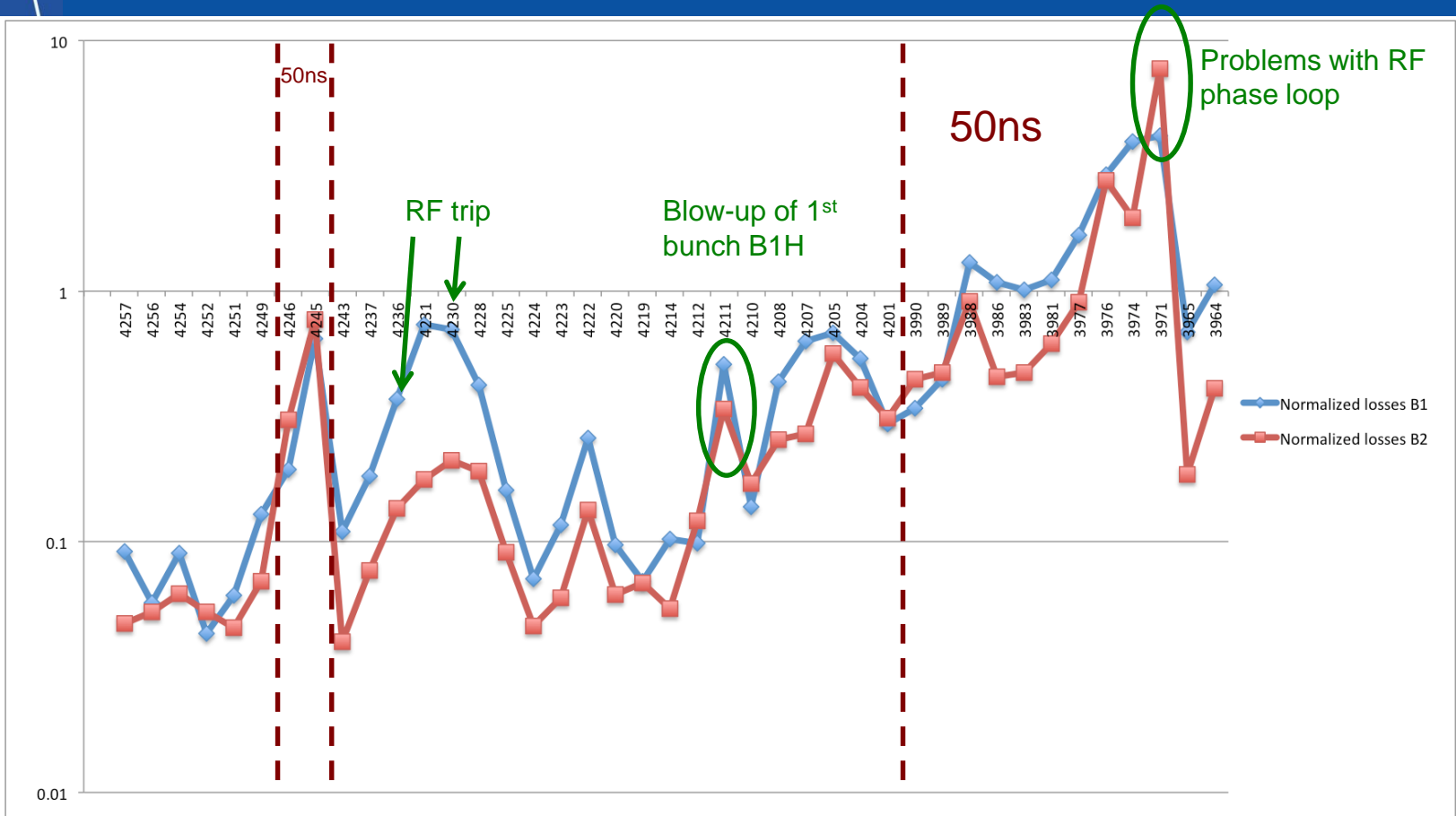


Losses during dumps (intensity ramp up)

