

ramo corto dei positroni

Element Name	X _b [mm]	Y _b [mm]	Z _b [mm]	L _{mec} [mm]	α_{y-z} [mrad]	α_y [mrad]	α_z [mrad]	XT _{in} [mm]	YT _{in} [mm]	ZT _{in} [mm]	XT _b [mm]	YT _b [mm]	ZT _b [mm]	XT _{out} [mm]	YT _{out} [mm]	ZT _{out} [mm]
IP1	0,000	0,000	0,000													
centro macchina	12.658,280	0,000	0,000													
PMQDI102	415,000	0,000	0,000	240,000	0,000	0,000	0,000	295,000	-7,552	0,338	415,000	-11,582	0,635	535,000	-18,455	0,973
PMQFPS01	963,892	-49,384	4,358	250,000	-79,424	-71,540	12,370	839,212	-40,449	2,951	963,890	-49,384	4,358	1.088,600	-58,319	6,098
PMDPS001	1.197,673	-65,990	7,795	75,000	0,000	-71,540	10,000	1.160,269	-63,310	7,237	1.197,700	-65,990	7,795	1.235,100	-68,670	8,209
PMDPS002	1.287,414	-72,309	8,614	75,000	0,000	-71,540	10,000	1.250,010	-69,629	8,340	1.287,400	-72,309	8,614	1.324,800	-74,989	8,742
QxxPSxxx																
CxxPSxxx																
QUAI1004	4.128,277	-270,115	5,750	300,000	-239,676	-71,540	0,000	3.978,661	-259,390	6,399	4.128,300	-270,110	5,750	4.277,900	-280,840	5,277
QUAPS101	5.245,086	-348,465	1,600	300,000	-239,676	-71,540	0,000	5.095,469	-337,740	2,223	5.245,100	-348,460	1,600	5.394,700	-359,190	1,106
DHCPS101	5.641,124	-381,432	0,000	328,000	0,0?	-76,180	0,000	5.477,544	-369,710	0,000	5.641,100	-381,430	0,000	5.804,600	-394,670	0,000
COMPS001	6.962,896	-488,501	0,000	1.410,000	0,000	-80,820	0,000	6.260,197	-431,580	0,000	6.962,900	-488,500	0,000	7.665,600	-545,420	0,000
QUAPS102	8.218,839	-590,238	0,000	300,000	15,210	-80,820	0,000	8.069,328	-578,130	0,000	8.218,800	-590,240	0,000	8.368,300	-602,350	0,000
QUAPS103	8.981,368	-652,006	0,000	300,000	-15,210	-80,820	0,000	8.831,857	-639,900	0,000	8.981,400	-652,010	0,000	9.130,900	-664,120	0,000
SXPPS101	9.305,317	-678,247	0,000	150,000	0,000	-80,820	0,000	9.230,563	-672,190	0,000	9.305,300	-678,250	0,000	9.380,100	-684,300	0,000
CHVPS101	9.690,680	-709,413	0,000	200,000	0,000	-80,820	0,000	9.591,006	-701,340	0,000	9.690,700	-709,410	0,000	9.790,400	-717,490	0,000

Il segno delle rotazioni dei QUA e dei DPM e' tale che un segno negativo implica una rotazione antioraria nel piano trasverso y-z nel verso di propagazione del fascio positroni.

