



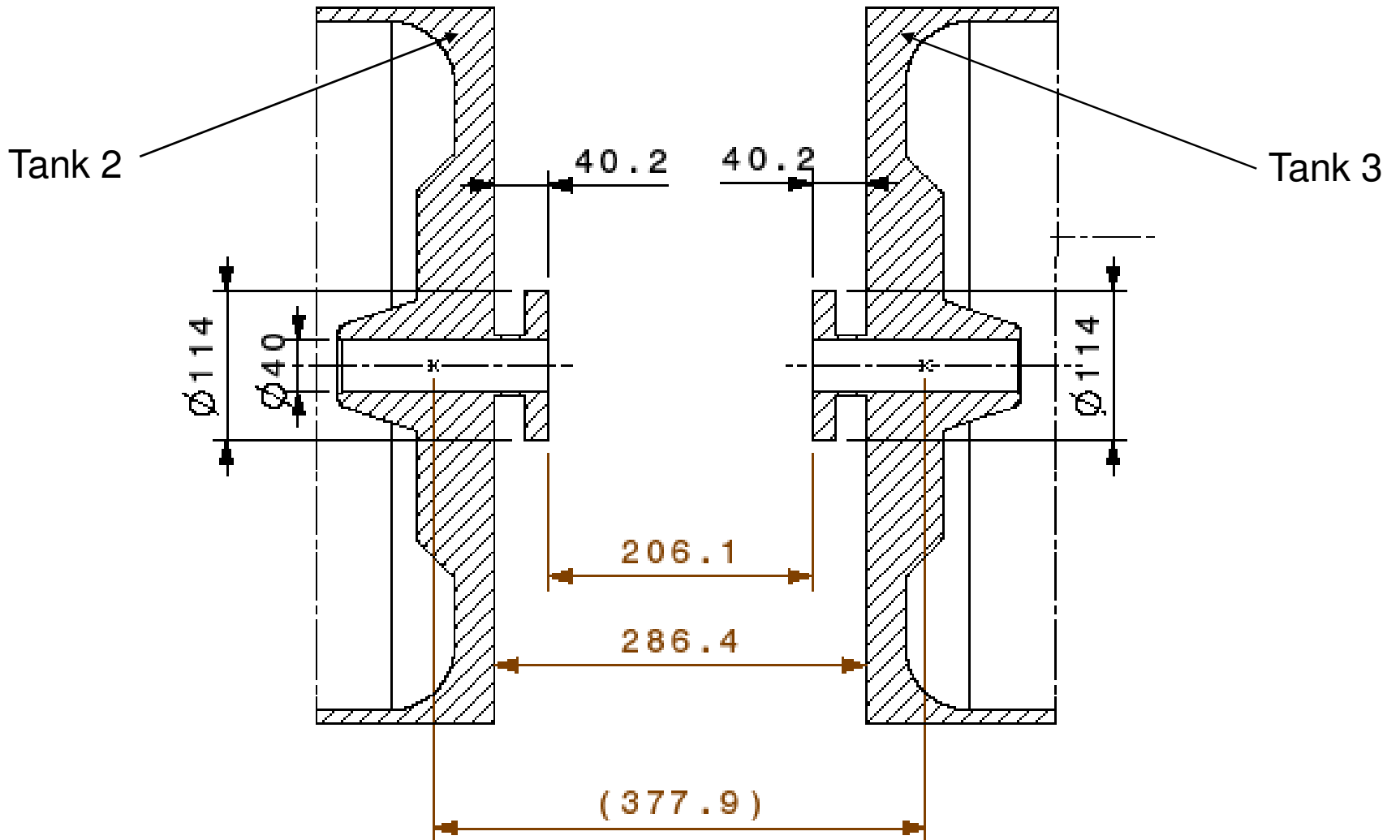
# Linac4

Intégration des zones inter tank





# PIMS – Inter tank 2/3





**Linac lengths, 21 September 2009**

Structure	Element	cavity sextubs	Length [m]	Wave-guide entry RF pick-up position 1 [m]	RF p-u position 2 [m]	RF p-u position 2 [m]	Total length [m]	Section length [m]	steerer + EMQ	steerer No.	No. pick-up former	trans- wirescanner	SEM	support structures	alignment table	alignment principle	survey targets	horizontal pairs	Comment	
Source																				
	LEBT		1.8855																"clovettes"	
	RFQ		3.2327																	
	Chopper-line		3.6500																	
DTL																				
	Tank1	2	3.8990	13.009	11.649	14.768	15.168			1	1	?								
	Drift		0.2780				15.436													
	Tank2	4	7.3567	6.016	16.172	19.114	22.056			1	1	?								
	Drift		0.4280	9.276			23.220													
	Tank3	4	7.2466	13.876	23.944	26.843	29.742	30.466		1	1	?							possible to reduce ends with mid-quad	
	Drift		0.6720	17.026			31.138			1	1	1	1	1	1	1	1	1		
ECCDTL 1																				
	Cavity 1	2	0.6962			31.4862														
	Drift		0.2580				31.634													
	Cavity 2	2	0.7151	32.241						1										
	Drift		0.2500				32.799													
	Cavity 3	2	0.7347			33.4167				1										
	Drift		0.4100				33.783	2.645												
ECCDTL 2																				
	Cavity 1	2	0.7541			34.67047				1										
	Drift		0.2500				34.948													
	Cavity 2	2	0.7730	35.384						1										
	Drift		0.2500				36.198													
	Cavity 3	2	0.7922			36.61662				1										
	Drift		0.4100				37.033	2.819												
ECCDTL 3																				
	Cavity 1	2	0.8103			37.82787				1	1	1	1	1	1	1	1	1		
	Drift		0.2500				38.233													
	Cavity 2	2	0.8282	38.697						1										
	Drift		0.2500				39.311													
	Cavity 3	2	0.8463			39.98437				1										
	Drift		0.4100				40.408	2.985												
ECCDTL 4																				
	Cavity 1	2	0.8629			41.24897				1	1	1	1	1	1	1	1	1		
	Drift		0.2500				41.600													
	Cavity 2	2	0.8815	42.171						1										
	Drift		0.2500				42.812													
	Cavity 3	2	0.8973			43.51057				1										
	Drift		0.4100				43.968	3.142												
ECCDTL 5																				
	Cavity 1	2	0.9157			44.82707				1	1	1	1	1	1	1	1	1		
	Drift		0.2500				45.285													
	Cavity 2	2	0.9301	45.800						1										
	Drift		0.2500				46.465													
	Cavity 3	2	0.9480			47.18902				1										
	Drift		0.4100				47.683	3.294												
ECCDTL 6																				
	Cavity 1	2	0.9621			48.55407				1	1	1	1	1	1	1	1	1		
	Drift		0.2500				49.055													
	Cavity 2	2	0.9788	49.574						1										
	Drift		0.2500				49.585													
	Cavity 3	2	0.9926			51.01002				1										
