

Damping Rings R&D Activities: Approved and Proposed Resources

17 August 2007

	2006		2007		2008		2009		2010	
	FTE	M&S	FTE	M&S	FTE	M&S	FTE	M&S	FTE	M&S
2 Beam Dynamics Studies	21.9	464.0	27.9	588.0	20.9	508.0	20.0	522.2	3.5	15.0
2.1 Single-Particle Dynamics	2.7	14.0	6.1	120.0	6.1	62.8	6.9	72.9	1.8	7.5
2.1.1 Lattice Design	1.3	8.0	1.9	18.0	2.1	14.8	2.8	17.7	1.8	7.5
2.1.2 Acceptance	0.4	3.0	2.5	64.0	0.8	9.2	0.4	7.4		
2.1.3 Optics Measurement and Correction	0.3	3.0			0.1	3.8	0.7	15.8		
2.1.4 Low-Emittance Tuning	0.8	0.0	1.8	38.0	3.2	35.0	3.0	32.0		
2.2 Multi-Particle Dynamics	18.2	444.0	19.2	432.0	14.2	438.6	12.6	443.3	1.8	7.5
2.2.1 Single-Bunch Impedance	0.5	1.5	1.2	22.0	1.4	16.2	2.0	21.4		
2.2.2 Multi-Bunch Impedance	0.5	0.0	0.8	13.0	1.2	17.5	0.9	10.7		
2.2.3 Electron Cloud	8.3	283.4	9.2	304.4	3.4	258.2	4.8	316.6		
2.2.4 Ion Effects	4.6	54.6	4.2	31.6	4.1	88.0	3.5	70.4	1.8	7.5
2.2.5 Other Collective Effects	4.4	104.5	3.9	61.0	4.2	58.8	1.5	24.3		
2.3 Integrated Dynamics Studies	1.0	6.0	2.6	36.0	0.5	6.6	0.4	6.0		
2.3.1 Integrated Dynamics Studies	1.0	6.0	2.6	36.0	0.5	6.6	0.4	6.0		

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3 Technical Subsystem or Component Developm	13.3	610.9	11.5	606.9	9.9	606.4	11.0	850.1		
3.1 Vacuum System	1.1	0.0	2.7	35.0	2.0	214.2	1.7	21.4		
3.1.1 Vacuum Chamber	1.1	0.0	2.7	35.0	2.0	214.2	1.7	21.4		
3.2 Permanent Magnets	0.7	1.3								
3.2.6 Damping Wiggler - PM	0.7	1.3								
3.3 Normal-Conducting Magnets							0.9	11.2		
3.3.3 Quadrupoles							0.3	7.2		
3.3.8 Magnet Power System							0.6	4.0		
3.4 Superconducting Magnets	0.9	0.0					0.8	54.0		
3.4.6 Damping Wiggler - SC	0.9	0.0					0.8	54.0		
3.5 Kickers	6.7	396.0	3.9	325.9	4.3	226.6	3.9	313.3		
3.5.1 Fast Injection/Extraction Kickers	6.7	396.0	3.9	325.9	4.3	226.6	3.9	313.3		
3.6 RF System	0.2	3.6					0.7	25.4		
3.6.1 RF System	0.2	3.6								
3.6.4 RF Controls (Low-Level RF)							0.7	25.4		
3.7 Instrumentation and Diagnostics	1.4	60.0	1.7	72.0	2.2	129.6	2.4	409.1		
3.7.2 Beam Position and Phase Diagnostics	1.2	40.0	1.3	55.0	1.4	101.2	0.7	275.4		
3.7.3 Beam Size and Bunch Length Diagnos	0.1	20.0	0.1	17.0	0.8	28.5	1.4	105.7		
3.7.5 Other Instrumentation and Diagnostics	0.1	0.0	0.3	0.0			0.3	28.0		
3.8 Feedback Systems	2.4	150.0	3.0	173.0	1.3	20.0	0.5	15.8		
3.8.1 Bunch-by-Bunch Feedback Systems	2.4	150.0	3.0	173.0	1.3	20.0	0.5	15.8		
3.13 Multiple Systems			0.2	1.0	0.3	16.0				
3.13.1 Systems Integration			0.2	1.0	0.3	16.0				
4 Experimental Studies and Test Facilities	7.4	219.1	10.8	459.5	6.6	251.1	4.9	139.2	4.5	120.0
4.1 Experimental Studies	3.0	147.0	5.2	244.5	5.0	170.0	4.5	120.0	4.5	120.0
4.1.1 Experimental Studies	3.0	147.0	5.2	244.5	5.0	170.0	4.5	120.0	4.5	120.0
4.2 Test Facility Development	4.4	72.1	5.6	215.0	1.6	81.1	0.4	19.2		
4.2.1 Test Facility Development	4.4	72.1	5.6	215.0	1.6	81.1	0.4	19.2		