

NATIONAL SCIENCE FOUNDATION

4201 Wilson Boulevard, Arlington VA 22230

**Division of Earth Sciences
Instrumentation and Facilities Program**

Summary of All FY-1998 Actions Leading to AWARDS

Institution/PI	Title of Proposal	Proposal #	\$'s Requested/ months	FY98 Funding by IF/months	Comments
Arizona BALDWIN, Suzanne L.	"Technician Support (Phase II): Noble Gas Mass Spectrometry Laboratory"	EAR9725891	52,000/24	52,000 /24	standard grant for TS
Arizona DAVIS, George H.	"Structural Analysis of Laramide Strike-Slip Faulting Along the Eastern Margin of the Kaibab Uplift, Colorado Plateau [supplement]"	EAR9840574	28,500/12	28,500 /12	IF suppl to TE grant for ITD
Arizona DONAHUE, Douglas J.	"NSF-Arizona Accelerator Mass Spectrometry Facility: Operations and Research Applications"	EAR9730699	1,248,306/36	260,155 /12	1st yr incr on 3-yr cont grant for FS; split-funded w/ OPP/Glaciology = 45,000, OPP/AGG = 25,000, OPP/ANS = 5,000 and SBER/AAS = 65,000 in FY 98
Arizona DONAHUE, Douglas J.	"Acquisition of a New Accelerator Mass Spectrometer"	EAR9871035	1,335,000/60	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 1,335,000
Arizona ZANDT, George	"Upgrading of the Seismology Research Computer Facility at the University of Arizona"	EAR9806229	88,783/12	88,783 /24	standard grant for EA
Arizona State HOLLOWAY, John R.	"Development of an Artificial Hydrothermal System for Organic/Inorganic Synthesis"	EAR9800147	42,000/12	42,000 /24	standard grant for ITD
Arizona State LESHIN, Laurie A.	"Acquisition of a Cameca IMS 6f Secondary Ion Mass Spectrometer for Applications in Earth and Space Materials Research"	EAR9871270	696,085/36	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 548,000 and additional funding from NASA
Arizona State WILLIAMS, Stanley N.	"Workshop on COSPEC, April 1997 [supplement]"	EAR9706265	2,500/12	2,500 /12	IF suppl to IF grant for workshop
Brown TULLIS, Terry E.	"Understanding Processes of Rock Friction Relevant to Earthquake Mechanics"	EAR9725562	2,000/12	2,000 /12	IF split-funding for EA on PH grant
California - Berkeley CARMICHAEL, Ian S.	"Water in Magmas: Experimental Constraints on the Stability of Hornblende in Basalts and Basaltic Andesites"	EAR9706129	14,380/12	14,380 /12	IF split-funding for EA on CH grant
California - Berkeley JEANLOZ, Raymond	"Upgrade of a Ruby-Fluorescence System"	EAR9725898	29,760/12	25,545 /24	standard grant for EA

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California - Berkeley RICHARDS, Mark A.	"Laboratory Experiments on Thermo-Chemical Convection at High Rayleigh and Prandtl Numbers"	EAR9804904	32,308/12	32,308 /12	IF split-funding for EA on PH grant
California - Berkeley ROMANOWICZ, Barbara A.	"Technical Support for the Geophysics Computer Laboratory at U.C. Berkeley: Phase II"	EAR9809735	100,000/24	50,000 /12	1st yr incr on 2-yr cont grant for TS
California - Berkeley ROMANOWICZ, Barbara A.	"Upgrade of the UC Berkeley Seismological Laboratory and Geophysics Computer Laboratory Communication Network"	EAR9809738	30,284/12	25,140 /24	standard grant for EA
California - Davis NAVROTSKY, Alexandra	"Energetics of Oxides and Oxyhydroxides, Especially of Transition Metals"	EAR9725020	5,000/12	5,000 /12	IF split-funding for EA on CH grant
California - Los Angeles HARRISON, T. Mark	"Support of an Ion Microprobe Facility"	EAR9806639	1,130,626/60	210,001 /12	1st yr incr on 3-yr cont grant for FS
California - Los Angeles MCKEEGAN, Kevin D.	"U.S.-France Cooperative Research: Development of Multiple-Collector SIMS Techniques for High Precision Isotopic Analyses"	INT9726772	7,146/12	7,146 /12	IF split-funding for ITD on INT grant
California - Riverside GREEN, Harry W.	"Technical Support for UCR Tectonophysics Laboratory (Phase II)"	EAR9731383	87,422/24	72,600 /24	standard grant for TS
California - Riverside GREEN, Harry W.	"Collaborative Research: Dehydration Embrittlement of Serpentine at High Pressures: Implications for Intermediate and Deep Earthquakes"	EAR9725575	9,800/12	9,800 /12	IF split-funding for EA on PH grant
California - Riverside GREEN, Harry W.	"An Experimental Approach to Understanding Self-Organization of Mode I Defects and Nucleation of Shear Fracture"	EAR9805368	6,000/12	6,000 /12	IF split-funding for EA on PH grant
California - San Diego BOCK, Yehuda	"Fundamental Support for GPS Research -- UNAVCO Facilities"	EAR9813700	150,000/12	116,667 /14	standard grant for FS
California - San Diego BOCK, Yehuda	"Collaborative Research: Integration of Synthetic Aperture Radar Interferometry, Continuous GPS and GPS Meteorology for Crustal Deformation and Earthquake Monitoring"	EAR9619201	681,452/36	67,554 /12	2nd yr incr on 3-yr cont grant for ITD; split-funded with interagency transfer from NASA = 67,554 in FY 98
California - Santa Cruz COE, Robert S.	"Upgrading of a Superconducting Rock Magnetometer"	EAR9727706	58,712/12	58,712 /24	standard grant for EA
California - Santa Cruz KOCH, Paul L.	"Upgrading of the Light Stable Isotope Geochemistry Facilities at the University of California, Santa Cruz"	EAR9714263	83,716/24	29,301 /24	standard grant for EA; split-funded w/ OCE/ITS = 29,301
California - Santa Cruz KOCH, Paul L.	"Isotopic Reconstruction of Home Range and Migration in Extinct Mammals"	EAR9725854	2,350/12	2,350 /12	IF split-funding for EA on GE grant
California - Santa Cruz SILVER, Eli A.	"GPS Study of the Transition Between Subduction and Collision in Papua New Guinea: Equipment"	EAR9728749	18,400/12	18,400 /24	standard grant for EA

