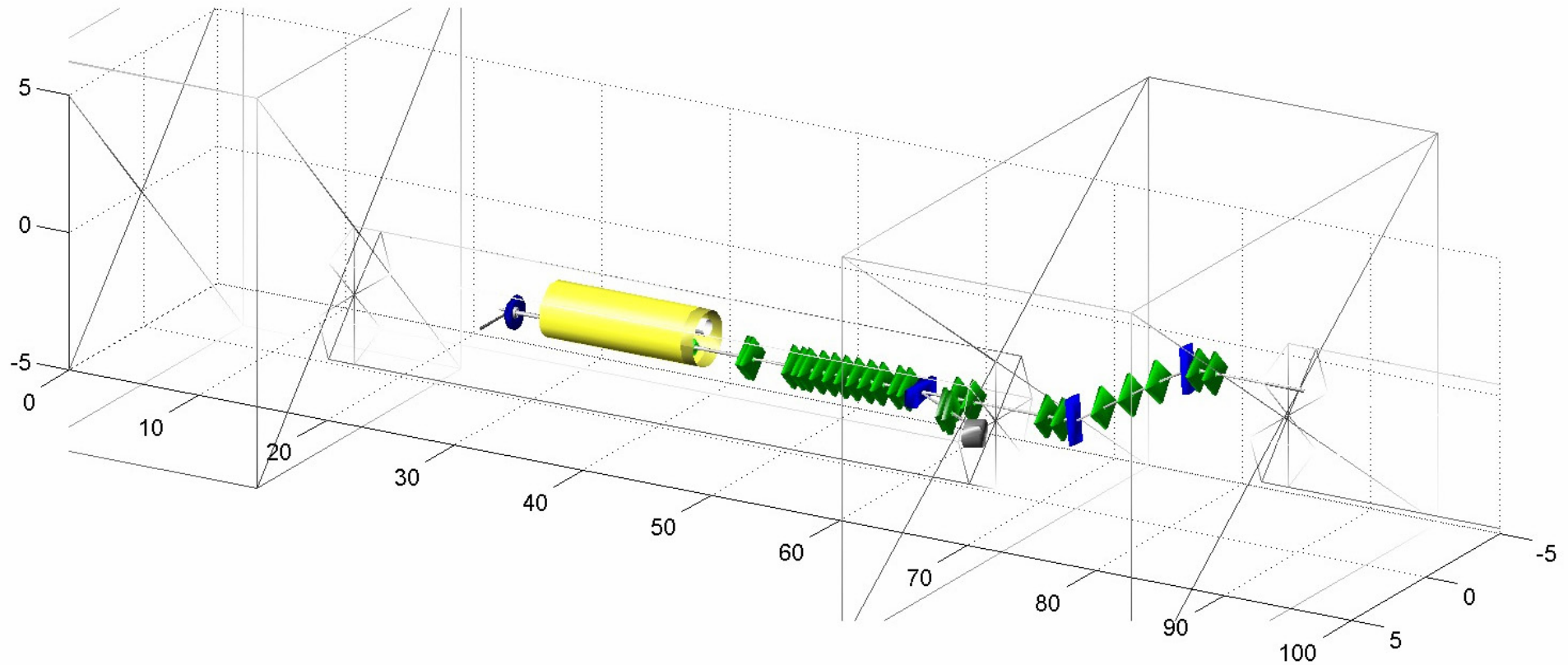
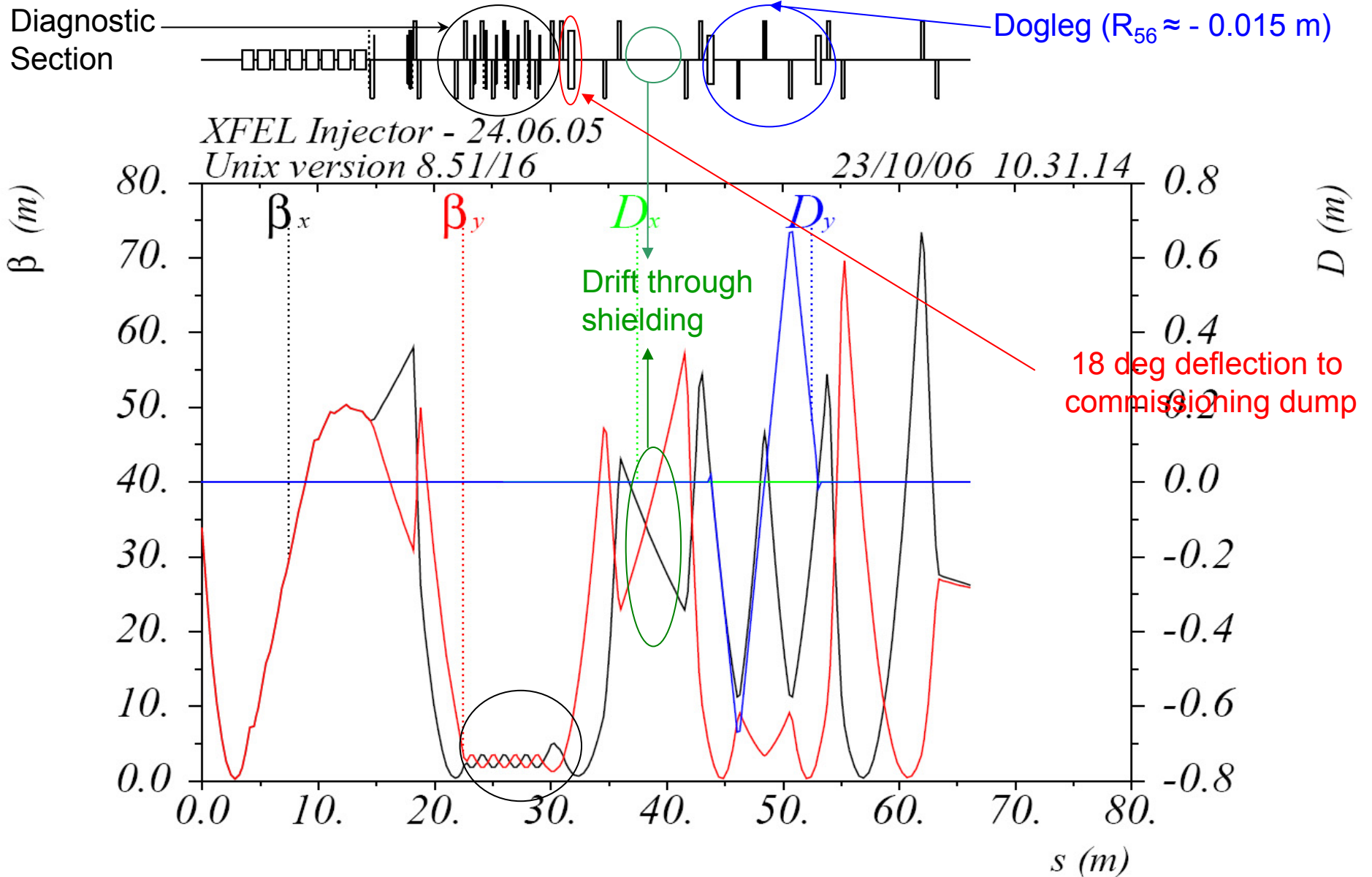
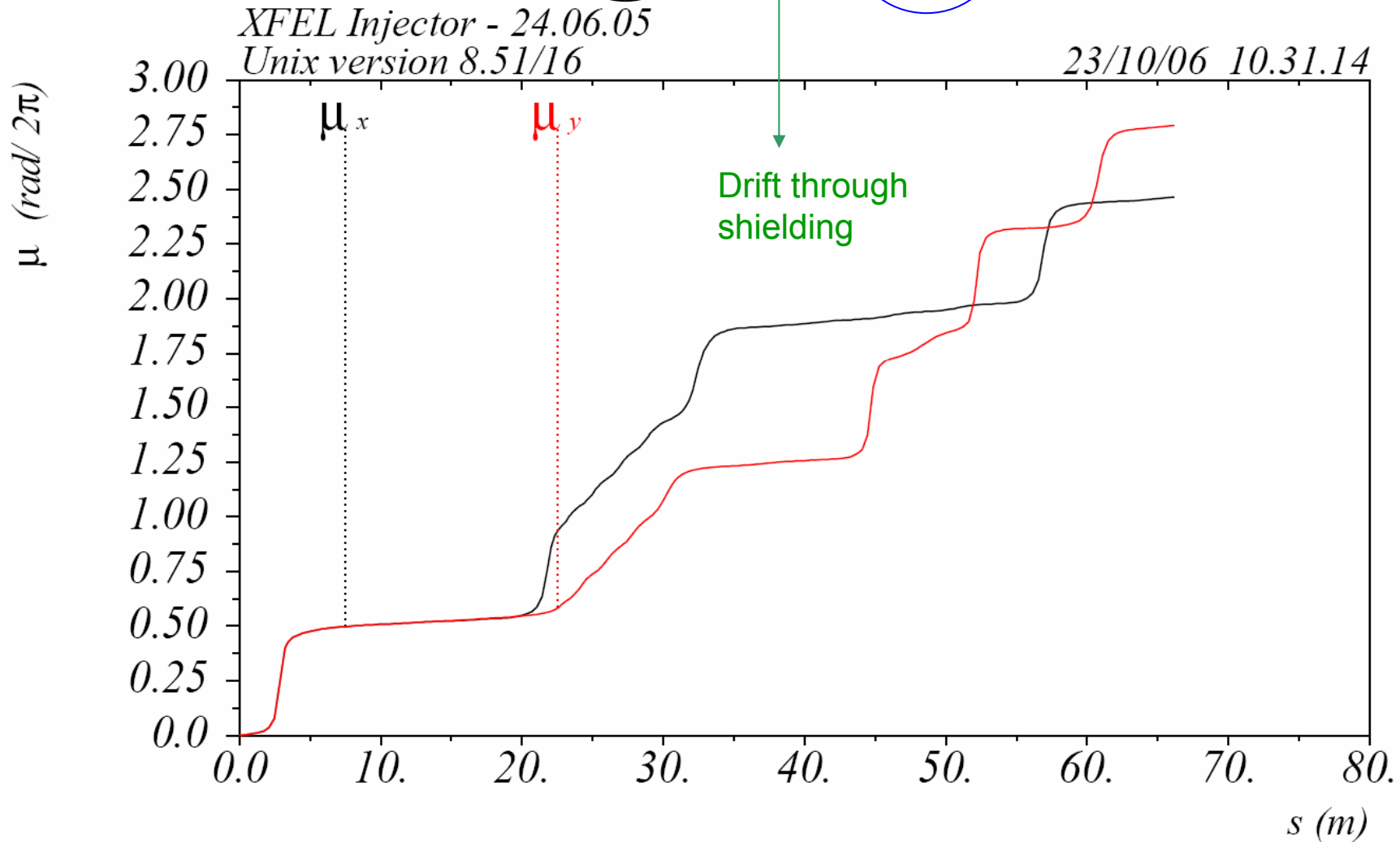
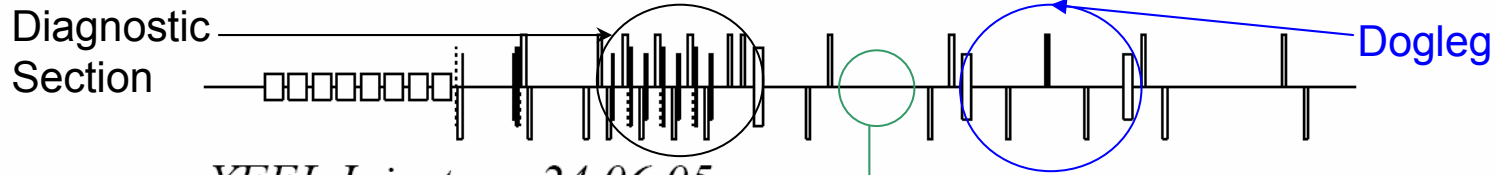


- Geometrical requirements:
  - total available length (back wall of XSIN to start of XTL tunnel): 89.55 m
  - passage through shielding (approx. 5 m long drift) at 65m to 70m
  - dogleg with 2.75 m vertical offset, length up 20 m
  - commissioning dump-line ends in the shielding
- So far considered functional requirements:
  - matching of gun beam
  - diagnostic section (1 to 1 copy of FLASH BC2 diagnostic)
  - dogleg with mediocre chromatic properties (assuming an almost mono-energetic beam from the gun)









- Technical Specifications
  - magnet bore radius (half aperture): 20 mm
  - energy reach for magnet system: 130 MeV



- What's missing
  - laser heater section (before diagnostic)
  - transverse deflecting structure
  - possibility of additional bunch compression
