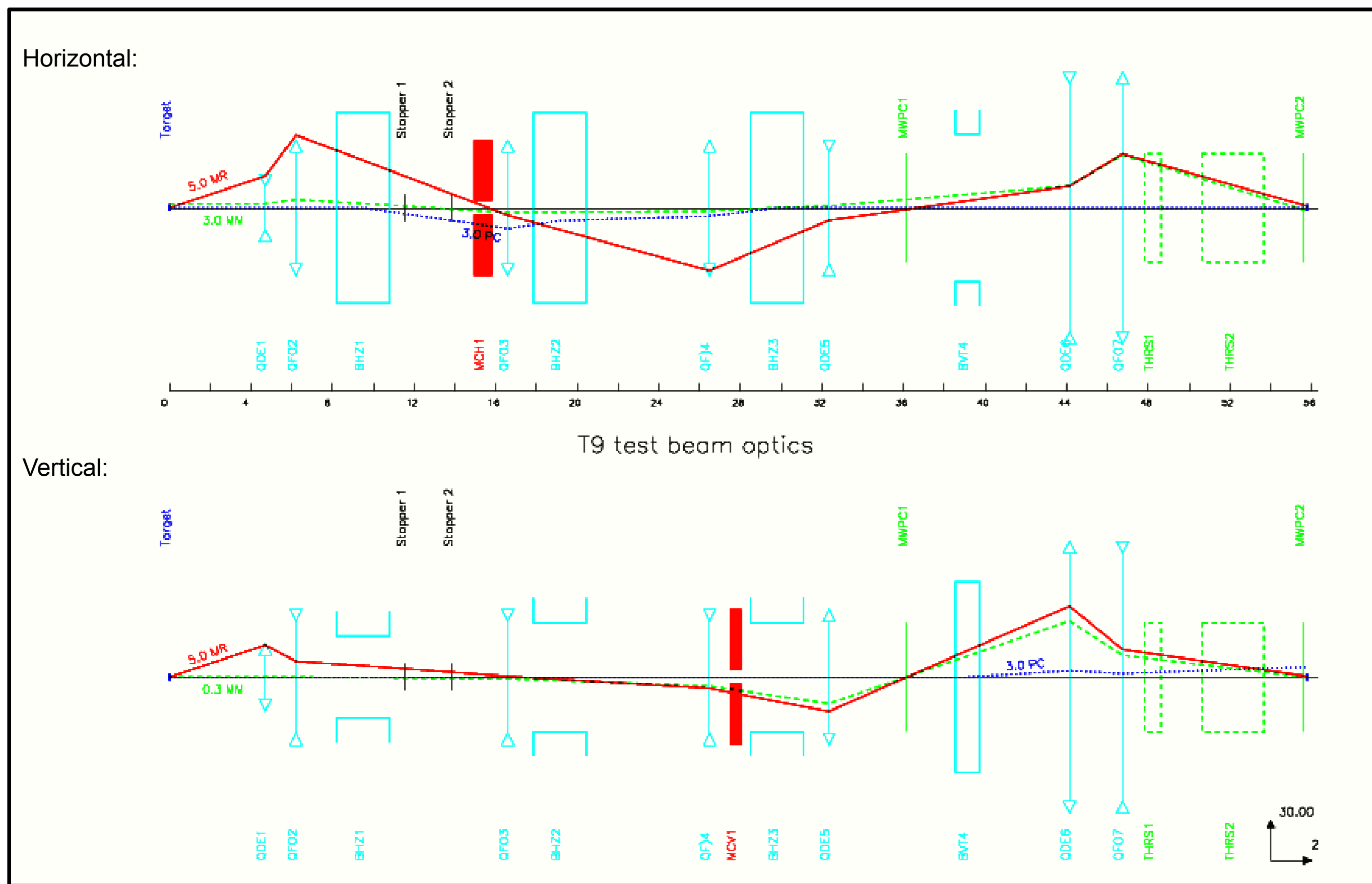
