

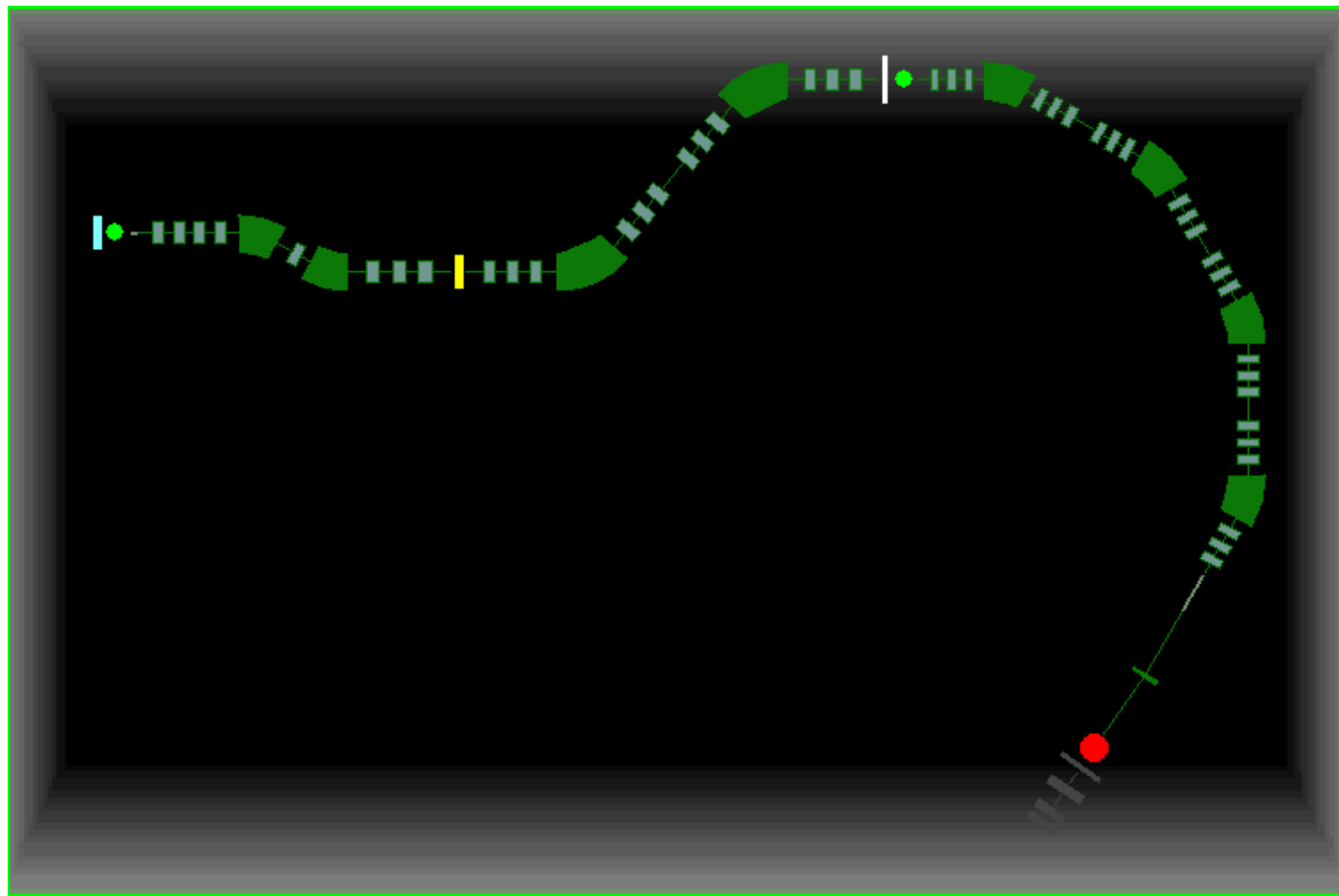
http://lise.nsl.msui.edu/10_0/rotationTest.lpp

LISE++ version
10.0.45

New internal optical block matrix :

Global Rotated

(Global matrix relatively absolute 0-rotation angle)



Optical matrix - RA90

$G_i = L_i * G_{i-1}$
G - Global, L - Block (Local)

