



Guidelines for an NSF PI for Using NCALM Facility

October 5, 2005

The National Center for Airborne Laser Mapping (NCALM), funded by Instrumentation and Facility program, Division of Geosciences, the National Science Foundation (NSF) is operated jointly by the Department of Civil & Coastal Engineering, College of Engineering, University of Florida (UF) and the Department of Earth and Planetary Science, University of California-Berkeley (UCB). Current funding level provides support for the operation of NCALM facility. In addition, a Principal Investigator (PI) can request NSF for additional funds for NCALM to collect research grade ALSM (LIDAR) data.

In order to avoid double overhead charges, the PI shall submit his/her budget to NSF that DOES NOT include the cost of the ALSM support from NCALM, but DOES EXPLICITLY state in the PI's Project Summary that in addition to the budget requested in the PI proposal, a specified amount of money is requested for ALSM coverage, and if funded the University of Florida (UF) will request a supplement budget for the expenses. This means that the NSF program supporting the PI must also allocate funds to a UF supplement budget to provide data to the PI. The cost of obtaining ALSM data still comes from the program supporting the PI, but instead of the money going to the PI's institution and then to the University of Florida, UF will request supplemental funds directly once the PI has been awarded the grant, thus avoiding double overhead.

NCALM will provide to the PI: 1) the budget justification for NCALM services, and 2) a letter of support from the NCALM director stating that the facility is willing and able to schedule the PI's project. These files should be uploaded by the PI to the Supplementary Documents section of the Fastlane submission. When PI's submit their research proposals they should follow up with NCALM and provide the relevant NSF Proposal number so that the NCALM facility can report to the NSF/EAR/IF program, the proposals pending before NSF that have requests for NCALM services.

RESPONSIBILITY OF A PI

A PI must write scientific justification for the use of research grade ALSM data from NCALM in the official proposal to NSF. Detail budgets and budget justification provided by NCALM to the PI (i.e. Appendix A) should be a part of the Supplementary Documents in the PI's proposal. PI must provide NCALM the following to generate the necessary documents.

1. **Title of the project**
2. **Summary of proposed work** (one page or less)
Summary of PI's NSF project for which this data is going to be used. This can be the Summary of PI's project submitted to NSF.
3. **Justification for the research-grade ALSM data**
PI writes why it is important to have ALSM data for his/her research
4. **Supplementary Documents** (if applicable)
5. **Approximate rectangular dimension** (length and width in km) and location of the project.
6. **Data collection Season**
7. **Seasonal data collection restraints** (if any) i.e. leaf "on/off"; snow "on/off" etc
8. **Topography/Relief Information** (i.e. lowest and highest elevation, steepness etc.)

RESPONSIBILITY OF NCALM

NCALM provides all necessary field crews and equipment for the ALSM data collection. It processes, calibrates, analyzes, validates and produces products (XYZ ASCII text files) of the First Surface and the Bare Earth to each PI. In addition, NCALM provides opportunities for PIs and/or graduate students to participate in ALSM planning, data collection, data reduction and analysis.

NCALM will provide detailed budget to the PI for the use of NCALM facility based on the following categories:

1. Mobilization and de-mobilization costs
2. Data Collection cost
3. Fixed Operational Cost (Staff)
4. For large projects, in addition to the existing support for NCALM, additional support for data processing and analysis will be required.
5. A letter of support.

For more information, please contact:

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APPENDIX A: An Example

(These documents must be included in PI's Proposal as a part of Supplementary Documents)

BUDGET SUMMARY AND JUSTIFICATION

December 6, 2004

PI: _____
Project Title: _____
Project Site: West Coast

Summary of the proposed budget is presented below. Details are included in Table 1.

1.	Mobilization and Demobilization of the Cessna 337 Aircraft in the Field		\$17,040
	Round trip travel cost for Cessna*	\$11,760	
	Round trip airfare for 3 crew members*	\$3,000	
	Hotel and per diem for 4 field crews for 3 nights	\$1,800	
	Rental Cars for 2 field crews for 4 days	\$480	
		Total	\$17,040
	<p>*These costs assume that this is the <u>only NCALM project at this time</u>. However, if there were to be additional projects during the same field data collection campaign, these costs will be shared between projects and will lower the budget requested here. The reduction amount will depend on the number of projects. In such case, each project will require budget adjustment to reflect the actual cost in the future.</p>		
2.	ALSM Collection (LOT + Aircraft Operation)		\$1,735
3.	Fixed Operational Cost (for a staff)		\$756
	<p>Part of a staff's salary is supported by the NCALM base funding for its administrative operation but additional time and effort of the staff is needed to manage each project and this budget reflects the additional budget for the staff support.</p>		
4.	Data Processing and Analysis (additional fund will be needed for a large project)		\$0
		Total	\$19,530
5.	Overhead (45.5%)		\$8,886
		TOTAL BUDGET	\$28,416

Table 1. NCALM Cost

December 6, 2004
Project Site: West Coast

PI: _____

Project Title: _____

Dimension			Area			Cost for Site 1
	km	mi	sq. km.	sq. mi.	acres	
Length	5	3.1	25	10	6,250	
Width	5	3.1				
A. Mobilization & De-mobilization Cost						\$17,040
Round Trip Dist		Speed	Travel Time	Cost/hr		
mi	km	mph	hr			
6,000	9,600	150	40	\$294.0		\$11,760
Transportation Cost						
Airfare	Crews					
\$1,000	3					\$3,000
Hotel and Per diem						
# nights	Cost/night	# People	Per Diem			
3	\$100	4	\$50			\$1,800
GPS Ground Crew (2): Rental Car						
# Days	Cost/day	# People				
4	\$60	2				\$480
B. Data Collection Cost						\$1,735
A. LOT and Data Collection						
Flying Ht (m)	Overlap (%)	½ angle (deg)	Swath Width (m)	Effective Swath Width (m ft)		
600	50	16	344	172	564	
# Strips	Speed (mph)	hr/strip	LOT (hrs)	LOT cost/hr		
30.1	100	0.04	1.13	\$232		\$262
B. Aircraft Operation						
Turn/strip (min)	Total (min)	Total (hr)				
10	300.6	5.010				\$1,473
C. Fixed Operational Cost - Staff						\$756
hrs	Cost/hr	Fringe				
40.0	\$17.50	7.95 %		1		
D. Maintenance						\$0
Hrs	Cost/hr				\$0	\$2
	\$0					
E. Data Processing and Analysis (additional cost may be needed for large projects)						\$0
Processor				0.0		\$0
Pilot				0.0		\$0
Laser Operator				0.0		\$0
Center Director				0.0		\$0
Senior Engineer				0.0		\$0
Senior Scientist				0.0		\$0
F. Total (A + B + C + D + E)						\$19,530
G. Overhead (45.5 % of F)						\$8,886
H. Total Budget (F + G) for LASER only						\$28,416

