



Project Financial and Schedule Status and Summary

Greg Bock
NOvA PMG
19 February 2013

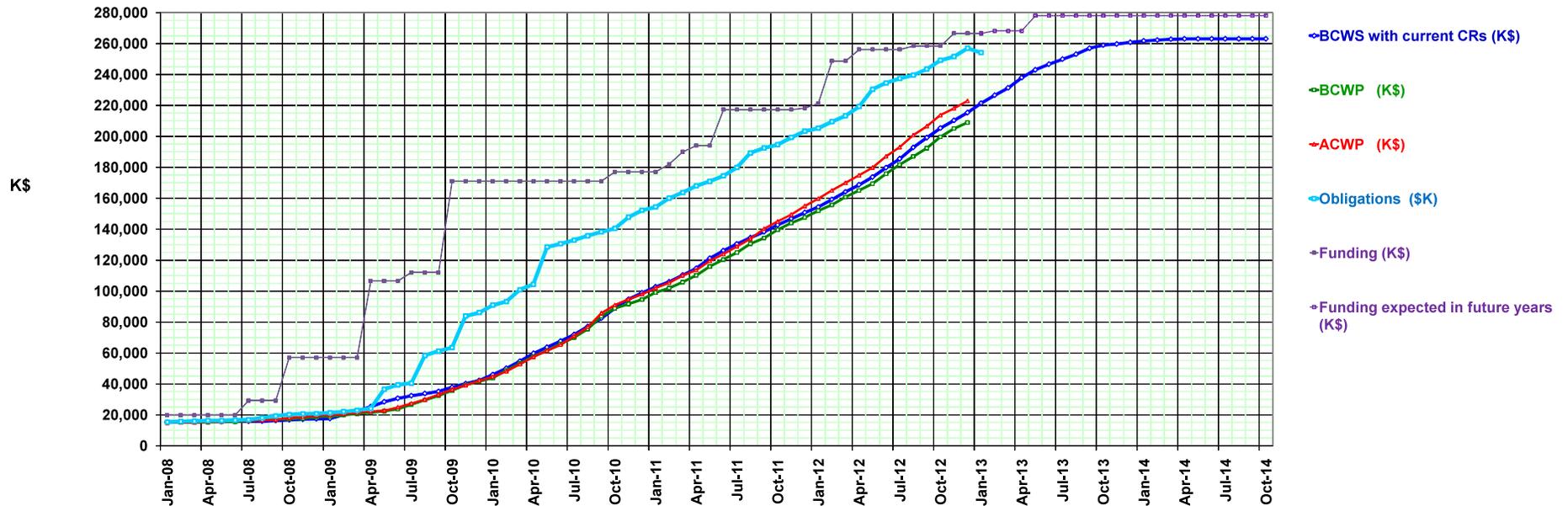


- NO JANUARY NUMBERS UNTIL THURSDAY
- Summary of Completed Contingency Actions
- FNAL Workforce Matrixing
- ETC Committee actions
- Risks
- Readiness for Operations
- Summary