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Caltech ROSSMAN, George R.	"Upgrading of Infrared Spectroscopic Instrumentation at the Mineral Spectroscopy Lab at Caltech"	EAR9725897	83,791/12	83,791 /24	standard grant for EA
Caltech WERNICKE, Brian P.	"Active Tectonics of Diffuse Intracontinental Deformation"	EAR9725766	45,000/12	45,000 /12	IF split-funding for EA on CD grant
Central Washington MILLER, M. Meghan	"Collaborative Research: Development of Pacific Northwest Geodetic Array (PANGA) by CWU and UW and Data Analysis Facility at CWU: Monitoring North America-Juan de Fuca-Pacific Plate Interaction [supplement]"	EAR9615640	63,000/12	20,000 /12	IF suppl to IF grant for EA
Chicago RIVERS, Mark L.	"GeoCARS, a National Resource for Earth, Planetary, Soil and Environmental Science Research at the Advanced Photon Source"	EAR9317772	11,745,446/60	1,400,000 /12	5th yr incr on 5-yr cont grant for FS
CIW - DTM HAURI, Erik H.	"Facility Support for the CIW Ion Microprobe Laboratory"	EAR9811348	273,451/36	89,000 /12	1st yr incr on 3-yr cont grant for FS
CIW - GL COHEN, Ronald E.	"Theoretical Investigations of Mantle Materials"	EAR9870328	30,000/12	30,000 /12	IF split-funding for EA on PH grant
CIW - GL FEI, Yingwei	"CSEDI: A Test of Dehydration Weakening Hypothesis for the Occurrence of Intermediate/Deep-Focus Earthquakes"	EAR9840447	12,000/12	12,000 /12	IF split-funding for EA on PH grant
CIW - GL FINGER, Larry W.	"Acquisition of a Four-Circle Single-Crystal Diffractometer with CCD Detector"	EAR9725354	161,000/36	117,500 /36	standard grant for EA
CIW - GL MAO, Ho-Kwang	"Superconducting Wiggler Beam Line for X-Ray Studies with the Diamond Cell at Ultrahigh Pressures"	EAR9730617	380,772/36	112,849 /12	1st yr incr on 3-yr cont grant for FS
CIW - GL MAO, Ho-Kwang	"Superconducting Wiggler Beam Line for X-Ray Studies with the Diamond Cell at Ultrahigh Pressures [supplement]"	EAR9730617	31,500/12	31,500 /12	IF suppl to IF grant for EA
Colorado PRATSON, Lincoln F.	"Collaborative Research: Experimental Study of Basin Stratigraphy"	EAR9725471	26,333/12	26,333 /12	IF split-funding for EA on GE grant
Colorado RAJARAM, Harihar	"Feedback Coupling Between Flow and Reactions in Heterogeneous Porous and Fractured Media: Computational and Experimental Studies"	EAR9734404	10,000/12	10,000 /12	IF split-funding for EA on HS grant
Colorado RITZWOLLER, Michael A.	"Normal Mode Studies of the Mantle and Core"	EAR9706188	9,600/12	9,600 /12	IF split-funding for EA on PH grant
Columbia - LDEO WALKER, David	"Experimental Petrology of Lunar and Planetary Igneous Rocks"	EAR9813447	9,000/12	9,000 /12	IF split-funding for EA on CH grant

