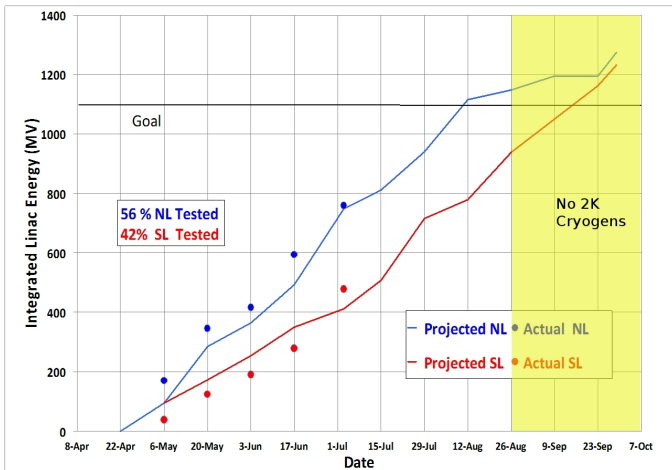


SRF Chart Shown at the July S&T Visit

as of: 2013-07-09 Tue



Busted Play



APF
OPS

LSD Directors Briefing

August 22, 2013

1 / 9



- SRF End Game meeting on 2013-Aug-01
 - ▶ Cryo schedule
 - ▶ SRF Commissioning
 - ▶ Circulators
 - ▶ C50-11
 - ▶ R100

Proposed Path:

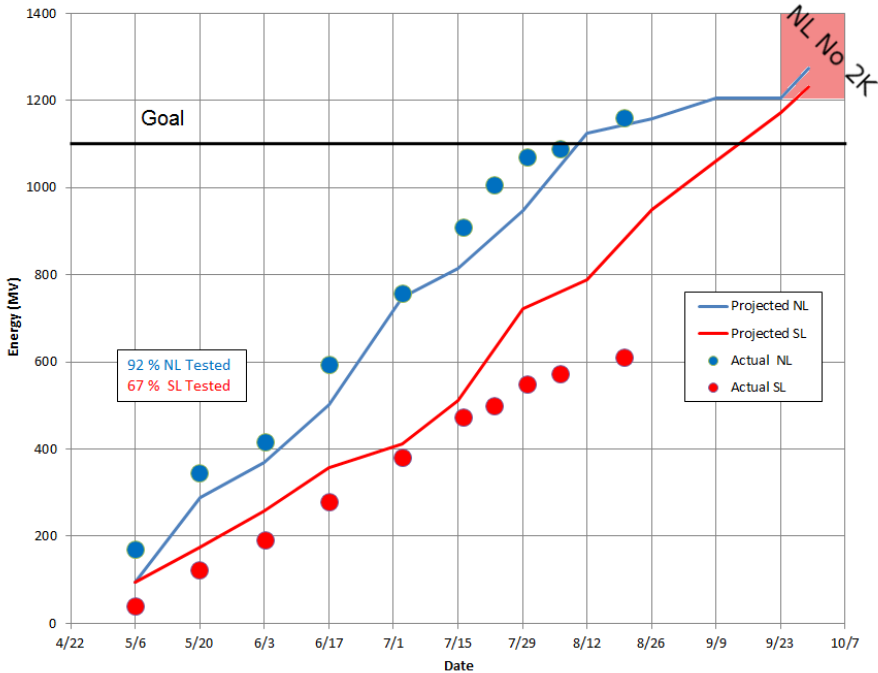
Retains Nov/Dev 2013 beam operations

- Shift start of 2K cold box commissioning effort from Aug-26 to Sep-30.
- Shift start of beam operations from Nov-04 to Nov-09.
- Shift **HCO** start to **Sep-28** (was Sep-16).
- One Linac (South) will remain cold at 2K during the cold box commissioning effort.
- Run over Thanksgiving, adds 5 days to the beam schedule.
- Try to collect LEM Fault data before Sep-30(Nov-4) if SRF commissioning finishes before that date in North(South). If needed move LEM Fault collection data to 2014-Jan. Will make the LEM gradient setup a bit trickier than we'd like.
- Defer R100 commissioning to 2014-Jan. Coast through R100, inject beam at 35MeV during the Nov/Dec run.