EVMS Reporting Overview

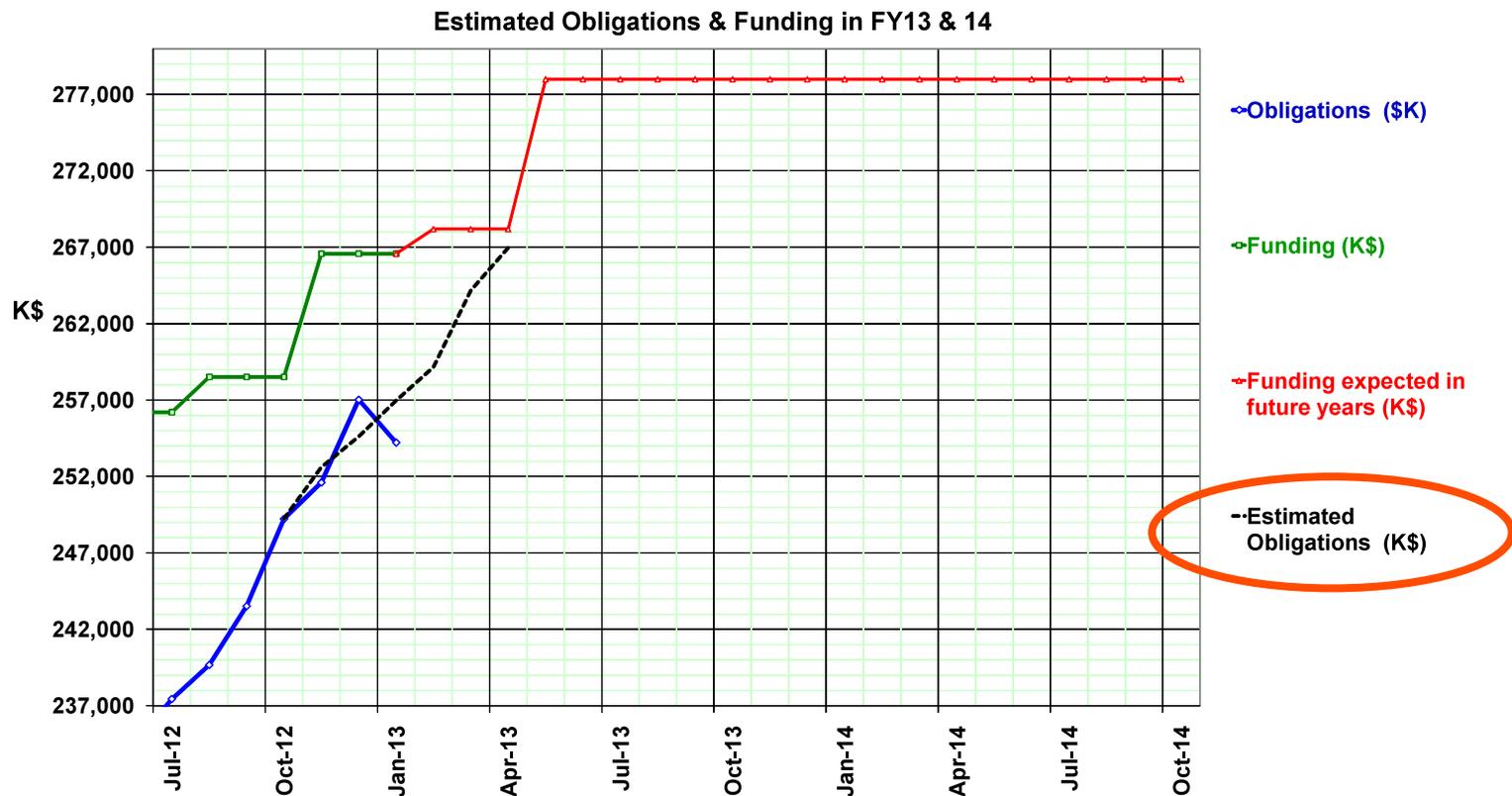
- Basic data in BCWS, BCWP, ACWP, **Funding & Obligations** through **Dec 2012**
 - BCWS = Budgeted cost of work Scheduled
 - BCWP = Budgeted cost of work Performed
 - ACWP = Actual cost of work Performed