Dimension: mm (selected), cm

Matrices: Block (local) (selected), Global

Second Order LOCAL matrix: Non (selected), Exist

only for Monte Carlo transmission

1. X	0	0	-1	0	0	0
2. T	0	0	0	-1	0	0
3. Y	1	0	0	0	0	0
4. P	0	1	0	0	0	0
5. L	0	0	0	0	1	0
6. D	0	0	0	0	0	1

-1.34143	-7.847e-4	0	0	0	0	[mm]
-2.049e-5	-0.74543	0	0	0	0	[mrad]
0	0	1.26557	-4.038e-3	0	45.71047	[mm]
0	0	-0.03499	0.79026	0	-0.8748	[mrad]
0	0	-0.04922	3.61195	1	58.97291	[mm]
0	0	0	0	0	1	[%]

Beam (sig): 1.341, 1.714, 3.441, 1.819, 63.679, 0.07

Det = 1.00000

Det = 0.99994

Buttons: Import/link COSY map, 2-nd order view, Beam Rotation, Ok, Cancel, Help, Spectrometer matrix

Optical matrix - C_D4

$G_i = L_i * G_{i-1}$
G - Global, L - Block (Local)

Dimension: mm (selected), cm

Matrices: Block (local) (selected), Global

Second Order LOCAL matrix: Non, Exist (selected)

only for Monte Carlo transmission

1. X	-0.88431	0.0198	0	0	0	10.3178	1
2. T	0.26143	-1.13665	0	0	0	-2.51799	2
3. Y	0	0	-0.08324	-2.6335	0	0	3
4. P	0	0	0.28153	-3.10606	0	0	4
5. L	0.04707	-1.1678	0	0	1	-1.0729	5
6. D	0	0	0	0	0	1	6

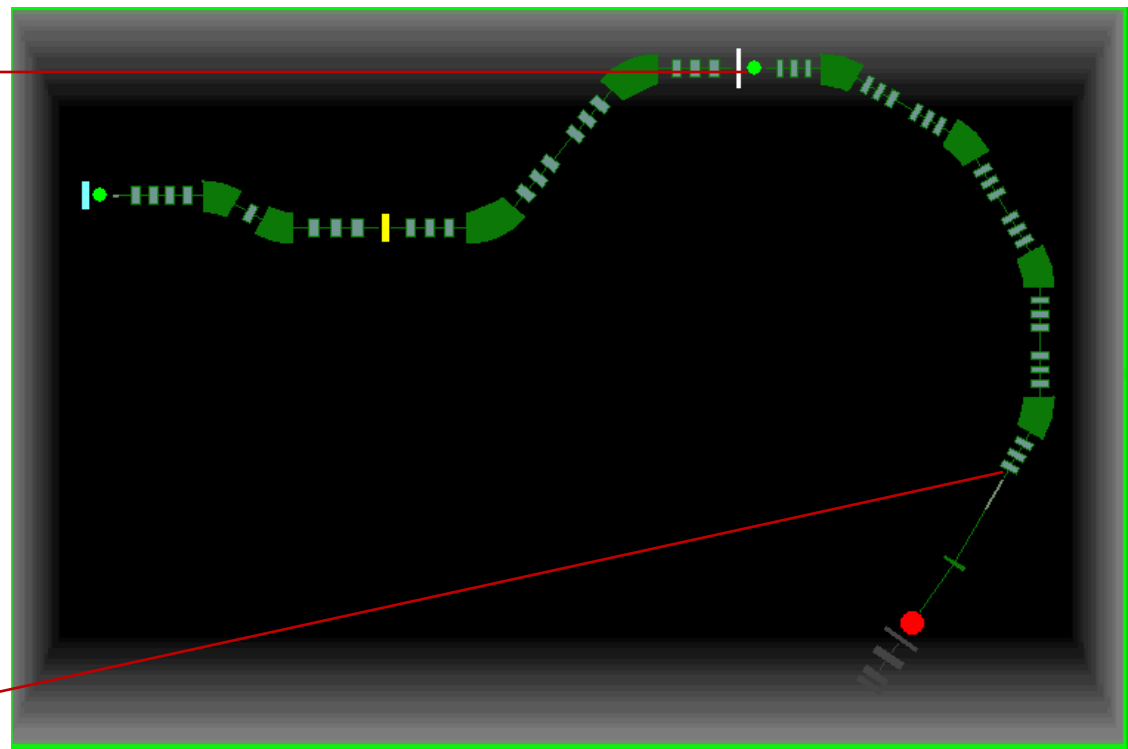
-1.62449	-9.741e-4	0	0	0	1.385e-3	[mm]
0.58868	-0.61515	0	0	0	-1.216e-4	[mrad]
0	0	-1.7015	5.424e-3	0	-61.4555	[mm]
0	0	-2.29751	-0.58033	0	-83.2717	[mrad]
8.155e-5	-1.31e-4	-0.04922	3.61195	1	54.67406	[mm]
0	0	0	0	0	1	[%]

