

KOPIO Data Sheet

Offline
sigma
Offline
extinction

| Date | Time | run# | Up-Dn | | | | delP/P | RF Volts | rf Volts (sc) | Frequency | | | | Bunch Widi | Extin Fact | |
|--|---------|----------|----------|----------|----------|----------|----------|----------|---------------|-----------|-----------|----------|----------|------------|---------------|-------------|
| | | | T1 | T2 | T3 | T4 | | | | Sig Gen | Fre | Sig Gen | Fre | | | Early(1690n |
| 5/18/04 | 1730 | 126 | | | | | 0.4166 | | | 10.701500 | | | | 4.451484 | 30 >10% | |
| | 1740 | 126 | 144305 | 143823 | 143377 | 142717 | 0.0110 | 30.0000 | 219 | 10.701500 | | | | 4.451584 | 50.4 >10 | |
| | 1830 | 128 | 144306.7 | 143827.9 | 143373.1 | 142704.7 | 0.0111 | 30.0000 | 219 | 10.701300 | | | | 4.451684 | 41 | |
| | 1855 | 129 | 144305.0 | 143831.7 | 143379.1 | 142731.9 | 0.0109 | 30.0000 | 219 | 10.701200 | | | | 4.451784 | 36.8 | |
| | 2006 | 133 | 144304.3 | 143884.4 | 143463.3 | 142977.1 | 0.0092 | 30.0000 | 219 | 10.701100 | | | | 4.451884 | 33 | |
| | 2023 | 135 | 144307.0 | 143891.6 | 143473.0 | 142998.8 | 0.0091 | 30.0000 | 219 | 10.701000 | | | | 4.451984 | 32.5 | |
| | 2050 | 136 | 144305.8 | 143895.1 | 143469.2 | 142979.6 | 0.0092 | 30.0000 | 219 | 10.700800 | | | | 4.452084 | 28 | |
| | 2122 | 138 | 144304.8 | 143892.2 | 143468.7 | 142975.1 | 0.0092 | 30.0000 | 219 | 10.700700 | | | | 4.452184 | 24.1 | |
| | 2137 | 139 | 144306.9 | 143889.2 | 143472.2 | 142971.4 | 0.0093 | 30.0000 | 219 | 10.700600 | | | | 4.452284 | 22.33 | |
| | 2148 | 140 | 144303.3 | 143890.5 | 143465.5 | 142964.5 | 0.0093 | 30.0000 | 219 | 10.700500 | | | | 4.452384 | 21.4 | |
| | 2209 | 142 | 144306.5 | 143902.2 | 143474.5 | 142972.3 | 0.0092 | 30.0000 | 219 | 10.700400 | | | | 4.452484 | 17.06 | |
| | 2224 | 143 | 144303.7 | 143908.0 | 143482.8 | 142971.3 | 0.0092 | 30.0000 | 219 | 10.700300 | | | | 4.452583 | 16.1 | |
| | 2236 | 144 | 144306.0 | 143933.6 | 143509.4 | 142984.2 | 0.0092 | 30.0000 | 219 | 10.700200 | | | | 4.452692 | 12.1 | |
| | 2306 | 145 | 144307.8 | 144030.2 | 143597.5 | 143000.2 | 0.0091 | 30.0000 | 219 | 10.700100 | | | | 4.452783 | | |
| | 2322 | 148 | 144309.7 | 143963.6 | 143411.1 | 142750.9 | 0.0108 | 30.0000 | 219 | 10.700000 | | | | 4.452873 | | |
| | 2332 | 149 | 144302.7 | 143919.6 | 143386.0 | 142750.9 | 0.0108 | 30.0000 | 219 | 10.699900 | | | | 4.452974 | | |
| | 5/19/04 | 111 | 150 | 144308.6 | 143861.1 | 143436.8 | 142842.7 | 0.0102 | 130.0000 | 1875 | 10.700000 | | | | 4.452870 | |
| | | 131 | 166 | 144307.9 | 143749.1 | 143298.3 | 142592.0 | 0.0119 | 130.0000 | 1875 | 10.700050 | | | | 4.452815 | |
| | | 149 | 167 | 144306.5 | 143749.9 | 143299.2 | 142716.2 | 0.0110 | 130.0000 | 1875 | 10.700100 | | | | 4.452766 | |
| | | 157 | 168 | 144304.5 | 143736.5 | 143249.0 | 142714.6 | 0.0110 | 130.0000 | 1875 | 10.700150 | | | | 4.452724 | |
| | | 206 | 169 | 144303.5 | 143797.7 | 143260.7 | 142821.1 | 0.0103 | 130.0000 | 1875 | 10.700200 | | | | 4.456671 | 11 |
| | | 215 | 170 | 144303.3 | 143767.8 | 143194.5 | 142734.2 | 0.0109 | 130.0000 | 1875 | 10.700250 | | | | 4.452617 | 13.9 |
| | | 231 | 171 | 144304.9 | 143771.2 | 143164.1 | 142720.7 | 0.0110 | 130.0000 | 1875 | 10.700300 | | | | 4.452564 | 14.2 |
