



FY06 Neutrino Factory and Muon Collider Collaboration Budget

	Total (\$K)	BNL	FNAL	LBNL	ANL	ORNL	Jlab	Princeton	UCB	UCLA	U-Miss	IIT	UC-R
Cooling	150												
MTA operation	40		40										
201-MHz cavity	48			40							8		
Coupling solenoid	20			20									
Be windows/grids	0												
MTA beam line	0												
LH ₂ absorber test	17		5								12		
Instrumentation	25									25			
Targetry	640												
Magnet testing (MERIT)	50	50											
Cryogenics (MERIT)	160	160											
Hg jet preparations (MERIT)	225	110				75		40					
Optics (MERIT)	135	135											
Targetry studies [1]	50	50											
CERN operations (MERIT)	20	20											
Diagnostics	150												
Norem [2]	150				150								
Hardware	0												
Beam Simulations	105												
Cooling/Theory	105										20	85	
Acceleration	10												
RLA/FFAG studies	10						10						
Collider	65												
Longitudinal cooling	65									45			20
MICE	620												
Spectrometer solenoids	620			620									
Total Expended (\$K)	1740	525	45	680	150	75	10	40	0	70	40	85	20
Operating (\$K)	1120	525	45	60	150	75	10	40	0	70	40	85	20
Equipment (\$K)	620			620									
GPP (\$K)	0												
Previously Allocated Funds (\$K)	0												
Remaining Planned Expenditures (\$K)	0												
Management Reserve [3]	60												
TOTAL BUDGET (\$K)	1800	525	45	680	150	75	10	40	0	70	40	85	20



Budget Notes

Budget was prepared based on requests submitted to the Technical Board and approved by the Executive Board. It reflects the following activities: preparation work for a high-intensity target experiment at CERN (“MERIT”); initial fabrication of a pair of spectrometer solenoids for MICE Phase 1; RF cavity and liquid-hydrogen absorber tests in the FNAL MUCOOL Test Area (MTA); and ongoing simulation and theory effort in support of Neutrino Factory and Muon Collider design.

- [1] Specific allocation of these funds will not be made until NFMCC review of MERIT has occurred.
- [2] Assumes partial salary support from non-MC finds this year; \$30K is held in project reserve (see Note 3) in case additional salary support does not materialize.
- [3] Includes \$30K earmarked for ANL support, if needed, and \$30K presently unallocated.

Targetry

MERIT: Develop ≈ 20 m/s Hg jet target system, 15-T pulsed solenoid with supporting cryogenic system, and instrumentation for CERN experiment; continue preparations for experiment operation at CERN

Targetry Studies: Testing and simulation work in support of high-power target design

MUCOOL

MTA operations: Support for study of dark current and breakdown phenomena at both 805 and 201 MHz

201 MHz Cavity: Continued engineering support for 201-MHz RF cavity tests

Coupling solenoid: Continued engineering support for conceptual design of coupling coil and other cooling channel magnets

Absorber: Continue tests of KEK convection-cooled design and its thin aluminum windows; initial exploration of LiH absorbers

Diagnostics

Design effort: Support for Norem (partial salary support, with remainder from elsewhere); main work on dark currents and cavity breakdown phenomena, both for MUCOOL and for MICE



Beam Simulations

Support IIT and U.-Mississippi post-docs to work on cooling simulations and MICE

MICE

Support spectrometer solenoid fabrication for MICE

Project Reserve

Reserve funds for presently unspecified activities, to be allocated later in the year; includes \$30K earmarked for salary support at ANL, if needed

Institutional contact persons are:

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ANL:	James Norem
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