Beam (sig): 1.624, 1.532, 4.626, 6.406, 63.661, 0.07

Det = 0.99993

Det = 0.99978

Buttons: Import/link COSY map, 2-nd order view, Dispersive (M-dipole), Link to COSY map, CB_IMG4.mat, Ok, Cancel, Help, Spectrometer matrix



In the momentum compression mode, LISE++ shows non-zero vertical global dispersion.. But! LISE++ uses in both Monte-Carlo and Distribution methods only local dispersions!!!

1. X	mm	1	Gaussian
2. T	mrاد	2.3	Gaussian
3. Y	mm	1	Gaussian
4. P	mrاد	2.3	Gaussian
5. L	mm	63	Gaussian
6. D	%	0.07	Gaussian

Benchmark: final transmission value and envelope plots should not be depended from the rotation block in front of separator in the case of symmetrical beam emittance.

	RAm90	Angle 0 deg
	shield	standard 50.2 cm
	PS1A	Brho 3.4310 Tm
	PS1B	Brho 3.4310 Tm
	PS_wdg	Al 1000 mg/cm2
	PS1C	Brho 3.1238 Tm
	PS1D	Brho 3.1238 Tm
	PS_FP_V-slit	slits
	RA90	Angle -90 deg
	C_D1	Brho 3.1238 Tm