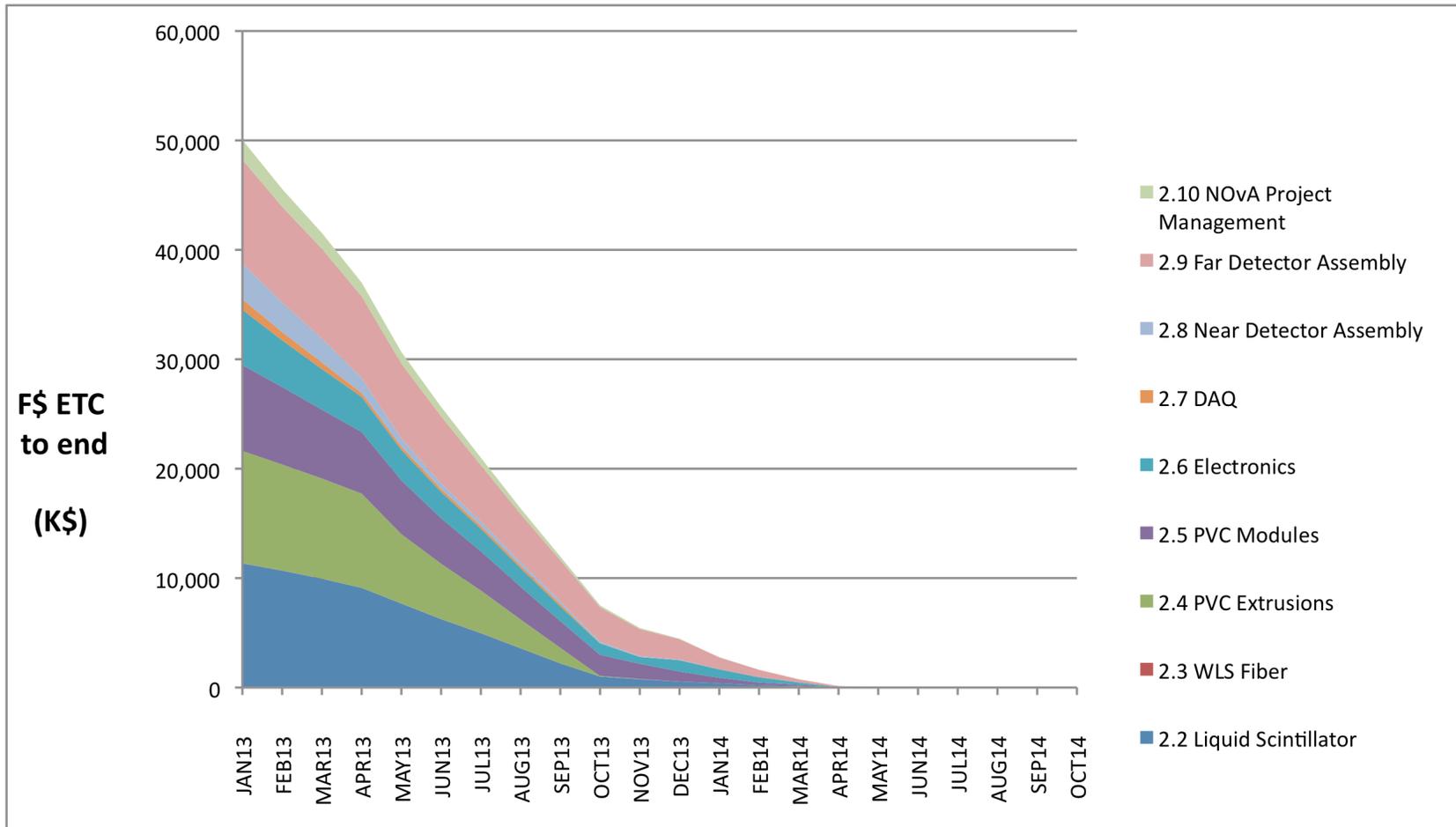
Funding Profile

- 5/12 FY13 funding to date, expect relief in March
- Extrapolation of obligations (*estimated, not exact*) looked tight at April 1
- Already cutting back on Minnesota P.O.s to under 50% of FY13 need
 - Minneapolis Factory and Ash River Assembly
 - They will need “instant” infusion in April to continue, but funds appear in May?





ETC profile for Detector





January 31 Summary of Contingency Actions

	Contingency Draws	Actions Generating Contingency	Net Contingency from CR & ETC	BCWP-ACWP to right = CV for month
Sept status @ Nov mini-Review	-	-	6,913.0	-
October	(591.8)	227.1	6,548.3	141.0
November	(3,712.7)	219.6	2,981.9	1,012.0
December	(527.8)	0.0	3,106.2	(972.0)
January	(1,400.5)	4,890.4	5,700.0	?
Sum:	(6,232.8)	5,337.1	5,700.0	

We don't have January 31 BCWP and ACWP yet. We expect them later this week

CV's vary month to month.

We executed the actions we planned for this month!



NOVA – ETC committee

(P. Mantsch, T.J. Sarlina, H. Brown, H. Ferguson)

Objectives:

- Update the BOEs for each of the level 2 tasks.
- Follow up findings and recommendations of the *Internal Nova Assessment Committee* of DEC 2012.
- Examine remaining risks with L2 managers and update the risk register as needed.
- Update the projected ETC monthly

Status:

- Second round of BOE and Risk meetings with L2s (L3s as needed) completed 15 February.
- Most BOE's have been updated and CRs completed and included in the January report.
- Risks have been reevaluated and updated including those from the McCluskey report.
- A new projected ETC has been prepared.



BOE Update Process

Status 16 January 2013

Count of Status- 1/16/13		
Cnt %	Row Labels	Total
67%	a) Tasks are complete, no change necessary	304
10%	b) Not changed, tasks will complete by end of CY13, and ETC forecast keeps track of anticipated contingency use	44
18%	c) Reviewed, no changes required	81
3%	d) Updated, CR completed	14
0%	d) Updated, Needs CR	1
2%	e) New activity, new BOE, CR completed	9
Grand Total		453