V. Chetvertkova, R. Schmidt, D. Wollmann

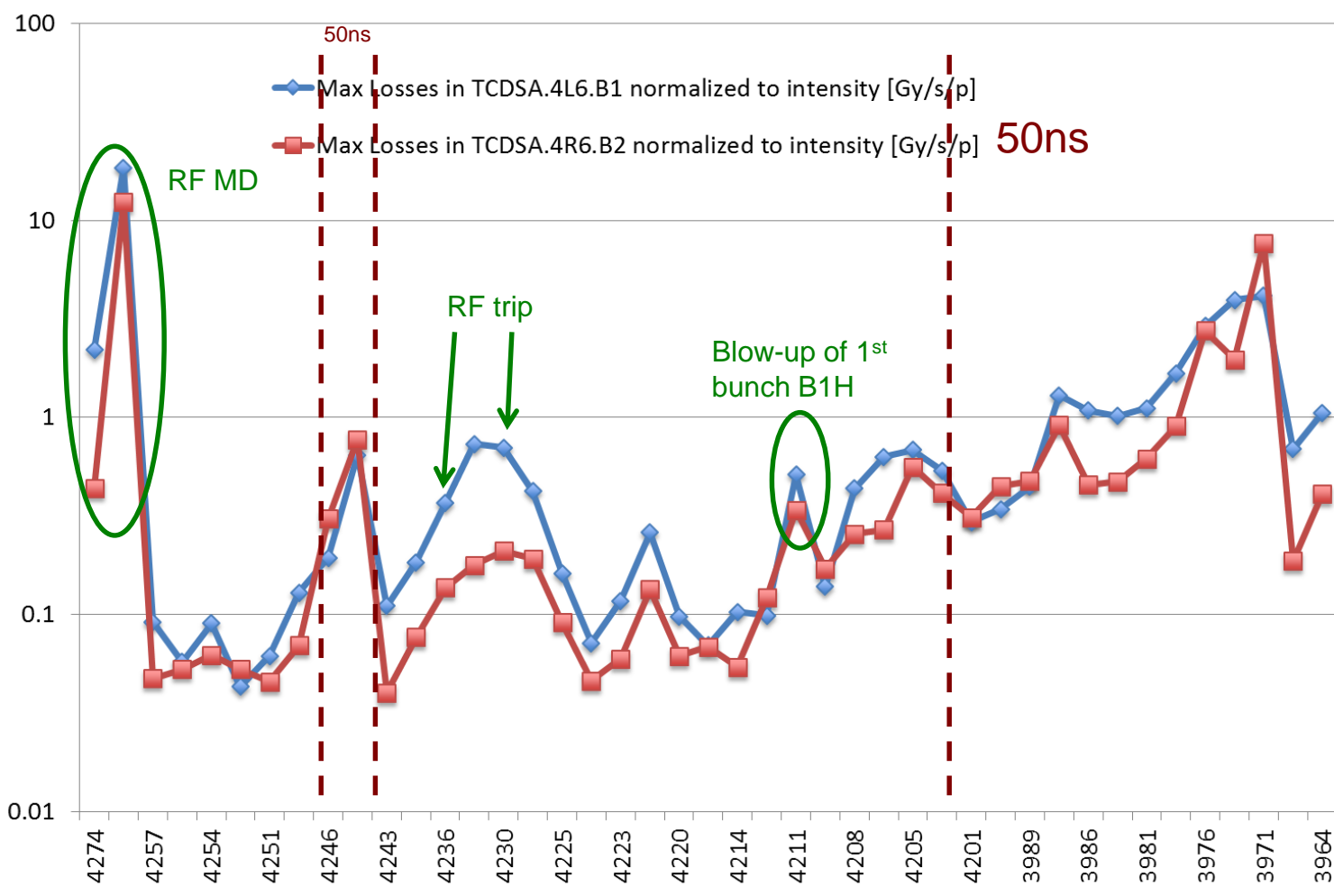
Losses during dumps normalized per total beam intensity