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Connecticut LIU, Lanbo	"Acquisition of Ground Penetrating Radar Antennas and Computing Facilities for the Near-Surface Geophysics Program at the University of Connecticut"	EAR9712012	19,900/12	19,900 /24	standard grant for EA
Dartmouth FENG, Xiahong	"Acquisition of a Particle Size Analyzer for Chemical Research at Dartmouth College"	EAR9727362	29,700/06	29,700 /24	standard grant for EA
Field Mus Nat Hist WADHWA, Meenakshi	"Acquisition of a Thermal Ionization Mass Spectrometer Facility at the Field Museum"	EAR9871154	333,420/12	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 255,000 and additional funding from NASA
Franklin & Marshall DE WET, Andrew P.	"RUI: Acquisition of Magnetic Mapping System for Environmental, Archaeological and Geologic Surveys"	EAR9810581	36,837/24	36,387 /24	standard grant for EA
Georgia CROWE, Douglas E.	"Development of Laser Microprobe irmMS Methods for the Stable Isotopic Analysis of Sulfide Minerals Using SO2 Gas"	EAR9811170	53,639/12	53,639 /24	standard grant for ITD
Harvard BLOXHAM, Jeremy	"Investigations of the Geodynamo"	EAR9725675	36,000/12	36,000 /12	IF split-funding for EA on PH grant
Harvard RUDNICK, Roberta L.	"Acquisition of an Inductively Coupled Plasma Mass Spectrometer UV Laser Lab and Microcentric Nebulizer"	EAR9726058	261,995/12	241,995 /24	standard grant for EA; split-funded w/ OCE/ITS = 20,000
Harvard RUDNICK, Roberta L.	"Acquisition of an Inductively Coupled Plasma Mass Spectrometer UV Laser Lab and Microcentric Nebulizer [supplement]"	EAR9726058	50,505/12	50,505 /12	IF suppl to IF grant for EA
Hawaii BATIZA, Rodey	"Technician Support: University of Hawaii ICP-MS Facility for Research in Ocean and Earth Sciences [supplement]"	EAR9706711	38,567/06	19,284 /06	IF suppl to IF grant for TS; split-funded w/ OCE/ITS = 19,283
Hawaii BEVIS, Michael G.	"Collaborative Research: Integration of Synthetic Aperture Radar Interferometry, Continuous GPS and GPS Meteorology for Crustal Deformation and Earthquake Monitoring"	EAR9711445	111,298/36	12,866 /12	2nd yr incr on a 3-yr cont grant for ITD; split-funded w/ interagency transfer from NASA = 12,865 in FY 98
Hawaii HERRERO-BERVERA, E.	"Acquisition of Equipment for Measuring Magnetic Properties of Rocks [supplement]"	EAR9633500	7,500/12	7,500 /12	IF suppl to IF grant for EA
Hawaii MORGAN, Julia K.	"Distinct Element Simulations of the Frictional Behavior of Granular Shear Zones"	EAR9805270	3,600/12	3,600 /12	IF split-funding for EA on PH grant
Illinois - Chicago FLOWER, Martin F. J.	"Acquisition, Upgrade, and Support of an Electron Microprobe Facility at UIC"	EAR9730013	81,547/12	81,547 /24	standard grant for EA
Indiana HAMBURGER, Michael W.	"Acquisition of GPS Instruments for Measurement of Crustal Deformation at Pinatubo and Taal Volcanoes, Philippines"	EAR9727300	118,407/24	46,132 /24	standard grant for EA

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Indiana RIPLEY, Edward M.	"Acquisition of a Sulfur Isotope-Ratio Mass Spectrometer"	EAR9726264	349,210/36	160,000 /24	standard grant for EA
Iowa BUDD, Ann F.	"Evolution of a Species Complex During Faunal Turnover: Morphometric Analyses of the Montastrea Annularis Reef Coral Complex"	EAR9725273	16,865/12	16,865 /12	IF split-funding for EA on GE grant
IRIS BUTLER, Rhett	"IRIS/JOI Scientific Submarine Cable Steering Committee"	OCE9612368	123,096/36	21,498 /12	2nd yr incr on 3-yr cont OCE grant for steering committee support; split-funded w/ OCE = 21,498 in FY 98
IRIS SIMPSON, David W.	"IRIS 2000: A Science Facility for Studying the Dynamics of the Solid Earth"	EAR9843924	93,089,000/60	11,024,600 /12	3rd yr incr on 5-yr Cooperative Agreement EAR-9529992 for FS; split-funded w/ OPP/AGG = 9,000 and interagency transfer from DOD/NIMA = 142,950 in FY 98
IRIS SIMPSON, David W.	"Development of the Hawaii-2 Observatory: Deployment and Installation"	OCE9724491	650,104/12	100,000 /12	IF split-funding for ITD on OCE grant; split-funded w/OCE = 250,104 and OIA/MRI = 300,000
IUPUI-Indianapolis ROSENBERG, Gary D.	"Acquisition of SEM/EDS/WDS for Earth and Life Science"	EAR9871243	250,000/24	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 200,000
Kansas STEEPLES, Don W.	"Near-Surface Seismic Research"	EAR9706128	21,000/12	21,000 /12	IF split-funding for EA on PH grant
Lehigh BEBOUT, Gray E.	"Technician Support (Phase II): Isotope Geochemistry at Lehigh University"	EAR9727589	100,000/24	100,000 /24	standard grant for TS
Lehigh KODAMA, Kenneth P.	"Acquisition of a Sensitive Magnetic Susceptibility/Anisotropy System for Investigating Red Bed Inclination Shallowing"	EAR9807099	23,245/12	23,245 /24	standard grant for EA
Maryland PICCOLI, Philip M.	"Acquisition of a State of the Art Electron Probe Microanalyzer"	EAR9810244	195,000/12	195,000 /24	standard grant for EA
Massachusetts WILLIAMS, Michael L.	"Technician Support (Phase I): Upgrading and Expanding the Electron Microprobe Facility, Department of Geosciences, University of Massachusetts"	EAR9725456	70,098/36	70,098 /36	standard grant for TS
Michigan STIXRUDE, Lars	"Collaborative Research: Quantum Mechanical Modeling of Major Mantle Materials"	EAR9841183	12,000/12	12,000 /12	IF split-funding for EA on PH grant
Michigan Tech DIEHL, Jimmy F.	"Acquisition of a Superconducting Rock Magnetometer and a Field Free Room"	EAR9810773	179,200/24	129,000 /24	standard grant for EA
Minnesota BANERJEE, Subir K.	"Continuation of a Facility: Institute for Rock Magnetism"	EAR9628693	1,502,322/60	269,184 /12	3rd yr incr on 3-yr cont grant for FS

