



NATIONAL SCIENCE FOUNDATION

4201 Wilson Boulevard, Arlington VA 22230

Division of Earth Sciences
Instrumentation and Facilities Program

Summary of All FY-2000 Actions Leading to AWARDS

Institution/PI	Title of Proposal	Proposal #	\$'s Requested/ months	FY00 Funding by IF/months	Comments
Alaska FREYMUELLER, Jeffrey	"Acquisition of Computer Equipment for Crustal Deformation Research"	EAR0075680	41,353/12	41,353/36	standard grant for EA
Alaska GARDNER, James E.	"Acquisition of Externally Heated TZM Pressure Vessel and Diamond Anvil Cell Systems"	EAR9910539	33,239/12	18,963/24	standard grant for EA
Appalachian State HAGEMAN, Steven J.	"RUI: The Meaning of Morphology: Source Hierarchy for Phenotypic Variation of Skeletal Hard Parts (Bryozoa)"	EAR0073648	2,029/12	2,029/0	IF split-funding for EA on GE grant
Arizona DONAHUE, Douglas J.	"NSF-Arizona Accelerator Mass Spectrometry Facility: Operations and Research Applications"	EAR9730699	1,248,306/36	313,136/12	3rd yr incr on 3-yr cont grant for FS; split-funded w/ OPP/ARCSS = 37,500, OPP/AGG = 10,000, OPP/ANS = 5,000 and SBER/AAS = 65,000
Arizona JULL, Timothy	"Continuing Studies of In Situ Cosmogenic 14-C in Terrestrial Materials"	EAR0001069	20,520/12	20,520/12	IF split-funding for EA on GE grant
Arizona QUADE, Jay	"Technician Support: Gas-Source Mass Spectrometry Laboratories - Phase II"	EAR0002134	124,230/24	60,600/	1st yr incr on 2-yr cont grant for TS
Arizona State LEINENWEBER, Kurt	"Crystal Structural Analysis of New Phases Formed Under Mantle Conditions in Geological Systems"	EAR0074089	9,000/12	9,000/12	IF split-funding for EA on CH grant
Arizona State O'DAY, Peggy A.	"Molecular Characterization and Reaction Mechanisms of Arsenic Speciation in Stream Hyporheic Zone Sediments"	EAR0073984	5,000/12	5,000/12	IF split-funding for EA on HS grant
Beloit DAVIDSON, Cameron	"MRI: Acquisition of a Scanning Electron Microscope, Beloit College"	EAR0079326	100,000/12	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 100,000
Boise State SNYDER, Walter S.	"Jurassic(?) Emplacement of the Golconda Allochthon, West-Central Nevada: Implications for the Late Paleozoic - Mesozoic Tectonic Development of Western North America"	EAR0074117	4,500/12	4,500/12	IF split-funding for EA on GE grant
Boston FITZGERALD, Duncan M.	"MRI: Acquisition of Near-Surface Geophysical and Sampling Equipment for Earth Surface Processes and Quaternary Stratigraphic Research"	EAR0079588	136,646/24	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 111,692
Brigham Young KEITH, Jeffrey D.	"Acquisition and Refurbishment of an Electron Microprobe"	EAR9910664	237,000/12	237,000/24	standard grant for EA
California - Berkeley ALVAREZ, Walter	"Acquisition of a Cathodoluminescence Microscopy and Microsampling Facility"	EAR9910595	32,486/24	32,486/24	standard grant for EA