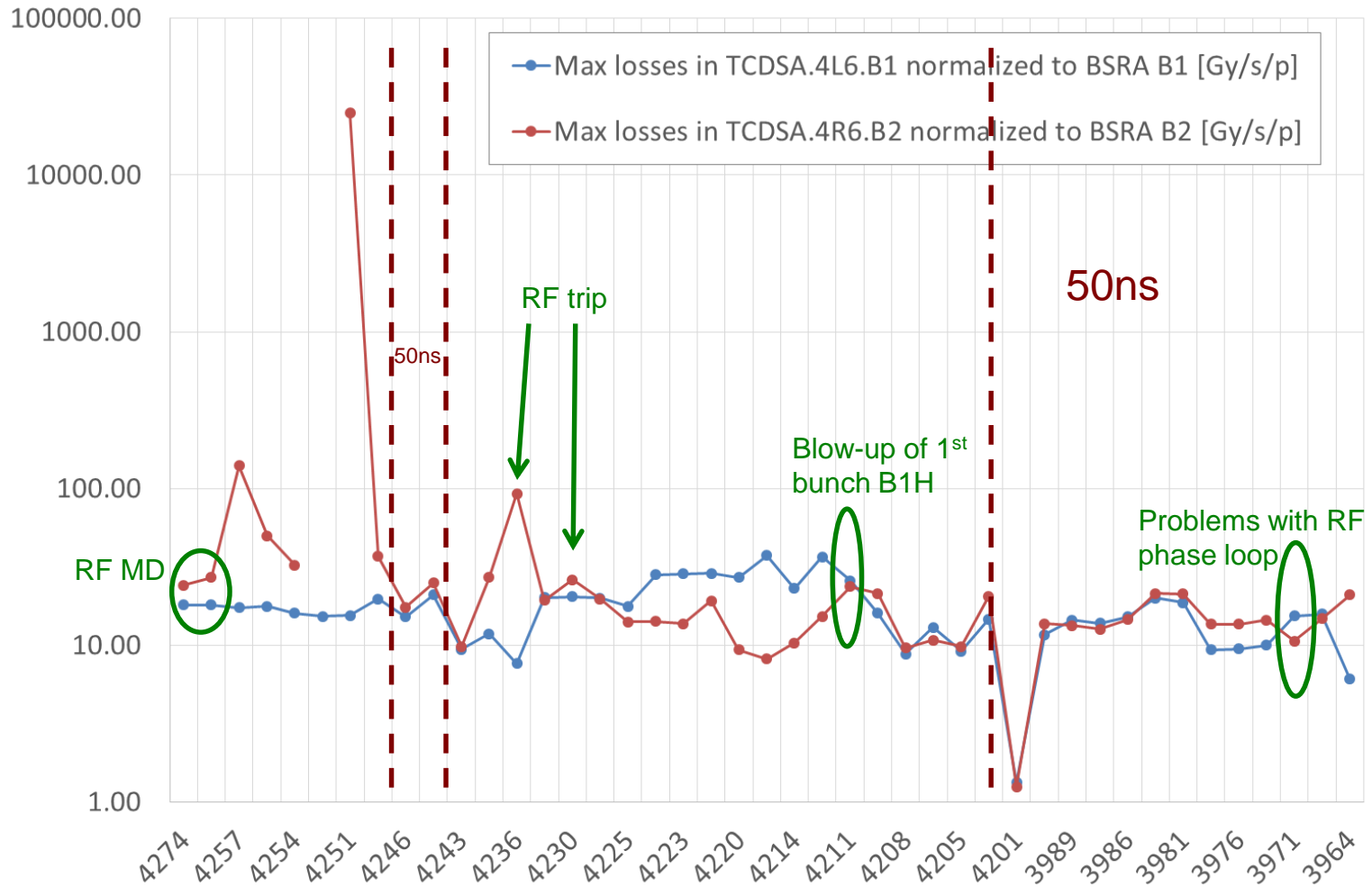
- **Losses** during the dump seem to **reduce over time**.
- **50ns fills** have **factor 5-8 higher losses** during dump compared to 25ns fills.
- Analysis **ongoing** – to be understood.



Losses during dumps normalized per total beam intensity



Losses during dumps normalized per intensity in the abort gap



- When **normalized to the intensity in the abort gap**, the BLM signals do not show significant differences for 25ns and 50ns fills



Losses during dumps normalized per intensity in the abort gap

XPOC : XPOC_B2 : 22.08.2015 20:22:29 (1440267749007738525) - LOAD_RESULTS for session of 22.08.2015 20:24:09 by vchetver on 03.09.2015 at 12:03:10