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Minnesota BANERJEE, Subir K.	"Equipment Acquisition and Upgrades, Institute for Rock Magnetism"	EAR9807021	188,500/24	188,500 /24	standard grant for EA
Minnesota BANERJEE, Subir K.	"Continuation of a Facility: Institute for Rock Magnetism [supplement]"	EAR9628693	15,390/12	3,690 /12	IF suppl to IF grant for conference support; split-funded w/ GE = 3,000, PH = 3,700 and ATM/PC = 5,000
Minnesota KELTS, Kerry R.	"LRC Multi-User Core Facility and Repository Development"	EAR9729034	583,966/36	105,003 /24	standard grant for FS; split-funded w/ ATM/PC = 35,001
Minnesota PERSON, Mark A.	"Collaborative Research: Salinity of Groundwaters in Continental Sedimentary Basins as a Record of Quaternary Paleoclimatic Conditions"	EAR9805456	5,000/12	5,000 /12	IF split-funding for EA on HS grant
Minnesota SUGITA, Shinya	"Modeling Regional Paleovegetation of the Holocene in Eastern United States: Upper Great Lakes"	ATM9709633	14,000/12	14,000 /12	IF split-funding for EA on ATM/PC grant
Minnesota YUEN, David A.	"The Use of Wavelets in Modelling Geophysical Flows"	EAR9842208	10,000/12	10,000 /12	IF split-funding for EA on PH grant
Nevada - DRI BERGER, Glenn W.	"Acquisition of Equipment to Expand a Luminescence Dating Laboratory"	EAR9725531	72,700/12	40,000 /24	standard grant for EA
Nevada - DRI HOUSE, P. Kyle	"Collaborative Research: Comparison of Regional Flood Frequency Responses to Climatic Variability in the Western U.S. During the Late Holocene Using Modern, Historical and Prehistoric Information"	EAR9725331	5,000/12	5,000 /12	IF split-funding for EA on HS grant
New Hampshire DAVIS, J. Matthew	"Collaborative Research: Hydrogeologic Analysis of Oriented Carbonate Concretions, Sierra Ladrones Formation, New Mexico"	EAR9725194	2,750/12	2,750 /12	IF split-funding for EA on HS grant
New Mexico SHARP, Zachary D.	"Acquisition of a Stable Isotope Mass Spectrometer and Tandem UV-CO2 Laser System"	EAR9727141	221,658/12	221,658 /24	standard grant for EA
New Mexico WIEDENBECK, Michael G.	"Support of UNM/SNL Ion Microprobe Facility"	EAR9706054	258,912/36	80,000 /12	2nd yr incr on 2-yr cont grant for FS
New Mexico Tech HEIZLER, Mathew T.	"Acquisition of a UV Laser Ablation System for 40Ar/39Ar Research [supplement]"	EAR9706062	20,000/12	20,000 /12	IF suppl to IF grant for EA
New Mexico Tech MCPHERSON, Brian J.	"Acquisition of Computer Workstations Necessary for Hydrogeologic and Geophysical Research"	EAR9871388	139,334/36	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 139,334
Northern Illinois PERRY, Eugene C.	"Development of a Laser-Excited System for 16-O, 17-O, and 18-O Analysis of Molecular Oxygen from Small Samples of Silicate and Oxide Minerals [supplement]"	EAR9708023	4,739/12	4,739 /12	IF suppl to IF grant for EA