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California - Berkeley BARNOSKY, Anthony D.	"A GIS Analysis to Assess the Effect of Large-Scale Perturbations in the Physical Environment on the Evolution of Neogene Mammal Faunas in the Western United States"	EAR9909353	10,500/12	10,500/12	IF split-funding for EA on GE grant
California - Berkeley DIETRICH, William E.	"SGER: Geomorphic Response to the September 1999 Taiwan Earthquake: Evolution of River Profiles Across the Scarp and Inference About Earthquake Recurrence Intervals"	EAR0000893	1,500/12	1,500/12	IF split-funding for EA on GE grant
California - Berkeley JEANLOZ, Raymond	"Experimental Study of H2O at Deep Mantle Conditions"	EAR0001087	17,300/12	17,300/12	IF split-funding for EA on PH grant
California - Davis NAVROTSKY, Alexandra	"Energetics of Oxides and Oxyhydroxides, Especially of Transition Metals [supplement]"	EAR9725020	8,044/6	8,044/6	IF suppl to CH grant for EA
California - Davis VEROSUB, Kenneth L.	"FORC Diagrams: A New Technique for Characterizing the Magnetic Properties of Natural Samples"	EAR9909468	127,241/24	64,000/24	IF split-funding for ITD on PH grant
California - Los Angeles HARRISON, T. Mark	"Support of an Ion Microprobe Facility"	EAR9806639	1,130,626/60	209,999/12	3rd yr incr on 3-yr cont grant for FS
California - Los Angeles HARRISON, T. Mark	"Technician Support: UCLA 40 Ar/39 Ar Dating Facility, Phase II"	EAR9909584	68,369/24	68,369/24	standard grant for TS
California - Los Angeles ISAAK, Donald G.	"High Temperature Elasticity of Pyroxenes"	EAR0073989	6,000/12	6,000/12	IF split-funding for EA on PH grant
California - Los Angeles REID, Mary R.	"Timescales of Magma Reservoir Processes Beneath Hawaii"	EAR9980646	22,495/12	22,495/12	IF split-funding for EA on CH grant
California - Los Angeles ROBERTS, Paul H.	"Core Dynamics and the Geodynamo"	EAR0074015	10,000/12	10,000/12	IF split-funding for EA on PH grant
California - Riverside SADLER, Peter M.	"Parsimony Trees, Best-Fit Fences, and Consensus Sequences: Integrating Cladistics and Biostratigraphy at High-Resolution"	EAR9980372	3,500/12	3,500/12	IF split-funding for EA on GE grant
California - San Diego JACKSON, Jeremy B. C.	"Contradictory Trends in the History of Cenozoic Corals and Coral Reefs: Oceanographic Change and Biotic Response"	EAR9909485	2,500/12	2,500/12	IF split-funding for EA on GE grant
California - San Diego STAUDIGEL, Hubertus	"Geochemical Earth Reference Model: GERM Workshop and Development of GERM Data Base"	EAR0000998	144,158/24	140,000/24	IF split-funding for ITD on CH grant; CH = 4,158
California - San Diego WYATT, Frank K.	"Improvements in Continuous Long-Base Crustal Deformation Measurements: Pinon Flat Observatory, California"	EAR9910237	290,154/24	197,500/24	standard grant for ITD
California - Santa Cruz COE, Robert S.	"Paleomagnetic and Rock Magnetic Investigations of Phanerozoic Rock Units from Central Asian Foldbelt, Siberia, Russia [supplement]"	EAR9805444	18,004/6	18,004/6	IF suppl to TE grant for EA
Caltech GURNIS, Michael	"Acquisition of a High Performance Computer for Solid Earth Geophysics at Caltech"	EAR9910387	208,000/24	208,000/36	standard grant for EA

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Caltech SIMONS, Mark	"Emplacement of Large Crustal Sills and the Mechanics of Magmatic Underplating"	EAR9980664	10,800/12	10,800/12	IF split-funding for EA on PH grant
Central Washington MILLER, M. Meghan	"Upgrading of the Pacific Northwest Geodetic Array (PANGA): Infrastructure and Data Analysis Facility, Central Washington University"	EAR0002066	316,712/36	102,490/12	1st yr incr on 3-yr cont grant for FS
Chicago RIVERS, Mark L.	"GeoSoilEnviroCARS: A National Resource for Earth, Planetary, Soil and Environmental Science Research at the Advanced Photon Source"	EAR9906456	8,099,515/60	1,400,000/12	2nd yr incr on 3-yr cont grant for FS
Chicago RIVERS, Mark L.	"GeoSoilEnviroCARS: A National Resource for Earth, Planetary, Soil and Environmental Science Research at the Advanced Photon Source [supplement for workshop on laser heating of diamond anvil cells]"	EAR9906456	15,780/12	15,780/12	IF suppl to IF grant for Other
Chicago SHEN, Guoyin	"High Pressure Melting of the Earth's Core Material"	EAR0001149	7,000/12	7,000/12	IF split-funding for EA on PH grant
Chicago WANG, Yanbin	"High Pressure Synchrotron Radiology and Microtomography Studies of Mechanisms and Kinetics of Liquid Iron - Silicate Segregation: Implications for the Formation of the Earth's Core"	EAR0001088	160,000/36	160,000/36	IF split-funding for Other on PH grant
CIW - DTM HAURI, Erik H.	"Facility Support for the CIW Ion Microprobe Laboratory"	EAR9811348	273,451/36	93,548/12	3rd yr incr on 3-yr cont grant for FS
CIW - DTM HAURI, Erik H.	"Facility Support for the CIW Ion Microprobe Laboratory [supplement for the Plume 3 Workshop]"	EAR9811348	10,000/12	- 0 -	suppl to IF grant for Other; PH = 5,000 and CH = 5,000
CIW - DTM HAURI, Erik	"Development of a Large-Radius Multicollector SIMS"	EAR0001912	108,298/12	- 0 -	on hold for FY '01 decision
CIW - GL COHEN, Ronald E.	"Collaborative Research: Theoretical Investigation of Core Materials"	EAR9980602	12,000/12	12,000/12	IF split-funding for EA on PH grant
CIW - GL FEI, Yingwei	"Acquisition of an X-ray Microdiffractometer System"	EAR9976622	118,000/36	118,000/36	standard grant for EA
CIW - GL HEMLEY, Russell J.	"Integrated Synchrotron Infrared Facility for High-Pressure Spectroscopy and Microspectroscopy"	EAR0079510	129,964/24	70,968/12	standard grant for FS
CIW - GL MAO, Ho-kwang	"Superconducting Wiggler Beam Line for X-Ray Studies with the Diamond Cell at Ultrahigh Pressures"	EAR9730617	380,772/36	123,332/12	3rd yr incr on 3-yr cont grant for FS
CIW - GL MAO, Ho-kwang	"Renewal -- Equations of State, Elasticity, and Rheology of Earth Materials at High Pressures and Temperatures"	EAR0001173	78,800/12	78,800/12	IF split-funding for EA on PH grant
CIW - GL SACKS, I. Selwyn	"Deep Geophysical Observatory in Long Valley Caldera"	EAR0080841	261,601/24	261,601/24	standard grant for ITD
Clemson MURDOCH, Larry	"Characterization of Hydrologically Active Sheet Fractures"	EAR0001146	37,043/12	37,043/12	IF split-funding for EA on HS grant