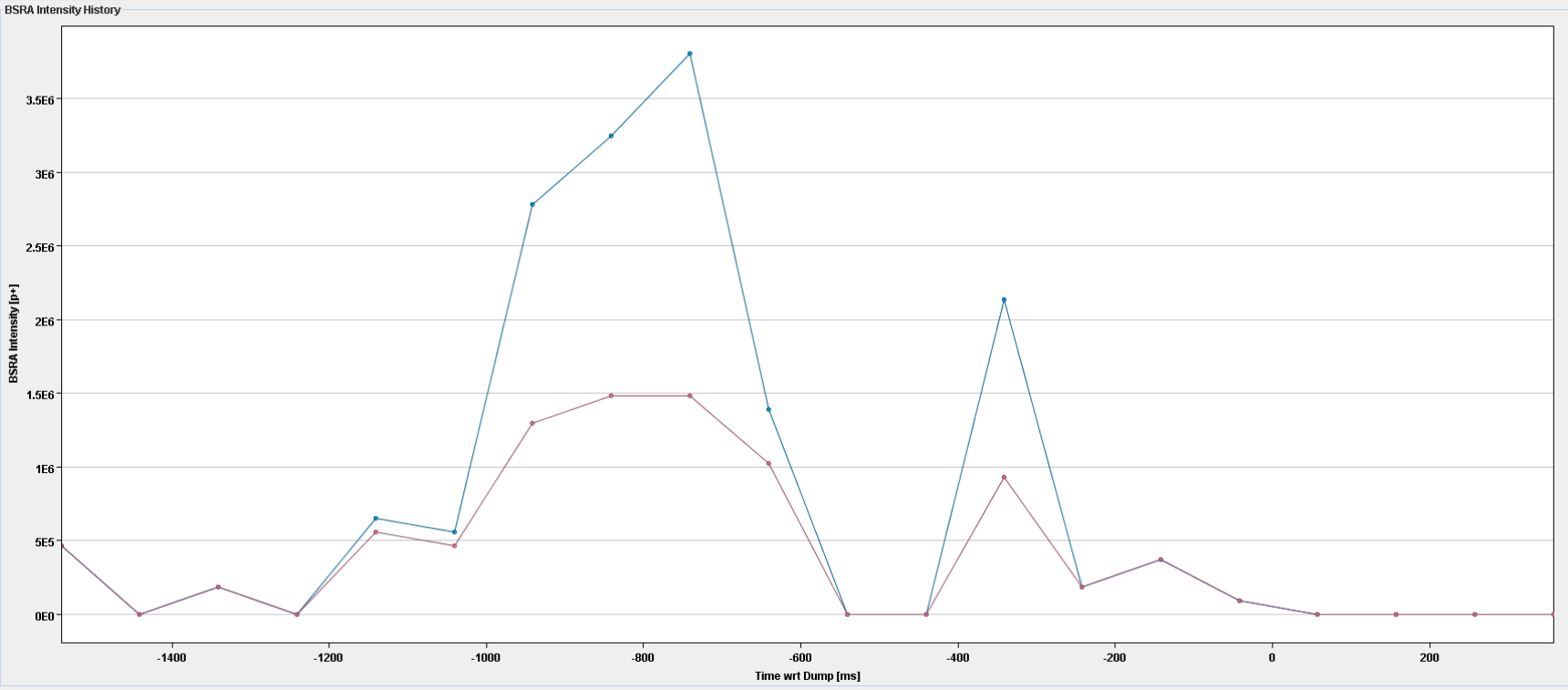
Final analysis is confirmed

XPOC Modules graph Results
BEAM 2 - PROTON (PROTPHYS) E: 6499.68 GeV I: 5.13E13 p+ #b: 459 22.08.2015 - 20:22:29.007357675

- ✓ XPOC
- ✓ CONTEXT
- ✓ MKD
- ✓ MKB
- ✓ TSU
- ✓ MKDGEN
- ✓ SCSS
- ✓ BETS
- ✓ BLM
- ✓ VAC
- ✓ BTVDD
- ✓ BPMD
- ✓ BCT
- ✓ BSRA
- ✓ TCDQ_BPMS