Monthly updates for each L2 system ongoing

Status 13 February 2013

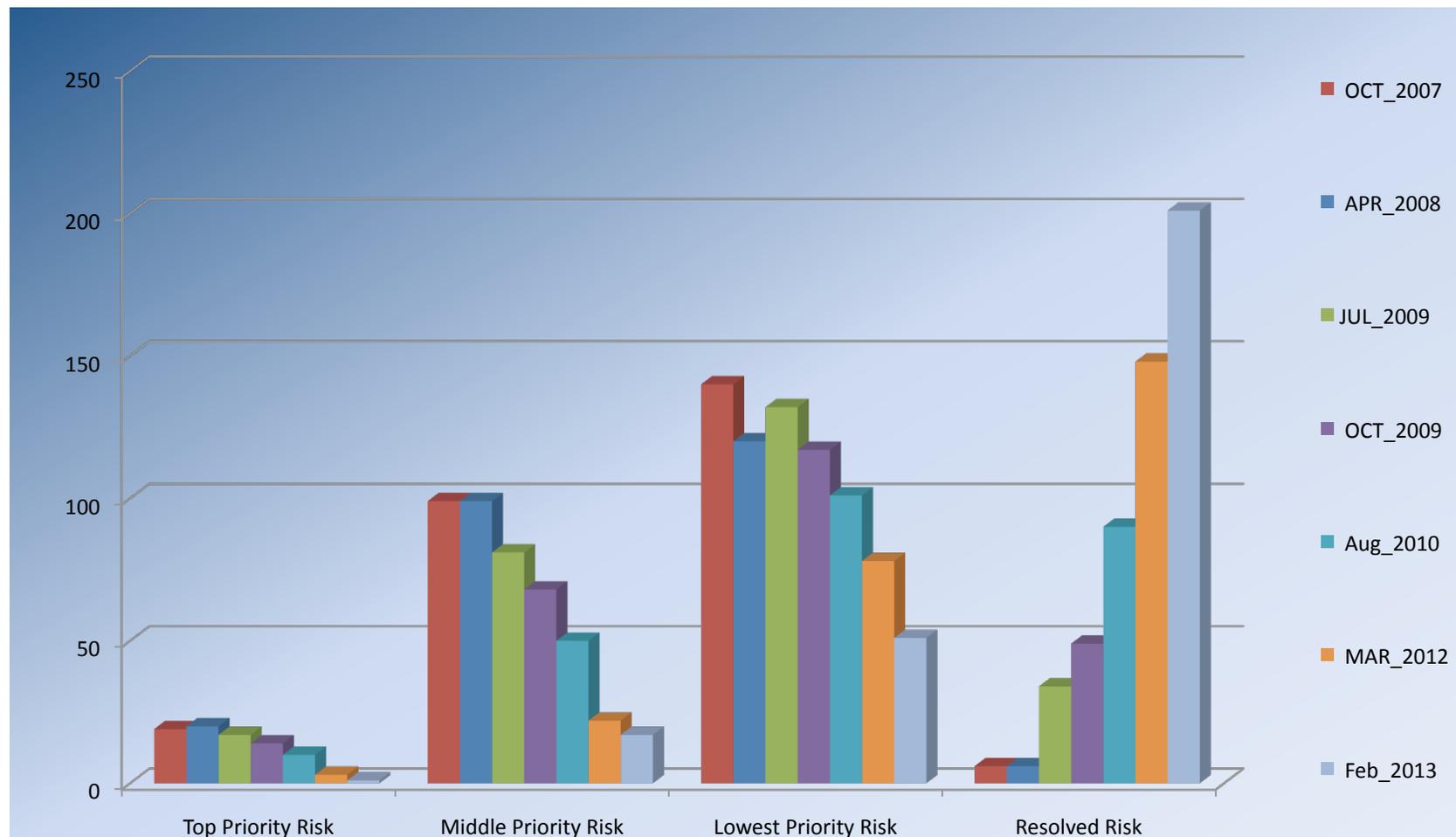
Count of Status- 2/13/13		
Cnt %	Row Labels	Total
76%	a) Tasks are complete, no change necessary	350
2%	b) Not changed, tasks will complete by end of shutdown	11
11%	c) Reviewed, no changes required	49
6%	d) Updated, CR completed	26
1%	d) Updated, CR needed, in Dec ETC update	5
2%	e) New activity, new BOE, CR completed	10
1%	k) New activity, BOE completed and CR in progress	3
1%	l) Reviewed, need more info, check status next month	4
Grand Total		458

Number of newly discovered activities and corresponding cost increase seem to be decreasing as one would expect



List of NOvA risks by priority over time

The ~ 270 NOvA Risks have a “score” assigned to each risk by WelcomRisk
All risks identified by McCluskey Committee and added by ETC Committee
work are rolled into this. Assessments underway.