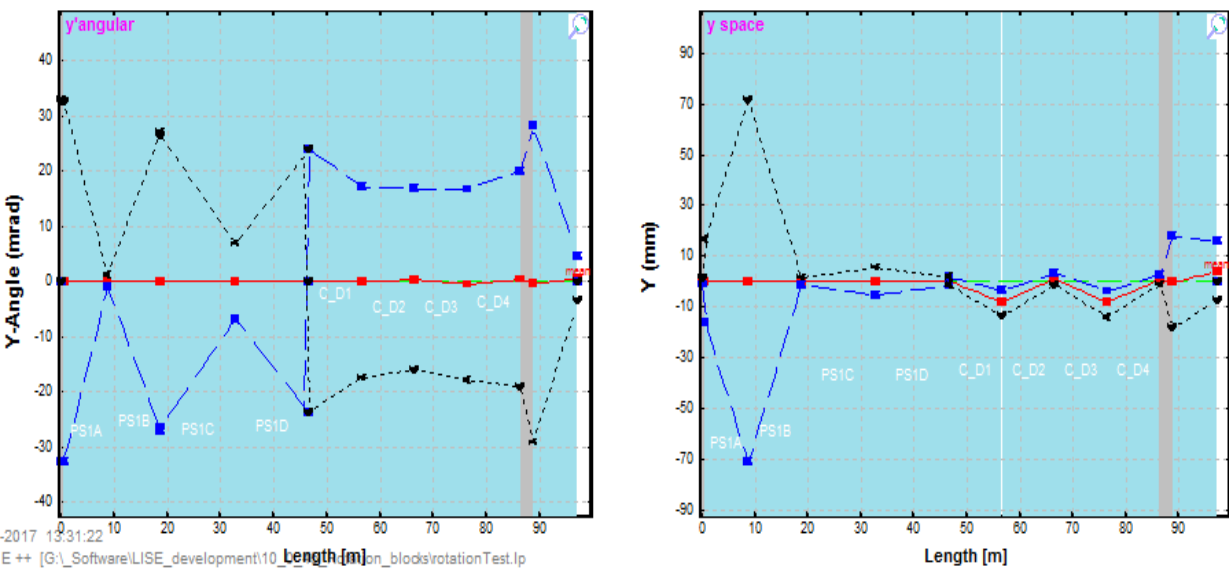
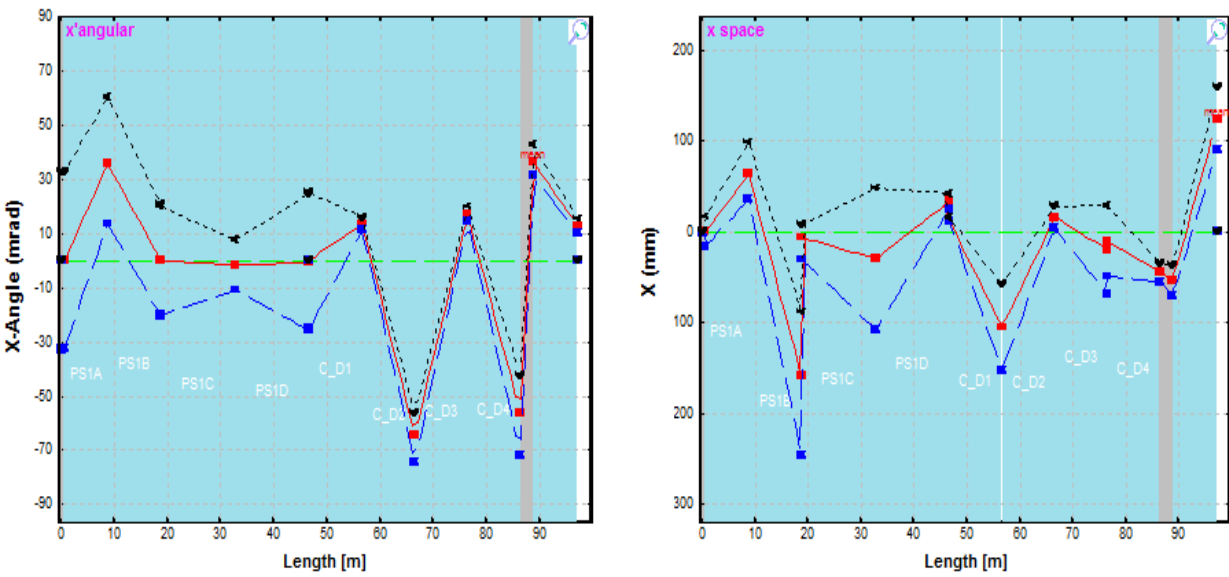
	RAm90	Angle 90 deg
	shield	standard 50.2 cm
	PS1A	Brho 3.4310 Tm
	PS1B	Brho 3.4310 Tm
	PS_wdg	Al 1000 mg/cm2
	PS1C	Brho 3.1238 Tm
	PS1D	Brho 3.1238 Tm
	PS_FP_V-slit	slits
	RA90	Angle -90 deg
	C_D1	Brho 3.1238 Tm

