

Beam Setup Plan February 2019

#	Title	Date	Shift	Ion	Target	Extraction	Energy [MeV/u]	Intensity	Coordinator	Participants	Beam Study #	brief description	boundary conditions / infos
0	DryRun Unilac / SIS	07.02.							BK	Schicht		testing of all devices, machine preparation	
1	beam comissioning UNILAC to TK	11.02.	F / S / N	Ar					BK	Schicht		UNILAC commisioning with Ar Beam	
2	Operator Training	12.02.	F	Ar / Sn					BK	Schicht		training: beamsetup and adjustment for UNILAC	
3	Operator Training		S	Ar / Sn					BK	Schicht		training: beamsetup and adjustment for UNILAC	
4	Operator Training		N	Ar / Sn					BK	Schicht		training: beamsetup and adjustment for UNILAC	
5	Operator Training	13.02.	F	Sn					BK	Schicht		training: beamsetup and adjustment for UNILAC SIS commisioning with beam	
6	Operator Training		S	Ar					BK	Schicht		Ar beam setup poststripper	
7	preparation and beam setup for beam studies		N	Ar					BK	Schicht		beamsetup of Ar beam to TK / SIS	
8	Operator Training / Beam Setup for Machine Studies	14.02.	F	Ar					BK	Schicht		training + Ar beam setup to HTP	keep settings
9	Operator Training / Beam Setup for Machine Studies		S	C					BK	Schicht		preparation and beamsetup of C beam to TK / SIS	
10	Operator Training / Beam Setup for Machine Studies		N	C					BK	Schicht		preparation and beamsetup of C beam to HTP	keep settings
11	Accelerator Optimization	15.02.	F 8:00 - 13:00	C	HHD	slow / fast	300	5,00E+08	RB (SIS18) + experienced UNILAC expert	Schicht		goal is to fine tune the match between UNILAC and SIS18	preparation of machine. Common activity for machine setup, machine development and beam study
12	Mirko based SIS18 injection matching		F 13:00 - 15:00	C	HHD	slow	300	5,00E+08	Y. El Hayek	Schicht		continue fine tune the MIT w.o. cooling	preparation of machine. Common activity for machine setup, machine development and beam study
13	BI Investigations in SIS18 / Positions,- tune,- TOPOS measurements / Closed Orbit Correction, Closed orbit feed back (slow)		S	C	HHD	fast	300	5,00E+08	R. Singh, Y. El Hayek	Schicht		BI new electronics setup	preparation of machine. Common activity for machine setup, machine development and beam study
14	BI FAIR electronics tests		N	C	HTP	slow / fast	300	5,00E+08	M . Witthaus	SD	BI-001-HTP	To test the electronics of the resonant transformer for FAIR high energy transfer line at HTTP of HEST. No specific on ion species, and prefer to have several ion types as well as different ion intensities to study the dynamic range.	
15	Slow extraction spill quality, measurements of PC ripple, (what about the noise on electrostatic septum?)	16.02.	F - 15:00	C	HHD	slow	300, up to energy corresponding to maximum rigidity of 18Tm	5,00E+08	D. Ondreka	P. Schmid	SIS18-001-AP	dedicated setup of SIS18 power convertor ripple and measure the spill quality simulatenously. See the presentation by Singh and summary of the mini Slow extraction workshop. measured in the past. Not conclusive. If a conclusive measurement can help to find the effective fix. BI experts in slow extraction spill quality are highly beneficial	

16	BI systems developments in "HTP"/HEST		S	C	HTP	slow / fast	varies	5,00E+08	Schwickert/Forck	Schicht	BI-002-HEST	This is part of the HEST BI upgrade project. Needs to know the ipdated situation
17	BI Experiments		N									
18	Acceleration with highest ramp rate, correction of radial position and close orbit, conservation of phase space	17.02.	F	C	HHD	fast	1000	5,00E+08	D. Ondreka	J. Stadlmann	SIS18-003-AP	To investigate beam performance with highest ramp rate. Ideally, aiming for Q1 2019 to gain experience for FAIR booster mode. For Q1 2019, ramp rate is limited to 4T/s
19	BI system developments in HEST/ HADES beam line		S	C	HHD	fast	300	5,00E+08	H. Bräuning, B. Walasek-Höhne	Schicht	BI-003-HEST	also part of the HEST BI upgrade AIP. This is more focused on the DAC system, while the BI-002-HEST is focused on the detector. For this particular part, it is aimed for the debugging of the Large analogue scaling system enviroment (LASSIE) alogorithem. The debugging can significantly improve the reliability of the HEST DAQ quality, which directly benefits FAIR phase 0
20	BI Experiments		N	C								
21	Commissioning new H=2 cavities	18.02.	F	C	HHD	fast	1000	5,00E+08	D. Lens	D. Ondreka	SIS18-002-RF	fine tune the sync between H=2 cavity with H=4 cavity
22	Beam preparation for HTA, HTC, HTM		S / N	C	HTA HTC HTM	slow			BK	Schicht		beam setup for HTA, HTC and HTM
23	Synchronisation/phase control loop Rf devices/ Dual harmonic operation	19.02.	F	C	HHD	fast	1000	5,00E+08	D. Lens	Schicht D. Ondreka	SIS18-004-RF	fine tune the sync between H=2 cavity with H=4 cavity
24	Parallel beam performance test		S / N	C	HTA HTC HTM	slow			BK	Schicht		beam performance tests for parallel operation of THA, HTC and HTM
25	Beam setup for Experiments	20.02.	F / S / N	C	HTA HTC HTM				BK	Schicht		beam setup for physics run

Legend:

training shifts

beam setup and fine tuning

beam study

beam setup for the upcoming beam time has absolute priority, so this plan might be subject to changes
 details will be coordinated in daily noon meeting 12:45 in SE1.124 c