

Epithelial Adgrf5 (Gpr116) Regulates Pulmonary Alveolar Homeostasis via G_{q/11} Signaling

Authors: Kari Brown¹, Alyssa Filuta¹, Marie-Gabrielle Ludwig², Klaus Seuwen², Julian Jaros², Solange Vidal², Kavisha Arora³, Anjaparavanda P. Naren³, Kathirvel Kandasamy⁴, Kaushik Parthasarathi⁴, Stefan Offermanns⁵, Robert J. Mason⁶, William E. Miller⁷, Jeffrey A. Whitsett¹, James P. Bridges^{1*}

Affiliations:

¹Department of Pediatrics, Perinatal Institute, Section of Pulmonary Biology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA, 45229.

²Novartis Institutes for Biomedical Research, CH-4056 Basel, Switzerland.

³Department of Pediatrics, Division of Pulmonary Medicine, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA, 45229.

⁴Department of Physiology, University of Tennessee Health Sciences Center, Memphis, TN, USA, 38163.

⁵Department of Pharmacology, Max Planck Institute for Heart and Lung Research, Bad Nauheim, Germany, 61231.

⁶Department of Medicine, National Jewish Health, Denver, CO, USA, 80206.

⁷Department of Molecular Genetics, University of Cincinnati College of Medicine, Cincinnati, OH, USA, 45229.

Supplemental Data

Supporting Information - Figure S1

A

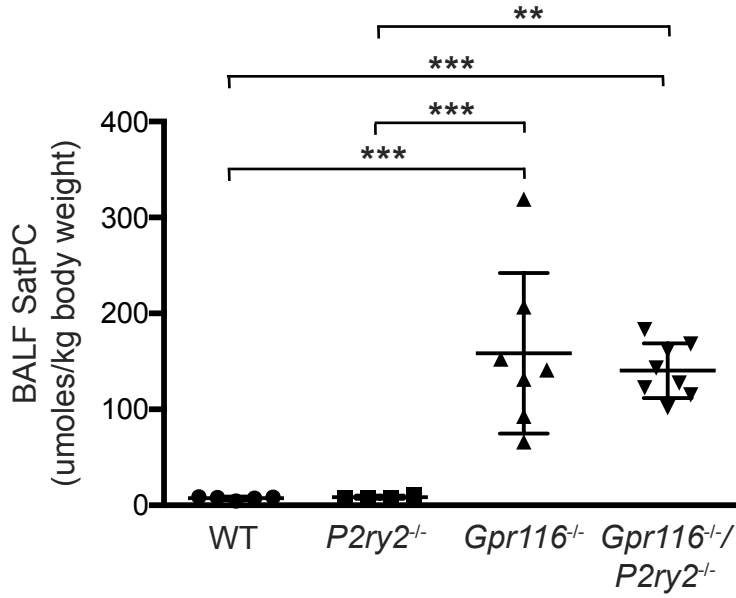
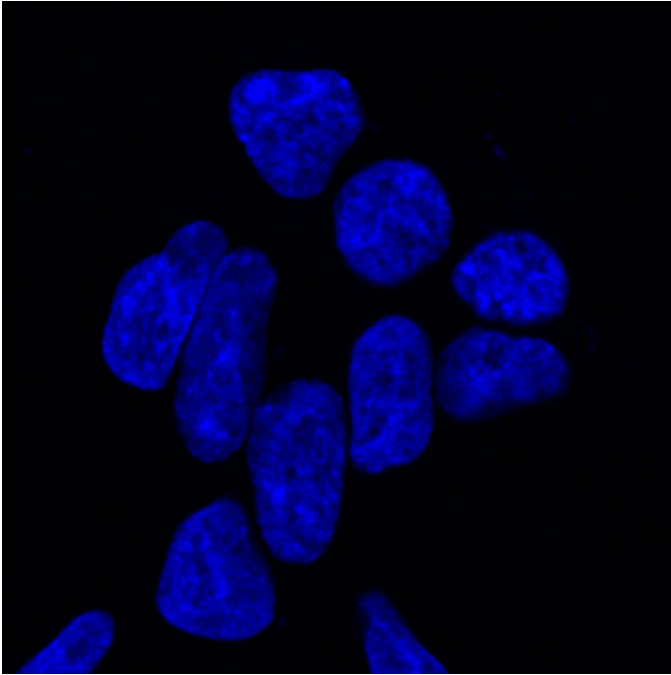


Figure S1 – P2ry2 is dispensable for baseline pulmonary surfactant homeostasis and in the context of Gpr116-dependent surfactant dysregulation. . (A) *Gpr116*^{-/-} mice were crossed with *P2ry2*^{-/-} mice and SatPC pool sizes in BALF were measured in 4 week old animals. n=2 individual experiments, 2-4 animals per group. Data are expressed as means +/- SD. **P<0.01, ***P<0.001 (one way ANOVA).

A



B

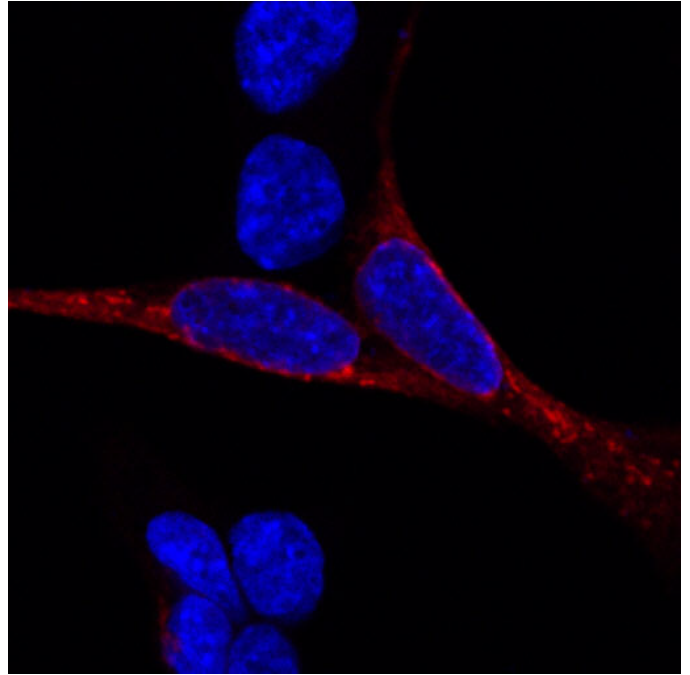


Figure S2. Transient GPR116 CTF-FLAG expression in HEK293 cells. Non-transfected (A) or GPR116 CTF-FLAG transfected (B) cells were fixed, permeabilized and stained with anti-FLAG antibody followed by Alexa568-conjugated secondary Ab and counter stained with DAPI 12hrs post-transfection. Note absence of signal in non-transfected group (A) and in non-transfected cells neighboring FLAG-positive cells in B. Magnification = 100X.

