

*** General parameters ***

	Option 1	Option 2	Option 3	Option 4	Nominal
Ek[MeV]	840.+/-15.	975.+/-15.	1109.+/-15.	1240.+/-15.	1000.
number of SRF cryo modules	11+12	11+15	11+18	11+21	
number of SRF cavities	33+48	33+60	33+72	33+84	
gamma	1.895	2.039	2.182	2.322	2.066
beta	.849	.872	.889	.903	.875
eta	.243	.205	.174	.150	.199
revolution period in ring [ns]	973.8	949.1	930.7	916.6	945.3
rf frequency in ring [MHz]	1.027	1.054	1.074	1.091	1.058
chopper beam-on duty factor [%]	69.7	68.9	68.3	67.8	68.8
pulse length on target [ns]	724.	699.	681.	667.	695.

*** Maximum Allowed by the Accelerator System ***

(max. linac peak current 52 mA; max. ring inj. turn 1200)

	Option 1	Option 2	Option 3	Option 4	Nominal
proton per bunch to ring [e14]	1.5	2.0	2.4	2.3	2.1
ave. current in ring [mA]	1.5	1.9	2.3	2.2	2.0
ave. power in ring [MW]	1.2	1.9	2.5	2.8	2.0
ave. current in linac [mA]	1.5	2.0	2.4	2.3	2.1
ave. power on target [MW]	1.2	1.8	2.4	2.7	1.9
peak current in linac [mA]	30.9- 52.0	42.1- 52.0	52.0- 52.0	52.0- 52.0	44.4- 52.0
linac duty cycle [%]	7.0- 4.2	6.8- 5.5	6.7- 6.7	6.6- 6.6	6.8- 5.8
injection time [ms]	1.17- .70	1.14- .92	1.12- 1.12	1.10- 1.10	1.13- .97
injection turns	1200.- 714.	1200.- 972.	1200.-1200.	1200.-1200.	1200.-1025.
space charge tune shift	.19	.20	.19	.15	.20
e bounce frequency [MHz]	184.	211.	231.	228.	216.
tolerable eff. momentum spread	.0044	.0049	.0051	.0049	.0049
beam core chromatic tune spread	.07	.07	.08	.07	.07
total effective tune spread	.20-> .27	.21-> .28	.20-> .28	.16-> .24	.21-> .28
estimated min. beam loss [kW]	4.9-> 17.1	11.2-> 31.6	10.2-> 35.5	2.8-> 25.0	12.0-> 34.0

*** 1 MW Operation Options ***

	Option 1	Option 2	Option 3	Option 4	Nominal
proton per bunch to ring [e14]	1.2	1.1	.9	.8	1.0
ave. current in ring [mA]	1.2	1.0	.9	.8	1.0
ave. power in ring [MW]	1.0	1.0	1.0	1.0	1.0
ave. current in linac [mA]	1.2	1.1	.9	.8	1.0
ave. power on target [MW]	1.0	1.0	1.0	1.0	1.0
peak current in linac [mA]	25.3- 52.0	22.6- 52.0	20.5- 52.0	18.7- 52.0	22.2- 52.0
linac duty cycle [%]	7.0- 3.4	6.8- 3.0	6.7- 2.6	6.6- 2.4	6.8- 2.9
injection time [ms]	1.17- .57	1.14- .50	1.12- .44	1.10- .40	1.13- .48
injection turns	1200.- 585.	1200.- 523.	1200.- 473.	1200.- 432.	1200.- 513.
space charge tune shift	.16	.11	.08	.08	.10
e bounce frequency [MHz]	166.	154.	145.	137.	153.
tolerable eff. momentum spread	.0040	.0036	.0034	.0040	.0035
beam core chromatic tune spread	.06	.05	.05	.06	.05
total effective tune spread	.17-> .23	.12-> .17	.09-> .14	.09-> .15	.11-> .16
estimated min. beam loss [kW]	1.0-> 8.0	1.0-> 1.0	1.0-> 1.0	1.0-> 1.0	1.0-> 1.0
HEBT RF cavity needed	Y	Y	Y	Y	Y
Ring chromatic sextupole needed	Y	Maybe	N	N	Maybe
Ring rf cavity number (h=1,2)	3+1	3+1	3+1	3+1	3+1
Ring kicker PFN out preferred	Y	Y	Y	Y	Y
Ring kicker ferrite coating?	Y	Y	Y	Y	Y
HEBT/RTBT BPMs halved?	OK	OK	OK	OK	OK
HEBT/RTBT correctors halved?	OK	OK	OK	OK	OK
Ring correctors reduction?	OK	OK	OK	OK	OK

*** 2 MW Operation Options ***

	Option 1	Option 2	Option 3	Option 4	Nominal
proton per bunch to ring [e14]	2.5	2.1	1.9	1.7	2.1
ave. current in ring [mA]	2.4	2.1	1.8	1.6	2.0
ave. power in ring [MW]	2.0	2.0	2.0	2.0	2.0
ave. current in linac [mA]	2.5	2.1	1.9	1.7	2.1
ave. power on target [MW]	1.9	1.9	1.9	1.9	1.9
peak current in linac [mA]	50.7- 52.0	45.3- 52.0	41.0- 52.0	37.5- 52.0	44.4- 52.0
linac duty cycle [%]	7.0- 6.8	6.8- 6.0	6.7- 5.3	6.6- 4.8	6.8- 5.8
injection time [ms]	1.17- 1.14	1.14- .99	1.12- .88	1.10- .79	1.13- .97
injection turns	1200.-1170.	1200.-1045.	1200.- 946.	1200.- 865.	1200.-1025.
space charge tune shift	.31	.21	.16	.15	.20

e bounce frequency [MHz]	235.	218.	205.	194.	216.
tolerable eff. momentum spread	.0057	.0050	.0048	.0056	.0049
beam core chromatic tune spread	.08	.08	.07	.08	.07
total effective tune spread	.32-> .41	.22-> .30	.17-> .24	.16-> .25	.21-> .28
estimated min. beam loss [kW]	40.0-> 80.0	16.0-> 34.0	2.0-> 20.0	2.0-> 20.0	12.0-> 34.0
HEBT RF cavity needed	Y	Y	Y	Y	Y
Ring chromatic sextupole needed	Y	Y	Y	Y	Y
Ring rf cavity number (h=1,2)	3+1	3+1	3+1	3+1	3+1
Ring kicker PFN out preferred	Y	Y	Y	Y	Y
Ring kicker ferrite coating?	Y	Y	Y	Y	Y
HEBT/RTBT BPMs halved?	?	?	OK	OK	?
HEBT/RTBT correctors halved?	?	?	OK	OK	?
Ring correctors reduction?	?	?	?	?	?