

## FY03 Neutrino Factory and Muon Collider Collaboration Budget First Installment

	Total (\$K)	BNL	FNAL	LBNL	ANL	Princeton	UCB	UCLA	U-Miss	IIT	Jlab
<b>Cooling</b>	<b>629</b>										
MUCOOL Test Area	400		400								
Lab G operation	0										
201-MHz cavity	160			160							
Coupling solenoid	44			44							
Be windows/grids	0										
RF power source	0										
LH <sub>2</sub> absorber test	0										
Instrumentation	25							25			
<b>Targetry</b>	<b>350</b>										
AGS operations	0										
Magnet	200	200									
Target studies	100	50				50					
Simulations	50	50									
Target station studies	0										
Yield measurements	0										
<b>Diagnostics</b>	<b>144</b>										
Norem-Hardware	144				144						
<b>Phase Rotation</b>	<b>0</b>										
Induction linac	0										
Mini-cool absorber	0										
<b>Beam Simulations</b>	<b>125</b>										
Cooling/Theory	125								50	75	
<b>Acceleration</b>	<b>10</b>										
RLA/FFAG studies	10										10
<b>Collider</b>	<b>55</b>										
Longitudinal cooling	55						5	50			
<b>Management &amp; Reserve</b>	<b>0</b>			0							
<b>TOTAL (\$K)</b>	<b>1313</b>	300	400	204	144	50	5	75	50	75	10
Operating (\$K)	553	100	0	44	144	50	5	75	50	75	10
Equipment (\$K)	360	200	0	160							
GPP (\$K)	400		400								

## Budget Notes

- [1] BNL funds provide support for design of an upgraded Hg-jet system and Woods-metal target system. Support for finalizing the design and beginning construction of a target test solenoid, and for simulating beam-target interactions, are also included. The funding request is for \$300K, of which \$100K is operating and \$200K is equipment funds.
- [2] FNAL funds are to complete phase-II of the MUCOOL Test Area (MTA) construction. The funding request is \$400K, with all requested funding being GPP.
- [3] LBNL funds will support work on the 201-MHz cavity final design and construction. Conceptual design work on a 201-MHz compatible solenoid will be carried out. This funding request is for \$204K, with \$44K operating and \$160K equipment funds.
- [4] ANL funds cover MC support for Norem. This year, Norem will get partial salary support (\$36K) from ANL LDRD funds for work of benefit to the MC and other HEP programs, so the MC contribution has been reduced accordingly. Funding request is for \$144K of operating funds. Note: *the reduction of support for this year does not imply any change in the agreement to fully support Norem in future years.*
- [5] Princeton funding will cover their portion of the target system development, being done in collaboration with BNL. Funding request is for \$50K of operating funds.
- [6] UCB funding is for travel support for a post-doc working in the general area of cooling simulations. Funding request is for \$5K of operating funds.
- [7] UCLA funding covers design work on a dipole-based ring for 6D cooling and support for developing fast-timing diagnostic devices (in collaboration with FNAL). Funding request is for \$75K of operating funds.
- [8] University of Mississippi funding covers simulation studies of an RFOFO cooling ring (in collaboration with BNL) and conceptual studies of a very fast cycling synchrotron for muon acceleration. They will also provide fabrication support for the 805- and 201-MHz rf cavities as needed. Funding request is for \$50K of operating funds.

- [9] IIT funding supports a post-doc working on the dark-current and cavity breakdown tests and also on design for the international Muon Ionization Cooling Experiment (MICE). Funding request is for \$75K of operating funds.
- [10] Jlab funding is for travel support of staff members participating in MC activities, specifically, design of RLAs and ring coolers (Bogacz) and rf cavities (Rimmer). Funding request is for \$10K of operating funds.
- [11] Institutional contact persons are:

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