Supporting Information - Figure S3

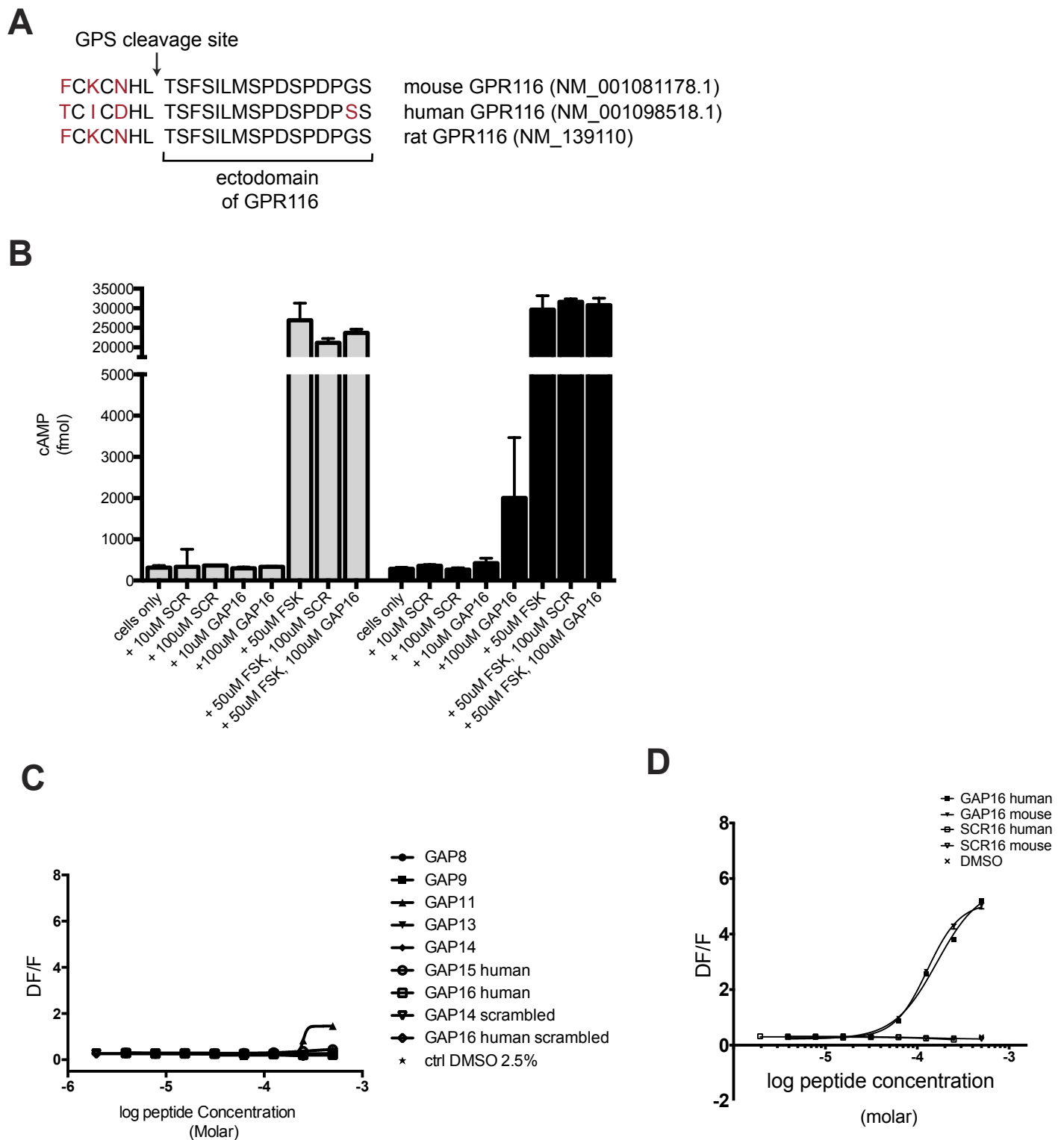
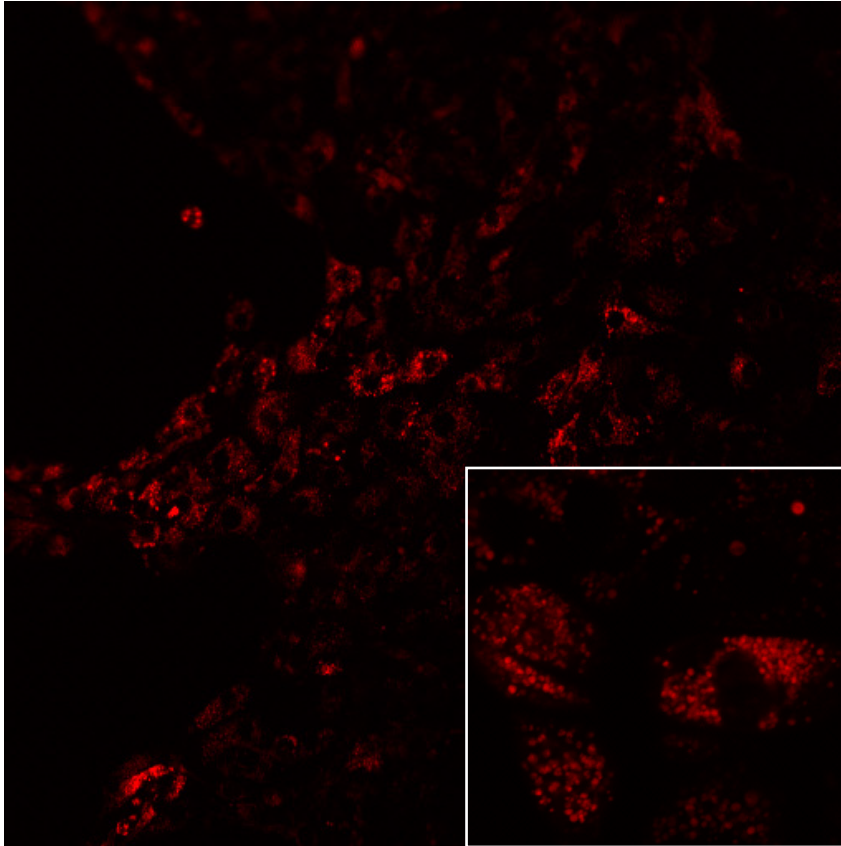


Figure S3. GAP treatment does not induce Gq/11 responses in parental HEK cells or cAMP in GPR116 expressing cells. (A) Protein sequence alignment of mouse, human and rat GPR116 in area surrounding GPS cleavage site. (B) cAMP levels in lysates from HEK cells stably expressing mGPR116 (1D8 line) or hGPR116 (A6 line). n=1 experiment performed with biological replicates. (C) Calcium transient assays of parental HEK cells treated with GAP16 and truncated activating peptides. (D) Calcium transient assays of HEK cells stably expressing human GPR116 (A6 line) with GAP16 peptide using: 1) human activating sequence as a template (GAP16 human); 2) mouse activating sequence as a template (GAP16 mouse); 3) scrambled human GAP16; 4) scrambled mouse GAP16; and 5) DMSO vehicle control.

Supporting Information - Figure S4

A



B

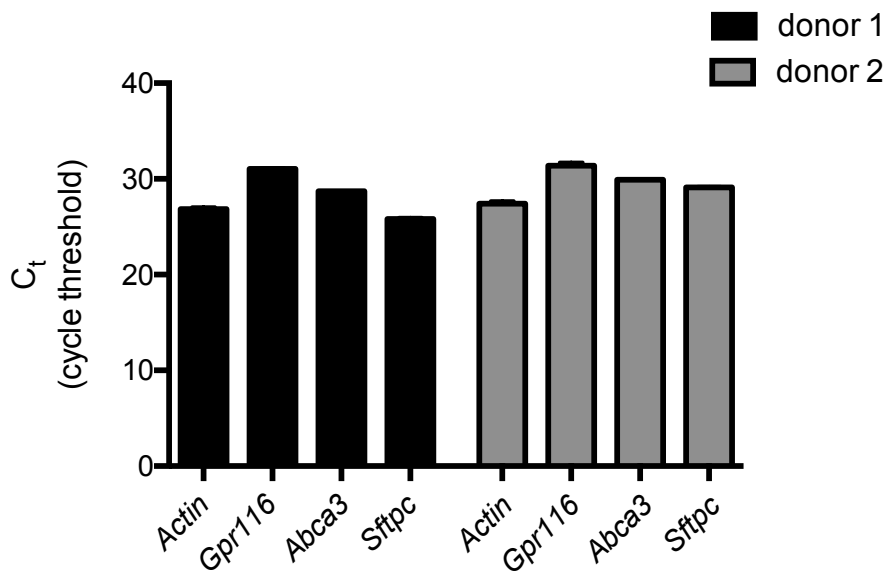


Figure S4. Characterization of primary human AT2 cells. (A) Widefield fluorescent image of Lysotracker red staining of live primary human AT2 cells cultured for 7 days on cultrex/collagen matrix. Note punctate staining pattern, consistent with labelling of lamellar bodies. (B) qPCR analysis of *Actin* and AT2 markers in primary human AT2 cells from 2 individual donors cultured for 7 days on cultrex/collagen matrix. Note high level expression of *Gpr116*, *Abca3* and *Sftpc*.

Supporting Information - TableS1

mGAP16	TSFSILMSPDSPDPGS-OH
mGAP16 scrambled	IFSDSTPSDPGLSMSP-OH
hGAP16	TSFSILMSPDSPDPSS-OH
mGAP15	TSFSILMSPDSPDPG-OH
hGAP15	TSFSILMSPDSPDPS-OH
GAP14	TSFSILMSPDSPDP-OH
GAP14 scrambled	IFSDSTPSDPLSMP-OH
GAP13	TSFSILMSPDSPD-OH
GAP12	TSFSILMSPDSP-OH
GAP11	TSFSILMSPDS-OH
GAP10	TSFSILMSPD-OH
GAP9	TSFSILMSP-OH
GAP9 scrambled	FSSTPSLMI-OH
GAP8	TSFSILMS-OH
GAP7	TSFSILM-OH
GAP6	TSFSIL-OH

Table S1. Sequences for GPR116 activating peptides used in this study.

Supporting Information - Table S2

	hum GPR116		mouse GPR116	
	EC50 mean (uM)	SD	EC50 mean (uM)	SD
GAP16 mouse	150.70	18.53	89.14	2.46
GAP16 human	121.87	25.33	79.21	16.43
GAP15 mouse	144.20	17.68	72.13	1.35
GAP15 human	108.76	40.35	74.08	34.24
GAP14	79.95	6.78	48.60	1.68
GAP13	48.87	2.98	25.39	3.14
GAP12	20.09	9.28	16.62	7.38
GAP11	60.16	13.31	34.42	3.04
GAP10	37.49	12.18	11.94	3.47
GAP9	87.59	11.05	21.78	6.40
GAP8	>500uM (inactive)		>100uM; lower efficacy	
GAP7	>300uM (inactive)		>300uM (inactive)	
GAP6	>300uM (inactive)		>300uM (inactive)	
GAP16 human scrambled	>300uM (inactive)		>300uM (inactive)	
GAP16 mouse scrambled	>500uM (inactive)		>500uM (inactive)	
GAP14 scrambled	>300uM (inactive)		>300uM (inactive)	
GAP9 scrambled	>500uM (inactive)		>500uM (inactive)	

Table S2. EC₅₀ data for GPR116 activating peptides in calcium transient assays on cells stably expressing GPR116. HEK293 cells stably expressing mouse GPR116 (3C) or human GPR116 (A6) were stimulated with GAP16 or C-terminally truncated peptides; GAP9 was identified as the minimal peptide length required for activity and GAP10 and GAP12 were the most potent peptides.