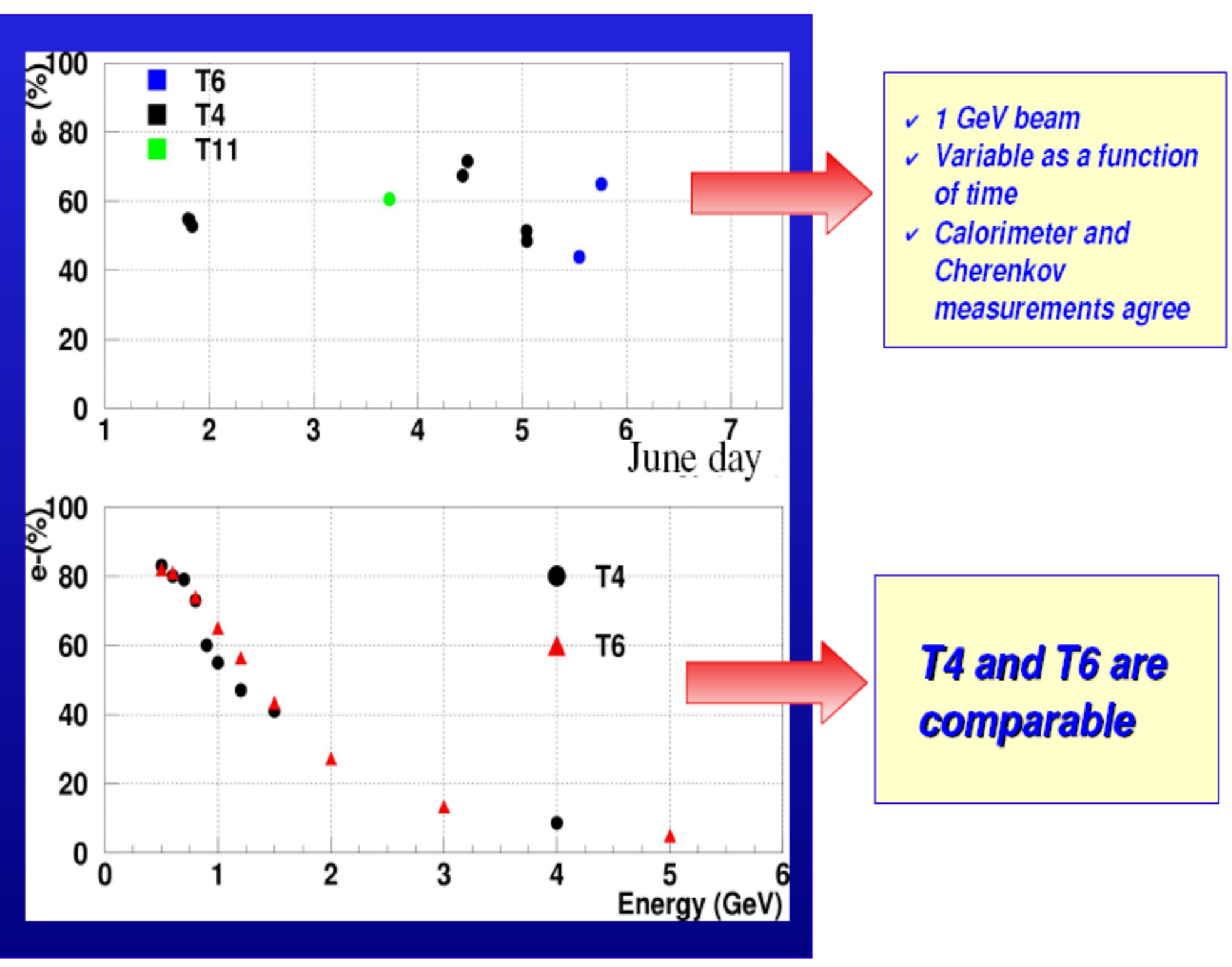