Status of Recommendations from the McCluskey Committee

	<u>Recommendation (drawn from December Report)</u>	<u>Planned Action</u>	<u>Status</u>	<u>Responsibility</u>	<u>Estimated Completion</u>
1	Perform a bottoms-up re-estimate of all work to go. This should be complete by January for use in conjunction with December monthly reporting.	L2 Managers will review and update as needed the BOE's for work to go.	Second round completed Feb 15, ongoing monthly now.	Cooper/Mantsch/Brown/Sarlina	2/15/2013 round 2 completed, ongoing monthly
2	The project incorporate the 'identified contingency draws' that come out of the re-estimate into the base budget.	Following above re-estimates incorporate into the base EAC	Planned for completion in February	Cooper	2/15/2013 round 2 completed, ongoing monthly
3	The project should maintain the ETC with a transparent assessment each month by L2 managers of any work that is not in their budget and to communicate this to the Project Office for inclusion in the monthly reports. This should start with December monthly report, expected out in January.	Discuss with each L2 Manager monthly any needs in the ETC beyond the budget, and prepare the documentation for review and approval.	In progress,	Cooper/Mantsch	monthly until end of project
4	Discontinue managing contingency activity by activity on a percentage basis. Confirm with managers that they need to manage to their base budget.	This change has been implemented and is being repemphasized to the staff.	Complete. Done verbally in December and by email to all L2s.	Cooper	16-Jan-13
5	The project, with stakeholders as appropriate, validate the list of risks and their cost values identified in this review, update as necessary. Maintain this list by reviewing it monthly with the project team. Use it to manage contingency to go on the project.	Project management staff together with an outside senior manager from the Laboratory will interview L2 managers monthly	First cycle completed. Continuing process underway .	Mantsch	Reviews started January and continue monthly
6	The project and Fermilab management assess the list of opportunities to see if work should be recategorized, scope reduced, or performed by the NOVA science collaboration.	Assess the feasibility of items in the list and include time triggers for all items that might be implemented.	In progress, monthly reports to POG underway. First major actions completed.	Cooper/Lindgren/Bock	18-Feb-13
7	The project work with the Federal Project Director, OPA, and Fermilab PSS to see how variance thresholds can be utilized to be more reflective of current performance and not driven by past performance either for a short term or for the rest of the project duration.	Work with the project controls staff, the Fermilab Office of Project Management, and DOE to see whether changes in the reporting process could improve information flow.	Appears to be unhelpful due to the amount of work by project controls	Hoffer/Carolan/Webster	18-Jan-13
8	Fermilab management consider providing outside senior management support to the Project Manager to review the monthly ETC and risk updating prior to inclusion in the monthly report.	Provide outside oversight to work with project team to review ETC and risks on a monthly basis. A second senior manager will continue to assess technical risks.	Complete: Added Mantsch and ALD Bock	Directorate	9-Jan-13
9	Fermilab management assess in February (after January monthly reporting) if these actions are improving timely communication of cost status as well as understanding of contingency on remaining work.	Provide an assessment of the effectiveness of these corrective actions and the state of the project.	Report to Fermilab POG and DC Mini review team	Bock	28-Feb-13



