

Name, Institution	spill duration	particles in spill	original bin length	Particles Per Bin, av. (orig.) ( $PPB_{av}$ )	$\frac{\Delta PPP_{rms}}{PPB_{av}}$	Particles Per Bin, av. (1 ms) ( $PPB_{av}$ )	$\frac{\Delta PPP_{rms}}{PPB_{av}}$ (1 ms)
M. Fraser, CERN	4.0 s	$4.0 \cdot 10^{13}$	0.4 ms	$4.0 \cdot 10^9$	0.158	$10^{10}$	0.157
C. Krantz, MIT	8.0 s	$2.7 \cdot 10^8$	0.05 ms	1700	0.25	34000	0.17
K. Brown, BNL (*)	2.4 s	$7.6 \cdot 10^{13}$	0.04 ms	$1.3 \cdot 10^9$	0.21	$3.2 \cdot 10^{10}$	0.19
C. Schömers, HIT	5.0 s	$1.5 \cdot 10^8$	0.05 ms	1500	0.31	30000	0.21
H. Stockhorst, FZJ (+)	3.5 s	$1.3 \cdot 10^7$	1.0 ms	3700	0.28	3700	0.28
S. Ivanov, IHEP	1.3 s	$(2 - 10) \cdot 10^{12}$	0.04 ms	$(6.0 - 30.0) \cdot 10^8$	0.45	$(1.5 - 7.5) \cdot 10^9$	0.329
P. Forck, GSI (x)	1.5 s	$1.4 \cdot 10^6$	0.02 ms	18	0.58	900	0.334
A. Wastl, MedAustron	5.0 s	$1.8 \cdot 10^{10}$	0.02 ms	72000	0.90	$3.6 \cdot 10^6$	0.54
K. Brown, BNL (**)	1.6 s	$6.2 \cdot 10^{13}$	0.04 ms	$1.5 \cdot 10^9$	0.87	$3.0 \cdot 10^{10}$	0.57
M. Tomizawa, J-PARC	2.1 s	$4.8 \cdot 10^{13}$	0.01 ms	$2.3 \cdot 10^8$	0.91	$2.3 \cdot 10^{10}$	0.637
P. Forck, GSI (xx)	2.0 s	$1.1 \cdot 10^6$	0.02 ms	11	0.81	550	0.642
P. Forck, GSI (xxx)	2.1 s	$2.1 \cdot 10^6$	0.02 ms	20	1.4	1000	0.73
H. Stockhorst, FZJ (++)	3.0 s	$4.3 \cdot 10^6$	1.0 ms	1400	1.1	1400	1.1

K. Brown (\*) – empty 93 MHz bucket

K. Brown (\*\*) – no empty bucket filtering

H. Stockhorst (+) – stochastic extraction

H. Stockhorst (++) – quadrupole driven extraction

P. Forck (x) – bunched beam, KO extraction

P. Forck (xx) – bunched beam, quadrupole driven extraction

P. Forck (xxx) – unbunched beam, quadrupole driven extraction

Tab. 1. Comparison of the spill structures