WBS	Name	Start	End	Duration	Completion	Timeline																											
						Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013	Nov 2013																				
3	Long Shutdown/Upgrade	Tue 2013-01-01	Mon 2013-11-11	44.9	46%	[Gantt bar from Jan to Nov 2013]																											
3.2	Linac Tasks	Thu 2013-04-11	Mon 2013-11-04	29.6	34%	[Gantt bar from Apr to Nov 2013]																											
3.2.1	North Linac	Thu 2013-04-11	Mon 2013-09-30	24.6	67%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.1	C20/C50 recomissioning NL	Thu 2013-04-11	Mon 2013-09-23	23.6	91%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.1.1	C20/C50 Cavities at 2K	Thu 2013-04-11	Mon 2013-09-23	23.6	95%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.1.2	C20/C50 EMAX Determined	Thu 2013-04-11	Mon 2013-09-23	23.6	90%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.1.3	C20/C50 Q0 vs E Measured	Thu 2013-04-11	Mon 2013-09-23	23.6	89%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.2	C100 Cryomodule	Thu 2013-04-11	Mon 2013-09-23	23.6	80%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.2.1	C100 Cavities at 2K	Thu 2013-04-11	Mon 2013-09-23	23.6	100%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.2.2	Circulator Status	Thu 2013-04-11	Mon 2013-09-23	23.6	60%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.2.3	C100 EMAX Determined	Thu 2013-04-11	Mon 2013-09-23	23.6	82%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.2.4	C100 Q0 vs E Measured	Thu 2013-04-11	Mon 2013-09-23	23.6	80%	[Gantt bar from Apr to Sep 2013]																											
3.2.1.3	R100 Cryomodule	Sun 2013-06-30	Mon 2013-09-30	13.0	28%	[Gantt bar from Jun to Sep 2013]																											
3.2.1.3.1	Controls and Power Upgra...	Sun 2013-06-30	Mon 2013-09-30	13.0	57%	[Gantt bar from Jun to Sep 2013]																											
3.2.1.3.2	R100 Cavities at 2K	Thu 2013-08-22	Fri 2013-08-23	0.1	0%	[Gantt bar from Aug 2013]																											
3.2.2	South Linac	Thu 2013-04-11	Mon 2013-11-04	29.6	37%	[Gantt bar from Apr to Nov 2013]																											
3.2.2.1	C20/C50 recomissioning SL	Thu 2013-04-11	Mon 2013-10-21	27.6	83%	[Gantt bar from Apr to Oct 2013]																											
3.2.2.1.1	C20/C50 Cavities at 2K	Thu 2013-04-11	Mon 2013-10-21	27.6	90%	[Gantt bar from Apr to Oct 2013]																											
3.2.2.1.2	C20/C50 EMAX Determined	Thu 2013-04-11	Mon 2013-10-21	27.6	80%	[Gantt bar from Apr to Oct 2013]																											
3.2.2.1.3	C20/C50 Q0 vs E Measured	Thu 2013-04-11	Mon 2013-10-21	27.6	80%	[Gantt bar from Apr to Oct 2013]																											
3.2.2.2	C100 Cryomodule	Thu 2013-04-11	Mon 2013-11-04	29.6	30%	[Gantt bar from Apr to Nov 2013]																											
3.2.2.2.1	C100 Cavities at 2K	Thu 2013-04-11	Mon 2013-11-04	29.6	100%	[Gantt bar from Apr to Nov 2013]																											
3.2.2.2.2	Circulator Status	Thu 2013-04-11	Mon 2013-11-04	29.6	20%	[Gantt bar from Apr to Nov 2013]																											
3.2.2.2.3	C100 EMAX Determined	Thu 2013-04-11	Mon 2013-11-04	29.6	0%	[Gantt bar from Apr to Nov 2013]																											
3.2.2.2.4	C100 Q0 vs E Measured	Thu 2013-04-11	Mon 2013-11-04	29.6	0%	[Gantt bar from Apr to Nov 2013]																											
3.2.2.3	C50-11 Cryomodule	Mon 2013-09-09	Mon 2013-10-07	4.0	0%	[Gantt bar from Sep to Oct 2013]																											
3.2.2.3.1	Installation	Mon 2013-09-09	Mon 2013-09-23	2.0	0%	[Gantt bar from Sep 2013]																											
3.2.2.3.2	Commissioning	Mon 2013-09-23	Mon 2013-10-07	2.0	0%	[Gantt bar from Sep to Oct 2013]																											
3.2.3	Helium Processing	Mon 2013-10-07	Mon 2013-10-21	2.0	0%	[Gantt bar from Oct 2013]																											
3.1	Cryogenic Tasks	Mon 2013-01-21	Mon 2013-11-11	42.0	55%	[Gantt bar from Jan to Nov 2013]																											
3.1.5	Break CEBAF Cryo into two ...	Mon 2013-09-23	Mon 2013-09-30	1.0	0%	[Gantt bar from Sep 2013]																											
3.1.6	2K Cold Box Commissioning	Mon 2013-09-30	Mon 2013-11-04	5.0	0%	[Gantt bar from Sep to Nov 2013]																											
3.1.7	Stabilize Linacs to 2K for...	Mon 2013-11-04	Mon 2013-11-11	1.0	0%	[Gantt bar from Nov 2013]																											
4	Hot Check Out	Sat 2013-07-27	Sat 2013-11-09	15.0	0%	[Gantt bar from Jul to Nov 2013]																											
4.2	Hot Check Out (All Systems)	Sat 2013-09-28	Sat 2013-11-09	6.0	0%	[Gantt bar from Sep to Nov 2013]																											
4.3	LEM Data Collection	Mon 2013-10-21	Mon 2013-11-04	2.0	0%	[Gantt bar from Oct 2013]																											
4.3.1	South Linac	Mon 2013-10-21	Mon 2013-11-04	2.0	0%	[Gantt bar from Oct 2013]																											
5	PSS Certification 2013-II	Mon 2013-09-09	Wed 2013-09-18	1.2	0%	[Gantt bar from Sep 2013]																											
5.1	PSS pre-checks	Mon 2013-09-09	Wed 2013-09-11	0.2	0%	[Gantt bar from Sep 2013]																											
5.2	PSS Certification	Fri 2013-09-13	Wed 2013-09-18	0.6	0%	[Gantt bar from Sep 2013]																											
8	12GeV CEBAF Commissioning	Sat 2013-11-09	Fri 2015-05-22	79.9	0%	[Gantt bar from Nov 2013 to May 2015]																											
8.1	Accelerator Period I: 2.2GeV...	Sat 2013-11-09	Fri 2013-12-20	5.9	0%	[Gantt bar from Nov 2013]																											
8.1.1	Recover: Beam up to 5MeV	Sat 2013-11-09	Sat 2013-11-16	1.0	0%	[Gantt bar from Nov 2013]																											