It will be useful to benchmark with the extended configuration

0

RAm90 Angle 0 deg

Transmission 0.009%

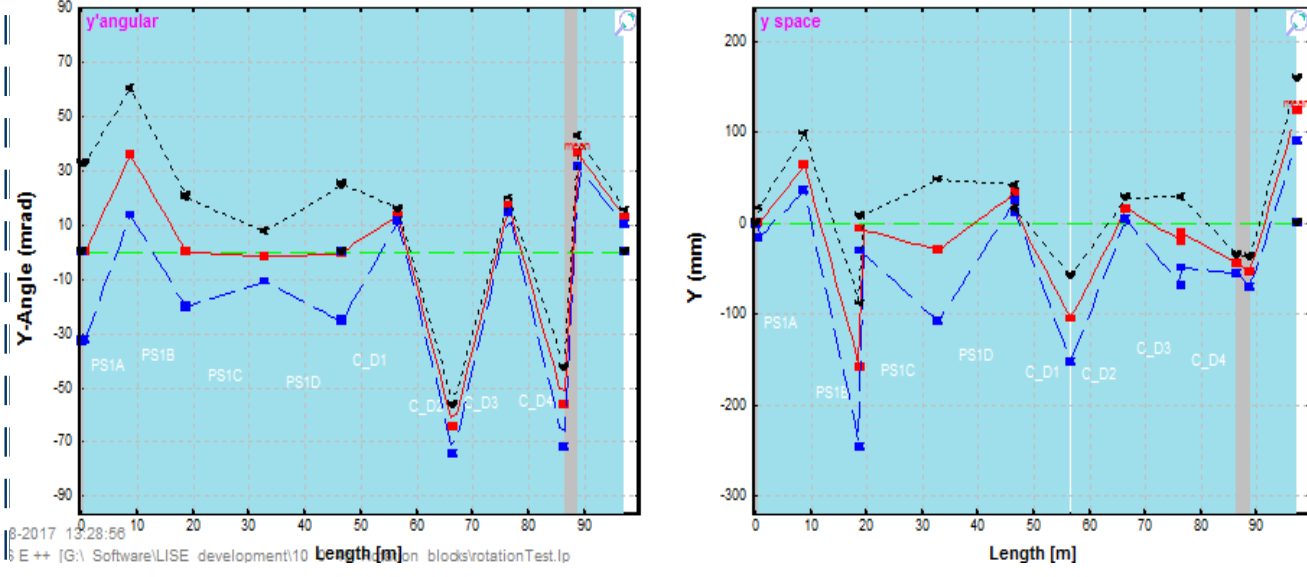
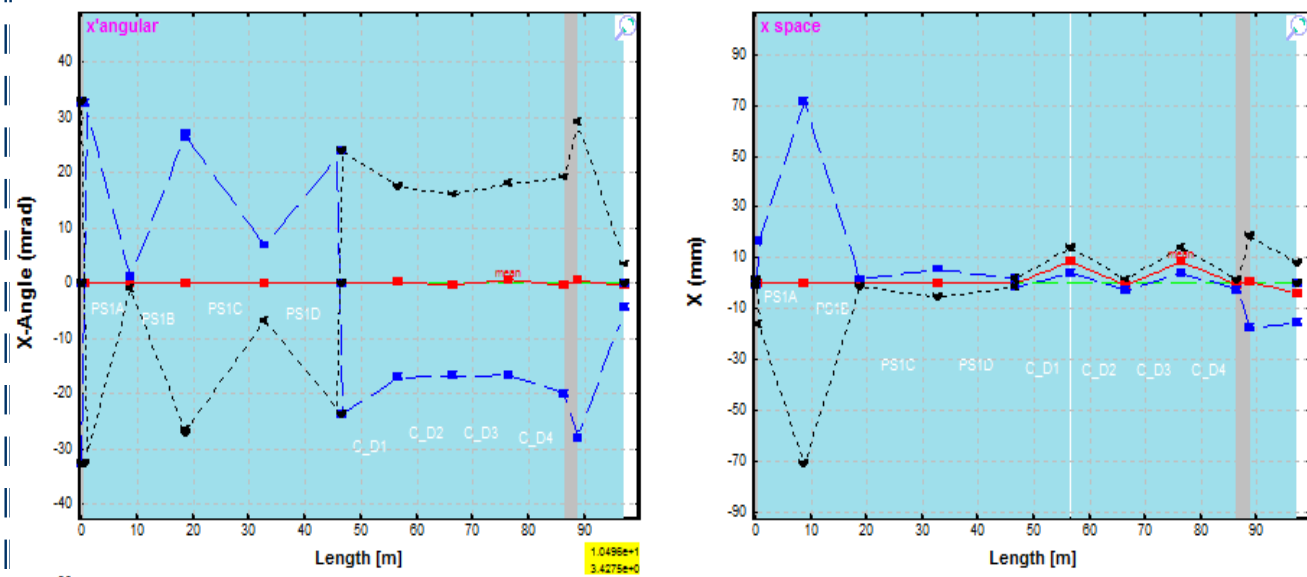


2017 13:31:22 E ++ [G:_Software\LISE_development\10_length[m]on_blocksrotationTest.lp