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Northwestern OKAL, Emile A.	"Centroid Moment Tensor Solutions for Intermediate-Depth Earthquakes from the Pre-Digital Era [supplement]"	EAR9843716	5,000/12	5,000/12	IF suppl to PH grant for research
Notre Dame NEAL, Clive R.	"Technical Support, Phase II: Request for Continuing Support for an ICP-MS Technician at the University of Notre Dame"	EAR9727664	59,459/24	59,459/24	standard grant for TS
Oxford, UK WILLEMAN, Raymond J.	"Partial Support of the International Seismological Center"	EAR9725096	57,600/12	57,600/12	IF split-funding for FS on PH grant
Oxford, UK WILLEMAN, Raymond J.	"Partial Support of the International Seismological Center [supplement]"	EAR9843719	40,590/12	40,590/12	IF suppl to PH grant for FS
Penn State DUFFY, Christopher J.	"Seasonal to Decadal Variability in Discharge & Dissolved Solids in the Colorado River Basin: The Climate-Groundwater System"	EAR9805035	11,000/12	11,000/12	IF split-funding for EA on HS grant
Penn State KERRICK, Derrill M.	"Continuous Monitoring of CO2 Emission at Mammoth Mountain, California"	EAR9810417	66,802/24	39,802/24	standard grant for EA; split-funded w/ CH = 27,000
Penn State LVOV, Serguei N.	"Collaborative Proposal: Development of Advanced Electrochemical Instruments for Accurate pH Measurements in Hydrothermal Solutions at Temperatures up to 450 Degrees Centigrade (Revised Version)"	EAR9725191	321,360/24	99,590/12	1st yr incr on 3-yr cont grant for ITD
Pomona College REINEN, Linda A.	"Collaborative Research on Dehydration Embrittlement of Serpentine at High Pressures: Implications for Intermediate and Deep Earthquakes"	EAR9726885	4,800/12	4,800/12	IF split-funding for EA on PH grant
Portland State CUMMINGS, Michael L.	"Acquisition of a Powder X-Ray Diffractometer for the Applied Mineralogy Laboratory at Portland State University"	EAR9807085	75,854/12	75,854/24	standard grant for EA
Portland State LI, Shu-Guang	"Stochastic Flow and Transport in Heterogeneous Soils: A New Approach for Measurement Conditioning"	EAR9805357	14,000/12	14,000/12	IF split-funding for EA on HS grant
Princeton CELIA, Michael A.	"Quantitative Predictions of Phase Behavior and Mass Transfer for Complex Mixed Wastes"	EAR9805376	8,000/12	8,000/12	IF split-funding for EA on HS grant
Princeton DUFFY, Thomas S.	"Acquisition of a Brillouin Spectrometer for Measurement of High-Pressure Elastic Properties of Earth Materials"	EAR9725453	89,337/12	113,337/24	standard grant for EA
Puerto Rico RIPPERDAN, Robert L.	"Acquisition of a Gas Source Isotope Ratio Mass Spectrometer for Stable Isotope Analyses at the University of Puerto Rico, Mayaguez"	EAR9871423	323,938/12	- 0 -	standard grant for EA; split-funded w/ EHR/EPSCoR = 128,434 and OIA/MRI = 128,434
Purdue ELMORE, David	"Facility Support: The Purdue Rare Isotope Measurement Laboratory"	EAR9809983	1,590,830/36	549,750/12	1st yr incr on 3-yr cont grant for FS

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Purdue GIERE, Reto	"Acquisition of a New Automatic X-ray Powder Diffractometer"	EAR9804769	62,112/12	62,112/24	standard grant for EA
Purdue KING, Scott D.	"Upgrading (and Expanding) the Geophysics Computer Network at Purdue"	EAR9726013	115,000/12	75,000/36	standard grant for EA
Rhode Island - GSO PECK, John A.	"Collaborative Research: High Resolution, Interdisciplinary Paleoclimatic Studies of Late Quaternary Lacustrine Systems in Mongolia"	EAR9709438	10,000/12	10,000/12	IF split-funding for EA on GE grant
Rochester BASU, Asish R.	"Request for a Technical Associate to Support the Isotope Geochemistry Laboratories at the University of Rochester (Phase I)"	EAR9730743	149,050/36	149,050/36	standard grant for TS
Smithsonian - AO DAVIS, James L.	"Development of a GPS Calibration System for High-Accuracy Geophysical Applications"	EAR9708251	938,591/36	198,419/12	2nd yr incr on 3-yr cont grant for ITD
South Carolina OWENS, Thomas J.	"Upgrade of the Geophysical Computing Network at the University of South Carolina"	EAR9725735	55,286/12	55,286/36	standard grant for EA
South Carolina SHERVAIS, John W.	"Instrument Purchase: University of South Carolina X-Ray Fluorescence Laboratory"	EAR9805160	90,400/18	90,400/24	standard grant for EA
Southern California LI, Yong-gang	"Continuing Studies of the Strengthening of the Fault Zone Ruptured in the 1992 Landers, California Earthquake by Monitoring Fault Zone Waves"	EAR9804811	12,731/12	12,731/12	IF split-funding for research on PH grant
Southern Mississippi SHILLER, Alan M.	"Acquisition of a High Resolution Inductively Coupled Plasma-Mass Spectrometer (HR-ICP-MS) for the Central Gulf Coast Region"	OCE9870954	414,290/36	- 0 -	standard grant for EA; split-funded w/ OIA/MRI (OCE allocation = 150,000 and EAR allocation = 50,000) and EHR/EPSCoR = 200,000
Stanford STEBBINS, Jonathan F.	"Acquisition of a 600 MHz NMR Spectrometer for Research on Solid and Molten Materials in the Earth, Materials, and Chemical Sciences"	EAR9724198	894,073/24	- 0 -	2nd yr incr on 2-yr cont grant for EA; split-funded w/ MPS/CHE = 24,468 in FY98
Stanford ZEBKER, Howard A.	"Collaborative Research: Integration of Synthetic Aperture Radar Interferometry, Continuous GPS and GPS Meteorology for Crustal Deformation and Earthquake Monitoring"	EAR9711915	226,200/36	27,667/12	2nd yr incr on a 3-yr cont grant for ITD; split-funded w/ interagency transfer from NASA = 27,667 in FY 98
SUNY - Stony Brook SCHOONEN, Martin A.	"Acquisition of Ion Chromatograph"	EAR9807023	24,996/07	24,996/24	standard grant for EA
SUNY - Stony Brook WEIDNER, Donald J.	"Science and Technology Center for High Pressure Research"	EAR9841353	14,680,542/60	2,753,384/12	8th yr incr on STC Cooperative Agreement EAR-8920239 for FS; split-funded w/ EHR = 159,436 in FY 98