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Colorado FARMER, G. Lang	"Collaborative Research: Lithospheric Structure and Evolution of the Western United States: An Integrated Geological and Geophysical Investigation"	EAR9614410	28,000/12	28,000/12	IF split-funding for EA on CD grant
Colorado GUPTA, Vijay K.	"Collaborative Research: Scaling Theories of the 3-D Geometry and Flows of River Networks [supplement]"	EAR0040409	5,460/12	5,460/12	IF suppl to HS grant for EA
Colorado HERZFELD, Ute C.	"Snow Surface Roughness - Data Collection, Geostatistical Analysis, Relationship to Meteorologic Observations, and Relevance to Snow Hydrologic Models"	EAR0001514	3,000/12	3,000/12	IF split-funding for EA on HS grant
Colorado NAGY, Kathryn L.	"Formation of Kaolinite in Inorganic and Organic Low-Temperature Systems"	EAR9909561	26,000/12	26,000/12	IF split-funding for EA on GE grant
Colorado RYAN, Joseph N.	"The Mobilization and Transport of Particles and Particle-Associated Contaminants in the Unsaturated Zone"	EAR9909553	42,000/12	42,000/12	IF split-funding for EA on HS grant
Colorado SHEEHAN, Anne F.	"Upgrading of the Geophysics Computer Facility at the University of Colorado at Boulder, Department of Geological Sciences"	EAR9910490	66,559/12	66,559/36	standard grant for EA
Colorado School of Mines MANDERNACK, Kevin W.	"CAREER: Oxygen & Iron Isotopic Analyses of Bacterially-Produced Iron Oxides in the Laboratory & in Acid Mine Drainage: A Watershed Approach to Classroom Instruction & Research"	EAR9985234	5,000/12	5,000/12	IF split-funding for EA on HS grant
Colorado State WOHL, Ellen E.	"Acquisition of Hydraulics Instrumentation for Field-Based Research"	EAR9907048	54,068/60	54,068/60	standard grant for EA
Colorado State WOHL, Ellen E.	"Quantitative Modeling of Channelized Flow Within a Karst Stream"	EAR0000725	7,030/24	7,030/12	IF split-funding for EA on HS grant
Cornell WHITE, William M.	"CSEDI: Reconciling Geophysical and Geochemical Observations of Mantle Structure"	EAR0079975	4,000/12	4,000/12	IF split-funding for EA on PH grant
Dartmouth CHAMBERLAIN, C. Page	"Technician Support: Gas-Isotope Ratio Mass Spectrometer Laboratory at Dartmouth College [Phase I]"	EAR9903082	179,925/36	59,975/12	2nd yr incr on 3-yr cont grant for TS
Dartmouth FENG, Xiahong	"Contaminant Loading of Watersheds from Snowmelt: An Integrated Study Using Stable Isotopes and Rare Earth Elements"	EAR9903281	14,500/12	14,500/12	IF split-funding for EA on HS grant
Drexel WELTY, Claire (check I	"An Acre an Hour: Documenting the Effects of Urban Sprawl on a Model Watershed in Philadelphia, Pennsylvania"	EAR0007884	29,800/12	29,800/12	IF split-funding for EA on HS grant
East Carolina RIGSBY, Catherine A.	"Acquisition of a CO2 Coulometer and a Laser-Diffraction Particle-Size Analyzer for the Sediment Analysis Laboratory at East Carolina University"	EAR0080605	101,545/45	67,697/24	standard grant for EA; split-funded w/ ATM/PC = 33,848
Florida FOSTER, David A.	"Acquisition of a Noble Gas Mass Spectrometer for Geochronology and Thermochronology at the University of Florida"	EAR0080086	310,566/24	280,000/24	standard grant for EA
Florida MACFADDEN, Bruce J.	"Late Pleistocene Latitudinal Gradients in North America Interpreted from Stable Isotopes of Fossil Equus Teeth"	EAR9909186	5,000/12	5,000/12	IF split-funding for EA on GE grant