90

RAm90 Angle 90 deg

Transmission 0.009%

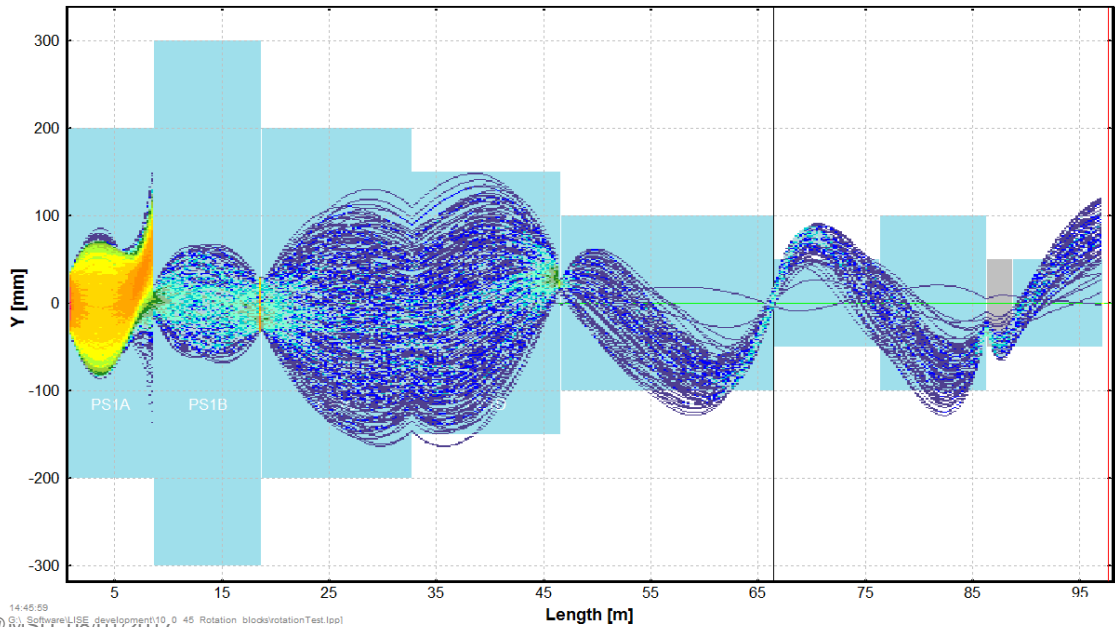
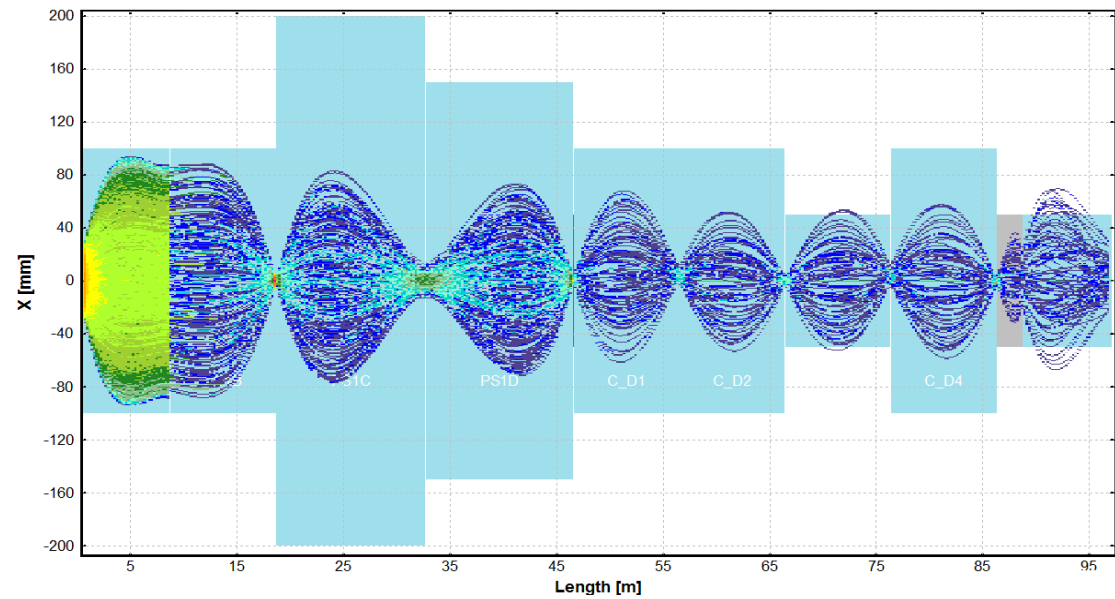