Table S3. Raw fluorescence data for mouse AT2 calcium imaging experiments.

Image Name: GAP -2 100 ul matrigel

Slide Name: Jim calcium 0709125.sld

Capture Date: 07/09/2015

Capture Time: 20:11:33

Image Name: GAP -1 200 ul matrigel

Slide Name: Jim calcium 0709125.sld

Capture Date: 07/09/2015

Capture Time: 19:13:22

Plane	Time	Elapsed (ms)	GFP1-bg	GFP2-bg	GFP3-bg	GFP4-bg	Plane	Time	Elapsed (ms)	GFP (2) - Bkg	GFP (3) - Bkg	GFP (4) - Bkg	GFP (5) - Bkg
0	19:13:22	0	1032.374	1101.5	1019.66	949.474	0	20:11:33	0	408.698	416.738	324.816	429.182
1	19:13:22	9999	1016.227	1073.816	988.607	926.679	1	20:11:33	10000	595.353	602.429	509.559	617.716
2	19:13:22	19999	1005.788	1063.57	965.57	920.512	2	20:11:33	20000	599.722	585.525	502.17	598.695
3	19:13:22	29999	986.97	1075.073	946.917	904.806	3	20:11:33	30001	582.23	577.084	485.725	590.083
4	19:13:22	39999	975.315	1039.626	930.124	890.895	4	20:11:33	40001	574.853	575.443	485.896	595.344
5	19:13:22	49999	981.134	1046.098	946.116	922.181	5	20:11:33	50001	570.72	560.193	482.158	593.344
6	19:13:22	59999	997.592	1055.386	958.333	917.399	6	20:11:33	60001	561.69	551.808	464.086	577.594
7	19:13:22	70000	994.448	1058.67	953.726	916.685	7	20:11:33	70001	584.241	559.143	471.869	588.16
8	19:13:22	80000	990.419	1053.506	973.362	917.463	8	20:11:33	80000	568.529	552.179	460.717	581.777
9	19:13:22	90000	988.448	1059.806	948.19	922.204	9	20:11:33	90000	568.139	550.512	461.421	581.777
10	19:13:22	100000	985.887	1056.206	950.902	931.279	10	20:11:33	100000	559.773	561.655	463.607	593.48
11	19:13:22	110000	982.612	1059.372	965.795	929.751	11	20:11:33	110000	566.834	561.261	460.991	603.328
12	19:13:22	120000	973.321	1044.448	933.85	925.159	12	20:11:33	120000	577.563	562.055	459.22	611.555
13	19:13:22	129999	987.254	1046.616	955.735	905.445	13	20:11:33	130000	569.073	556.432	461.287	597.091
14	19:13:22	139999	1205.351	1163.807	1005.742	1239.081	14	20:11:33	140000	552.837	547.198	447.852	592.041
15	19:13:22	149999	1461.386	1359.623	1098.798	1536.012	15	20:11:33	150000	563.099	553.939	450.555	604.706
16	19:13:22	159999	1617.524	1552.497	1191.059	1717.155	16	20:11:33	160000	615.052	563.44	451.282	610.689
17	19:13:22	169999	1684.879	1633.091	1241.072	1757.36	17	20:11:33	170000	590.951	554.169	450.306	611.075
18	19:13:22	179999	1643.155	1644.247	1236.878	1686.043	18	20:11:33	180001	572.666	547.703	437.412	597.354
19	19:13:22	189999	1599.637	1585.358	1237.321	1601.589	19	20:11:33	190001	563.759	554.414	438.614	600.393
20	19:13:22	199999	1576.222	1511.303	1201.073	1493.61	20	20:11:33	200001	567.519	546.704	436.307	599.074
21	19:13:22	209999	1490.795	1476.799	1174.112	1531.868	21	20:11:33	210001	556.755	542.014	433.336	602.709
22	19:13:22	220000	1435.16	1414.103	1173.156	1536.051	22	20:11:33	220001	570.939	568.822	454.766	632.426
23	19:13:22	230000	1439.178	1367.607	1130.375	1539.351	23	20:11:33	230000	586.275	579.691	459.121	660.872
24	19:13:22	240000	1457.771	1321.962	1130.233	1516.968	24	20:11:33	240000	603.163	612.808	471.892	689.863
25	19:13:22	250000	1388.329	1329.654	1122.869	1471.795	25	20:11:33	250000	622.268	640.16	481.713	712.083
26	19:13:22	260000	1270.151	1256.928	1095.651	1432.242	26	20:11:33	260000	652.22	671.066	499.174	756.388
27	19:13:22	270000	1253.595	1261.527	1124.355	1452.137	27	20:11:33	270000	693.69	730.149	537.412	786.923
28	19:13:22	279999	1195.28	1200.092	1089.318	1366.064	28	20:11:33	280000	716.639	759.411	535.479	822.055
29	19:13:22	289999	1215.036	1187.975	1114.724	1299.27	29	20:11:33	290000	729.262	761.757	543.45	855.532
30	19:13:22	299999	1121.067	1124.521	1058.868	1179.654	30	20:11:33	300000	749.868	771.044	550.977	876.86
31	19:13:22	309999	1141.756	1159.27	1113.192	1162.653	31	20:11:33	310000	756.915	774.418	557.477	897.139
32	19:13:22	319999	1095.866	1130.018	1068.201	1096.912	32	20:11:33	320001	770.58	775.92	551.312	881.561
33	19:13:22	329999	1059.919	1093.067	1034.189	1056.724	33	20:11:33	330001	766.552	774.927	557.853	884.575
34	19:13:22	339999	1045.929	1076.214	1031.405	1013.956	34	20:11:33	340001	758.572	768.243	548.667	885.466
35	19:13:22	349999	1007.948	1054.138	1024.935	995.758	35	20:11:33	350001	746.644	758.598	547.548	884.943
36	19:13:22	360000	989.937	1025.72	990.036	954.132	36	20:11:33	360001	757.531	762.782	553.396	903.868
37	19:13:22	370000	979.499	1049.762	1003.237	950.332	37	20:11:33	370001	749.479	753.222	540.476	884.268
38	19:13:22	380000	959.296	1014.58	972.632	944.954	38	20:11:33	380000	750.246	756.904	546.806	885.087
39	19:13:22	390000	942.54	1018.431	966.542	917.711	39	20:11:33	390000	742.526	749.146	539.628	884.201
40	19:13:22	400000	946.507	1009.489	973.155	917.215	40	20:11:33	400000	733.655	737.427	530.954	871.128
41	19:13:22	410000	919.517	993.97	965.35	918.849	41	20:11:33	410000	734.752	739.625	522.748	870.78
42	19:13:22	420000	917.53	1005.953	961.699	911.326	42	20:11:33	420000	725.799	730.523	514.831	855.282
43	19:13:22	429999	913.555	981.233	938.61	880.802	43	20:11:33	430000	728.816	733.309	518.564	862.372
44	19:13:22	439999	913.863	983.247	969.658	886.421	44	20:11:33	440000	708.584	707.358	500.566	842.454
45	19:13:22	449999	898.565	1027.761	938.254	891.775	45	20:11:33	450000	733.377	742.783	528.794	876.56
46	19:13:22	459999	895.989	1071.248	938.88	900	46	20:11:33	460000	722.66	733.519	509.794	860.707
47	19:13:22	469999	905.295	1071.318	948.122	888.669	47	20:11:33	470001	720.754	726.259	511.794	853.538
48	19:13:22	479999	925.815	1094.53	940.387	874.78	48	20:11:33	480001	719.877	715.291	508.806	850.506
49	19:13:22	489999	899.63	1076.595	938.87	881.13	49	20:11:33	490001	701.251	705.499	499.964	832.782
50	19:13:22	499999	874.546	1065.518	930.611	876.221	50	20:11:33	500001	719.011	711.244	504.577	845.585
51	19:13:22	510000	884.553	1068.077	930.429	894.645	51	20:11:33	510001	693.13	692.822	491.808	823.412
52	19:13:22	520000	886.413	1073.269	942.002	895.592	52	20:11:33	520001	702.282	699.58	497.287	830.551
53	19:13:22	530000	882.597	1079.581	920.008	880.371	53	20:11:33	530000	712.316	705.987	507.989	838.936
54	19:13:22	540000	865.721	1027.564	893.756	875.984	54	20:11:33	540000	712.182	696.087	504.741	841.688
55	19:13:22	550000	890.011	1019.971	929.183	876.082	55	20:11:33	550000	715.316	698.838	507.545	849.54
56	19:13:22	560000	885.589	998.628	915.787	874.116	56	20:11:33	560000	708.277	688.752	495.111	843.889
57	19:13:22	569999	872.844	993.733	909.4	866.918	57	20:11:33	570000	706.371	695.937	503.309	833.197
58	19:13:22	579999	869.36	980.886	907.749	864.149	58	20:11:33	580000	727.197	707.763	507.58	846.567
59	19:13:22	589999	884.253	982.268	907.263	880.176	59	20:11:33	590000	720.215	713.395	513.695	844.625
							60	20:11:33	600000	716.237	713.323	505.737	849.234