- Next Steps
  - refine diagnostic section, include laser heater, study bunch compression options
    - Affects only XTIN, enough space, less time critical
  - improve chromatic/dispersive properties of dogleg
    - May influence XSIN layout, asap

SECTION	NAME	TYPE	LENGTH	X	Y	Z	ENERGY	BETX	MUX	BETY	MUY	DY	DPY
[ ]	[ ]	[ ]	[m]	[m]	[m]	[m]	[GeV]	[m]	[2PI]	[m]	[2PI]	[m]	[rad]
I1	GUN	MARK	0.000	0.000	-2.750	28.806	0.005	33.821	0.000	33.821	0.000	0.000	0.000
I1	ACCSTAR	MARK	0.000	0.000	-2.750	32.019	0.005	0.831	0.396	0.832	0.396	0.000	0.000
I1	CAV.1	LCAV	1.038	0.000	-2.750	33.279	0.015	7.288	0.466	7.293	0.466	0.000	0.000
I1	CAV.1	LCAV	1.038	0.000	-2.750	34.662	0.026	17.311	0.485	17.317	0.485	0.000	0.000
I1	CAV.1	LCAV	1.038	0.000	-2.750	36.046	0.036	27.793	0.495	27.796	0.495	0.000	0.000
I1	CAV.1	LCAV	1.038	0.000	-2.750	37.429	0.047	37.948	0.502	37.946	0.502	0.000	0.000
I1	CAV.2	LCAV	1.038	0.000	-2.750	38.813	0.068	45.705	0.507	45.698	0.507	0.000	0.000