	Drift		0.4100				51.506	3.433												
ECCDTL 7																				
	Mockup7	2	1.0081			52.42037				1	1	1	1	1	1	1	1	1		
	Drift		0.2500				53.004													
	Cavity 2	2	1.0203	53.486						1										
	Drift		0.2500				53.174													
	Cavity 3	2	1.0353			54.96237				1										
	Drift		1.2114				54.145	3.564												
	Cavity 1	1	1.2978	57.340		57.062	57.618			1	1	1	1	1	1	1	1	1		
	Drift		0.3708				57.989	24.342												
	Cavity2	1	1.3225	59.021		58.738	59.305			1										
	Drift		0.3779				60.060													
	Cavity3	1	1.3484	60.734		60.445	61.022			1	1	1	1	1	1	1	1	1		
	Drift		0.3847				61.407													
	Cavity4	1	1.3699	62.476		62.183	62.770			1										
	Drift		0.3914				63.181													
	Cavity5	1	1.3952	64.249		63.951	64.548			1	1	1	1	1	1	1	1	1		
	Drift		0.3981				65.063													
	Cavity6	1	1.4161	66.052		66.749	67.355			1										
	Drift		0.4046				67.780			1	1	1	2	1	1	1	1	1		
	Cavity7	1	1.4387	67.884		67.576	68.192			1										
	Drift		0.4111				68.603													
	Cavity8	1	1.4609	69.745		69.432	70.058			1										
	Drift		0.4174				70.475													
	Cavity9	1	1.4828	71.634		71.316	71.962			1	1	1	1	1	1	1	1	1		
	Drift		0.4237				72.376													
	Cavity10	1	1.5044	73.561		73.229	73.874			1										
	Drift		0.4298				74.294													
	Cavity11	1	1.5234	75.495		75.169	75.822			1	1	1	1	1	1	1	1	1		
	Drift		0.4383				76.257													
	Cavity12	1	1.5398	77.462		77.132	77.792			1										
	Drift		0.4000				78.092	21.540												
Linac4																				
	Total linac length [m]		82.2318				82.232													
	Measurement line		5.0000				87.232													
	Dump		5.0000				87.866													
	Straight tunnel length [m]		92.2318																	
	Up to 180 MeV, continued after cavity2																			
PMS																				
	Drift		0.4399				76.672													
	Cavity13	1	1.5590	79.451			80.230													
	Drift		0.4451				80.675													
	Cavity14	1	1.5779	81.464			82.553													
	Drift		0.4508				83.704													
	Cavity15	1	1.5975	83.502			85.301													
	Drift		0.4564				84.768													
	Cavity16	1	1.6169	85.566			86.374													
	Total linac length [m]		81.9998																	8.143
<p>■ All tank dimensions are from inner wall to inner wall</p> <p>■ DTL inner walls coincide with the centre of first-lead quad</p> <p>■ Between DTL tanks there is 2 beta lambda and an EMQ with steerer</p> <p>■ Wave-guide entry in DTL tank 1 needs to be moved off-centre because of the flange between 2 half-tanks: assume -0.2m for now,</p> <p>■ Wave-guide entry in DTL tanks 3 is at 1/3 and 2/3 of total length (4 parts for each tank).</p> <p>■ ECCDTL module: cavity+EMQ+cavity+EMQ+cavity</p>																				