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Florida MARTIN, Jonathan B.	"Development of an Inexpensive, Submersible, Automatic Water Sampler"	EAR9910011	48,227/24	48,227/24	standard grant for ITD
Florida A&M YOUNG, Cheryl	"SGER: Ultramicrotomy for Petrographic Thin Sections"	EAR0071152	7,370/12	7,370/12	IF split-funding for EA on GE grant
Florida International SAXENA, Surendra K.	"MRI: Acquisition of X-Ray Diffraction Equipment for Study of Matter at High-Pressure and Temperature for Geophysical and Materials Science Applications"	EAR0079641	398,000/36	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 224,025
Georgia SCHROEDER, Paul A.	"Upgrading of the X-Ray Diffraction and FTIR Facilities for Mineralogical Research"	EAR9911501	41,392/12	41,392/24	standard grant for EA
Georgia State GHAZI, A. Mohamad	"MRI: Acquisition of a Laser Ablation Single Collector High Resolution Inductively Coupled Plasma Mass Spectrometer"	EAR0079721	288,300/24	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 287,099
Harvard O'CONNELL, Richard J..	"Mantle Circulation Models: Applications to Lithospheric Deformation, Subduction and Plumes"	EAR0001046	27,000/12	27,000/12	IF split-funding for EA on PH grant
Hawaii MANGHNANI, Murli H.	"Compressibility and Structure of Silicate Melts at High Pressure"	EAR0074285	22,000/12	22,000/12	IF split-funding for EA on PH grant
Illinois BASS, Jay D.	"Development of Laser Heating for Sound Velocity Measurements at High P and T"	EAR0002021	279,273/24	146,358/12	1st yr incr on 2-yr cont grant for ITD
Illinois LUNDSTROM, Craig C.	"Measuring Trace Element Partition Coefficients Between Minerals and Basaltic Melts"	EAR0000924	15,000/12	15,000/12	IF split-funding for EA on CH grant
IRIS SIMPSON, David W.	"IRIS 2000: A Science Facility for Studying the Dynamics of the Solid Earth"	EAR9843924	93,089,000/60	11,594,547/12	5th yr incr on 5-yr CAGR EAR-9529992 for FS; split-funded w/ OPP/AGG = 7,500 and PH = 14,000
IRIS SIMPSON, David W.	"IRIS 2000: A Facility for Studying the Dynamics of the Solid Earth [supplement for Eurasian Plate study]"	EAR0042507	95,600/12	- 0 -	suppl to IF grant for FS; split-funded w/ interagency transfer from NIMA = 95,600
Kentucky MOECHEER, David P.	"Upgrade of the University of Kentucky Electron Probe Microanalyzer"	EAR0001322	70,649/12	70,649/24	standard grant for EA
Lehigh LARSEN, John W.	"Kerogen-Water Reactions During Maturation"	EAR9820862	4,300/12	4,300/12	IF split-funding for EA on GE grant
Maryland HELZ, George R.	"Geochemical Switches"	EAR9980532	19,000/12	19,000/12	IF split-funding for EA on CH grant
Maryland - Baltimore KUANG, Weijia	"CSEDI: Core-Mantle Interactions and the Polar Motion of the Earth"	EAR0079998	10,000/12	10,000/12	IF split-funding for EA on PH grant
Michigan ESSENE, Eric J.	"Acquisition of a New Electron Microprobe at the University of Michigan"	EAR9911352	540,630/24	540,630/24	standard grant for EA
Michigan MUKASA, Samuel B.	"Upgrading and Refurbishing of the "Multi-1" Mass Spectrometer at the University of Michigan"	EAR9909598	168,250/12	105,775/24	standard grant for EA; split-funded w/ OPP/AGG = 12,000

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Michigan ZHANG, Youxue	"Diffusion, Solubility, Bubble Growth, and Gas-Driven Eruptions [supplement]"	EAR9972937	9,294/12	9,294/12	IF suppl to CH grant for EA
Michigan State OSTROM, Nathaniel E.	"MRI: Acquisition of Stable Isotope Ratio Mass Spectrometers"	EAR0079573	760,540/12	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 262,260
Minnesota BANERJEE, Subir K.	"Continuation of a Facility: Institute for Rock Magnetism"	EAR9818704	951,280/36	315,593/12	2nd yr incr on 3-yr cont grant for FS
Minnesota BANERJEE, Subir K.	"Continuation of a Facility: Institute for Rock Magnetism [supplement for Santa Fe Conference]"	EAR9818704	17,273/6	5,273/6	IF suppl to IF grant for Other; split-funded w/ CH = 5,000; PH = 4,000 and GE = 3,000
Minnesota BANERJEE, Subir K.	"Continuation of a Facility: Institute for Rock Magnetism [supplement for workshop]"	EAR9818704	13,964/12	3,491/12	IF suppl to IF grant for Other; split-funded w/ GEO/ICI = 6,982 and INT/AP = 3,491
Minnesota KARATO, Shun-ichiro	"Technician for the Mineral and Rock Physics Laboratory, University of Minnesota [Phase II]"	EAR9906986	120,000/24	60,000/12	2nd yr incr on 2-yr cont grant for TS
Minnesota KARATO, Shun-ichiro	"Plastic Deformation of Transition Zone Minerals [supplement]"	EAR0040281	12,600/12	12,600/12	IF suppl to PH grant for EA
Minnesota KARATO, Shun-ichiro	"MRI: High Pressure Experimental Facility for Study of Dynamic Processes in Earth's Interior"	EAR0079827	542,500/12	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 542,500
Missouri KELLEY, Cheryl	"Acquisition of a Multi-Use Isotope Ratio Mass Spectrometer System"	EAR9910489	182,265/12	129,515/24	standard grant for EA
Missouri - Kansas City SLATER, Lee	"Investigating the Complex Resistivity (0.01-1000 Hz) Response to Saturation State for Unconsolidated Sediments"	EAR0073680	67,171/12	67,171/12	standard grant for ITD
MIT FREY, Frederick A.	"Upgrading of the Neutron Activation Analysis Facility in the Earth, Atmospheric and Planetary Sciences Department, Massachusetts Institute of Technology: A Laboratory in the MIT Center for Geochemical Analysis"	EAR9910529	63,040/24	63,040/24	standard grant for EA
MIT GROVE, Timothy L.	"Electron Microprobe Technician Support at MIT - Phase II"	EAR0002743	123,070/24	123,070/24	standard grant for TS
MIT HARVEY, Charles F.	"CAREER: Revisiting Two Basic Processes in Hydrogeology --- Solute Transport in Heterogeneous Formations and Chemical Mixing in Porous Media"	EAR9875995	1,000/12	1,000/12	IF split-funding for EA on HS grant
MIT HODGES, Kip V.	"Acquisition of Equipment to Establish a U-Th-He Geochronology Facility at MIT and Enhance Existing Laser Extraction Capabilities"	EAR9985357	140,000/12	48,600/24	standard grant for EA
MIT KING, Robert W.	"Support for Fundamental GPS Research - UNAVCO Facilities for Data Processing"	EAR0001631	235,000/48	175,000/36	standard grant for ITD
MIT MOLNAR, Peter H.	"Vertical Movement in the Southern Alps Constrained by GPS [equipment request]"	EAR9912071	99,323/30	99,323/30	standard grant for EA