Status of Recommendations

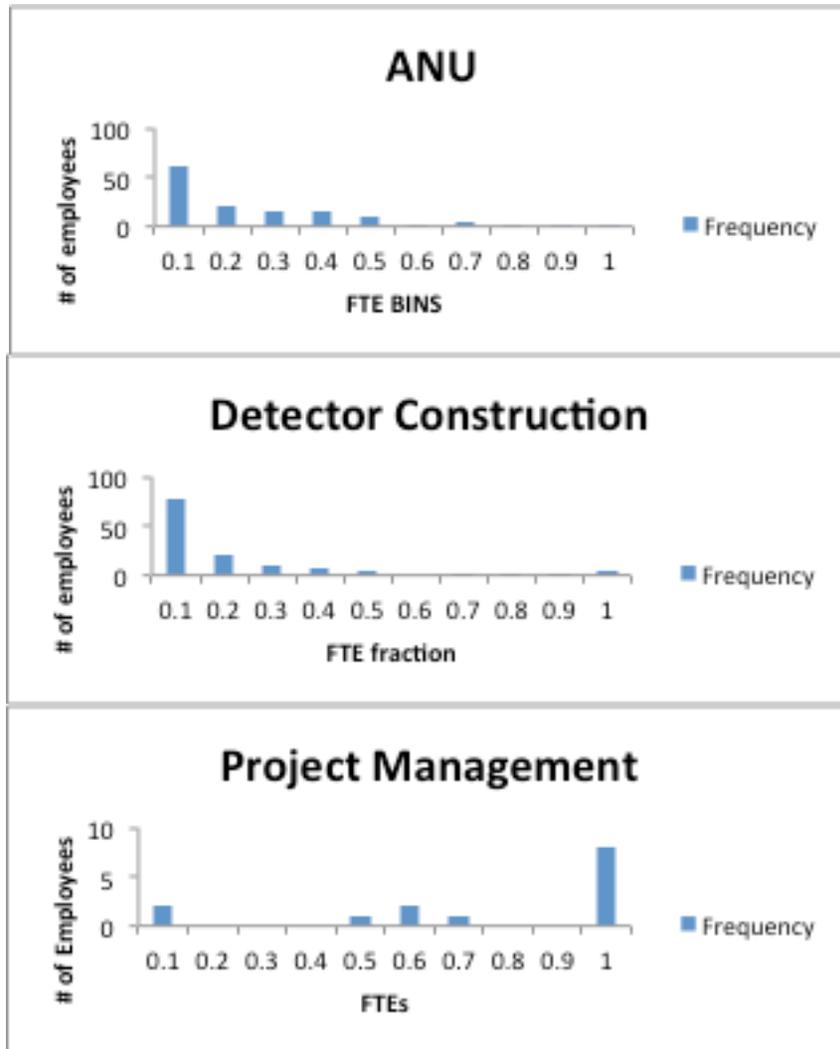
20 Nov 2012 Mini-Review

from

- Present the results of the internal review committee concerning contingency
 - **COMPLETED December 14, 2012.**
- Present a plan “to get to CD-4” to HEP by December 14,2012.
 - **COMPLETED December 14, 2012.**
- Schedule a mini-review in February, 2013.
 - Scheduled for February 27, 2013.
 - We are in contact with the committee and have posted draft materials for their review and comment



NOvA FNAL Effort Matrix



A first look at the period from Jan 2012 to Jan 2013

This will be useful for the LBNE and Mu2E teams as they complete the lessons learned exercise underway

Note that this is only Fermilab labor, and does not include the bulk of the detector construction activities which involve hundreds of people.



Summary from the Recent Experiment Operations Readiness Review

- Construction and outfitting are proceeding well. Expect to have 3 kt of far detector reading out on May 31st
- APD test stand has a 98% success rate and indicates that APD installation at far detector will keep pace with the schedule.
- Critical path is a tie between filling rate / APD delivery rate to Ash River.
- All tools we need for commissioning exist
- Shifts begin 9hrs/day, 5days/wk on March 11th, 24/7 on June 1st.
- Early beam delivery is likely limiting factor to satisfying key commissioning performance parameter
- All pieces needed for ν_{μ} and ν_e data analysis are in place and have been tested on mock data and on **real data** from prototype detector
 - Near detector schedule is likely critical path for first analysis results by Neutrino 2014
 - Looking for ways to advance this schedule

