SUMMARY PROPOSAL BUDGET FOR NSF USE ONLY PROPOSAL NO. DURATION (months) ORGANIZATION Proposed Granted Funds Requested By proposer Funds granted by NSF (if different)

Date Checked

Date Of Rate Sheet

Initials - ORG

SUMMARY PROPOSAL BUDGET

PROPOSAL BUDG	ET		FOF	≀ NSF I	USE ONL'	1
ORGANIZATION		PRO	OPOSAL	NO.	DURATIO	ON (months)
					Proposed	Granted
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A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates		NSF Fund Person-mo	ded	F	unds	Funds
(List each separately with title, A.7. show number in brackets)	CAL	ACAD			ested By	granted by NSF (if different)
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6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				1		
7. () TOTAL SENIOR PERSONNEL (1 - 6)						
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)				<u> </u>		
1. () POST DOCTORAL SCHOLARS				ļ		
2. () OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				ļ		
3. () GRADUATE STUDENTS				L		
4. () UNDERGRADUATE STUDENTS				1		
5. () SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)				1		
6. () OTHER						
TOTAL SALARIES AND WAGES (A + B)						
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)						
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)				i		
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3. SUBSISTENCE ————						
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2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION				ĺ		
3. CONSULTANT SERVICES						
4. COMPUTER SERVICES						
5. SUBAWARDS				1		
6. OTHER				 		
TOTAL OTHER DIRECT COSTS						
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I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)						
TOTAL INDIRECT COSTS (F&A)						
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)						
K. RESIDUAL FUNDS						
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					Proposed	Granted
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(List each separately with title, A.7. show number in brackets)	CAL	ACAD			ested By	granted by NSF (if different)
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Budget Justification - USF

The main costs in the USF fraction of this proposal are stipend and tuition waiver for three graduate student years, funding for 2 undergraduates in each of years 2 and 3, and funding for one month of Senior Personnel (L. Connor) during Year 1.

Funding is requested for L. Connor in Year 1 because she is the primary author of the Tephra2 and Lava2 codes. She will devote one month to rewriting these codes following the modular design outlined in the proposal and embedding flexibility to allow for code reuse and modification. This is a Year 1 activity and will be carried out in close collaboration with UB personnel (hence trips to UB are scheduled as part of the USF budget).

In Year 1 a graduate student 28.096(v)54.257(h8(l)-1.0.897(e)-0.678(d)-334.3)Y s8(l)-1.0.897(e)9s8299-330.577

- Domestic travel. As in Year 2, funding is requested for domestic travel for one trip to U Bu alo by the graduate student and two trips to Fall American Geophysical Union meeting to present (a) the modular version of Tephra2 and (b) results of undergraduate research on Lava2.
- Other Direct. Tuition is requested for the graduate student, totaling \$10344 for 24 hours. Publication costs are associated with two papers in Year 3, to cover the cost of publishing two papers.
- Indirect. USF institutional indirect costs for this time frame is 49.5%, not including graduate student tuition.

YEAR 4

No USF funding is required in Year 4.