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MIT MOLNAR, Peter H.	"Collaborative Research: Vertical Movement in the Southern Alps Constrained by GPS and Absolute Gravimetry [supplement]"	EAR0040454	7,500/12	7,500/12	IF suppl to PH grant for Other
MIT REILINGER, Robert E.	"Present-Day Kinematics and Dynamics of the Eastern Mediterranean/Caucasus: Interaction of the Arabian, African, and Eurasian Plates [supplement]"	EAR0042641	42,344/12	- 0 -	on hold for FY '01 decision
MIT SOUTHARD, John B.	"The Fluid Mechanics of Submarine Fan Morphogenesis: An Experimental Study"	EAR9909261	19,428/12	19,428/12	IF split-funding for EA on GE grant
MIT WHIPPLE, Kelin X.	"Collaborative Research: Relief Evolution at the Fluvial-Glacial Transition"	EAR9980465	2,000/12	2,000/12	IF split-funding for EA on GE grant
Northwestern BRANDON, Alan D.	"Acquisition of a Thermal Ionization Mass Spectrometer"	EAR9910485	435,000/12	360,000/36	standard grant for EA
Northwestern RUSSO, Raymond M.	"Upgrading of Department of Geological Sciences Computer Network"	EAR9910255	51,258/12	51,258/36	standard grant for EA
Oregon REED, Mark H.	"Collaborative Proposal: Temporal Evolution of Hydrothermal Fluid Compositions and Construction of a Three-Dimensional Model for the Giant Butte Magmatic-Hydrothermal Ore Deposit"	EAR0001272	16,090/12	16,090/12	IF split-funding for EA on CH grant
Oregon State WONDZELL, Steven M.	"Interactions Between Streams and Groundwater Along the River Continuum: Scaling Up to a Stream Network"	EAR9909564	6,000/12	6,000/12	IF split-funding for EA on HS grant
Oxford WILLEMANN, Raymond	"Partial Support of the International Seismological Center"	EAR9725096	345,600/36	122,200/12	IF split-funding for FS on 4-yr cont PH grant
Oxford WILLEMANN, Raymond J.	"Developing New Services at the International Seismological Centre"	EAR9909662	17,395/12	17,395/12	IF split-funding for FS on PH grant
Penn State FREEMAN, Katherine H.	"Acquisition of a Mass Spectrometer and Continuous-Flow Inlet Systems for Analyses of H, C, N, O & S Stable Isotopes in Ultra-Small Gas Liquid and Solid Samples for Research in Geosciences"	EAR0080267	302,006/24	169,277/12	1st yr incr on 2-yr cont grant for EA; split-funded w/ ATM/PC = 40,000
Penn State FREEMAN, Katherine H.	"Biogeochemical and Environmental Influences on the Composition of Late Archean Kerogens and Extracts"	EAR0073831	3,500/12	3,500/12	IF split-funding for EA on GE grant
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	100,290/12	3rd yr incr on 3-yr cont grant for ITD
Penn State SLINGERLAND, Rudy L.	"Upgrading Computing Hardware to Support Geoscience Initiatives"	EAR0001918	158,047/12	158,047/36	standard grant for EA
Penn State VOIGHT, Barry	"Edifice Sector Failure at Soufriere Hills Volcano, Monserrat: Documenting the Failure Dynamics of a Hydrothermally-Altered Edifice in Three-Dimensions"	EAR9909673	16,000/12	16,000/12	IF split-funding for EA on CH grant
Purdue CUSHMAN, John H.	"Application of Stochastic Theories and 3D-PTV Experiments to Study Anomalous Dispersion"	EAR0073262	20,000/12	20,000/12	IF split-funding for EA on HS grant

