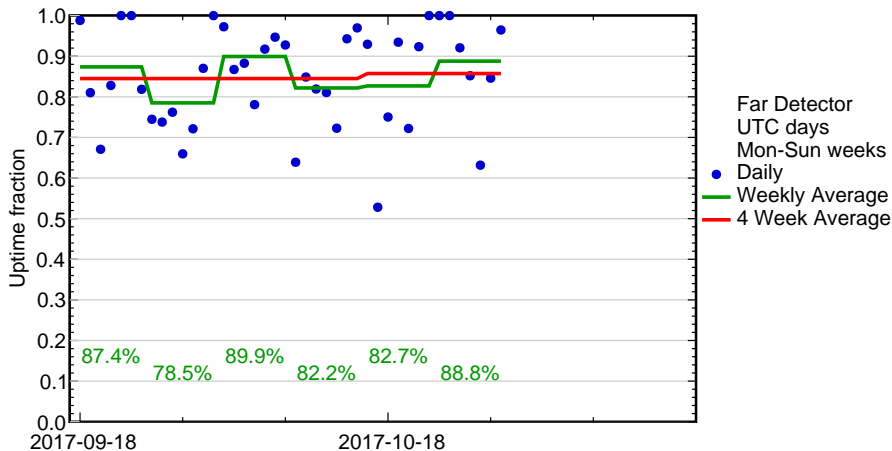

Average uptime since July 10: 87.7%

Final Shutdown Work

- last test of script to shut down computing cluster in case of a high temperature event to happen this week
- continued DAQ stability testing after addition of 72 buffer nodes to replace those lost in the sprinkler incident in November
- final software release has been cut and ready to go for beam
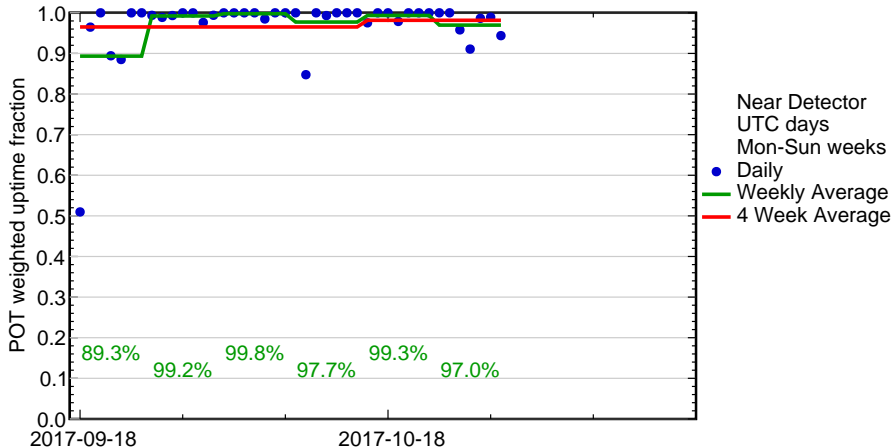
DAQ Status and Uptime: FarDet
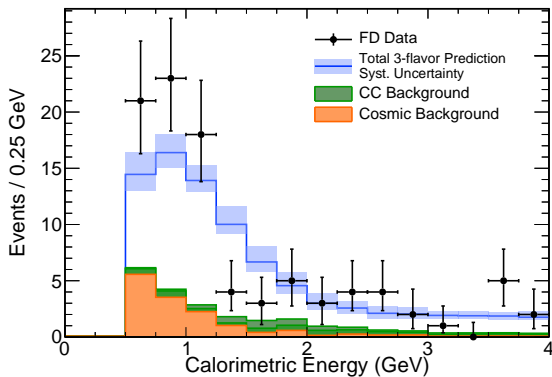

Four Week Average: 85.9%

Far Detector
UTC days
Mon-Sun weeks
● Daily
— Weekly Average
— 4 Week Average

Power glitch at Far Detector which caused master database machine to go down, led to 11 hours downtime.

Four Week Average: 98.45%

	θ_{24}	θ_{34}	$|U_{\mu4}|^2$	$|U_{\tau4}|^2$
NOvA	20.8°	31.2°	0.126	0.268
MINOS	7.3°	26.6°	0.016	0.20
SuperK	11.7°	25.1°	0.041	0.18
IceCube	4.1°	-	0.005	-
IceCube-DeepCore	19.4°	22.8°	0.11	0.15

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