Image Name: WT cells + 250uM GAP16 #2
 Slide Name: Jim calcium 090315.sld
 Capture Date: 09/03/2015
 Capture Time: 15:45:55

Plane	Time	Elapsed (ms)	GFP (1) - Bkg	GFP (2) - Bkg	GFP (3) - Bkg	GFP (4) - Bkg	GFP (5) - Bkg	GFP (6) - Bkg	Bkgnd
0	15:45:55	0	491.167	445.363	661.964	2264.349	594.508	1483.071	
1	15:45:55	9999	443.785	405.694	641.493	2208.749	545.569	1431.439	
2	15:45:55	19999	424.048	424.271	639.747	2237.519	547.391	1487.417	
3	15:45:55	29999	463.386	460.116	639.903	2238.397	581.908	1478.39	
4	15:45:55	39999	392.263	396.689	623.012	2197.293	541.566	1450.591	
5	15:45:55	49999	387.131	401.876	640.507	2194.287	551.352	1471.496	
6	15:45:55	59999	406.186	397.656	633.716	2201.926	560.099	1481.158	
7	15:45:55	69999	378.52	405.158	609.769	2182.522	561.936	1487.542	
8	15:45:55	80000	351.204	399.306	622.21	2212.591	565.867	1493.257	
9	15:45:55	90000	334.353	411.945	623.462	2215.765	569.004	1519.387	
10	15:45:55	100000	334.006	402.941	638.413	2195.516	611.062	1530.875	
11	15:45:55	110000	308.43	408.461	635.521	2193.516	601.749	1538.233	
12	15:45:55	120000	309.808	417.329	641.162	2181.197	610.305	1525.907	
13	15:45:55	130000	329.925	428.361	650.196	2185.627	644.563	1541.747	
14	15:45:55	139999	314.333	410.847	647.69	2188.45	633.14	1536.933	
15	15:45:55	149999	743.319	1586.698	1900.155	3872.767	1705.069	3212.369	
16	15:45:55	159999	474.773	962.574	944.31	3769.77	502.919	2526.946	
17	15:45:55	169999	272.786	253.092	229.075	2722.7	364.249	2221.699	
18	15:45:55	179999	-119.29	-141.626	-85.851	2433.372	180.57	2233.464	
19	15:45:55	189999	15.588	26.141	132.443	2593.42	449.004	2318.864	
20	15:45:55	199999	-76.993	-75.059	16.379	2450.079	314.073	2265.082	
21	15:45:55	209999	-106.114	-51.178	55.316	2420.552	295.183	2260.806	
22	15:45:55	219999	-187.456	-75.83	1.236	2357.317	204.6	2217.994	
23	15:45:55	230000	-179.025	-72.015	-9.345	2370.591	128.477	2191.192	
24	15:45:55	240000	-129.794	-64.637	17.509	2339.361	100.789	2117.844	
25	15:45:55	250000	-187.261	-124.072	-50.734	2296.458	60.528	2122.242	
26	15:45:55	260000	-287.053	-213.874	-173.665	2242.89	-45.682	2146.514	
27	15:45:55	270000	-222.847	-175.681	-190.061	2217.737	-92.874	2007.832	
28	15:45:55	280000	-163.206	-174.532	-185.52	2198.295	-116.039	1975.717	
29	15:45:55	289999	-193.46	-243.319	-251.17	2153.559	-152.857	1949.384	
30	15:45:55	299999	-203.883	-247.768	-218.291	2188.923	-149.091	1925.863	
31	15:45:55	309999	-220.806	-245.361	-210.298	2155.05	-149.96	1885.961	
32	15:45:55	319999	-221.251	-281.686	-236.121	2145.508	-143.729	1884.475	
33	15:45:55	329999	-292.645	-301.13	-260.887	2112.238	-176.881	1857.773	
34	15:45:55	339999	-264.884	-277.802	-232.978	2159.667	-157.027	1873.488	
35	15:45:55	349999	-257.02	-245.091	-210.754	2185.121	-108.266	1910.257	
36	15:45:55	359999	-216.765	-204.104	-139.454	2183.94	-99.202	1871.229	
37	15:45:55	369999	-289.314	-253.614	-190.824	2133.738	-117.181	1825.289	
38	15:45:55	380000	-275.026	-249.921	-196.629	2154.746	-136.182	1812.076	
39	15:45:55	390000	-241.748	-190.471	-149.154	2160.021	-131.635	1740.13	
40	15:45:55	400000	-231.894	-160.553	-140.996	2190.806	-120.697	1765.023	
41	15:45:55	410000	-259.233	-194.419	-142.837	2181.151	-136.791	1789.644	
42	15:45:55	420000	-319.256	-250.471	-169.478	2160.459	-109.834	1789.629	
43	15:45:55	430000	-318.498	-239.082	-165.975	2164.318	-66.479	1822.247	
44	15:45:55	439999	-296.192	-236.793	-105.137	2180.692	-30.934	1827.402	
45	15:45:55	449999	-379.83	-342.56	-160.281	2158.262	-71.624	1815.691	
46	15:45:55	459999	-504.408	-432.525	-234.835	2107.622	-54.961	1922.905	
47	15:45:55	469999	-463.094	-400.08	-200.918	2147.554	1.003	1967.067	
48	15:45:55	479999	-462.248	-397.293	-164.827	2154.833	86.534	1994.412	
49	15:45:55	489999	-525.364	-419.225	-181.474	2139.052	79.347	1991.267	
50	15:45:55	499999	-518.894	-444.029	-173.433	2128.761	105.271	1982.209	
51	15:45:55	509999	-468.763	-387.34	-140.68	2160.341	151.986	2000.217	
52	15:45:55	519999	-464.838	-360.51	-121.334	2166.114	176.254	2001.74	
53	15:45:55	530000	-463.6	-350.353	-95.409	2170.649	188.5	1980.89	
54	15:45:55	540000	-467.194	-357.385	-135.431	2155.719	156.972	1982.002	
55	15:45:55	550000	-492.529	-359.773	-108.272	2183.571	165.386	1969.504	
56	15:45:55	560000	-518.243	-380.45	-162.441	2165.816	136.729	1972.055	
57	15:45:55	570000	-480.512	-306.106	-39.184	2246.877	293.442	2063.945	
58	15:45:55	580000	-586.823	-327.835	-72.079	2208.769	209.195	2017.877	
59	15:45:55	589999	-507.56	-302.949	41.434	2222.528	374.793	2054.248	
60	15:45:55	599999	-509.947	-320.787	20.8	2215.326	370.223	2012.857	

Image Name: 11-19-15_TII_WT_GAP2
Slide Name: 11-19-15-1.sld
Capture Date: 11/19/2015
Capture Time: 14:10:01

Plane	Time	Elapsed (ms)	GFP (1) - Bkg	GFP (2) - Bkg	GFP (3) - Bkg	GFP (4) - Bkg	GFP (4) - Bkg
0	14:10:01	0	990.396	1853.726	1651.395	973.824	
1	14:10:01	9999	980.109	1831.197	1625.66	961.088	
2	14:10:01	19999	981.845	1803.104	1616.696	934.235	
3	14:10:01	29999	963.613	1798.847	1618.357	930.274	
4	14:10:01	39999	918.107	1747.197	1562.969	874.414	
5	14:10:01	49999	924.119	1748.276	1558.729	871.884	
6	14:10:01	60000	936.089	1763.425	1581.459	881.113	
7	14:10:01	70000	913.248	1733.527	1552.824	865.6	
8	14:10:01	80000	936.772	1726.757	1556.739	873.666	
9	14:10:01	90000	921.744	1699.379	1519.493	848.289	
10	14:10:01	99999	954.977	1862.547	1609.491	885.712	
11	14:10:01	109999	908.956	1800.488	1617.563	799.232	
12	14:10:01	119999	950.198	1795.276	1567.656	787.606	
13	14:10:01	129999	1480.36	2042.034	1673.284	767.371	
14	14:10:01	139999	1710.235	2242.507	1862.193	798.394	
15	14:10:01	149999	1649.642	2292.216	1971.495	1042.262	
16	14:10:01	159999	1551.168	2259.949	2124.577	1171.533	
17	14:10:01	169999	1508.124	2223.086	2000.567	1130.474	
18	14:10:01	179999	1391.249	2106.887	2012.417	1158.786	
19	14:10:01	189999	1312.25	2144.332	2037.125	1185.369	
20	14:10:01	200000	1250.853	2006.612	1982.613	1102.538	
21	14:10:01	210000	1140.544	1857.341	1843.1	1041.091	
22	14:10:01	220000	1113.131	1780.963	1900.35	1012.219	
23	14:10:01	230000	1017.859	1799.52	1774.518	971.471	
24	14:10:01	240000	991.204	1808.339	1761.764	924.698	
25	14:10:01	249999	957.559	1764.204	1724.286	873.887	
26	14:10:01	259999	951.959	1692.197	1658.491	870.741	
27	14:10:01	269999	971.5	1655.42	1622.069	825.458	
28	14:10:01	279999	958.423	1699.046	1628.517	816.363	
29	14:10:01	289999	939.765	1659.055	1617.705	853.627	
30	14:10:01	299999	926.316	1642.387	1600.365	825.06	
31	14:10:01	309999	921.954	1597.371	1576.395	813.309	
32	14:10:01	319999	910.572	1617.12	1572.283	799.732	
33	14:10:01	329999	911.184	1604.113	1561.192	795.119	
34	14:10:01	339999	922.95	1648.405	1570.721	777.657	
35	14:10:01	350000	918.113	1638.822	1593.747	773.929	
36	14:10:01	360000	922.664	1646.787	1586.426	767.55	
37	14:10:01	370000	938.651	1642.404	1591.156	770.407	
38	14:10:01	380000	920.015	1630.154	1591.284	775.602	
39	14:10:01	390000	904.879	1613.544	1576.074	782.93	
40	14:10:01	399999	895.019	1584.093	1560.179	772.837	
41	14:10:01	409999	907.914	1588.318	1562.039	782.288	
42	14:10:01	419999	909.571	1628.643	1571.231	800.248	
43	14:10:01	429999	881.192	1594.112	1552.294	776.223	
44	14:10:01	439999	893.58	1574.164	1545.361	779.877	
45	14:10:01	449999	903.164	1581.724	1551.692	782.907	
46	14:10:01	459999	924.258	1593.089	1563.715	795.582	
47	14:10:01	469999	922.823	1590.734	1572.572	795.018	
48	14:10:01	479999	906.827	1592.369	1573.482	794.1	
49	14:10:01	489999	906.084	1584.823	1560.157	788.681	
50	14:10:01	500000	880.629	1559.841	1533.176	773.874	
51	14:10:01	510000	888.223	1598.28	1546.83	784.634	
52	14:10:01	520000	897.628	1610.593	1549.34	798.189	
53	14:10:01	530000	882.964	1608.341	1549.887	776.687	
54	14:10:01	540000	894.312	1601.952	1563.205	781.543	
55	14:10:01	549999	869.329	1599.807	1567.127	777.513	
56	14:10:01	559999	856.511	1553.039	1539.797	759.298	
57	14:10:01	569999	877.448	1601.287	1547.319	780.403	
58	14:10:01	579999	856.139	1555.745	1525.052	750.514	
59	14:10:01	589999	751.035	1394.224	1383.443	837.55	
60	14:10:01	599999	1815.707	3742.841	2758.763	817.45	