| 245 | | 172 | 144304.1 | 143755.4 | 143128.6 | 142688.4 | 0.0112 | 130.0000 | 1875 | 10.700350 | | | | 4.452514 | 13.1 | |
| 300 | | 173 | 144306.0 | 143777.7 | 143272.9 | 142790.9 | 0.0105 | 130.0000 | 1875 | 10.700160 | | | | 4.452713 | 8.7 | |
| 310 | | 174 | 144304.4 | 143714.4 | 143213.7 | 142682.3 | 0.0112 | 130.0000 | 1875 | 10.700170 | | | | 4.452703 | 8.5 | |
| 320 | | 175 | 144302.0 | 143719.1 | 143211.1 | 142685.8 | 0.0112 | 130.0000 | 1875 | 10.700180 | | | | 4.452686 | 8.6 | |
| 330 | | 176 | 144303.4 | 143711.1 | 143207.3 | 142701.9 | 0.0111 | 130.0000 | 1875 | 10.700190 | | | | 4.452679 | 9.6 | |
| | | 177 | | | | | | 130.0000 | 1875 | | | | | | 10 | |
| 448 | | 178 | 144301.6 | 143669.1 | 143063.1 | 142566.1 | 0.0120 | 130.0000 | 1875 | 10.700400 | | | | 4.452464 | 17.3 | |
| 532 | | 179 | 144300.5 | 143702.3 | 143055.4 | 142624.0 | 0.0116 | 130.0000 | 1875 | 10.700450 | | | | 4.452411 | 14.1 | |
| 546 | | 180 | 144302.4 | 143665.5 | 143066.1 | 142548.4 | 0.0122 | 130.0000 | 1875 | 10.700310 | | | | 4.452550 | 13.3 | |
| 559 | | 181 | 144298.5 | 143677.5 | 143069.9 | 142562.9 | 0.0120 | 130.0000 | 1875 | 10.700320 | | | | 4.425545 | 13.3 | |
| 610 | | 182 | 144299.5 | 143685.9 | 143070 | 142571.2 | 0.0120 | 130.0000 | 1875 | 10.700330 | | | | 4.452532 | 13.5 | |
| 621 | | 183 | 144301.1 | 143678.5 | 143057.8 | 142551.4 | 0.0121 | 130.0000 | 1875 | 10.700340 | | | | 4.452522 | 12.7 | |
| 631 | | 184 | 144298.9 | 143687.3 | 143055 | 142564.8 | 0.0120 | 130.0000 | 1875 | 10.700360 | | | | 4.452499 | 13.7 | |
| 640 | | 185 | 144302.8 | 143706.4 | 143078.6 | 142593.1 | 0.0118 | 130.0000 | 1875 | 10.700370 | | | | 4.452494 | 14.1 | |
| 651 | | 186 | 144299.3 | 143698.9 | 143066.8 | 142574.6 | 0.0120 | 130.0000 | 1875 | 10.700380 | | | | 4.452484 | 13.7 | |
| 710 | | 187 | 144302.3 | 143723.4 | 143099.5 | 142620.8 | 0.0117 | 130.0000 | 1875 | 10.700390 | | | | 4.452475 | 14.9 | |
| 721 | 188 | 144299 | 143707.7 | 143074.4 | 142600.8 | 0.0118 | 130.0000 | 1875 | 10.700340 | | | | 4.452524 | 13.7 | | |
| 1104 | 201 | 144294.4 | 143760.8 | 143444 | 143108.5 | 0.0082 | 270.0000 | 3890 | 10.700340 | | | | 4.452524 | | | |
| 1258 | 210 | 144292.5 | 144297 | 143988.3 | 143445.1 | 0.0059 | 270.0000 | 3940 | 10.700000 | | | | 4.452909 | 13.7 | | |
| | 211 | | | | | | | | 10.700000 | | | | 4.452909 | | | |
| | 212 | | | | | | | | 10.700000 | | | | 4.452909 | | | |
| | 213 | | | | | | | | 10.700000 | | | | 4.452909 | | | |
| | 214 | | | | | | | | 10.700000 | | | | 4.452909 | | | |
| 1459 | 215 | | | | | | | | 10.700100 | | | | 4.452809 | | | |
| 1528 | 217 | 144291.8 | 144300.8 | 143992.9 | 143448.1 | 0.0058 | 270.0000 | 3920 | 10.700100 | | | | 4.452858 | 5.00E-02 | | |
| 1611 | 218 | 144293.3 | 144298.1 | 143992 | 143448.9 | 0.0059 | 270.0000 | 4230 | 10.700200 | | | | 4.452857 | 3.62E-01 | | |
| Runs 219 through 234 are missing due to the AGS active filter not working. The AGS active filter is working again for run 235. | | | | | | | | | | | | | | | | |
| | 2034 | 235 | 144283.4 | 144288.4 | 143978.5 | 143424.7 | 0.0060 | 130.0000 | 1860 | 10.700430 | 10.700466 | 4.453081 | 4.452522 | 1.26E-04 | 9.01 6.00E-01 | |