THE EAST AREA TEST BEAMS



Some beam performance plots:



The T9 and T10 beams are dedicated test beams, T7 and T11 are only occasionally used for tests.

The test beams use the **EASTA** cycles from the PS and are derived from the North target:

- Head 4: 200 mm Be + 3 mm W Electron enriched
- Head 6: 100 mm Al + 3 mm W Electron enriched
- Head 11: 200 mm Al Hadron target

The target head is under CCC control

Test Beam Parameters

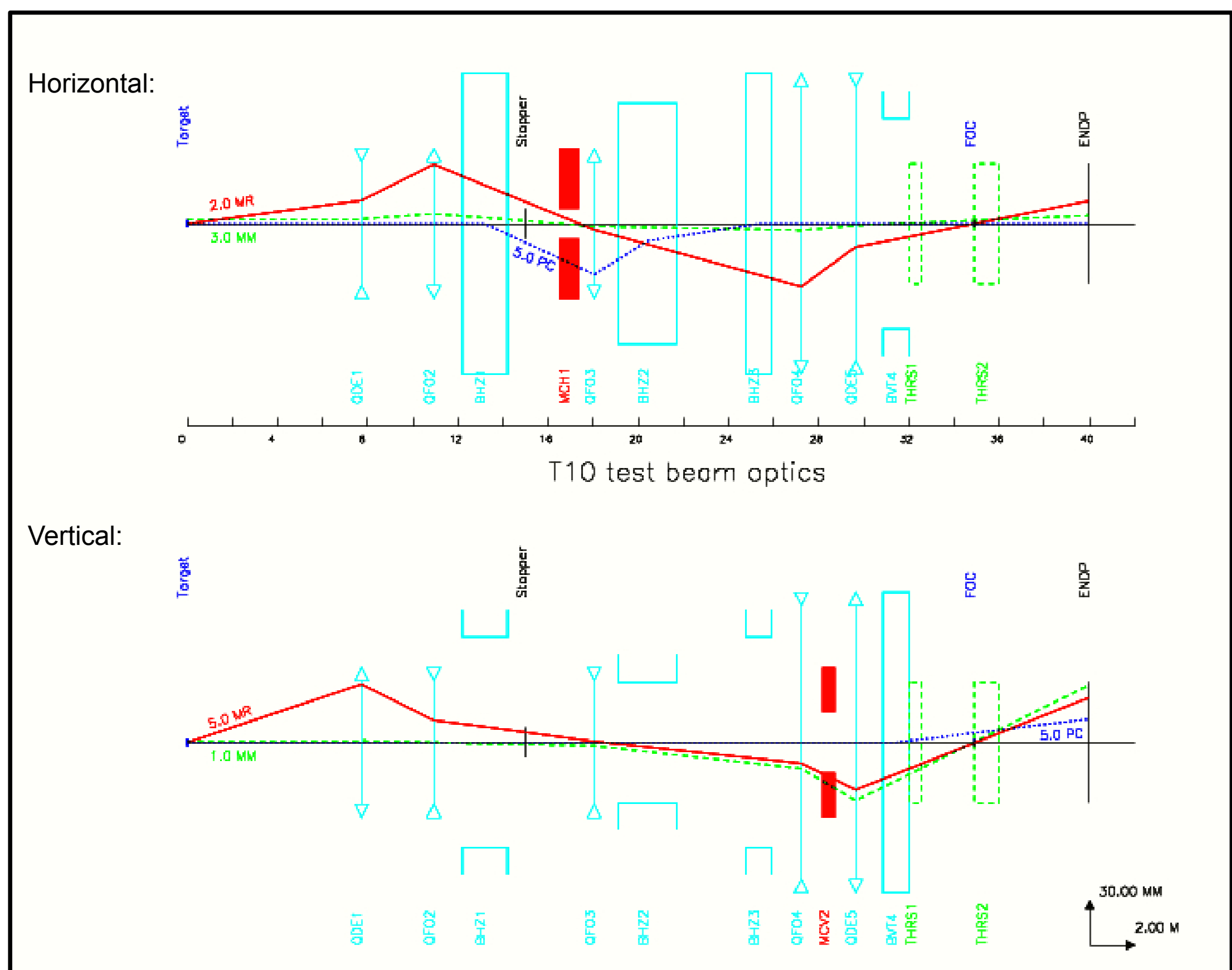
Parameter	T9	T10
Maximum Momentum [GeV/c]	15	7
Production angle [mrad]	0	61.6
Distance target - reference focus [m]	55.8	34.9
Beam height above floor [m]	2.5	2.505
Angular acceptance Horizontal [mrad]	±4.8	±5.4
Vertical [mrad]	±5.8	±13.9
Acceptance solid angle [μsterad]	87	224
Theoretical momentum resolution [%]	0.24	0.24
Maximum momentum band [%]	±10	±8
Magnification at ref. focus (X,Y)	1.0, 1.2	0.8, 0.6
Protons on North target per spill	15 10 ¹¹	
Maximum flux (depending on p, Q, ...)	10 ⁶	10 ⁶

Information from the PS machine

Activate EA Vistar from the General menu in the Java Console Manager:

The white curve shows the shape of the spill over its 400 msec length

The green dots indicate the intensity per spill for the different Target telescopes



BXSICNTS status program

EA-ZT11 - CPS.USER.EASTA

Device Name	Equipment Name	Module Name	Position	HV	d	Counts	Time of last EE	Uptime
BXSICNT_1000	SCINT17 033	SCINT10 1	IN	-1.7731	27012	24 9 27 10	0000 00 3	click
BXSICNT_1001	XSD19 054	SCINT10 2	IN	-1.8321	183023444	24 9 27 10	0000 00 3	click
BXSICNT_1002	XSD110 033	SCINT10 1	IN	-1.8041	180075558	24 9 27 10	0000 00 3	click
BXSICNT_1003	XSD111 027	SCINT10 2	IN	-1.8041	1800238662	24 9 27 10	0000 00 3	click

The Vistar on the TV screen shows the overall state of the PS (+ cycles):

Magnet current

Inst. Intensity

Active cycle

Cycle intensity

Comments from the operators

Currents for T9 test beam optics (focus 2 m downstream of XDWC)