Module results Module journal
Module: BSRA Analysis: OK Check: OK

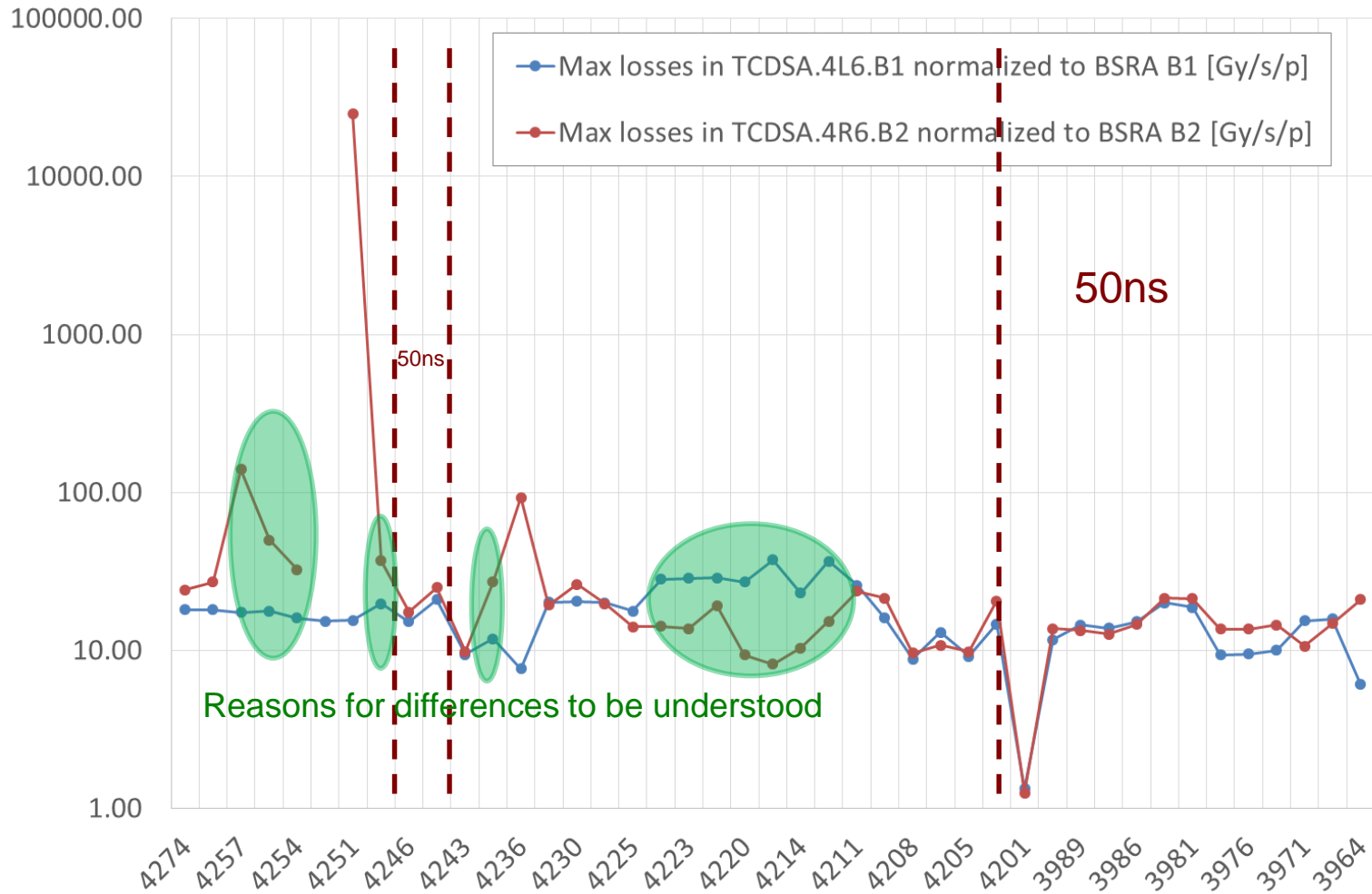
CHECKS	Property	Value	Min.Value	Ref.Value	Max.Value	Diff.	Units	Check
dataValid		TRUE		TRUE				OK
max		1.485E6	0.000E0	5.000E9	1.000E10	-4.999E9	p+	OK
sum		3.805E6	0.000E0	1.000E10	2.000E10	-9.996E9	p+	OK



- When **normalized to the intensity in the abort gap**, the BLM signals do not show significant differences for 25ns and 50ns fills