I1	CAV.2	LCAV	1.038	0.000	-2.750	40.197	0.088	49.172	0.512	49.160	0.512	0.000	0.000
I1	CAV.2	LCAV	1.038	0.000	-2.750	41.580	0.109	49.845	0.516	49.829	0.516	0.000	0.000
I1	CAV.2	LCAV	1.038	0.000	-2.750	42.964	0.130	48.686	0.521	48.665	0.521	0.000	0.000
I1	BPM	MONI	0.000	0.000	-2.750	43.243	0.130	48.282	0.522	48.261	0.522	0.000	0.000
I1	Q.0	QUAD	0.300	0.000	-2.750	43.618	0.130	48.357	0.523	47.123	0.523	0.000	0.000
I1	CV	VKIC	0.000	0.000	-2.750	43.618	0.130	48.357	0.523	47.123	0.523	0.000	0.000
I1	ACCEND	MARK	0.000	0.000	-2.750	44.010	0.130	49.406	0.524	45.028	0.524	0.000	0.000
I1	CVI	VKIC	0.100	0.000	-2.750	46.610	0.130	56.801	0.532	32.522	0.535	0.000	0.000
I1	CHI	HKIC	0.100	0.000	-2.750	46.810	0.130	57.402	0.532	31.659	0.536	0.000	0.000
I1	BPM	MONI	0.000	0.000	-2.750	46.910	0.130	57.704	0.533	31.233	0.536	0.000	0.000
I1	QI.3	QUAD	0.250	0.000	-2.750	47.260	0.130	46.158	0.534	37.353	0.538	0.000	0.000