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SUNY - Stony Brook WONG, Teng-fong	"Effect of Stress on Transport Properties of Rock"	EAR9805072	52,470/12	52,470 /12	IF split-funding for research on PH grant
Temple ULMER, Gene C.	"Collaborative Proposal: Development of Advanced Electrochemical Instruments for Accurate pH Measurements in Hydrothermal Solutions at Temperature Up to 450 (Revised Version)"	EAR9727118	234,290/24	64,432 /12	1st yr incr on 3-yr cont grant for ITD
Texas BANNER, Jay L.	"Acquisition of a Magnetic-Sector, High-Resolution Inductively-Coupled Plasma Mass Spectrometer for the University of Texas at Austin"	EAR9871301	229,100/24	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 229,100
Texas GEORGE, Brenda K.	"SGER: Investigation of Nannobacteria and Their Role in Mineral Precipitation"	EAR9803031	10,000/12	10,000 /12	IF split-funding for EA on GE grant
Texas - El Paso KELLER, G. Randy	"Acquisition of a Pool of Highly Portable Seismic Recorders for Use by the Seismological Community"	EAR9871161	583,600/24	164,257 /24	standard grant for EA; split-funded w/ OIA/MRI = 419,343
Tulane MARCANTONIO, Franco	"Consortium Proposal: Acquisition of an ICP-MS for Elemental and Isotopic Analysis in the Earth and Environmental Sciences"	OCE9871009	183,372/24	- 0 -	standard grant for EA; split-funded w/ OIA/MRI (OCE allocation = 122,248 and EAR allocation = 61,124)
UNAVCO - UCAR WARE, Randolph H.	"Fundamental Support for GPS Research -- UNAVCO Facilities"	EAR9840963	10,057,671/36	1,575,000 /12	2nd yr incr on 3-yr cont grant for FS
UNAVCO - UCAR WARE, Randolph H.	"Support of UNAVCO and Related Activities [supplement]"	EAR9843276	230,665/12	- 0 -	suppl to UNAVCO Cooperative Agreement ATM-9209181/SPO #2 EAR-9405501 for FS; interagency transfer from NOAA = 225,900 and Air Force = 4,765
UNAVCO - UCAR WARE, Randolph H.	"Fundamental Support for GPS Research -- UNAVCO Facilities [supplement]"	EAR9843276	269,108/12	- 0 -	suppl to UNAVCO Cooperative Agreement ATM-9209181/SPO #2 EAR-9405501 for FS; split-funding for support of Antarctica projects from OPP = 200,000 and PH = 69,108 for EAR project support
UNAVCO - UCAR WARE, Randolph H.	"Support of UNAVCO and Related Activities [supplement]"	EAR9405501	150,000/12	- 0 -	suppl to UNAVCO Cooperative Agreement ATM-9209181/SPO #2 EAR-9405501 for ITD; interagency transfer from NASA/SENH = 150,000 to support: "Development of an L1 Phase GPS Volcano Monitoring System"
Utah HALGEDAHL, Susan L.	"Local Energy Minimum Domain States in Magnetite, Titanomagnetite, and Hematite"	EAR9725844	8,400/12	8,400 /12	IF split-funding for EA on PH grant
Utah WANNAMAKER, Philip E.	"Collaborative Research: A Magnetotelluric Instrumentation Facility for Electromagnetic Study of the Continents (EMSOC)"	EAR9616450	318,713/36	99,653 /12	1st yr incr on 3-yr cont grant for FS