Momentum	QDE1	QFO2	BHZ1	QFO3 (E7)	BHZ2	QFO4	BHZ3	QDE5	BVT1	QDE6	QFO7
0.50	1314077	1180744	263784	130676	142724	132224	142724	132224	142724	132224	142724
1.00	263784	2361488	527568	263784	527568	527568	527568	527568	527568	527568	527568
1.50	395676	3542224	791304	395676	791304	791304	791304	791304	791304	791304	791304
2.00	527568	4721664	1055040	527568	1055040	1055040	1055040	1055040	1055040	1055040	1055040
2.50	660460	5901104	1406720	660460	1406720	1406720	1406720	1406720	1406720	1406720	1406720
3.00	791304	7080544	1813760	791304	1813760	1813760	1813760	1813760	1813760	1813760	1813760
3.50	922148	8260000	2220800	922148	2220800	2220800	2220800	2220800	2220800	2220800	2220800
4.00	1053000	9439440	2627840	1053000	2627840	2627840	2627840	2627840	2627840	2627840	2627840
4.50	1183844	10618880	3034880	1183844	3034880	3034880	3034880	3034880	3034880	3034880	3034880
5.00	1314688	11803320	3441920	1314688	3441920	3441920	3441920	3441920	3441920	3441920	3441920
5.50	1445532	12987760	3848960	1445532	3848960	3848960	3848960	3848960	3848960	3848960	3848960
6.00	1576376	14172200	4256000	1576376	4256000	4256000	4256000	4256000	4256000	4256000	4256000

Currents for T10 test beam optics, nominal focus (2 m downstream of XDWC)

Momentum	QDE1	QFO2	BHZ1	QFO3	BHZ2	QFO4	QDE5	BVT1
1.00	85.5905	89.4710	168.9311	49.7667	76.2401	46.9567	58.4866	66.6719
1.50	128.3858	134.2065	253.3967	74.6500	114.3600	70.4350	87.7299	100.0075
2.00	171.1810	178.9920	337.8516	99.5333	153.8133	93.9133	116.4826	132.8489
2.50	213.9762	223.7872	422.3065	124.4167	193.2682	125.8267	159.0519	169.6606
3.00	256.7714	268.5824	506.7614	149.3000	232.7231	149.7070	196.6485	208.6667
3.50	299.5666	313.3776	591.2163	174.1833	272.1780	175.1200	234.2364	247.6729
4.00	342.3618	358.1728	675.6712	199.0667	311.6329	199.5268	271.8248	286.6792
4.50	385.1570	402.9680	760.1261	223.9500	351.0878	224.0200	309.4132	325.6855
5.00	427.9522	447.7632	844.5810	248.8333	390.5427	248.5133	347.2016	364.6918
5.50	470.7474	492.5584	929.0359	273.7167	430.0000	273.0000	384.9880	403.6981
6.00	513.5426	537.3536	1013.4908	300.6000	469.4549	302.4549	422.7842	442.7044

Currents for T11 test beam optics - 2008

Momentum	QDE1	QFO2	BHZ1	QFO3	BHZ2	QFO4	QDE5	BVT1
1.00	85.1247	87.0422	209.1989	65.6556	153.3960	89.0998	81.0191	34.9197
1.20	105.7526	108.4514	250.8065	78.7867	184.1115	106.9476	97.2422	41.9026
1.40	123.9020	124.8411	292.4144	91.9178	214.9266	124.8175	113.0022	48.8876
1.50	132.1974	134.1363	313.0632	98.4334	230.9516	133.7641	121.6065	52.7595
1.60	141.0133	143.0313	333.7953	105.6889	245.9236	143.7196	129.7394	55.8715
1.80	158.4466	162.4820	375.2625	118.1800	277.2125	160.6650	146.0270	62.8554
2.00	176.2624	178.9920	416.7926	131.1112	308.9415	178.6692	162.5528	69.8394
2.20	193.9007	195.9054	458.4762	144.4423	341.3025	196.7509	178.7386	76.8233
2.40	211.5620	216.9183	500.1607	157.3734	374.5536	214.9229	195.1084	83.8072
2.50	220.3838	224.2550	521.5807	164.1389	391.6158	224.0705	203.4175	87.2992
2.60	229.2064	231.5912	542.8554	170.7045	409.0391	233.2433	211.6893	90.7912
2.80	246.8443	248.7447	584.5626	183.5356	445.2446	251.7151	228.1322	97.7751
3.00	264.5658	266.8532	626.2698	196.3667	481.8777	270.3381	245.6002	104.7590
3.20	282.1613	284.9587	667.9770	209.1978	518.5008	289.3113	261.9619	111.7430
3.40	299.8210	302.9641	709.6842	222.0289	557.5549	308.5432	279.0512	118.7269
3.50	308.6325	311.9706	732.5227	229.7945	580.2833	318.2968	287.6789	122.2189