Image Name: 11-19-15_TII_WT_GAP-1
Slide Name: 11-19-15-1.sld
Capture Date: 11/19/2015
Capture Time: 10:29:06

Plane	Time	Elapsed (ms)	GFP (1) - Bkg	GFP (1) - Bkg
0	10:29:06	0	667.862	
1	10:29:06	10000	652.805	
2	10:29:06	20000	658.038	
3	10:29:06	30000	646.681	
4	10:29:06	40000	637.74	
5	10:29:06	50001	638.192	
6	10:29:06	60001	638.048	
7	10:29:06	70001	626.1	
8	10:29:06	80001	629.588	
9	10:29:06	90001	620.49	
10	10:29:06	100001	580.148	
11	10:29:06	110001	629.138	
12	10:29:06	120001	743.185	
13	10:29:06	130001	836.091	
14	10:29:06	140001	877.358	
15	10:29:06	150001	792.44	
16	10:29:06	160001	717.344	
17	10:29:06	170001	669.5	
18	10:29:06	180001	635.773	
19	10:29:06	190001	628.332	
20	10:29:06	200002	602.771	
21	10:29:06	210002	620.777	
22	10:29:06	220002	630.438	
23	10:29:06	230002	611.744	
24	10:29:06	240002	606.259	
25	10:29:06	250001	616.714	
26	10:29:06	260001	620.44	
27	10:29:06	270001	620.212	
28	10:29:06	280001	627.742	
29	10:29:06	290001	596.51	
30	10:29:06	300001	610.568	
31	10:29:06	310001	602.251	
32	10:29:06	320001	620.691	
33	10:29:06	330001	633.943	
34	10:29:06	340001	619.983	
35	10:29:06	350001	624.236	
36	10:29:06	360002	605.988	
37	10:29:06	370002	615.63	
38	10:29:06	380002	613.622	
39	10:29:06	390002	610.705	
40	10:29:06	400001	612.57	
41	10:29:06	410001	604.351	
42	10:29:06	420001	611.986	
43	10:29:06	430001	606.486	
44	10:29:06	440001	607.562	
45	10:29:06	450001	592.372	
46	10:29:06	460001	598.222	
47	10:29:06	470001	609.211	
48	10:29:06	480001	594.792	
49	10:29:06	490001	607.893	
50	10:29:06	500002	600.158	
51	10:29:06	510002	602.424	
52	10:29:06	520002	587.824	
53	10:29:06	530002	602.729	
54	10:29:06	540002	585.542	
55	10:29:06	550001	590.237	
56	10:29:06	560001	581.372	
57	10:29:06	570001	583.81	
58	10:29:06	580001	609.645	
59	10:29:06	590001	591.853	
60	10:29:06	600001	598.563	

Image Name: SRC - 1 200 ul matrigel
 Slide Name: Jim calcium 0709125.sld
 Capture Date: 07/09/2015
 Capture Time: 18:36:55

Plane	Time	Elapsed (ms)	GFP1-bg	2-bg	3-bg
0	18:36:55	0	605.999	587.084	259.598
1	18:36:55	10001	605.352	587.237	259.585
2	18:36:55	20001	605.659	584.454	253.105
3	18:36:55	30001	618.542	598.065	264.176
4	18:36:55	40001	621.502	596.49	254.255
5	18:36:55	50000	632.773	606.305	259.08
6	18:36:55	60000	634.758	612.398	259.172
7	18:36:55	70000	638.865	617.557	259.132
8	18:36:55	80000	654.17	625.553	257.527
9	18:36:55	90000	633.84	617.284	264.924
10	18:36:55	100000	632.561	610.496	266.419
11	18:36:55	110000	625.323	602.829	264.782
12	18:36:55	120000	622.713	607.749	266.247
13	18:36:55	130000	616.26	598.312	277.486
14	18:36:55	140000	612.197	596.748	259.858
15	18:36:55	150001	610.089	594.708	262.277
16	18:36:55	160001	611.075	598.161	262.62
17	18:36:55	170001	615.93	607.121	260.183
18	18:36:55	180001	614.379	607.558	260.405
19	18:36:55	190001	618.114	602.233	257.536
20	18:36:55	200000	614.717	602.574	255.278
21	18:36:55	210000	614.495	603.746	255.606
22	18:36:55	220000	624.99	616.046	258.893
23	18:36:55	230000	624.454	604.503	259.914
24	18:36:55	240000	612.011	592.909	244.789
25	18:36:55	250000	616.002	596.66	255.288
26	18:36:55	260000	614.149	594.869	254.2
27	18:36:55	270000	606.445	591.298	247.898
28	18:36:55	280000	602.151	588.411	248.5
29	18:36:55	290001	600.51	577.58	243.375
30	18:36:55	300001	580.206	560.696	231.116
31	18:36:55	310001	568.04	544.716	216.828
32	18:36:55	320001	568.751	547.327	216.207
33	18:36:55	330001	569.032	548.169	211.895
34	18:36:55	340001	568.522	543.568	209.855
35	18:36:55	350000	635.775	611.174	156.392
36	18:36:55	360000	567.599	538.151	205.396
37	18:36:55	370000	567.292	539.824	202.495
38	18:36:55	380000	578.81	543.425	199.706
39	18:36:55	390000	588.823	563.496	208.504
40	18:36:55	400000	607.859	579.518	219.34
41	18:36:55	410000	623.237	586.92	244.072
42	18:36:55	420000	632.335	590.452	235.223
43	18:36:55	430000	640.223	595.105	236.857
44	18:36:55	440000	646.62	606.49	241.804
45	18:36:55	450001	654.235	610.159	231.604
46	18:36:55	460001	655.566	609.835	231.592
47	18:36:55	470001	661.252	618.131	234.216
48	18:36:55	480001	651.38	620.353	232.595
49	18:36:55	490001	674.58	640.499	268.854
50	18:36:55	500000	587.781	524.597	187.899

Image Name: Control peptide 250 uM-2
 Slide Name: Jim calcium 072415.sld
 Capture Date: 07/24/2015
 Capture Time: 17:04:45