Commissioning Progress and Projected Results



A Slide on Circulators

Need 80 circulators for the 80 C100 cavities.

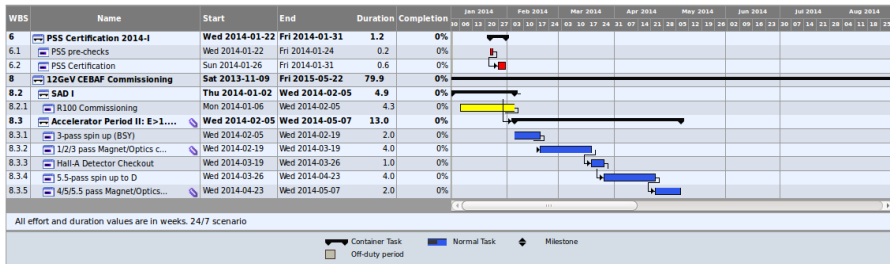
- four zones (3 north, 1 south) have circulators installed: 32
- have 5 good circulators ready to install
- have 43 circulators that need to be tuned.
- Sums to 80 (no spares?)

Circulator Tuning:

- Vendor representative on-site to perform work
- Hopefully 6 to 8 circulators tuned per day.
- Could be done with tuning by end of next week
- Testing and installation will be another one to two weeks.

Expected date for 100% C100s with circulators: Sept. 12. About 6 weeks of remaining 2K cryogens in the South Linac to recommission the 4 C100 zones (previously commissioned).

Looking Ahead to Acc-II



Strains and Stresses

Shift in the start of HCO from Sep-16 to Sep-28, provides a little more time to complete work. All groups benefit:

- Installation
- Alignment
- Software, completing HCO tool (which needs a complete CED) one of the more strained efforts
- HCO checklists in preparation for HCO

Cryo schedule/changes:

- South Linac remains cold, more time to work SRF in the South Linac.
- North Linac stays at 2K longer, allowing completion of the SRF commissioning in the North.
- Better alignment for the Cryogenic resources

More strain on the 2014 Winter SAD by deferring the R100 commissioning.