run# **NOTES**

126 AGS active filter down for now.

126 Problem with LABVIEW freq analyzer. Using analyzer at MCR 3.

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201 should throw away since we adjusted radius and energy afterwards

210 H2O Extraction Septum in the AGS tripped from 1328 to 1338.

211 Runs 211-215 taken by experiment without notice to MCR.

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217 At 1500 the calibration of the AGS CBM was changed such that 1047 cnts = 1 Tp (as opposed to 1066 cnts)

218 RF changes to improve poor bunch structure made before this run. Double peaks still seen on plots.

235 Active filter repaired. New KOPIO Frequency control program in use (ramping freq over 1 sec.) 36 Hz difference between start and stop. We use the difference throughout subsequent measurement.

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239 Run with active filter off for comparison with last run.
240 Active filter on.
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251 changed spill servo to create 0.17% dP/P
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262 Added delay to the ADCs. Previous running has improperly timed ADC gate.
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264 Changed AGS Radial Steering (Y Avg) at extraction from 5.5 to 3.9.
265 Changed AGS RF gap volts from ~270KV to ~130KV. Changed AGS Radial Steering at extraction (Y Avg) from 3.9 to 2.6.
267

267 Same as above run 267 except the sampling times for the AGS RF frequency measurements are Early(1950ms) and Late(2950ms).
268 Changed the slope of the frequency ramp from 36Hz/s to 96Hz
269 Changed the slope and timing of freq ramp, it now starts at APP + 2150 (instead of 2510 ms) and lasts 1.2 sec (up from 1 s)
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271 Begin frequency scan with NO slope in the generated frequency.
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274 At this point bunches become non-gaussian (highly double-peaked)
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281 End frequency scan.
282 Beginning rf voltage scan at optimal frequency from freq scan.
283 Power dip just at the end of the run. The experiment has good data, but Siemens tripped before we could take GCC measurements. Later note by ADM - The GCC measurements are from 0917 5/21, after the Siemens had been single cycled fi
284 Possible interbunch contamination from first few spills
285 Begin frequency scan at 25Hz increments (increasing).
286 Changed AGS Radial Steering function at extraction (Y Avg) from 4.2 to 3.95.
287 Lowered AGS Radial Steering function at extraction (Y Avg) from 3.95 to 3.8.
288 Lowered AGS Radial Steering function (Y Avg) from 3.8 to 3.7.
289 ?
290 Lowered AGS Radial Steering function (Y Avg) from 3.7 to 3.6. End frequency scan at 25Hz increments. Run 289 is now run 290. 289 is a bad run as reported from KOPIO.
291 Begin frequency scan at 25Hz increments (decreasing). Raised AGS Radial Steering function at extraction (Y Avg) from 3.6 to 4.25.
292 Raised AGS Radial Steering function at extraction (Y Avg) from 4.25 to 4.5.
293 Raised AGS Radial Steering function at extraction (Y Avg) from 4.5 to 4.65.
294 Raised AGS Radial Steering function at extraction (Y Avg) from 4.65 to 4.85. End frequency scan at 25Hz increments..
295 Lowered the AGS Radial Steering function at extraction (Y Avg) from 4.85 to 4.3.
296 COMMON START Mode
297 Changed
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300 Changed AGS RF Gap Volts from ~270KV to ~130KV. Lowered the AGS Radial Steering function at extraction (Y Avg) from 4.85 to 4.25.

ollowing a power dip.