

Message ID: 4319 Entry time: **Thu Aug 7 10:11:02 2008**

Run:	1382
Author:	TP
Type:	Info
System:	General
Subject:	MCP2 high-field results

Results of a first series of high-field runs on MCP2, 15kV transport:

- L3=9.5 kV, RA ~ 0.
- TD 85 degree/34 mm (instead of 85/29)
- Mirror 294.8 degree/17.0 mm (instead of 294.8/17.5)
- t0 shifts by about 86 TDC channels to shorter times:
3333 instead of 3419 for 15kV settings.

RA settings, beam spot parameter (fraction in 20x20 mm² with TOF cut), L3=9.5kV (t0=3333):

Run	Field (A/G)	RA-L	RA-T	RA-R	RA-B	in 20x20mm ²	x0 (mm)	y0 (mm)
1366	17.4/100	0.00	0.00	0.25	0.00	0.479	-0.08	-0.37
1382	88.0/500	0	0	0.20	0	0.551	-0.43	+0.27
1381	132/750	0	0	0	0	0.663	-0.26	+0.08
1380	175/1000	0	0	0	0	0.790	-0.95	+0.18
1379	263/1500	0.50	0	0	0.50	0.970	+0.43	+0.09
1378	350/2000	0.80	0	0	0.80	0.744	-0.13	-0.38

Results of a 2nd series of high-field runs on MCP2, 15kV transport, with "default" Trigger/Mirror postions:

- L3=9.75 kV, RA ~ 0.
- TD 85 degree/29 mm.
- Mirror 294.8 degree/17.5 mm.
- t0 shifts by a 68 TDC channels to shorter times:
3351 instead of 3419 for 15kV settings.

RA settings, beam spot parameter (fraction in 20x20 mm² with TOF cut), L3=9.75kV (t0=3351):

Run	Field (A/G)	RA-L	RA-T	RA-R	RA-B	in 20x20mm ²	x0 (mm)	y0 (mm)
1421	17.4/100	0.25	0.40	0.25	0	0.487	+0.12	-0.35
1420	88.0/500	0.25	0.40	0.25	0	0.560	+0.35	-0.05
1419	132/750	0.25	0.40	0.25	0	0.670	-0.02	-0.20
1418	175/1000	0.25	0.40	0.25	0	0.780	-0.99	-0.46
1417	219/1250	0	0	0	0	0.824	-0.68	+0.27
1416	263/1500	0.30	0	0	0.30	0.975	-0.09	+0.22
1415	307/1750	0.30	0	0	0.30	0.949	-0.66	+1.02
1414	350/2000	0.80	0	0	0.80	0.769	-0.60	-0.08
1413	438/2500	0.80	0	0	0.80	0.502	+0.20	-1.01

Compare with 100G runs on MCP2, RA on, different transport settings:

(**note:** the beam fractions in 20x20 mm² (with TOF cut) are a bit smaller compared to previous measurements because now a finer binning is used; the fractions from previous runs with coarser binning were for an area slightly larger than 20x20 mm²)

Run	Field (A/G)	RA-L	RA-T	RA-R	RA-B	in 20x20mm ²	x0 (mm)	y0 (mm)	Asymmetry
1348	17.4/100	4.99	4.99	4.99	4.99	0.848	-0.67	-0.32	0.094(2)
1349	17.4/100	6.82	6.82	6.82	6.82	0.877	-0.33	+0.06	0.106(2)
1350	17.4/100	8.26	8.26	8.26	8.26	0.891	-0.16	+0.39	0.104(1)
1351	17.4/100	10.56	10.56	10.56	10.56	0.902	+0.01	+0.53	0.118(2)

Thu Aug 7 12:05 2008:

still no beam due to leak check in "Dom". Test of moderator after refilling LHe:

unstable MCP1 rate at 15kV, getting more unstable at 16kV.