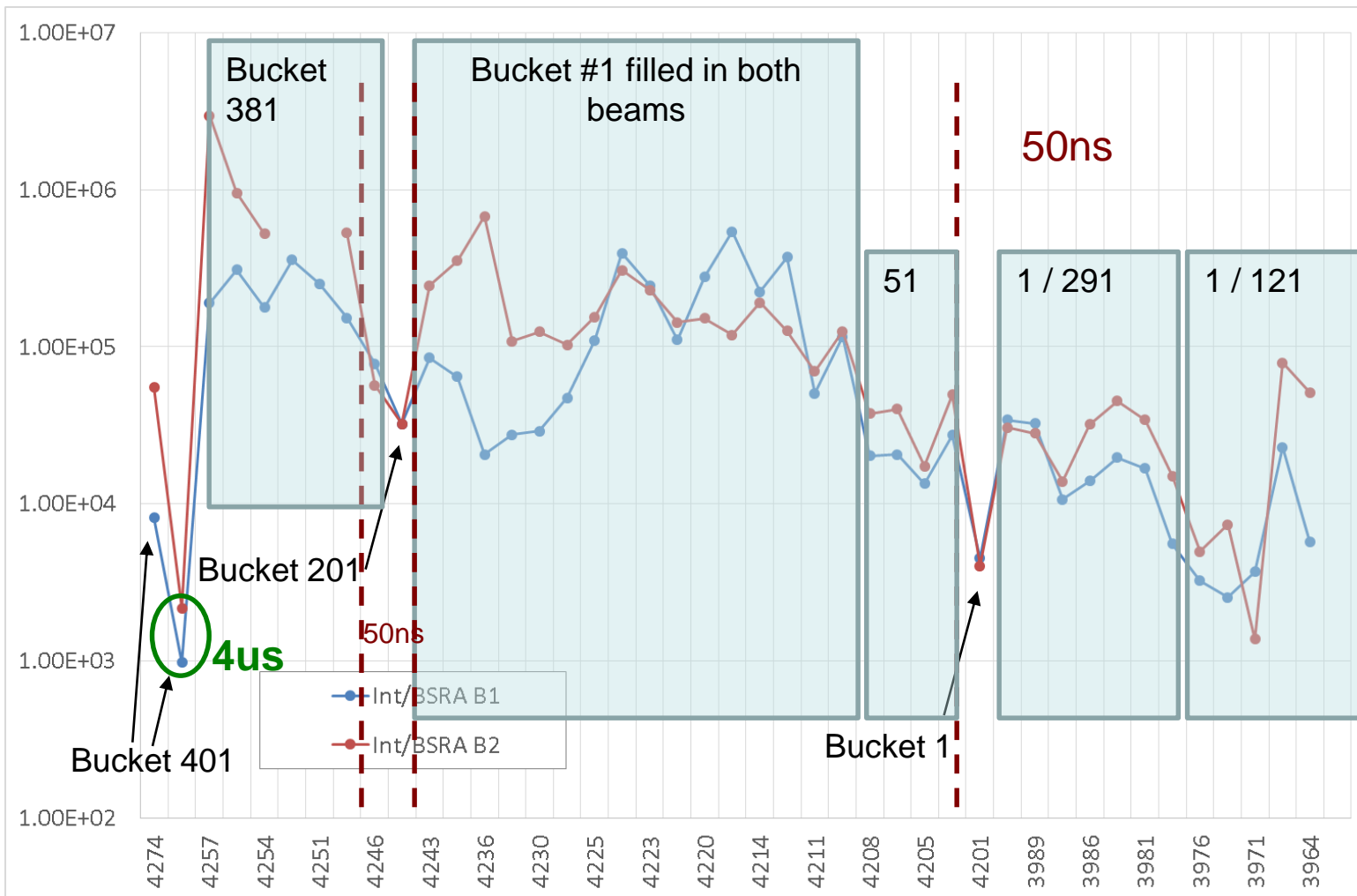
Losses during dumps normalized per intensity in the abort gap