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Purdue ELMORE, David	"Facility Support: The Purdue Rare Isotope Measurement Laboratory"	EAR9809983	1,590,830/36	543,146/12	3rd yr incr on 3-yr cont grant for FS
Purdue FRITZ, Steven J.	"Experimental Verification of a 37-Cl Minimum in CPL Profiles as Predicted by a Hyperfiltration Model"	EAR0001054	9,800/12	9,800/12	IF split-funding for EA on HS grant
Rensselaer Polytechnic Inst WATSON, E. Bruce	"Experimental Studies in the Kinetics of Petrologic Processes [supplement]"	EAR0040486	21,500/12	21,500/12	IF suppl to CH grant for EA
Rensselaer Polytechnic Inst WATSON, E. Bruce	"Accessory Minerals and Crustal Processes"	EAR0073752	6,000/12	6,000/12	IF split-funding for EA on CH grant
Rhode Island KING, John W.	"Acquisition of a Sensitive and Cost-Effective Superconducting Rock Magnetometer System for Paleomagnetic and Rock-Magnetic Studies"	EAR9909577	149,100/12	67,095/24	standard grant for EA; split-funded w/ OCE/MGG = 22,365; OCE/ODP = 22,365 and ATM/PC = 37,275
RPI MCCAFFREY, Robert	"GPS Observations and Numerical Modeling of a Rapid Shear Zone in Irian Jaya, Indonesia"	EAR0073769	2,000/12	2,000/0	IF split-funding for EA on PH grant
Rutgers DELANEY, Jeremy S.	"Upgrading of Hardware and Software at the Rutgers Electron Microprobe Facility"	EAR9910249	52,313/12	52,313/24	standard grant for EA; co-funded with NASA = 40,000
Simon's Rock College of Bard BERGMAN, Michael I.	"A Laboratory Study on the Effects of a Mean Shear Fluid Flow During Solidification of Hexagonal Closest Packed Metallic Alloys"	EAR9909333	1,000/12	1,000/12	IF split-funding for EA on PH grant
South Carolina TORRES, Raymond	"(EPSCoR) CAREER: A Mechanism for Rapid Soil-Water Transport"	EAR9985345	26,500/12	26,500/12	IF split-funding for EA on HS grant
South Dakota M&T DUKE, Edward F.	"Spectroscopic Methods for Mapping Metamorphic Rocks"	EAR0040364	10,830/12	10,830/12	IF split-funding for EA on CH grant
Southern California DOLAN, James F.	"Paleoseismological Investigation of the North Anatolian Fault, Turkey: Towards a Long Term Record of Patterns of Strain Release in Time and Space"	EAR9980564	7,500/12	7,500/12	IF split-funding for EA on PH grant
Southern California HENYEY, Thomas L.	"Southern California Earth Center [supplement for WinSAR data purchase]"	EAR0043326	100,000/12	25,000/12	IF suppl to PH grant for Other
Southern California LUND, Steven P.	"A Test of Paleomagnetic Field Variability at Equatorial Latitudes"	EAR9980410	5,000/12	5,000/12	IF split-funding for EA on PH grant
Southern Mississippi SHILLER, Alan M.	"Collaborative Research: Redox Controls on and Seasonal Variability of Dissolved Iron and Manganese in Rivers"	EAR0001049	2,000/12	2,000/12	IF split-funding for EA on HS grant
St. Louis MITCHELL, Brian J.	"Technician Support for Seismological Studies in the Central United States"	EAR9905328	179,927/36	60,000/12	2nd yr incr on 2-yr cont grant for ITD
Stanford BEROZA, Gregory C.	"Waveform-Based Earthquake Location"	EAR0074084	4,100/12	4,100/12	IF split-funding for EA on PH grant