Plane	Time	Elapsed (ms)	GFP (1)	Bkgn GFP (3)	Bkgn GFP (4)	Bkgn GFP (5)	Bkg
0	17:04:45	0	312.793	1509.718	691.403		374.892
1	17:04:45	10001	300.577	1481.422	651.476		348.696
2	17:04:45	20001	298.144	1454.397	664.074		372.035
3	17:04:45	30000	309.414	1441.084	656.546		379.217
4	17:04:45	40000	288.622	1431.398	654.767		402.06
5	17:04:45	50000	293.789	1436.199	662.111		426.756
6	17:04:45	60000	290.849	1408.916	646.68		417.498
7	17:04:45	70000	282.488	1437.128	683.778		384.735
8	17:04:45	80000	262.985	1409.084	650.518		360.473
9	17:04:45	90000	289.598	1412.236	677.914		386.586
10	17:04:45	100000	283.94	1400.716	662.062		361.702
11	17:04:45	110000	281.16	1406.643	663.336		376.749
12	17:04:45	120000	272.842	1371.37	653.338		354.651
13	17:04:45	130001	320.109	1416.246	685.294		389.353
14	17:04:45	140001	346.816	1469.414	700.954		405.388
15	17:04:45	150001	363.102	1473.198	701.009		404.887
16	17:04:45	160001	367.447	1454.569	670.689		411.166
17	17:04:45	170001	343.139	1441.749	676.495		417.702
18	17:04:45	180000	303.711	1404.137	662.199		427.271
19	17:04:45	190000	239.912	1353.697	627.606		434.277
20	17:04:45	200000	128.205	1311.206	614.67		368.044
21	17:04:45	210000	188.801	1397.198	629.484		341.952
22	17:04:45	220000	228.83	1393.111	604.306		369.549
23	17:04:45	230000	186.437	1332.358	582.722		342.217
24	17:04:45	240000	181.97	1378.293	589.173		343.405
25	17:04:45	250000	188.624	1362.335	575.501		338.676
26	17:04:45	260000	192.072	1356.118	572.039		328.688
27	17:04:45	270001	172.352	1325.791	560.857		343.905
28	17:04:45	280001	174.278	1332.078	570.132		329.935
29	17:04:45	290001	199.669	1357.439	577.485		353.232
30	17:04:45	300001	177.873	1311.453	560.028		325.752
31	17:04:45	310001	185.287	1332.077	565.281		331.462
32	17:04:45	320001	172.965	1325.972	541.058		330.224
33	17:04:45	330000	168.372	1285.831	553.173		327.269
34	17:04:45	340000	191.492	1300.818	564.331		341.775
35	17:04:45	350000	191.631	1299.313	545.517		327.618
36	17:04:45	360000	176.792	1298.216	535.958		335.021
37	17:04:45	370000	202.255	1315.908	542.866		337.978
38	17:04:45	380000	201.502	1299.514	542.841		338.407
39	17:04:45	390000	217.205	1323.707	556.219		358.404
40	17:04:45	400000	201.747	1332.503	568.432		344.714
41	17:04:45	410000	197.373	1309.275	545.943		331.455
42	17:04:45	420001	201.47	1292.482	533.635		336.018
43	17:04:45	430001	198.469	1296.137	555.677		334.543
44	17:04:45	440001	218.542	1292.471	554.074		335.883
45	17:04:45	450001	203.971	1289.735	553.8		320.17
46	17:04:45	460001	220.84	1294	555.963		315.385
47	17:04:45	470000	243.902	1318.205	574.918		344.688
48	17:04:45	480000	230.359	1307.623	564.659		349.882
49	17:04:45	490000	216.214	1291.09	541.93		338.323
50	17:04:45	500000	235.797	1290.06	571.973		343.714
51	17:04:45	510000	235.156	1297.573	553.229		341.498
52	17:04:45	520000	239.25	1290.721	549.504		349.583
53	17:04:45	530000	227.999	1280.965	543.492		345.065
54	17:04:45	540000	233.57	1287.059	546.295		330.595
55	17:04:45	550000	233.344	1297.261	565.083		334.805
56	17:04:45	560000	220.29	1267.522	537.628		319.3
57	17:04:45	570001	246.108	1285.836	552.963		335.986
58	17:04:45	580001	262.67	1295.99	570.42		345.429
59	17:04:45	590001	253.131	1283.301	567.095		358.8
60	17:04:45	600001	237.213	1273.443	566.68		340.845

Image Name: WT scram +Iono#1
Slide Name: Jim calcium 092815.sld
Capture Date: 09/28/2015
Capture Time: 14:08:04

Plane	Time	Elapsed (ms)	GFP (1) - Bkg	GFP (2) - Bkg	GFP (3) - Bkgnd
0	14:08:04	0	3982.845	3920.287	2315.011
1	14:08:04	10000	3792.269	3666.668	2150.033
2	14:08:04	20001	3834.393	3713.935	2140.579
3	14:08:04	30001	3935.204	3701.345	2168.301
4	14:08:04	40001	4019.748	3798.457	2249.949
5	14:08:04	50001	3667.555	3488.483	2069.044
6	14:08:04	60000	3804.777	3668.299	2121.866
7	14:08:04	70000	3831.08	3605.966	2129.742
8	14:08:04	80000	3760.688	3593.17	2127.638
9	14:08:04	90000	3683.562	3486.486	2028.644
10	14:08:04	100000	3709.542	3604.431	2158.237
11	14:08:04	110000	3582.305	3375.776	1986.942
12	14:08:04	120000	3534.608	3296.258	1909.741
13	14:08:04	130000	3641.024	3433.674	1950.985
14	14:08:04	140000	3578.054	3427.317	2059.863
15	14:08:04	150000	3414.087	3351.785	1984.255
16	14:08:04	160001	3502.846	3383.356	1958.14
17	14:08:04	170001	3512.482	3427.29	2055.638
18	14:08:04	180001	3294.606	3305.879	1941.866
19	14:08:04	190001	3351.737	3329.24	2015.855
20	14:08:04	200000	3433.096	3366.773	1986.334
21	14:08:04	210000	3497.999	3418.388	2034.98
22	14:08:04	220000	3355.495	3161.507	1829.013
23	14:08:04	230000	3316.914	3110.436	1782.732
24	14:08:04	240000	3410.696	3189.815	1716.095
25	14:08:04	250000	3404.259	3222.14	1883.707
26	14:08:04	260000	3408.72	3217.252	1775.172
27	14:08:04	270000	3393.278	3271.587	1821.262
28	14:08:04	280000	3512.937	3428.532	2010.175
29	14:08:04	290000	3428.777	3193.361	1859.847
30	14:08:04	300001	3553.897	3427.266	1983.457
31	14:08:04	310001	3316.404	3192.808	1787.705
32	14:08:04	320001	3196.918	2973.333	1622.936
33	14:08:04	330001	3417.779	3104.307	1867.174
34	14:08:04	340001	3247.269	3044.09	1739.365
35	14:08:04	350000	3299.533	3053.364	1779.677
36	14:08:04	360000	3103.805	2978.051	1833.026
37	14:08:04	370000	3237.136	3188.91	1973.172
38	14:08:04	380000	3222.4	2977.464	1772.709
39	14:08:04	390000	3204.988	3035.917	1823.912
40	14:08:04	400000	3137.273	3028.602	1874.502
41	14:08:04	410000	2979.978	2892.815	1840.148
42	14:08:04	420000	3005.565	2879.663	1846.056
43	14:08:04	430000	3126.675	2982.723	1871.235
44	14:08:04	440000	3176.098	2942.123	1810.161
45	14:08:04	450001	2999.196	2801.963	1716.813
46	14:08:04	460001	2994.21	2739.707	1689.627
47	14:08:04	470001	2824.908	2632.926	1541.816
48	14:08:04	480001	2912.239	2665.561	1648.951
49	14:08:04	490001	2919.121	2734.568	1819.333
50	14:08:04	500000	2827.815	2801.804	1736.56
51	14:08:04	510000	2916.706	2859.817	1768.008
52	14:08:04	520000	3045.433	2923.217	1826.091
53	14:08:04	530000	3027.036	2966.637	1850.601
54	14:08:04	540000	2943.598	2876.095	1791.935
55	14:08:04	550000	2925.156	2876.798	1831.74
56	14:08:04	560000	2895.02	2907.932	1864.56
57	14:08:04	570000	2756.731	2806.504	1837.64
58	14:08:04	580000	2755.487	2916.727	1971.476
59	14:08:04	590000	2606.91	2654.485	1729.383
60	14:08:04	600001	2910.344	3012.008	1974.338

Image Name: 11-19-15_TII_WT_scram2
Slide Name: 11-19-15-1.sld
Capture Date: 11/19/2015
Capture Time: 13:39:04

Plane	Time	Elapsed (ms)	GFP (3) - Bkg
0	13:39:04	0	412.968
1	13:39:04	9999	397.787
2	13:39:04	19999	382.535
3	13:39:04	29999	376.277
4	13:39:04	39999	362.421
5	13:39:04	49999	354.087
6	13:39:04	59999	358.073
7	13:39:04	69999	372.653
8	13:39:04	79999	357.061
9	13:39:04	89999	347.889
10	13:39:04	100000	382.991
11	13:39:04	110000	353.656
12	13:39:04	120000	354.349
13	13:39:04	130000	337.183
14	13:39:04	140000	343.881
15	13:39:04	149999	347.764
16	13:39:04	159999	349.785
17	13:39:04	169999	336.336
18	13:39:04	179999	350.224
19	13:39:04	189999	355.966
20	13:39:04	199999	336.606
21	13:39:04	209999	355.489
22	13:39:04	219999	345.935
23	13:39:04	229999	357.152
24	13:39:04	240000	353.174
25	13:39:04	250000	353.334
26	13:39:04	260000	336.854
27	13:39:04	270000	349.328
28	13:39:04	280000	275.732
29	13:39:04	290000	346.479
30	13:39:04	299999	335.867
31	13:39:04	309999	354.584
32	13:39:04	319999	339.288
33	13:39:04	329999	346.176
34	13:39:04	339999	336.941
35	13:39:04	349999	332.204
36	13:39:04	359999	331.401
37	13:39:04	369999	336.528
38	13:39:04	379999	311.581
39	13:39:04	389999	304.478
40	13:39:04	400000	323.071
41	13:39:04	410000	312.314
42	13:39:04	420000	327.855
43	13:39:04	430000	310.789
44	13:39:04	440000	334.457
45	13:39:04	450000	321.787
46	13:39:04	460000	299.765
47	13:39:04	470000	317.732
48	13:39:04	480000	317.375
49	13:39:04	490000	337.724
50	13:39:04	500000	316.736
51	13:39:04	510000	332.054
52	13:39:04	520000	341.016
53	13:39:04	530001	320.919
54	13:39:04	540000	313.533
55	13:39:04	550001	315.133
56	13:39:04	560001	317.294
57	13:39:04	570001	298.44
58	13:39:04	580001	300.708
59	13:39:04	590000	295.777
60	13:39:04	600000	285.626