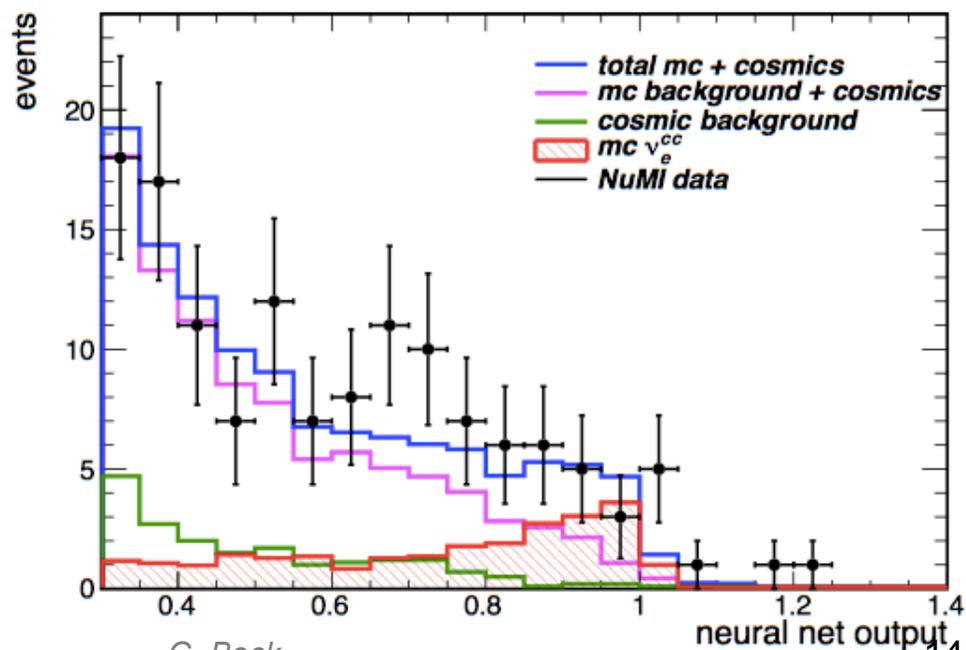
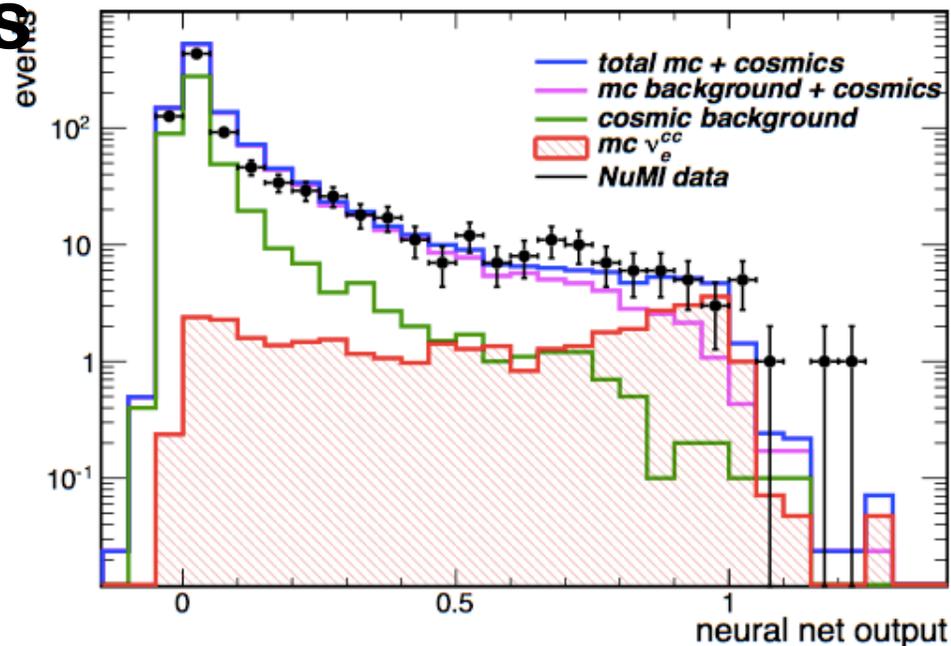
(NOvA in good shape according to the committee's draft report—'remain vigilant')