Institution/PI	Title of Proposal	Proposal #	\$'s Requested/ months	FY00 Funding by IF/months	Comments
Stanford BEROZA, Gregory C.	"Seismic Energy: Measurement, Mechanism Dependence, and Scaling"	EAR9909479	2,900/12	2,900/12	IF split-funding for EA on PH grant
Stanford ZEBKER, Howard A.	"Subsurface Magmatic Processes in the Western Galapagos Islands from High-Resolution Interferometric Radar Deformation Measurements"	EAR0001096	6,000/12	6,000/12	IF split-funding for EA on PH grant
SUNY - Buffalo BAKER, Gregory S.	"Acquisition of Equipment for Investigating Coincident Seismic and GPR Imaging"	EAR0002233	27,544/12	27,544/24	standard grant for EA
SUNY - Stony Brook LIEBERMANN, Robert C.	"Elasticity of High Pressure Phases of Mantle Minerals"	EAR9980451	5,000/12	5,000/12	IF split-funding for EA on PH grant
SUNY - Stony Brook WEIDNER, Donald J.	"Science and Technology Center for High Pressure Research"	EAR9841353	14,680,542/60	2,436,626/12	10th yr incr on STC CAGR EAR-8920239 for FS; split-funded w/ EHR = 163,835
SUNY-Binghamton WU, Francis T.	"Collaborative Reserach: Seismotectonics and Structure of Creeping Thrusts and Mountain Building in the Himalaya"	EAR9903768	23,500/12	23,500/12	IF split-funding for EA on PH grant
Syracuse SAMSON, Scott D.	"Technician Support (Phase II): Radiogenic Isotope, Stable Isotope, and XRF Laboratories at Syracuse University"	EAR9909151	120,000/24	120,000/24	standard grant for TS
Temple ULMER, Gene C.	"Collaborative Proposal: Development of Advanced Electrochemical Instruments for Accurate pH Measurements in Hydrothermal Solutions at Temperature Up to 450 Degrees Centigrade (revised version)"	EAR9727118	234,290/24	27,277/12	3rd yr incr on 3-yr cont grant for ITD
Tennessee MISRA, Kula C.	"Acquisition of a Wavelength-Dispersive, Automated X-Ray Fluorescence (XRF) Spectrometer System"	EAR0075405	118,612/12	118,612/24	standard grant for EA
Texas SHARP, John M.	"Urban 'Karst': The Impacts of Utility/Service Conduits/Ducts on Urban Groundwater Systems"	EAR9902899	6,400/12	6,400/12	IF split-funding for EA on HS grant
Texas A&M EVERETT, Mark	"Next-Generation Environmental Geophysics Using Controlled-Source Electromagnetic Induction"	EAR0074124	125,310/24	110,838/24	standard grant for ITD
U.S. CDRF COURTNEY, John E.	"Funding Arrangement for the U.S. Civilian Research and Development Foundation for the Independent States of the Former Soviet Union (CDRF) [supplement for support of KNET]"	INT0041269	20,000/12	20,000/12	IF suppl to INT grant for FS
UCAR - UNAVCO STEIN, Seth A.	"Support of UNAVCO Community and Facility Activities"	EAR9910789	10,520,000/48	1,914,103/12	1st yr incr on 4-yr CAGR ATM-9732665/SPO #2 (EAR-9903413) for FS
UCAR - UNAVCO STEIN, Seth A.	"Support of UNAVCO Community and Facility Activities [supplement for Antarctic science support]"	EAR9910789	210,227/12	- 0 -	suppl to CAGR ATM-9732665/SPO #2 (EAR-9903413) for FS; split-funded w/ OPP = 200,000 and PH = 10,227
UCAR - UNAVCO WARE, Randolph H.	"Support of UNAVCO and Related Activities [supplement for NASA/SENH activities]"	EAR9903413	535,658/12	23,569/12	suppl to CAGR ATM-9732665/SPO #2 (EAR-9903413) for FS; split-funded w/ interagency transfer from NASA/SENH = 512,089
UCAR - UNAVCO WARE, Randolph H.	"Support of UNAVCO and Related Activities [supplement for GPS project specific costs]"	EAR9903413	39,008/12	- 0 -	suppl to CAGR ATM-9732665/SPO #2 (EAR-9903413) for FS; split-funded w/ PH = 39,008

