

Studies	2 <sup>nd</sup> level	3 <sup>rd</sup> level	Owner	Total hours	Weeks															
					Jan 25th	Feb 8 <sup>th</sup>	Feb 15 <sup>th</sup>	Feb 22 <sup>nd</sup>	Feb 28 <sup>th</sup>	Mar 8 <sup>th</sup>	Mar 14 <sup>th</sup>	Mar 21 <sup>st</sup>	Mar 29 <sup>th</sup>	Apr 5 <sup>th</sup>	Apr 12 <sup>th</sup>	Apr 19 <sup>th</sup>	Apr 27 <sup>th</sup>			
<b>I present operations</b>																				
Regular operation setup																				
	initial injection and orbit recovery			2	2															
	24 singlets			0																
		lattice correction		2	2															
		injection optimization		2	2															
	hybrid			0																
		lattice correction		2	2															
		injection optimization		2	2															
	RHB			0																
		lattice correction		2	2															
		injection optimization		2	2															
P0 feedback setup, damping time measurement, and testing of spare unit			Yao	8	6		2													
Diagnostics checkout				0																
	BVPLD validation			4	4															
	S35 pinhole			4	4															
		digital camera pre-release test		8	8															
	Xbpm checkout			4	4															
	rf bpm checkout			6	6															
	ID gap scan			2	2															
Orbit switch for mode change			Xiao	12						4		4				4				
Make routine measurement and correction of CPU perturbation			Xiao	6	6															
BPM offset measurements (ongoing)			Sajaev	8	6					2										
RTFB fault investigation			Emery	6	6															
				0																
Improved hybrid setup			Sajaev	0																
	Hybrid (9,10) chromaticity		Sajaev	0																
		lattice correction	Sajaev	2	2															
		injection optimization	Sajaev	2	2															
		P0 feedback setup	Sajaev	4	4															
				0																
Injection investigation for user lattice			Sajaev	0																
	Target: 80% injection with closed bump with steered orbit in S39-S40		Sajaev	4	4															
Injection optimization automation			Sajaev	0																
	Closed bump kicker optimization		Sajaev	2	2															
	BTS trajectory optimization		Sajaev	2	2															
	Injection area orbit		Sajaev	2	2															
			Sajaev	0																
Coupling control algorithms																				
	Applying different corrections: minimization of RM and minimization of computed beam size		Sajaev	6						6										
Reduce beam tilt in ID1			Sajaev	0																
	later in the run		Sajaev	4						4										
Test "failed sextupole correction"			Sajaev	6								2	2	2						
MIA investigation using FPGA			Wang	28	4	2	2	2	2	2	2	2	2	2	2	2				
				0																
				0																
<b>APS-U</b>				0																
Optimized lattices for chromaticity values from 6 to 11			Sajaev	0																
	(7,7) lattice			0																
		initial injection and orbit recovery		2		2														
		Setup P0 feedback		2		2														
	(9,9) lattice			0																
		initial injection and orbit recovery		2			2													
		Setup P0 feedback		2			2													
		150 mA test	Harkay	4		0	0	4												
	SPX+RHB lattice			0																
		Optics + lifetime		6				6												
Sawtooth investigation with P0 feedback (time constant measurement)			Harkay	4	4															
Single bunch limit with 150 mA multibunch				0																
	Standard lattice with (9,9) chromaticity with P0 feedback		Harkay	4	4															
			Harkay	4																
150 mA with shutters open			Harkay	0	0															
Libera rf bpm electronic checkout			Decker	16	16															
Prototype beam arrival time monitor studies at 35ID using diamond detector			Yang	4	4															
Minimization of vertical emittance			Sajaev	4				4												
Simulate LSS aperture limitation with orbit bumps			Sajaev	4							4									
Low-alphac lattice investigation			Chae	0																
	lattice correction		Chae	4									4	0						
	injection optimization		Chae	4										4						
Benchmark simulations for CDR			Sajaev	0																
	nonlinear beam dynamics		Sajaev	4										4						
Tilt generated by single kick plus chromaticity			Yang	4									4							
Performance of rf BPMs (using BSP-100) in presence of beam tilt			Lill	4									4							
Vertical orbit bump to check nonlinear coupling			Sajaev	0																
Orbit displacement lattice			Borland																	
<b>Beam Losses</b>				0																
Beam Loss Position Monitor				0																
	S33 orbit bumps		Dooling	8		4	4													
Injection loss measurements			Dooling	0																
	Matched and mismatched bumps			4				4												
LCLS BLM calibration in BTS			Dooling	4						4										
Gas Bremsstrahlung measurement in S35			Dooling	4						4										
Cerenkov monitor with SR steering ID34 and other sectors			Yang	8	0						4		4							
ID5 3-d scanning (parasitic most of the time)			Yang	8						4		4								
Cerenkov detector calibration – ask Yang about the requirements	8 hours?			0																
<b>Instabilities</b>				0																
Beam-induced multipacting			harkay	8	4							0				4				
	Bunch-by-bunch tune shift																			
Fast ion effect in bunch train	various bunch patterns		Chae	8					4			4								
Impedance calibration of scrapers			Chae	0									4							
	horizontal scraper		Chae	4																
	vertical scraper		Chae	4										4						
Transient beam evolution			Chae	8						4		4								
Single-bunch accumulation limit investigation			Sajaev	2	2															
	Every few weeks		Sajaev	0																
<b>Injectors</b>				0																
1 Hz PAR operation as a possible option for a gun with reduced performance in RG1			Yao	0																
Optimization of PAR, PTB, and booster performances			Yao	0																
Booster ramp upgrade, include current ramp mode and energy saving mode development, and 360 Hz dipole ripple measurement and reduction			Yao	0																
Investigate periodic drop in booster efficiency			Yao	0																
Booster emittance measurement in BTS																				
			All weeks																	
Total SR studies hours				288	122	10	12	12	34	14	30	12	12	12	10	2				
Time not assigned for Total SR studies				32	18	2	0	0	-4	-2	0	0	0	0	2	10				
Hours available for interventions and studies				504	168	24	24	24	48	24	48	24	24	24	24	24				
Estimated hours available for SR+injector studies				384	152	16	16	16	36	16	36	16	16	16	16	16				
Estimated hours available for SR studies				320	140	12	12	12	30	12	30	12	12	12	12	12				