Institution/PI	Title of Proposal	Proposal #	\$'s Requested/ months	FY98 Funding by IF/months	Comments
Utah State KAUFMAN, Darrell	"Development of an Automated HPLC for Separation of DL Amino Acids for Enhanced Geochronology and Paleothermometry [supplement]"	EAR9530417	5,048/12	5,048 /12	IF suppl to IF grant for EA
Utah State OR, Dani	"Thin Films in Unsaturated Porous Media - Effects on Flow and Transport"	EAR9805409	2,000/12	2,000 /12	IF split-funding for EA on HS grant
VPI & SU READ, J. Fred	"Sequence Stratigraphic Signature of a Long Term Greenhouse to Ice House Transition in Mississippian Ramp Carbonates of Appalachian and Eastern Illinois Basins"	EAR9725308	7,500/12	7,500 /12	IF split-funding for EA on GE grant
Washington BOOKER, John R.	"Collaborative Research: A National Instrument Facility for ElectroMagnetic Studies of the Continents (EMSOC)"	EAR9616421	305,335/36	146,282 /12	2nd yr and final incr on 5-yr cont grant for FS
Washington BROWN, J. Michael	"Experimental Investigation of Core Anisotropy - REU [supplement]"	EAR9843578	12,750/12	12,750 /12	IF suppl to PH grant for EA
Washington BURGES, Stephen J.	"Development of Electronic Scour Depth Monitor"	EAR9727111	55,589/12	27,795 /24	standard grant for ITD; split-funded w/ HS = 27,794
Washington JOHNSON, H. Paul	"The Intensity of the Geomagnetic Field in the Cretaceous"	EAR9725590	32,000/12	32,000 /12	IF split-funding for EA on PH grant
Washington NELSON, Bruce K.	"Technician Support Phase II: Isotope Geochemistry Laboratory, Department of Geological Sciences, University of Washington"	EAR9803659	85,400/24	41,863 /24	1st yr incr on 2-yr cont grant for TS
Washington QAMAR, Anthony	"Collaborative Research: Development of Pacific Northwest Geodetic Array (PANGA) by CWU and UW and Data Analysis Facility at CWU: Monitoring North America-Juan de Fuca-Pacific Plate Interaction [supplement]"	EAR9616302	15,000/12	15,000 /12	IF suppl to IF grant for EA
Washington - SL WALKER, Robert M.	"Acquisition of a New Type of Ion Microprobe - The NanoSIMS- for Geochemical and Astrophysical Investigation of Terrestrial and Extraterrestrial Materials"	EAR9871070	500,000/60	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 500,000 and additional funding from NASA
Western Washington HOUSEN, Bernard A.	"Acquisition of a Cryogenic Magnetometer for Western Washington University's Paleomagnetism Lab"	EAR9727032	106,278/24	66,278 /24	standard grant for EA; split-funded w/ OCE/ITS = 20,000 and OCE/ODP = 20,000
WHOI KURZ, Mark D.	"Technician Support for Isotope Geochemistry (Phase I)"	EAR9807951	150,000/36	30,000 /12	1st yr incr on 3-yr cont grant for TS; split funded w/ OPP/AGG = 20,000 in FY 98
WHOI SHIMIZU, Nobumichi	"Support of a Regional Microprobe Facility at Woods Hole Oceanographic Institution"	EAR9628749	538,966/36	184,259 /12	3rd yr incr on 3-yr cont grant for FS
WHOI SHIMIZU, Nobumichi	"Support of a Regional Microprobe Facility at Woods Hole Oceanographic Institution [supplement]"	EAR9628749	3,200/12	1,600 /12	IF suppl to IF grant for international travel; split-funded w/ INT/WE = 1,600

Institution/PI	Title of Proposal	Proposal #	\$'s Requested/ months	FY98 Funding by IF/months	Comments
WHOI STEPHEN, Ralph A.	"Broadband Seismic Measurements on the Deep Ocean Floor: A Pilot Experiment"	OCE9522114	78,000/24	78,000 /12	IF split-funding for ITD on OCE grant; split-funded w/ OCE/ODP = 117,837 and OCE/MGG = 110,000
Wisconsin CHRISTENSEN, Nikolas I.	"Technician Support for the University of Wisconsin-Madison High Pressure-High Temperature Laboratory (Phase I)"	EAR9710478	149,937/36	149,937 /36	standard grant for TS
Wisconsin DeMETS, Dennis C.	"The Neotectonics of Mexico and the Pacific and North American Plates from Analysis of Data from Mexico's National Network"	EAR9804905	9,500/12	9,500 /12	IF split-funding for EA on PH grant
Wyoming EGGLESTON, Carrick M.	"Acquisition of Optical Second Harmonic Generation Instrumentation for the Study of Molecular Adsorption at the Mineral/Water Interface"	EAR9725993	60,100/12	40,600 /24	standard grant for ITD
Yale AGUE, Jay J.	"Upgrade of X-Ray Diffractometer and Electron Microprobe Laboratories"	EAR9810089	59,350/12	65,600 /24	standard grant for EA
Yale LASAGA, Antonio C.	"Upgrade of Computer Facilities for Yale University Geochemistry Group"	EAR9727134	66,000/12	55,000 /36	standard grant for EA
Yale LEES, Jonathan M.	"Technician Support: Supervisor of Computer Facilities (Phase I)"	EAR9729976	150,000/36	50,000 /12	1st yr incr on 3-yr cont grant for TS
Yale RIBE, Neil M.	"Upgrading the Geophysics/Tectonics Computational Facilities at Yale [supplement]"	EAR9528484	9,600/12	9,600 /12	IF suppl to IF grant for EA