I1	QI.4	QUAD	0.250	0.000	-2.750	47.610	0.130	26.092	0.535	49.966	0.539	0.000	0.000
I1	QI.5	QUAD	0.250	0.000	-2.750	50.860	0.130	0.532	0.859	7.290	0.566	0.000	0.000
I1	QI.6	QUAD	0.250	0.000	-2.750	51.610	0.130	2.365	0.956	2.663	0.597	0.000	0.000
I1	QI.1	QUAD	0.250	0.000	-2.750	52.135	0.130	1.801	1.000	3.440	0.623	0.000	0.000
I1	CVI	VKIC	0.100	0.000	-2.750	52.330	0.130	2.166	1.016	2.890	0.633	0.000	0.000
I1	OTR	MARK	0.000	0.000	-2.750	52.470	0.130	2.472	1.026	2.539	0.641	0.000	0.000
I1	WS	MARK	0.000	0.000	-2.750	52.495	0.130	2.530	1.027	2.480	0.643	0.000	0.000
I1	QI.2	QUAD	0.250	0.000	-2.750	53.085	0.130	3.437	1.057	1.808	0.692	0.000	0.000
I1	BPM	MONI	0.000	0.000	-2.750	53.085	0.130	3.437	1.057	1.808	0.692	0.000	0.000
I1	CHI	HKIC	0.100	0.000	-2.750	53.335	0.130	2.730	1.070	2.307	0.711	0.000	0.000
I1	QI.1	QUAD	0.250	0.000	-2.750	54.010	0.130	1.801	1.123	3.444	0.746	0.000	0.000
I1	CVI	VKIC	0.100	0.000	-2.750	54.205	0.130	2.166	1.139	2.894	0.756	0.000	0.000