- Analysis ongoing

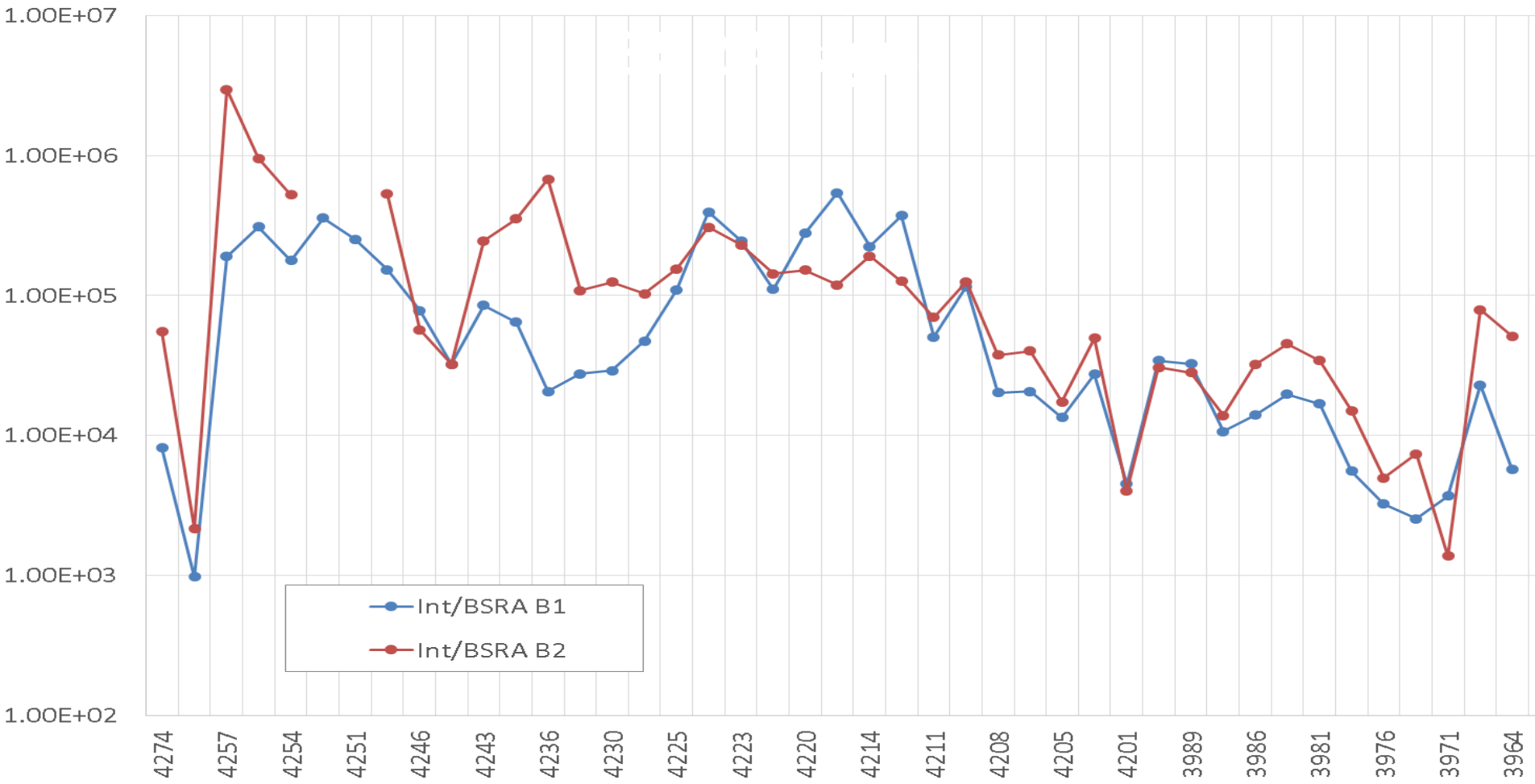


Total beam intensity normalized to BSRA signal





Total beam intensity normalized to



Flat top	4274
Flat top	4273
Stable beams	4257
Stable beams	4256
Stable beams	4254
Ramp	4252
Squeeze	4251
Stable beams	4249
Stable beams	4246
Adjust	4245
Stable beams	4243
Flat top	4237
Ramp	4236
Stable beams	4231
Adjust	4230
Squeeze	4228
Stable beams	4225
Stable beams	4224
Adjust	4223
Flat top	4222
Stable beams	4220
Stable beams	4219
Stable beams	4214
Stable beams	4212
Stable beams	4211
Stable beams	4210
Stable beams	4208
Stable beams	4207
Stable beams	4205
Stable beams	4204
Stable beams	4201
Adjust	3990
Adjust	3989
Stable beams	3988
Stable beams	3986
Stable beams	3983
Stable beams	3981
Flat top	3977
Stable beams	3976
Stable beams	3974
Stable beams	3971
Stable beams	3965
Ramp	3964