ABBREVIATIONS and EXPLANATIONS

AAS =	Archeology, Archeometry and Systematic Collections Program in SBER	IRIS =	Incorporated Research Institutions for Seismology
AFOSR =	Air Force Office of Scientific Research	ITD =	Instrument and Technique Development component of IF Program
AGG =	Antarctic Geology and Geophysics Program in OPP	ITS =	Oceanographic Instrumentation and Technical Service Program in OCE
AMS =	Accelerator Mass Spectrometry	IUPU =	Indiana University - Purdue University system
ANS =	Arctic Natural Sciences Program in OPP	LA-ICP-MS =	laser ablation ICP-MS
AO =	Astronomical Observatory of the Smithsonian Institution	LDEO =	Lamont-Doherty Earth Observatory, Columbia University
ASL =	Albuquerque Seismology Laboratory of the USGS	MGG =	Marine Geology and Geophysics Program in OCE
ATM =	Division of Atmospheric Sciences in GEO	MPS =	Directorate for Mathematics and Physical Sciences at NSF
BNL =	Brookhaven National Laboratory	MRI =	Major Research Instrumentation Program in OSTI
CD =	Continental Dynamics Program in EAR	NASA-DOSE =	National Aeronautics and Space Administration-Dynamics of the Solid Earth Program
CD-ATM =	Climate Dynamics Program in ATM	NIMA =	National Imagery and Mapping Agency (formerly DMA)
CH =	Geochemistry and Petrology Program in EAR	NOAA =	National Oceanic and Atmospheric Administration within U.S. Department of Commerce
CHE =	Chemical Instrumentation Program in MPS	NOS =	National Ocean Service in NOAA
CIW =	Carnegie Institution of Washington	NSLS =	National Synchrotron Light Source at BNL
CO =	Chemical Oceanography Program in OCE	OBES =	Office of Basic Energy Sciences in the U.S. Department of Energy
cont grant =	continuing grant, a multi-year grant funded one year at a time	OCE =	Division of Ocean Sciences in GEO
DCP =	direct current plasma	ODP =	Ocean Drilling Program in OCE
DMA =	Defense Mapping Agency	OIA =	Office of Integrative Activities at NSF (formerly OSTI)
DMR =	Division of Materials Research in MPS	OMA =	Office of Multidisciplinary Activities at NSF
DOD =	Department of Defense	OPP =	Office of Polar Programs at NSF
DRI =	Desert Research Institute of the University of Nevada	OSTI =	Office of Science and Technology Infrastructure at NSF
DTM =	Department of Terrestrial Magnetism in CIW	OT =	Oceanographic Technology Program in OCE
EA =	Equipment Acquisition component of IF Program	PC =	Paleoclimate program in ATM
EAR =	Division of Earth Sciences in GEO	PH =	Geophysics Program in EAR
EH =	Education & Human Resources Program in EAR	REU =	Research Experience for Undergraduates Program in EHR
EHR =	Directorate for Education and Human Resources at NSF	RSMAS =	Rosenstiel School of Marine and Atmospheric Sciences
ENG =	Directorate for Engineering at NSF	RUI =	Research in Undergraduate Institutions Program in EHR
EPSCoR =	Experimental Program to Stimulate Competitive Research in EHR	SBE =	Directorate for Social, Behavioral & Economic Sciences at NSF
FS =	Facility Support component of IF Program	SBER =	Division of Social, Behavioral and Economic Research in SBE
FY =	Federal fiscal year e.g., FY94: 10/1/93 to 9/30/94	SENH =	NASA's Solid Earth And Natural Hazards Research Program
GE =	Geology and Paleontology Program in EAR	SGER =	Small Grants for Exploratory Research
GEO =	Directorate for Geosciences at NSF	SIMS =	secondary ionization mass spectrometry
GL =	Geophysical Laboratory in CIW	SNL =	Sandia National Laboratory
GPS =	Global Positioning System	split-funding =	two or more programs share the funding of a grant
GSN =	Global Seismographic Network of IRIS	standard grant =	a grant funded for the full amount in its 1st yr
GSO =	Graduate School of Oceanography, University of Rhode Island	STC =	NSF Science and Technology Center
HRTEM =	high- resolution TEM	suppl =	a funding supplement to an active NSF grant
HS =	Hydrologic Sciences Program in EAR	TE =	Tectonics Program in EAR
ICP-AE =	Inductively coupled plasma-atomic emission spectrometer	TEM =	transmission electron microscopy
ICP-MS =	Inductively coupled plasma-mass spectrometer	TIMS =	thermal ionization mass spectrometry
IF =	Instrumentation and Facilities Program in EAR	TS =	Technician Support component of IF Program
incr =	an annual increment of funds to an active NSF grant	UCAR =	University Consortium for Atmospheric Research
INT =	Division of International Programs in SBE	UNAVCO =	University NAVSTAR Consortium within UCAR

USGS = U.S. Geological Survey
WE = Western Europe Program in INT
WHOI = Woods Hole Oceanographic Institution
XRD = X-ray diffractometer
XRF = X-ray fluorescence spectrometer

NATIONAL SCIENCE FOUNDATION
4201 Wilson Boulevard, Arlington VA 22230

Division of Earth Sciences (EAR)

Instrumentation and Facilities Program (IF)

Numerical Summary of All Actions in FY-1998

<u>PROPOSALS</u>		<u>DOLLARS</u>	
Total number of proposals processed by IF	205	Total dollars requested of IF (per year for multi-year proposals)	48,351,871
Logged-in to IF as primary program	157	Total awarded through IF actions in FY-1998	30,200,849
New proposals; full review by IF	124	Awarded from IF budget	24,247,951
Declined	58	For equipment acquisition/upgrade (EA)	3,381,986
Funded entirely from IF budget	49	For instr and technique development (ITD) ...	848,207
Split-funded with other programs ..	17	For facility support (FS)	19,073,977
New proposals; withdrawn before review	4	For technician support (TS)	844,291
Other award actions (incr, suppl, etc)	29	Other (workshops, REU, etc.)	99,489
Funded entirely from IF budget	17	Awarded from other NSF budgets through split-funding ..	5,321,197
Split-funded with other programs	12	For equipment acquisition/upgrade (EA)	4,606,786
Logged-in to other NSF programs; IF-split-funding ..	48	For instr and technique development (ITD) ...	27,794
		For facility support (FS)	612,545
		For technician support (TS)	39,283
		Other (workshops, REU, etc.)	34,789
		Awarded through interagency transfers	631,701
		For facility support (FS)	373,615
		For instr and technique development (ITD) ...	258,086