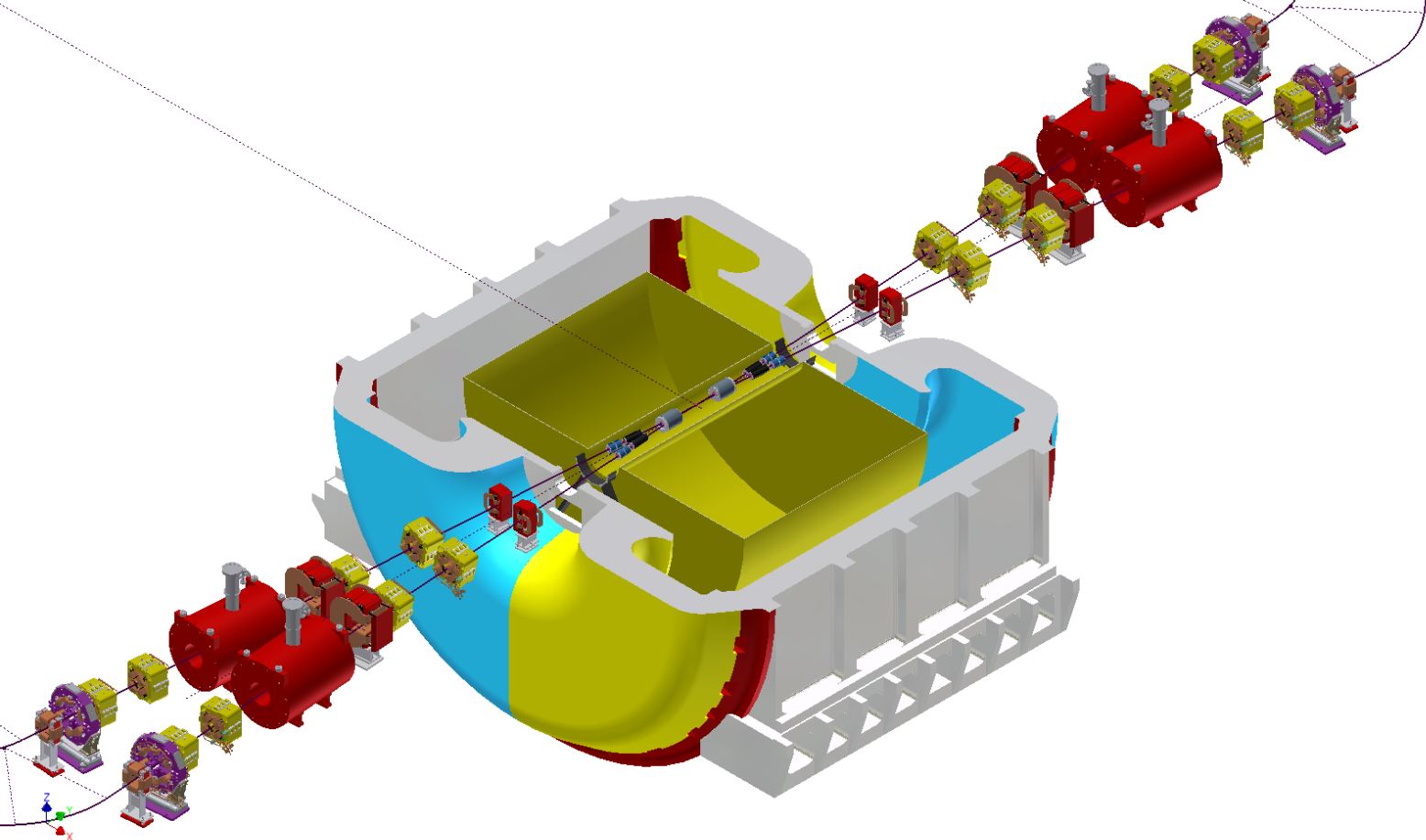
Per i QUADS usati per la correzione del coupling le rotazioni riportate in tabella si riferiscono alla sezione SHORT del fascio positroni, i loro corrispondenti valori nella sezione long hanno segno opposto questo, le rotazioni per positroni ed elettroni nei due tratti adiacenti rispetto all'IP sono le stesse.

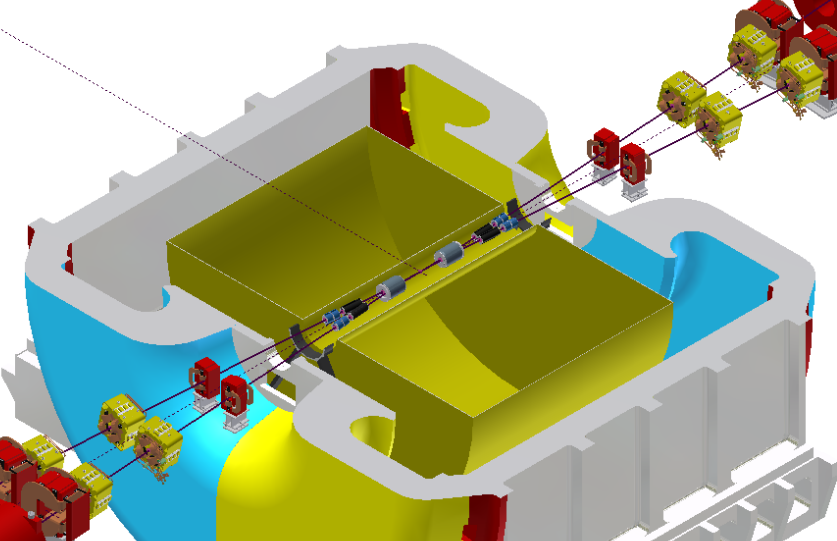
Per i positroni la componente principale del campo magnetico (Bx) prodotto dai dipoli a magneti permanenti e' diretta verso l'esterno macchina.