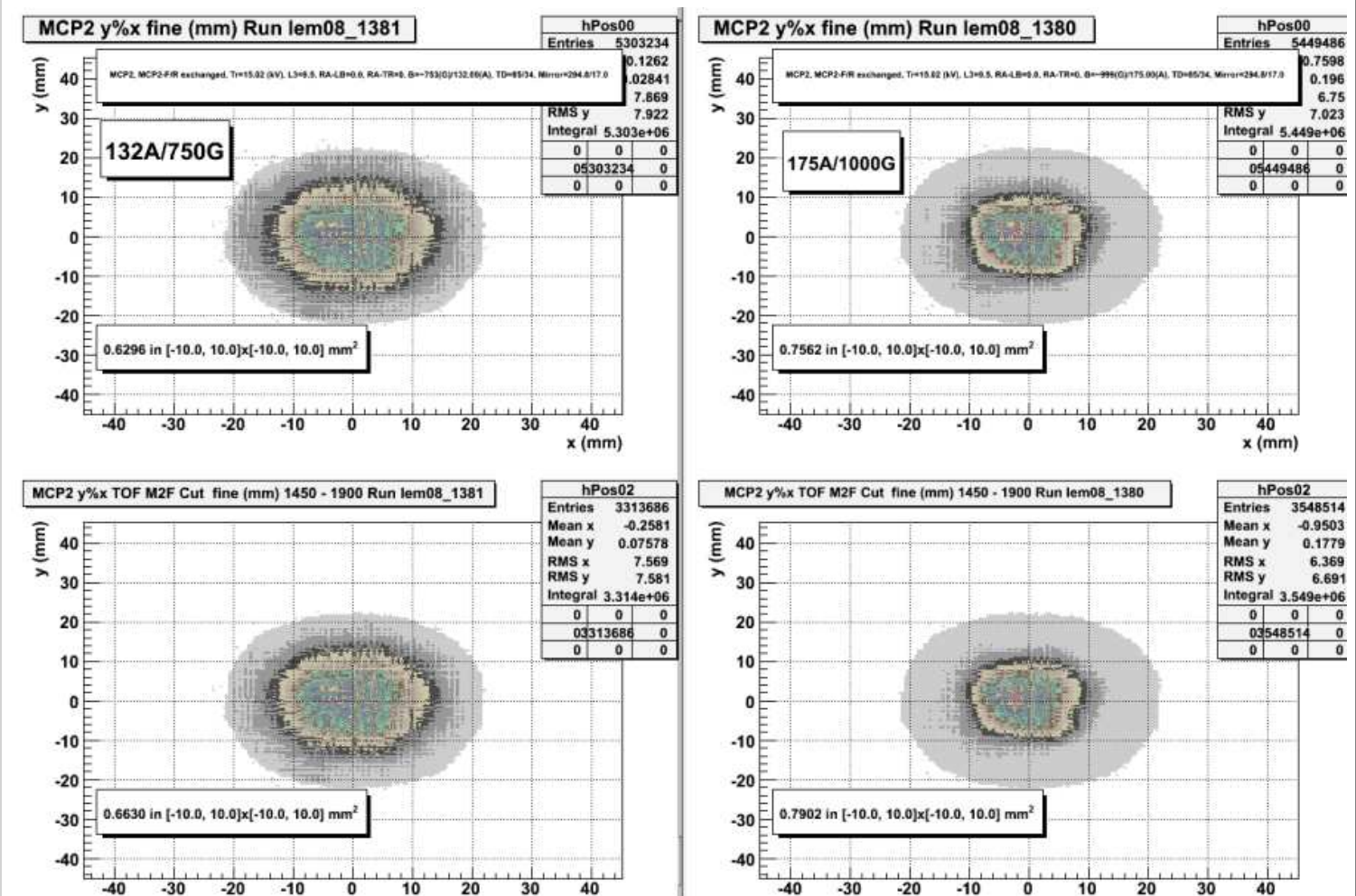
Decide to grow new moderator...

Thu Aug 7 13:52 2008:

still vacuum leak in "Dom". Moderator is at 150K. Do HV test at 150K.