Fill #		Energy [GeV]	B1 [1e10]	B2 [1e10]	BSRA B1	BSRA B2
4274	25ns_120b_4inj_48bpi_RFMD2_2015	6499680	1310	1345	1.60E+09	2.44E+08
4273	Multi_20b_10inj_2bpi_RFMD2_2015	6499800	190	201	1.94E+09	9.25E+08
4257	25ns_458b_446_360_372_48bpi13inj	6499800	4491	4437	2.36E+08	1.50E+07
4256	25ns_458b_446_360_372_48bpi13inj	6499800	4368	4373	1.41E+08	4.60E+07
4254	25ns_458b_446_360_372_48bpi13inj	6499680	4445	4504	2.50E+08	8.60E+07
4252	25ns_458b_446_360_372_48bpi13inj	4035600	5350	5329	1.50E+08	-
4251	25ns_459b_447_351_372_72bpi11inj	6499680	5048	5062	2.00E+08	92812
4249	25ns_459b_447_351_372_72bpi11inj	6499800	4729	4448	3.10E+08	8.40E+07
4246	50ns_296b_254_36_236_36bpi12inj_alt	6499680	2887	2912	3.70E+08	5.10E+08
4245	50ns_297b_255_36_246_36bpi12inj_alt	6499800	3560	3564	1.10E+09	1.10E+09
4243	25ns_315b_303_270_276_72bpi9inj	6499680	3409	3426	4.00E+08	1.40E+08
4237	25ns_315b_303_270_276_72bpi9inj	6499680	3815	3874	5.90E+08	1.10E+08
4236	25ns_315b_303_270_276_72bpi9inj	2169600	3516	3591	1.70E+09	5.30E+07
4231	25ns_315b_303_270_276_72bpi9inj	6499680	2755	3032	1.00E+09	2.80E+08
4230	25ns_315b_303_270_276_72bpi9inj	6499680	3490	3609	1.20E+09	2.90E+08
4228	25ns_315b_303_270_276_72bpi9inj	6499680	2791	3598	5.90E+08	3.50E+08
4225	25ns_315b_303_231_240_48bpi11inj	6499680	3414	3416	3.10E+08	2.20E+08
4224	25ns_315b_303_231_240_48bpi11inj	6499920	3640	3685	9.20E+07	1.20E+08
4223	25ns_315b_303_231_240_48bpi11inj	6499800	3674	3687	1.50E+08	1.60E+08
4222	25ns_315b_303_231_240_48bpi11inj	6499800	3539	3732	3.20E+08	2.60E+08
4220	25ns_219b_207_174_180_48bpi8inj	6499680	2260	2273	8.10E+07	1.50E+08
4219	25ns_219b_207_174_180_48bpi8inj	6499680	2590	2624	4.80E+07	2.20E+08
4214	25ns_158b_146_108_120_24bpi12inj	6499680	1752	1758	7.80E+07	9.20E+07
4212	25ns_158b_146_108_120_24bpi12inj	6499800	1861	1897	5.00E+07	1.50E+08
4211	25ns_158b_146_108_120_24bpi12inj	6499800	1718	1746	3.40E+08	2.50E+08
4210	25ns_158b_146_108_120_24bpi12inj	6499680	1735	1759	1.50E+08	1.40E+08
4208	25ns_86b_74_53_53_24bpi7inj	6499680.00	849.00	937.00	4.20E+08	2.50E+08
4207	25ns_86b_74_53_53_24bpi7inj	6499800.00	887.00	1004.00	4.30E+08	2.50E+08
4205	25ns_86b_74_53_54_24bpi7inj	6499800.00	821.00	872.00	6.10E+08	5.00E+08
4204	25ns_86b_74_53_54_24bpi7inj	6499800.00	985.00	992.00	3.60E+08	2.00E+08
4201	25ns_26b_26_10_14_12bpi4inj	6499680.00	271.00	290.00	6.00E+08	7.20E+08
3990	50ns_298b_256_38_246_36bpi13inj	6499680	6499	3383	1.90E+09	1.10E+09
3989	50ns_298b_256_38_246_36bpi13inj	6499680	6499.0	3379.0	2.00E+09	1.20E+09
3988	50ns_296b_254_36_246_36bpi11inj	6499680	3103.0	3192.0	2.90E+09	2.30E+09
3986	50ns_296b_254_36_246_36bpi11inj	6499680	3358.0	3365.0	2.40E+09	1.05E+09
3983	50ns_296b_254_36_246_36bpi11inj	6499680	3352.0	3385.0	1.70E+09	7.50E+08
3981	50ns_296b_254_36_246_36bpi11inj	6499800	2671.0	2748.0	1.59E+09	8.00E+08
3977	50ns_152b_110_36_108_36bpi7inj	6499800	1670.0	1660.0	3.00E+09	1.10E+09
3976	50ns_152b_110_36_108_36bpi7inj	6499680	1497.0	1490.0	4.60E+09	3.00E+09
3974	50ns_152b_110_36_108_36bpi7inj	6499680	1472.0	1475.0	5.80E+09	2.00E+09
3971	50ns_152b_110_36_108_36bpi7inj	6499680	1519.0	1495.0	4.10E+09	1.08E+10
3965	50ns_152b_110_36_108_36bpi7inj_wp	6499680	1422.0	1504.0	6.20E+08	1.90E+08
3964	50ns_152b_110_36_108_36bpi7inj_wp	1759200	1608.0	1587.0	2.80E+09	3.10E+08