Per gli elettroni il dipolo va ruotato di 180°.

I punti (XT_{in}, YT_{in}, ZT_{in}), (XT_b, YT_b, ZT_b), (XT_{out}, YT_{out}, ZT_{out}) sono le coordinate della traiettoria del fascio rispettivamente all'entrata, nel baricentro ed all'uscita di ogni elemento facendo riferimento alla sua lunghezza meccanica L_{mec}.

Nella zona d'interazione la traiettoria verticale (Z) per il fascio dei positroni e' sempre positiva, quella degli elettroni sempre negativa.





*positroni**coordinate del centro dei magneti ed angoli del loro assetto*

<i>Element Name</i>	x_b [mm]	y_b [mm]	z_b [mm]	α_z [mrad]	α_x [mrad]	α_y [mrad]
CHVPL106	12.367,693	9.690,680	0,000	-80,820	0,000	0,000
SXPPL104	12.336,527	9.305,317	0,000	-80,820	0,000	0,000
QUAPL108	12.310,286	8.981,368	0,000	-80,820	0,000	15,210
QUAPL109	12.248,518	8.218,839	0,000	-80,820	0,000	-15,210
COMPPL01	12.146,781	6.962,896	0,000	-80,820	0,000	0,000
DHCPL101	12.039,712	5.641,124	0,000	-76,180	0,000	0,0?
QUAPL110	12.006,745	5.245,086	1,600	-71,540	0,000	239,676
QUAI1001	11.928,395	4.128,277	5,750	-71,540	0,000	239,676
CxxPLxxx						
QxxPLxxx						
PMDPL001	11.730,589	1.287,414	8,614	-71,540	10,000	0,000
PMDPL002	11.724,270	1.197,673	7,795	-71,540	10,000	0,000
PMQFPL01	11.707,664	963,892	4,358	-71,540	12,370	79,424
PMDQI102	11.658,280	415,000	0,000	0,000	0,000	0,000

traiettoria del fascio nei magneti

<i>entrata</i>			<i>centro</i>			<i>uscita</i>		
x_{in} [mm]	y_{in} [mm]	z_{in} [mm]	x_c [mm]	y_c [mm]	z_c [mm]	x_{out} [mm]	y_{out} [mm]	z_{out} [mm]
12.375,770	9.790,400	0,000	12.367,690	9.690,700	0,000	12.359,620	9.591,006	0,000
12.342,580	9.380,100	0,000	12.336,530	9.305,300	0,000	12.330,470	9.230,563	0,000
12.322,400	9.130,900	0,000	12.310,290	8.981,400	0,000	12.298,180	8.831,857	0,000
12.260,630	8.368,300	0,000	12.248,520	8.218,800	0,000	12.236,410	8.069,328	0,000
12.203,700	7.665,600	0,000	12.146,780	6.962,900	0,000	12.089,860	6.260,197	0,000
12.052,950	5.804,600	0,000	12.039,710	5.641,100	0,000	12.027,990	5.477,544	0,000
12.017,470	5.394,700	1,106	12.006,740	5.245,100	5,750	11.996,020	5.095,469	2,223
11.939,120	4.277,900	5,277	11.928,390	4.128,300	5,750	11.917,670	3.978,661	6,399
11.733,269	1.324,800	8,742	11.730,589	1.287,400	8,614	11.727,909	1.250,010	8,340
11.726,950	1.235,100	8,209	11.724,270	1.197,700	7,795	11.721,590	1.160,269	7,237
11.716,599	1.088,600	6,098	11.707,664	963,890	4,358	11.698,729	839,212	2,951
11.676,735	535,000	0,973	11.669,862	415,000	0,635	11.665,832	295,000	0,338