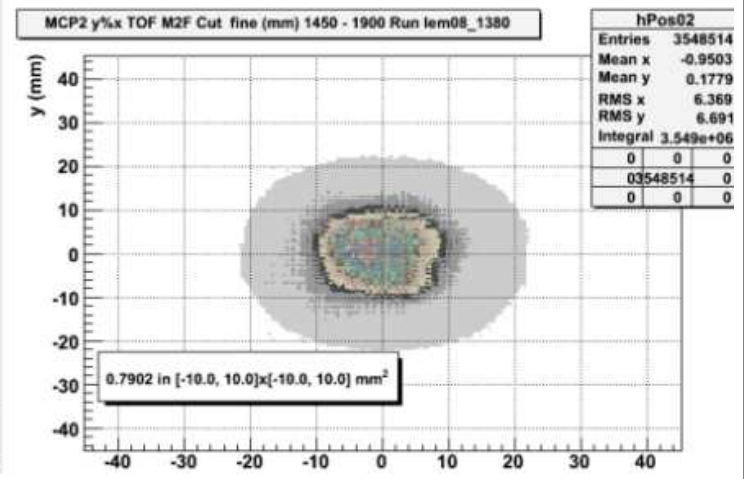
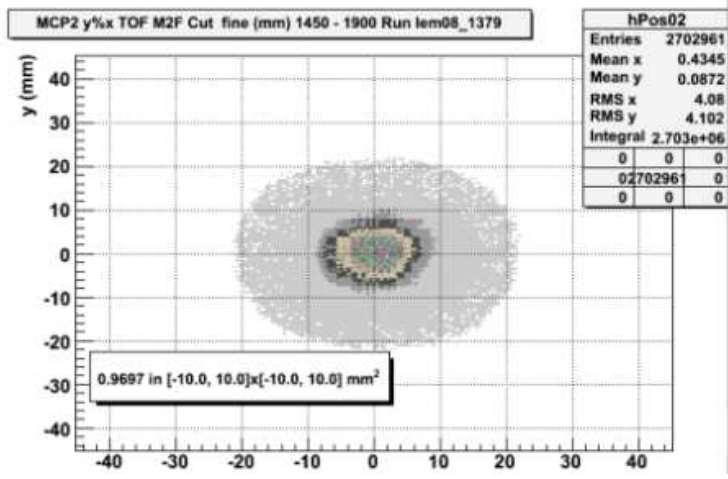
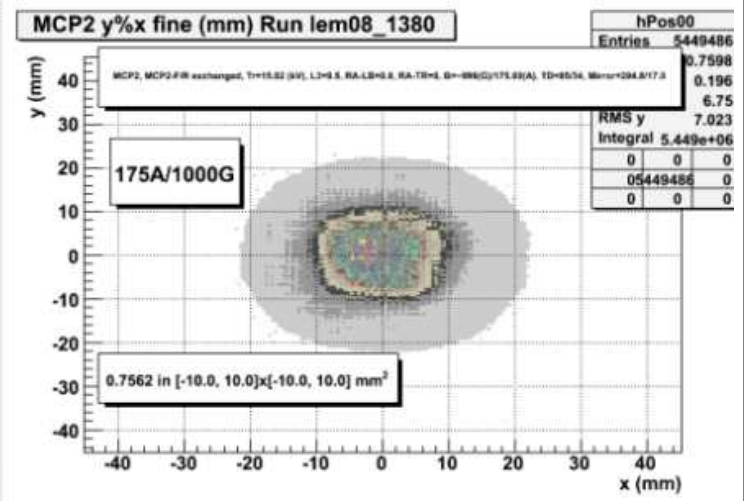
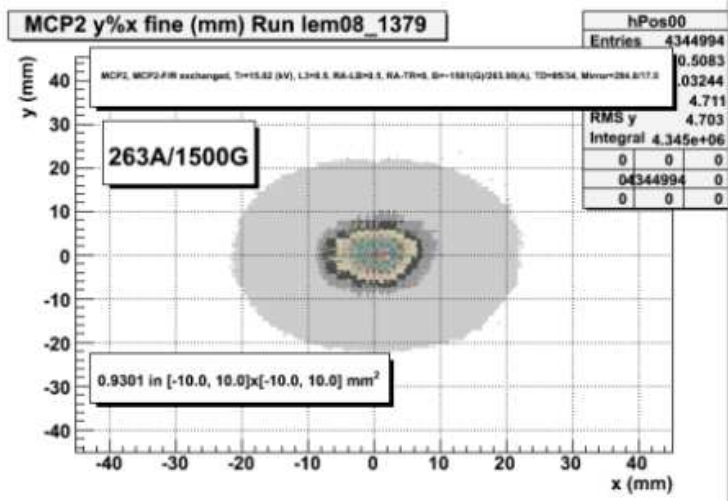
Attachment 1:

[BeamSpots_750-1000G_scale.png](#) 256 kB Uploaded Thu Aug 7 11:35:21 2008
[| Hide | Hide all](#)



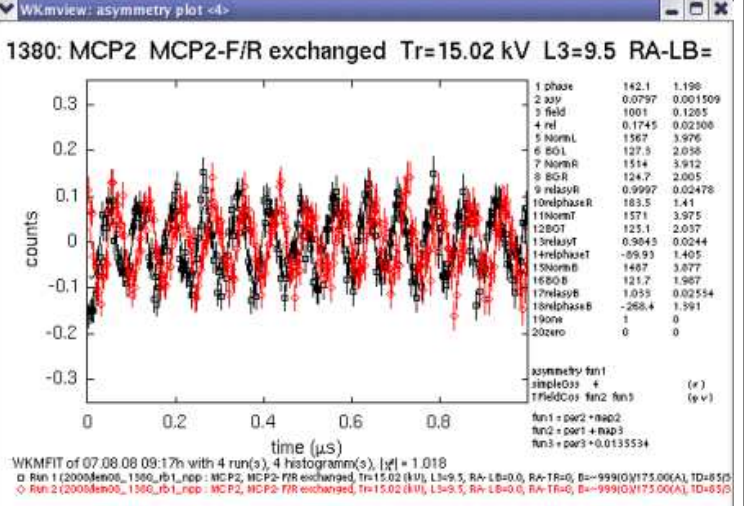
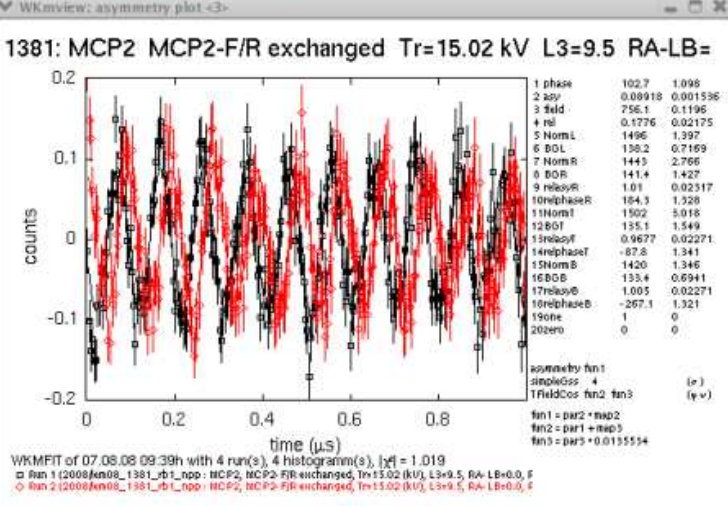
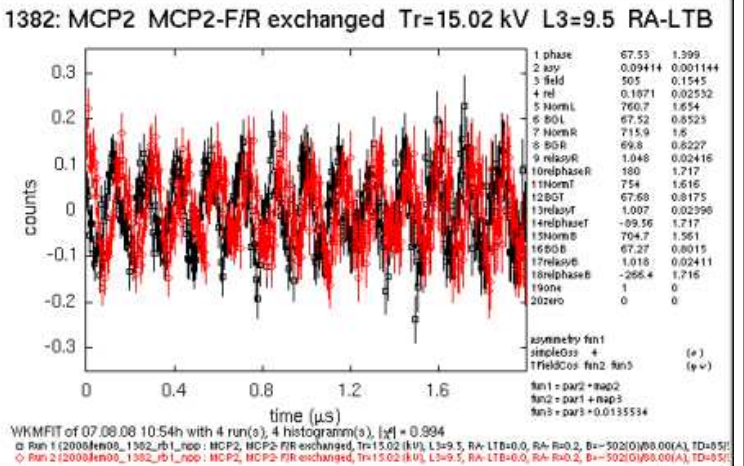
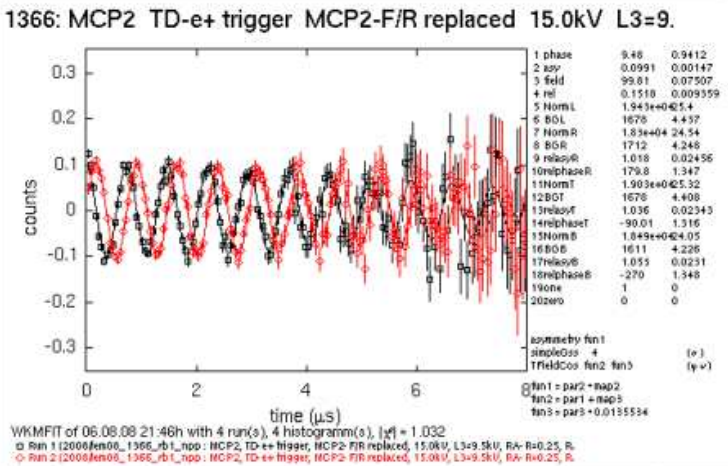
Attachment 2:

[BeamSpots_1500-2000G_scale.png](#) 282 kB Uploaded Thu Aug 7 11:37:34 2008
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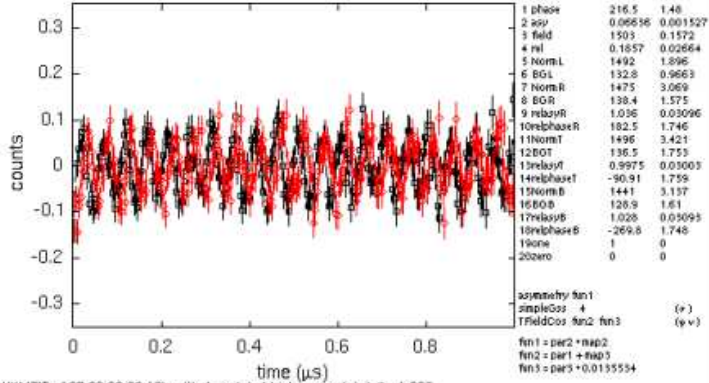


Attachment 3:

[Fits_100-1000G_scale.png](#) 292 kB Uploaded Thu Aug 7 12:11:36 2008
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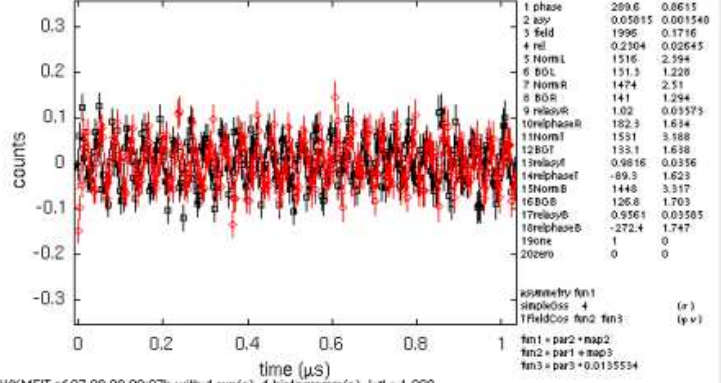


1379: MCP2 MCP2-F/R exchanged Tr=15.02 kV L3=9.5 RA-LB=



WKMFIT of 07.08.08 09:13h with 4 run(s), 4 histogram(s), [χ] = 1.003
 □ Run 1 (2008Met08_1379_ib1_npp) : MCP2, MCP2-F/R exchanged, Tr=15.02 (kV), L3=9.5, RA-LB=0.5, RA-TR=0,
 ○ Run 2 (2008Met08_1379_ib1_npp) : MCP2, MCP2-F/R exchanged, Tr=15.02 (kV), L3=9.5, RA-LB=0.5, RA-TR=0,

1378: MCP2 MCP2-F/R exchanged Tr=15.02 kV L3=9.5 RA-LB=



WKMFIT of 07.08.08 09:07h with 4 run(s), 4 histogram(s), [χ] = 1.008
 □ Run 1 (2008Met08_1378_ib1_npp) : MCP2, MCP2-F/R exchanged, Tr=15.02 (kV), L3=9.5, RA-LB=0, RA-TR=0, B=-1990(0)2350.0(A), TD=85,
 ○ Run 2 (2008Met08_1378_ib1_npp) : MCP2, MCP2-F/R exchanged, Tr=15.02 (kV), L3=9.5, RA-LB=0, RA-TR=0, B=-1990(0)2350.0(A), TD=85,