

PROJECT X FY10 WORK PLAN DETAILS AND RESOURCE REQUIREMENTS

WBS/Responsible Manager	FY10 Deliverables	Resource	FTE
<b>Project Management/Holmes</b>			
	Complete ICD-2		
	Complete Mission Needs Statement for CD-0		
	Establish Project Management team		
	Establish preferred configuration		
	Request PED funds for FY2012		
	Initiate work on all CD-1 documentation		
	Travel Budget		
	SWF Budget		
		Executive Direction	0.3
		Acc Phy Exp	0.3
		Mech Tech Mgr	0.3
		Project Manager	0.3
		Proj Cntrls	0.5
<b>Linac RF Systems/Reid/Pasquinelli</b>			
	325 MHz test station (after configuration decision)		
		Mech Design Eng	0.5
		RF Eng	1.0
		RF Tech	1.0
	325 MHz conceptual design		
	Test prototype phase shifter produced by industry (AFT)		
	1.3 GHz conceptual design		
		RF Eng	0.9
		Appl Dev & Sys Analyst	0.3
		RF Tech	0.6
		RF Sci	0.3
		Elec Des	0.1
	SLAC 1.3 GHz conceptual design		
<b>Ring RF Systems/Reid</b>			
	RCS HLRF prototyping (after configuration decision)		
		RF Eng	0.7
		RF Tech	0.5
		Elec Des	0.2
		RF Sci	0.2
<b>Cavities and Cryomodules/Champion</b>			
	RF coupler design studies and prototyping		
		RF Eng	0.5
		Elec Des	0.13
		RF Tech	0.12
	HOM studies [put in AP scope of work]		
	$\beta=0.81$ cavity design studies and prototyping		
		RF Eng	0.33
		Cryo Eng	0.33
		Mech Design Eng	0.33
	Processing and testing of prototype $\beta=0.81$ cavities at MSU		
	ANL TSR development (after configuration decision)		
	JLab TSR development		
<b>MI/RR/Kourbanis</b>			
	RF system development		
	Optimize the existing 53MHz cavity design and draw out the HLRF system architecture.		
		RF Eng	1.1
		RF Tech	1
		RF Drafter	0.2
	Start initial paper design of a second harmonic cavity		
	Initiate design for a higher fundamental frequency cavity		
	SLAC cavity simulations		
	ANL cavity development		
	e-cloud		
		Mech Design Eng	0.2
		Acc Systems Spec	0.15
		Mech Systems Tech	0.2
	e-cloud parametric (SEY and rf frequency) simulations in MI		
	e-cloud measurements in MI using the existing detector and EM wave propagation.		
	Coat 4 beam tubes (in collaboration with BNL); install one in MI during 2009 summer shutdown		
	Start work with SLAC on TiN coating		
	SLAC simulations and beampipe coating		
	LBNL simulations		

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<b>Instrumentation/Wendt</b>			
	Develop requirements and specifications for each beam instrument		
	See instrumentation list		
		Elec Tech	0.2
		Elec Drafter	0.2
		Electronics Eng	1
		Acc Phy Exp	0.6
	LBNL Instrumentation		
<b>Controls/Patrick</b>			
	Define system requirements		
	Controls architecture concept		
	Evaluate hardware platforms		
		Appl Dev & Sys Analyst	0.2
	Specification of timing protocol		
		Control Systems Eng	0.2
<b>Cryogenics/Klebaner</b>			
	Study existing CM thermal cycling experience at other facilities		
	ICD-1 development		
	Specification for NML cyro-plant		
	Cryogenic instrumentation		
	Investigation of static heat loads		
	FSU Fault scenario study		
	Initiate conceptual design report		
	SWF Budget		
		Cryo Eng	1
		Cryo Tech	1
<b>Conventional Facilities/Alber</b>			
	Complete ICD-2 and cost estimate		
	Initiate CDR activities		
	Initiate NEPA documentation		
	Start site characterization studies		
	Initiate A/E selection		
	Initiate drafts all required CD-1 documentation		
	A/E support		
		CF Eng	1
<b>Beam Transport and Injection/Johnson</b>			
	Recycler H- injection design		
	Transfer line physics design (2 and 8 GeV)		
	Collimator desing		
	RCS injection design		
	SWF Budget		
		Acc Phy Theorist	1.2
		Acc Phy Exp	0.3
		Mech Analysis Eng	0.2
		Elec Designer	0.1
		Mech Designer	0.2
	BNL RCS injection design		
	SNS RCS injection design		
	LBNL RCS injection design		
	Complete lattice designs for beamline		
	Conceptual design for foil and laser stripping		
<b>Accelerator Physics and Systems Design/Nagaitsev</b>			
	Complete ICD-2		
	Complete accelerator physics design of linac		
	Initiate conceptual design report		
	Initiate warm-cold analysis		
	SWF Budget (per Nikolay S.)		
		Acc Phy Theorist	3.25
		Acc Phy Exp	0.75
<b>RCS/Lebedev</b>			
	Stripping designs (foil and laser)		
		Acc Phy Theorist	1
	RF development: cavity prototypes		
		RF Eng	0.25
		Acc Phy Theorist	0.25
	Half-cell prototype		
		Acc Phy Theorist	1
	RCS Conceptual Design		