<i>IP1</i>	11.658,280	0,000	0,000
<i>centro macchina</i>	0,000	0,000	0,000

PMQDI101	11.658,280	-415,000	0,000	0,000	0,000	0,000	11.650,728	-295,000	0,338	11.646,698	-415,000	0,635	11.639,825	-535,000	0,973
PMQFPS01	11.608,896	-963,892	4,358	-71,540	-12,370	79,424	11.617,831	-839,212	2,951	11.608,896	-963,890	4,358	11.599,961	-1.088,600	6,098
PMDPS001	11.592,290	-1.197,673	7,795	-71,540	-10,000	0,000	11.594,970	-1.160,269	7,237	11.592,290	-1.197,700	7,795	11.589,610	-1.235,100	8,209
PMDPS002	11.585,971	-1.287,414	8,614	-71,540	-10,000	0,000	11.588,651	-1.250,010	8,340	11.585,971	-1.287,400	8,614	11.583,291	-1.324,800	8,742
QxxPSxxx															
CxxPSxxx															
QUAI1004	11.388,165	-4.128,277	5,750	-71,540	0,000	239,676	11.398,890	-3.978,661	6,399	11.388,170	-4.128,300	5,750	11.377,440	-4.277,900	5,277
QUAPS101	11.309,815	-5.245,086	1,600	-71,540	0,000	239,676	11.320,540	-5.095,469	2,223	11.309,820	-5.245,100	1,600	11.299,090	-5.394,700	1,106
DHCPS101	11.276,848	-5.641,124	0,000	-76,180	0,000	0,0?	11.288,570	-5.477,544	0,000	11.276,850	-5.641,100	0,000	11.263,610	-5.804,600	0,000
COMPS001	11.169,779	-6.962,896	0,000	-80,820	0,000	0,000	11.226,700	-6.260,197	0,000	11.169,780	-6.962,900	0,000	11.112,860	-7.665,600	0,000
QUAPS102	11.068,042	-8.218,839	0,000	-80,820	0,000	-15,210	11.080,150	-8.069,328	0,000	11.068,040	-8.218,800	0,000	11.055,930	-8.368,300	0,000
QUAPS103	11.006,274	-8.981,368	0,000	-80,820	0,000	15,210	11.018,380	-8.831,857	0,000	11.006,270	-8.981,400	0,000	10.994,160	-9.130,900	0,000
SXPPS101	10.980,033	-9.305,317	0,000	-80,820	0,000	0,000	10.986,090	-9.230,563	0,000	10.980,030	-9.305,300	0,000	10.973,980	-9.380,100	0,000
CHVPS101	10.948,867	-9.690,680	0,000	-80,820	0,000	0,000	10.956,940	-9.591,006	0,000	10.948,870	-9.690,700	0,000	10.940,790	-9.790,400	0,000

elettroni

coordinate del centro dei magneti ed angoli del loro assetto

Element Name	x _b [mm]	y _b [mm]	z _b [mm]	α _z [mrad]	α _x [mrad]	α _y [mrad]
CHVEL106	12.367,693	-9.690,680	0,000	80,820	0,000	0,000
SXPEL104	12.336,527	-9.305,317	0,000	80,820	0,000	0,000
QUAEL108	12.310,286	-8.981,368	0,000	80,820	0,000	15,210
QUAEL109	12.248,518	-8.218,839	0,000	80,820	0,000	-15,210
COMPEL01	12.146,781	-6.962,896	0,000	80,820	0,000	0,000
DHCEL101	12.039,712	-5.641,124	0,000	76,180	0,000	0,0?
QUAEL110	12.006,745	-5.245,086	-1,600	71,540	0,000	239,676
QUAI1003	11.928,395	-4.128,277	-5,750	71,540	0,000	239,676
CxxELxxx						
QxxELxxx						
PMDEL001	11.730,589	-1.287,414	-8,614	71,540	10,000	0,000
PMDEL002	11.724,270	-1.197,673	-7,795	71,540	10,000	0,000
PMQFEL01	11.707,664	-963,892	-4,358	71,540	12,370	79,424
PMDQI101	11.658,280	-415,000	0,000	0,000	0,000	0,000