2017 13:28:56 E ++ [G:_Software\LISE_development\10_length[m]on_blocksrotationTest.lp

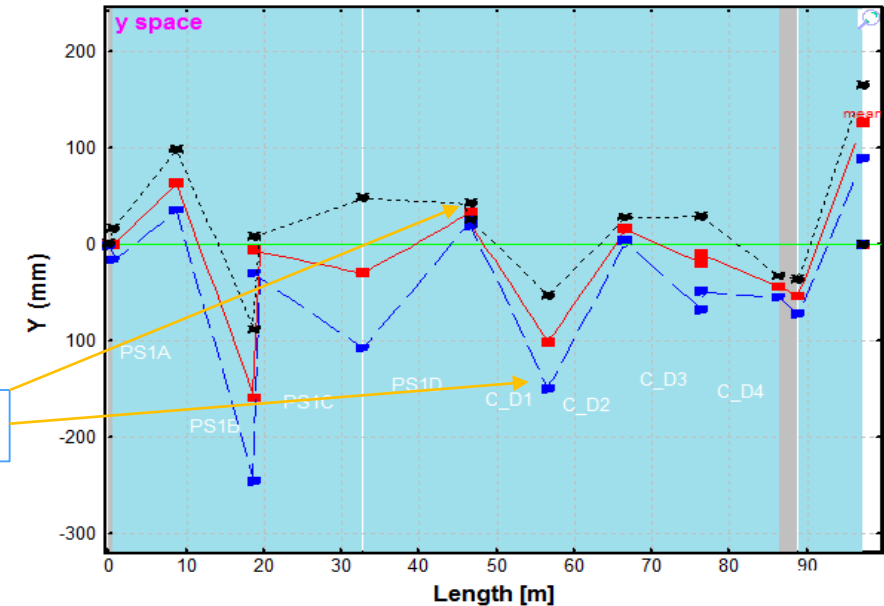
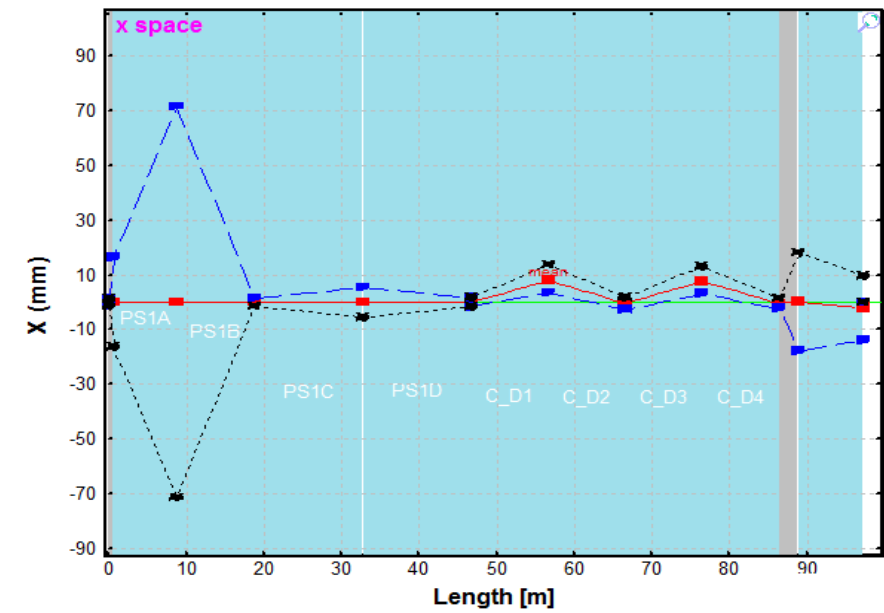
Monte Carlo

R RAm90

Angle
90 deg



Distribution



YY= -4