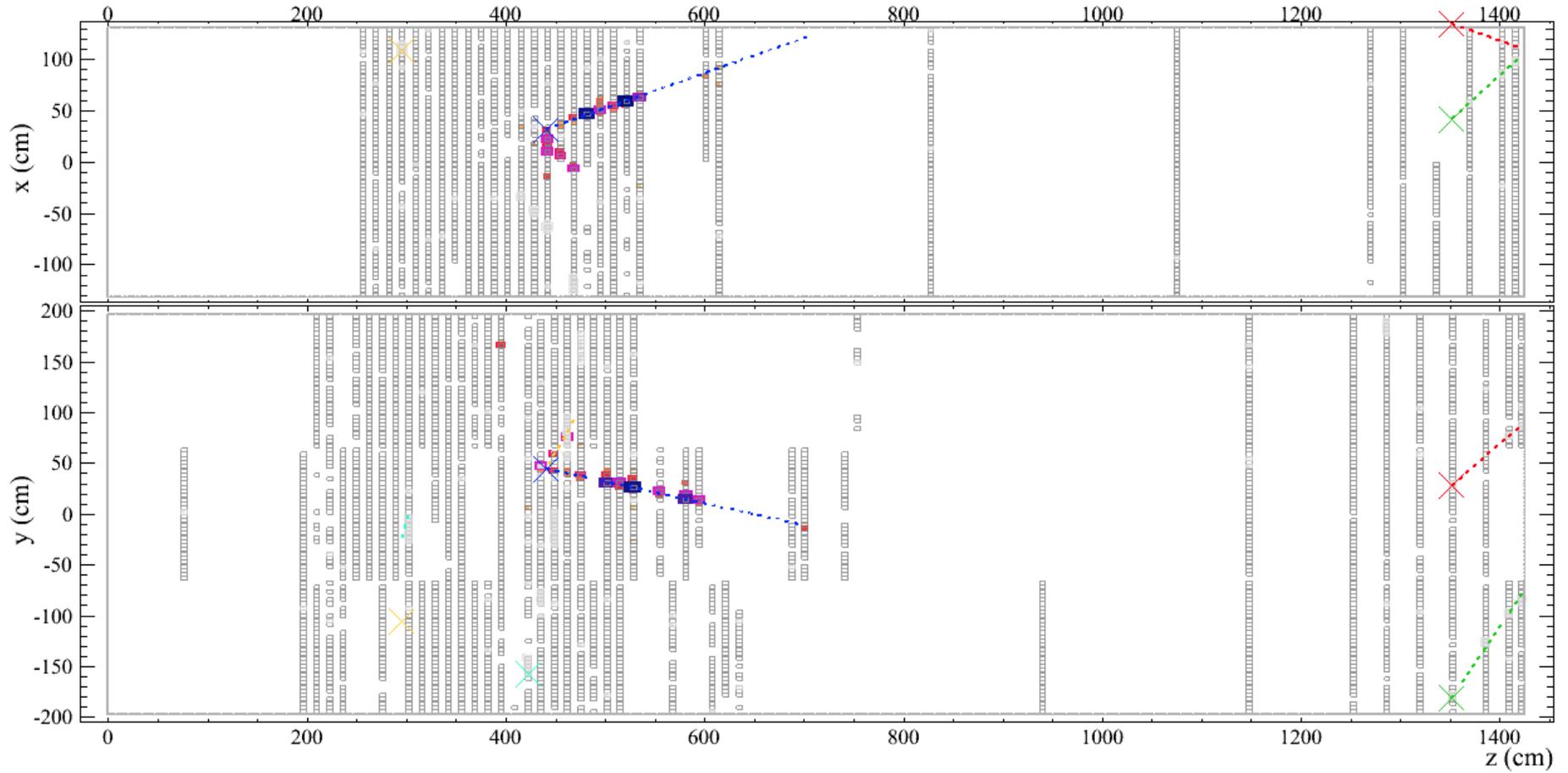


Electron neutrinos in NDOS

(FROM NOvA Collaboration
presentation at review)

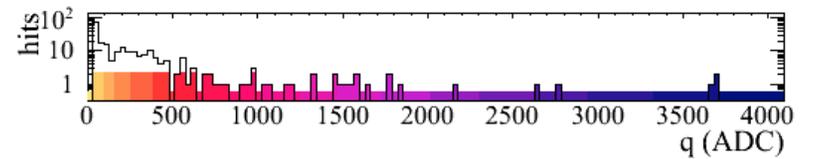
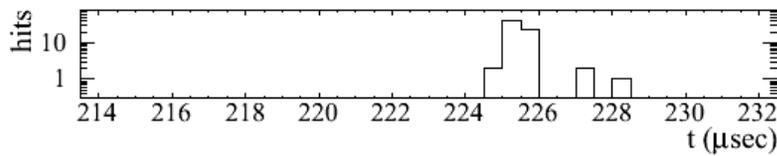
- In addition to the MDC we ran the analysis chain on the NuMI data recorded at NDOS
- Ran it “as is”. Situation at NDOS is much harder than far detector will be
 - Sparsely instrumented
 - No overburden
 - Large surface area / volume ratio
 - Lower energy neutrino spectrum
- Measured the electron neutrino component of the beam (data pulls away from magenta histogram):





NOvA - FNAL E929

Run: 13730 / 19
 Event: 894563 / NuMI
 UTC Sat Apr 7, 2012
 12:48:48.201899376



ν_e charged-current quasi-elastic event at NDOS



Summary comments

- Project is in very good technical shape (Cosmic rays in March and Fermilab neutrinos in June, risks retiring), and improved financial shape. (details later this week)
 - We have an approved adjustment to the ND cavern beneficial occupancy milestone
 - Recommendations from reviews are completed and new processes in place
 - Work at Ash River continues to go well.
 - We will be ready for the DOE review next week
 - ANU work going well and finishing up in May.
 - Attention turning to transition to Operations: Cosmic rays in March?
Fermilab Neutrinos in June.
- Risks that are uppermost in our minds now:
 - Someone gets hurt or something gets broken
 - Our tracking of costs is misleading, i.e.late or missing accruals, etc
 - Funding arrives too late
 - We do not manage an efficient project closeout as we complete tasks