Image Name: 11-19-15_TII_WT_scam-1

Slide Name: 11-19-15-1.sld

Capture Date: 11/19/2015

Capture Time: 10:50:00

Plane	Time	Elapsed (ms)	GFP (1) - Bkg	GFP (2) - Bkgnd
0	10:50:00	0	-207.917	920.916
1	10:50:00	9999	378.532	1510.823
2	10:50:00	19999	374.047	1519.014
3	10:50:00	29999	379.709	1521.648
4	10:50:00	39999	353.382	1491.174
5	10:50:00	49999	365.052	1503.547
6	10:50:00	59999	358.557	1482.195
7	10:50:00	70000	349.219	1484.926
8	10:50:00	80000	347.762	1483.723
9	10:50:00	90000	337.901	1473.949
10	10:50:00	100000	358.689	1528.365
11	10:50:00	110000	270.187	1627.907
12	10:50:00	119999	221.772	1582.208
13	10:50:00	129999	237.215	1644.043
14	10:50:00	139999	240.624	1593.606
15	10:50:00	149999	265.966	1572.732
16	10:50:00	159999	263.791	1561.655
17	10:50:00	169999	268.456	1576.906
18	10:50:00	179999	268.671	1563.692
19	10:50:00	189999	277.398	1579.432
20	10:50:00	199999	272.933	1544.462
21	10:50:00	209999	281.112	1534.501
22	10:50:00	220000	284.116	1544.534
23	10:50:00	230000	290.193	1543.527
24	10:50:00	240000	290.348	1541.814
25	10:50:00	250000	294.347	1535.45
26	10:50:00	260000	291.872	1527.823
27	10:50:00	269999	298.471	1543.067
28	10:50:00	279999	299.901	1519.372
29	10:50:00	289999	298.069	1528.62
30	10:50:00	299999	304.002	1508.284
31	10:50:00	309999	316.292	1515.059
32	10:50:00	319999	302.525	1489.63
33	10:50:00	329999	311.617	1505.277
34	10:50:00	339999	311.508	1506.826
35	10:50:00	349999	318.773	1503.109
36	10:50:00	359999	304.854	1483.602
37	10:50:00	370000	306.399	1495.953
38	10:50:00	380000	306.438	1481.87
39	10:50:00	390000	306.439	1495.712
40	10:50:00	400000	315.682	1504.467
41	10:50:00	410000	313.658	1481.561
42	10:50:00	419999	309.961	1474.331
43	10:50:00	429999	315.226	1488.314
44	10:50:00	439999	324.489	1496.188
45	10:50:00	449999	313.093	1480.637
46	10:50:00	459999	311.953	1463.033
47	10:50:00	469999	311.618	1461.707
48	10:50:00	479999	314.388	1470.455
49	10:50:00	489999	311.048	1468.404
50	10:50:00	499999	310.769	1471.24
51	10:50:00	509999	305.684	1466.148
52	10:50:00	520000	305.811	1459.496
53	10:50:00	530000	305.596	1460.183
54	10:50:00	540000	309.843	1454.764
55	10:50:00	550000	316.174	1460.912
56	10:50:00	560000	308.056	1440.801
57	10:50:00	569999	312.53	1438.65
58	10:50:00	579999	303.855	1428.237
59	10:50:00	589999	318.699	1430.889
60	10:50:00	599999	307.573	1419.34

Image Name: 11-19-15_TII_KO_GAP2

Slide Name: 11-19-15-1.sld

Capture Date: 11/19/2015

Capture Time: 14:36:15

Plane	Time	Elapsed (ms)	GFP (2) - Bkgn	GFP (3) - Bkgn	GFP (4) - Bkgn
0	14:36:15	0	101.062	467.846	713.281
1	14:36:15	10000	91.589	459.38	701.784
2	14:36:15	20000	79.164	431.954	689.507
3	14:36:15	30000	64.354	423.056	668.802
4	14:36:15	40000	73.403	432.399	680.175
5	14:36:15	50000	73.735	426.333	668.284
6	14:36:15	60000	50.896	398.701	641.362
7	14:36:15	70001	59.501	403.541	644.152
8	14:36:15	80001	57.029	397.564	638.572
9	14:36:15	90001	59.917	408.529	642.086
10	14:36:15	100001	-33.639	373.052	699.76
11	14:36:15	110000	43.407	402.878	648.857
12	14:36:15	120000	-16.883	366.828	627.322
13	14:36:15	130000	-12.642	372.569	638.277
14	14:36:15	140000	-1.245	375.646	626.898
15	14:36:15	150000	-18.259	372.637	617.056
16	14:36:15	160000	9.334	395.813	636.262
17	14:36:15	170000	6.303	387.246	622.601
18	14:36:15	180000	19.514	399.339	625.165
19	14:36:15	190000	25.143	384.048	631.018
20	14:36:15	200000	11.899	421.037	626.892
21	14:36:15	210001	32.592	412.649	630.026
22	14:36:15	220001	31.814	411.559	629.199
23	14:36:15	230001	37.858	400.566	641.151
24	14:36:15	240001	28.961	399.445	632.34
25	14:36:15	250001	53.049	413.685	648.914
26	14:36:15	260000	37.152	411.507	637.521
27	14:36:15	270000	56.57	425.307	651.448
28	14:36:15	280000	57.904	395.727	643.502
29	14:36:15	290000	63.581	395.575	653.144
30	14:36:15	300000	81.293	419.087	673.517
31	14:36:15	310000	91.026	441.342	680.341
32	14:36:15	320000	89.912	429.166	668.087
33	14:36:15	330000	95.075	460.792	668.304
34	14:36:15	340000	84.145	463.53	656.663
35	14:36:15	350000	76.115	452.88	648.789
36	14:36:15	360001	93.145	468.106	667.771
37	14:36:15	370001	73.178	449.166	651.292
38	14:36:15	380001	83.795	459.403	651.706
39	14:36:15	390001	66.774	446.326	638.965
40	14:36:15	400001	79.048	459.041	657.876
41	14:36:15	410000	89.259	457.272	656.112
42	14:36:15	420000	82.099	449.12	636.716
43	14:36:15	430000	79.22	454.421	642.312
44	14:36:15	440000	94.237	467.673	651.966
45	14:36:15	450000	79.706	457.986	637.47
46	14:36:15	460000	84.935	467.742	641.679
47	14:36:15	470000	86.382	459.325	643.997
48	14:36:15	480000	85.015	455.173	640.787
49	14:36:15	490000	101.553	466.847	654.359
50	14:36:15	500000	93.319	455.543	649.111
51	14:36:15	510001	104.005	468.664	657.186
52	14:36:15	520001	122.209	492.359	684.468
53	14:36:15	530001	92.485	465.947	647.874
54	14:36:15	540001	109.081	478.181	668.654
55	14:36:15	550001	90.854	462.583	655.148
56	14:36:15	560000	97.95	472.05	654.265
57	14:36:15	570000	94.142	466.426	652.732
58	14:36:15	580000	95.229	465.61	649.528
59	14:36:15	590000	84.58	451.674	640.358
60	14:36:15	600000	95.46	458.398	653.599
61	14:36:15	610000	82.901	471.24	648.227
62	14:36:15	620000	86.307	493.536	653.025
63	14:36:15	630000	93.884	487.987	656.18
64	14:36:15	640000	74.799	458.371	636.657
65	14:36:15	650000	109.915	498.554	671.642
66	14:36:15	660001	87.906	468.691	648.323
67	14:36:15	670001	76.974	453.658	637.542
68	14:36:15	680001	93.484	459.711	656.303
69	14:36:15	690001	107.96	479.701	661.493
70	14:36:15	700001	91.941	465.387	646.483
71	14:36:15	710000	84.912	473	639.066
72	14:36:15	720000	113.172	493.318	666.932
73	14:36:15	730000	114.132	481.699	658.96
74	14:36:15	740000	226.576	491.308	687.051
75	14:36:15	750000	557.941	565.622	874.314
76	14:36:15	760000	901.801	755.759	1275.63
77	14:36:15	770000	1119.197	1069.286	1774.145
78	14:36:15	780000	1203.943	1350.725	2103.727
79	14:36:15	790000	1217.843	1504.505	2244.615
80	14:36:15	800001	1191.988	1518.918	2236.545
81	14:36:15	810001	1151.01	1475.552	2181.709
82	14:36:15	820001	1132.203	1480.542	2174.164
83	14:36:15	830001	1111.744	1450.452	2144.734
84	14:36:15	840001	1096.738	1431.486	2133.474
85	14:36:15	850001	1093.422	1455.947	2147.508
86	14:36:15	860000	1111.152	1512.101	2192.965
87	14:36:15	870000	1141.488	1613.139	2271.182
88	14:36:15	880000	1151.597	1684.83	2324.078
89	14:36:15	890000	1174.954	1768.74	2386.833