traiettoria del fascio nei magneti

entrata			centro			uscita		
x _{in} [mm]	y _{in} [mm]	z _{in} [mm]	x _c [mm]	y _c [mm]	z _c [mm]	x _{out} [mm]	y _{out} [mm]	z _{out} [mm]
12.375,770	-9.790,400	0,000	12.367,690	-9.690,700	0,000	12.359,620	-9.591,006	0,000
12.342,580	9.380,100	0,000	12.336,530	-9.305,300	0,000	12.330,470	-9.230,563	0,000
12.322,400	-9.130,900	0,000	12.310,290	-8.981,400	0,000	12.298,180	-8.831,857	0,000
12.260,630	-8.368,300	0,000	12.248,520	-8.218,800	0,000	12.236,410	-8.069,328	0,000
12.203,700	-7.665,600	0,000	12.146,780	-6.962,900	0,000	12.089,860	-6.260,197	0,000
12.052,950	-5.804,600	0,000	12.039,710	-5.641,100	0,000	12.027,990	-5.477,544	0,000
12.017,470	-5.394,700	-1,106	12.006,740	-5.245,100	-5,750	11.996,020	-5.095,469	-2,223
11.939,120	-4.277,900	-5,277	11.928,390	-4.128,300	-5,750	11.917,670	-3.978,661	-6,399
11.733,269	-1.324,800	-8,742	11.730,589	-1.287,400	-8,614	11.727,909	-1.250,010	-8,340
11.726,950	-1.235,100	-8,209	11.724,270	-1.197,700	-7,795	11.721,590	-1.160,269	-7,237
11.716,599	-1.088,600	-6,098	11.707,664	-963,890	-4,358	11.698,729	-839,212	-2,951
11.676,735	-535,000	-0,973	11.669,862	-415,000	-0,635	11.665,832	-295,000	-0,338

IP1	11.658,280	0,000	0,000
centro macchina	0,000	0,000	0,000

PMQDI102	11.658,280	415,000	0,000	0,000	0,000	0,000	11.650,728	295,000	-0,338	11.646,698	415,000	-0,635	11.639,825	535,000	-0,973
PMQFES01	11.608,896	963,892	-4,358	71,540	-12,370	79,424	11.617,831	839,212	-2,951	11.608,896	963,890	-4,358	11.599,961	1.088,600	-6,098
PMDDES001	11.592,290	1.197,673	-7,795	71,540	-10,000	0,000	11.594,970	1.160,269	-7,237	11.592,290	1.197,700	-7,795	11.589,610	1.235,100	-8,209
PMDDES002	11.585,971	1.287,414	-8,614	71,540	-10,000	0,000	11.588,651	1.250,010	-8,340	11.585,971	1.287,400	-8,614	11.583,291	1.324,800	-8,742
QxxESxxx															
CxxESxxx															
QUAI1002	11.388,165	4.128,277	-5,750	71,540	0,000	239,676	11.398,890	3.978,661	-6,399	11.388,170	4.128,300	-5,750	11.377,440	4.277,900	-5,277
QUAES101	11.309,815	5.245,086	-1,600	71,540	0,000	239,676	11.320,540	5.095,469	-2,223	11.309,820	5.245,100	-1,600	11.299,090	5.394,700	-1,106
DHCES101	11.276,848	5.641,124	0,000	76,180	0,000	0,0?	11.288,570	5.477,544	0,000	11.276,850	5.641,100	0,000	11.263,610	5.804,600	0,000
COMES001	11.169,779	6.962,896	0,000	80,820	0,000	0,000	11.226,700	6.260,197	0,000	11.169,780	6.962,900	0,000	11.112,860	7.665,600	0,000
QUAES102	11.068,042	8.218,839	0,000	80,820	0,000	-15,210	11.080,150	8.069,328	0,000	11.068,040	8.218,800	0,000	11.055,930	8.368,300	0,000
QUAES103	11.006,274	8.981,368	0,000	80,820	0,000	15,210	11.018,380	8.831,857	0,000	11.006,270	8.981,400	0,000	10.994,160	9.130,900	0,000
SXPES101	10.980,033	9.305,317	0,000	80,820	0,000	0,000	10.986,090	9.230,563	0,000	10.980,030	9.305,300	0,000	10.973,980	-9.380,100	0,000
CHVES101	10.948,867	9.690,680	0,000	80,820	0,000	0,000	10.956,940	9.591,006	0,000	10.948,870	9.690,700	0,000	10.940,790	9.790,400	0,000