Image Name: 11-19-15_TII_WT_ATP-1

Slide Name: 11-19-15-1.sld

Capture Date: 11/19/2015

Capture Time: 10:06:01

Plane	Time	Elapsed (ms)	GFP (1) - Bkg	GFP (2) - Bkg	GFP (3) - Bkg	GFP (4) - Bkg	Bkgnd
0	10:06:01	0	351.321	466.643	442.34	616.664	
1	10:06:01	10000	350.284	470.126	439.664	619.189	
2	10:06:01	20000	340.011	467.337	436.901	601.406	
3	10:06:01	30000	334.268	455.439	429.635	593.277	
4	10:06:01	40000	327.791	452.465	422.867	580.67	
5	10:06:01	50001	324.903	450.809	420.742	581.622	
6	10:06:01	60001	310.424	434.302	406.955	558.539	
7	10:06:01	70001	304.181	432.979	403.905	555.509	
8	10:06:01	80000	321.208	446.496	421.712	570.358	
9	10:06:01	90000	354.222	480.718	451.541	622.346	
10	10:06:01	100000	1443.494	1759.691	1533.038	2222.719	
11	10:06:01	110000	1365.604	1664.262	1547.079	2141.613	
12	10:06:01	120000	1294.441	1508.111	1447.712	1962.891	
13	10:06:01	130000	1215.39	1419.391	1381.547	1842.956	
14	10:06:01	140000	1164.68	1365.874	1325.433	1739.926	
15	10:06:01	150000	1136.123	1315.077	1279.282	1656.354	
16	10:06:01	160000	1089.693	1268.668	1239.621	1628.155	
17	10:06:01	170000	1056.869	1252.591	1203.076	1588.699	
18	10:06:01	180001	1040.695	1219.374	1172.823	1527.109	
19	10:06:01	190001	1007.324	1165.696	1138.871	1450.094	
20	10:06:01	200001	1010.967	1160.369	1125.94	1440.852	
21	10:06:01	210001	960.273	1138.601	1086.289	1397.371	
22	10:06:01	220001	925.936	1129.322	1062.749	1349.213	
23	10:06:01	230000	897.621	1107.362	1039.349	1281.783	
24	10:06:01	240000	853.83	1086.803	1011.119	1246.815	
25	10:06:01	250000	869.035	1104.542	1010.431	1243.149	
26	10:06:01	260000	808.999	1068.758	965.976	1169.067	
27	10:06:01	270000	762.957	1029.528	909.805	1097.511	
28	10:06:01	280000	712.614	996.263	881.116	1051.153	
29	10:06:01	290000	670.088	937.072	833.616	983.09	
30	10:06:01	300000	647.915	911.729	806.098	960.327	
31	10:06:01	310000	616.906	854.688	772.043	930.023	
32	10:06:01	320000	555.798	797.484	720.243	879.698	
33	10:06:01	330001	555.392	790.35	692.244	872.425	
34	10:06:01	340001	530.201	739.83	674.627	862.022	
35	10:06:01	350001	540.945	722.007	672.041	865.648	
36	10:06:01	360001	524.574	703.413	664.363	850.941	
37	10:06:01	370001	520.819	715.509	666.946	855.045	
38	10:06:01	380000	536.148	737.97	704.281	873.265	
39	10:06:01	390000	556.384	758.241	712.553	885.293	
40	10:06:01	400000	535.056	767.111	697.532	863.393	
41	10:06:01	410000	558.403	769.426	729.384	879.791	
42	10:06:01	420000	562.079	776.893	711.557	864.932	
43	10:06:01	430000	553.902	772.374	727.663	865.54	
44	10:06:01	440000	569.598	783.173	732.964	871.09	
45	10:06:01	450000	604.962	788.192	741.496	900.202	
46	10:06:01	460000	634.708	811.439	807.852	901.02	
47	10:06:01	470000	648.538	857.523	798.04	929.173	
48	10:06:01	480001	639.176	866.491	783.494	956.871	
49	10:06:01	490001	655.748	835.595	816.639	971.551	
50	10:06:01	500001	662.788	861.004	816.255	961.82	
51	10:06:01	510001	674.413	874.306	814.018	957.163	
52	10:06:01	520001	687.041	855.814	804.308	989.891	
53	10:06:01	530000	661.81	847.778	778.578	928.779	
54	10:06:01	540000	661.028	866.22	787.267	948.727	
55	10:06:01	550000	637.476	829.459	759.125	925.124	
56	10:06:01	560000	635.794	837.44	772.624	920.074	
57	10:06:01	570000	645.045	842.827	752.394	945.873	
58	10:06:01	580000	630.701	831.751	758.755	944.549	
59	10:06:01	590000	622.541	814.249	729.895	892.776	
60	10:06:01	600000	627.163	816.074	724.938	902.85	
61	10:06:01	610000	614.952	784.688	727.394	863.94	
62	10:06:01	620001	583.1	784.39	703.87	848.988	
63	10:06:01	630001	879.045	790.576	796.119	848.561	

Image Name: 11-19-15_TII_KO_ATP-1

Slide Name: 11-19-15-1.sld

Capture Date: 11/19/2015

Capture Time: 11:16:47

Plane	Time	Elapsed (ms)	GFP (1) - Bkg	GFP (2) - Bkg	GFP (3) - Bkgnd
0	11:16:47	0	202.218	745.783	809.067
1	11:16:47	10001	214.985	742.875	807.327
2	11:16:47	20001	188.934	707.862	775.355
3	11:16:47	30001	201.78	713.049	787.843
4	11:16:47	40000	193.088	689.023	767.752
5	11:16:47	50000	183.513	686.842	771.14
6	11:16:47	60000	187.874	684.092	764.495
7	11:16:47	70000	185.422	687.282	768.869
8	11:16:47	80000	191.639	692.654	773.192
9	11:16:47	90000	182.507	684.844	768.738
10	11:16:47	100000	1353.875	3644.899	2910.22
11	11:16:47	110000	1461.69	3485.964	2794.407
12	11:16:47	120000	1372.114	3307.761	2661.035
13	11:16:47	130000	1297.678	3147.872	2541.368
14	11:16:47	140001	1245.906	3052.499	2426.687
15	11:16:47	150001	1184.688	2947.857	2299.06
16	11:16:47	160001	1109.191	2837.674	2195.311
17	11:16:47	170001	1059.163	2703.331	2093.15
18	11:16:47	180001	980.339	2579.24	2004.332
19	11:16:47	190000	912.487	2467.805	1911.812
20	11:16:47	200000	867.738	2348.784	1868.166
21	11:16:47	210000	781.15	2207.404	1783.348
22	11:16:47	220000	728.591	2111.14	1718.263
23	11:16:47	230000	647.497	1939.319	1638.856
24	11:16:47	240000	582.248	1823.016	1537.524
25	11:16:47	250000	504.259	1650.353	1438.475
26	11:16:47	260000	456.364	1524.506	1359.515
27	11:16:47	270000	407.216	1417.775	1265.895
28	11:16:47	280000	373.703	1219.025	1178.518
29	11:16:47	290001	343.719	1119.962	1109.735
30	11:16:47	300001	331.288	1034.279	1051.026
31	11:16:47	310001	310.072	983.508	1008.71
32	11:16:47	320001	299.121	941.938	969.608
33	11:16:47	330001	290.555	930.343	953.814
34	11:16:47	340000	266.994	896.974	921.095
35	11:16:47	350000	267.089	885.739	905.822
36	11:16:47	360000	271.338	897.156	915.062
37	11:16:47	370000	255.487	883.093	902.829
38	11:16:47	380000	241.64	858.753	886.093
39	11:16:47	390000	251.265	853.169	884.856
40	11:16:47	400000	241.794	837.092	876.867
41	11:16:47	410000	242.352	826.347	897.961
42	11:16:47	420000	264.649	824.582	924.987
43	11:16:47	430000	281.05	845.158	996.204
44	11:16:47	440001	305.441	910.908	1012.509
45	11:16:47	450001	352.575	1009.177	1051.254
46	11:16:47	460001	374.81	1136.134	1032.588
47	11:16:47	470001	397.515	1230.179	1084.071
48	11:16:47	480001	399.679	1213.341	1048.1
49	11:16:47	490001	388.949	1187.654	1089.236
50	11:16:47	500001	389.308	1164.131	1073.232
51	11:16:47	510001	380.228	1090.583	1041.877
52	11:16:47	520001	371.863	1092.958	1029.277
53	11:16:47	530001	367.432	1118.038	1039.839
54	11:16:47	540001	361.234	1084.474	1062.651
55	11:16:47	550001	364.617	1035.604	1032.147
56	11:16:47	560001	325.988	1006.386	1004.136
57	11:16:47	570001	337.547	989.368	1006.246