Institution/PI	Title of Proposal	Proposal #	\$'s Requested/ months	FY00 Funding by IF/months	Comments
Utah WANNAMAHER, Philip E.	"Collaborative Research: A Magnetotelluric Instrumentation Facility for Electromagnetic Study of the Continents (EMSOC)"	EAR9616450	318,713/36	60,552/12	3rd yr incr on 3-yr cont grant for FS
Virginia HERMAN, Janet S.	"Collaborative Research: Colloid Mobilization and Transport in the Vadose Zone"	EAR9909491	5,000/12	5,000/12	IF split-funding for EA on HS grant
VPI & SU GIBBS, Gerald V.	"A Study of Banded Interactions, Crystal Chemistry, Transformation of Chemical Reactivity of Earth Materials Based on Electron Density Distributions"	EAR0073637	15,000/12	15,000/12	IF split-funding for EA on CH grant
VPI & SU TRACY, Robert J.	"Collaborative Research: Documenting the Fine-Structure of Metamorphic Events and Ages in a Complex Polymetamorphic Orogen"	EAR9903140	17,500/12	17,500/0	IF split-funding for EA on CH grant
Washington STONE, John O.	"Development of a Comprehensive Cosmogenic 10-Be -26-Al Production Model for Quartz"	EAR9910209	41,098/12	41,098/12	standard grant for ITD
Washington State LARSON, Peter B.	"Acquisition of a Laser Fluorination Vacuum Line for Oxygen Isotope Ratio Measurement"	EAR9910129	30,000/12	30,000/24	standard grant for EA
Washington State REINERS, Peter W.	"Development of a Radiogenic Helium Dating Facility for Experimental Development of and Applications in (U-Th)/He Thermochronology"	EAR9909996	40,332/12	40,332/24	standard grant for EA
Washington State REINERS, Peter W.	"Experimental Development and Calibration of (U-Th)/He Thermochronology"	EAR0073576	12,550/12	12,550/12	IF split-funding for EA on CH grant
Washington State WOLFF, John A.	"Acquisition of a Laser-Ablation, Inductively Coupled Plasma Source, Multicollector Mass Spectrometer (LA-ICP-MCMS) for Isotope and Trace Element Microanalysis"	EAR0001484	476,135/12	476,135/24	standard grant for EA
Western Washington HOUSEN, Bernard A.	"Collaborative Research: Magnetofossils in Marine Sediments: Rock Magnetic Experiments on Artificial and Natural Samples [supplement]"	EAR9726884	15,295/6	15,295/6	IF suppl to PH grant for EA
WHOI KURZ, Mark D.	"Technician Support for Isotope Geochemistry [Phase I]"	EAR9807951	150,000/36	59,938/12	3rd yr incr on 3-yr cont grant for TS
WHOI NORRIS, Richard D.	"Molecular Diversity, Biogeography and Species Concepts in Planktonic Foraminifera"	EAR9909658	10,000/12	10,000/12	IF split-funding for EA on GE grant
WHOI SHIMIZU, Nobumichi	"Support of a National Ion Microprobe Facility at Woods Hole Oceanographic Institution"	EAR9904400	756,472/36	96,736/6	2nd incr on 1.5 yr cont grant for FS
WHOI SIMS, Kenneth W.	"CSEDI Collaborative Research: A Coupled Geodynamic/Geochemical Study of the Hawaiian Plume"	EAR0001924	7,000/12	7,000/12	IF split-funding for EA on PH grant
WHOI SIMS, Kenneth W.	"MRI: Acquisition of a MC ICPMS for the Woods Hole Oceanographic Institution Dedicated to the Study of Earth and Ocean Sciences"	EAR0079733	622,011/24	- 0 -	standard grant for EA; split-funded w/ OIA/MRI = 547,011

Institution/PI	Title of Proposal	Proposal #	\$'s Requested/ months	FY00 Funding by IF/months	Comments
Wisconsin DEMETTS, Dennis C.	"Collaborative Research: Continuation of a GPS-Based Study of a Slip Along the Riveara Subduction Interface Following the Oct. 9, 1995 M = 8 Jalisco Earthquake"	EAR9909321	5,000/12	5,000/12	IF split-funding for EA on PH grant
Wisconsin SINGER, Bradley S.	"Acquisition of an Ultra-Sensitive Mass Spectrometer for the University of Wisconsin Rare Gas Geochronology Laboratory"	EAR9972851	151,560/12	151,560/24	standard grant for EA
Wisconsin THURBER, Clifford H.	"High-Precision Earthquake Location and the Internal Structure of Active Volcanic Systems"	EAR0001138	6,000/12	6,000/12	IF split-funding for EA on PH grant
Yale BENOIT, Gaboury	"Dissolved Metal Sulfides in Fully Oxygenated River Waters: Sources, Distribution, Composition and Bioavailability"	EAR9909278	36,000/12	36,000/12	IF split-funding for EA on HS grant
Yale LEES, Jonathan M.	"Technician Support: Supervisor of Computer Facilities [Phase I]"	EAR9729976	150,000/36	50,000/12	3rd yr incr on 3-yr cont grant for TS
Yale SAIERS, James E.	"Collaborative Research: Colloid Mobilization and Transport in the Vadose Zone"	EAR9909508	4,000/12	4,000/12	IF split-funding for EA on HS grant

ABBREVIATIONS and EXPLANATIONS

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

standard grant a grant funded for the full amount in its 1st yr
STC = NSF Science and Technology Center
suppl = a funding supplement to an active NSF grant
TE = Tectonics Program in EAR
TEM = transmission electron microscopy
TIMS = thermal ionization mass spectrometry
TS = Technician Support component of IF Program
UCAR = University Consortium for Atmospheric Research
UNAVCO = University NAVSTAR Consortium within UCAR
USGS = U.S. Geological Survey
VPI & SU = Virginia Polytechnic Institute and State University
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-2000

<u>PROPOSALS</u>		<u>DOLLARS</u>	
Total number of proposals processed by IF	203	Total dollars requested of IF (per year for multi-year proposals)	44,150,190
Logged-in to IF as primary program	121	Total awarded through IF actions in FY-2000	30,243,872
New proposals; full review by IF	87	Awarded from IF budget	26,601,801
Declined	39	For equipment acquisition/upgrade (EA)	4,865,505
Funded entirely from IF budget	37	For instr and technique development (ITD)	1,439,360
Split-funded with other programs ..	10	For facility support (FS)	19,457,940
Held over for FY'00 decision	1	For technician support (TS)	601,952
New proposals; withdrawn before review	2	Other (workshops, REU, etc.)	237,044
Other award actions (incr, suppl, etc)	32	Awarded from other NSF budgets through split-funding ..	3,034,382
Funded entirely from IF budget	21	For equipment acquisition/upgrade (EA)	2,242,440
Split-funded with other programs	11	For facility support (FS)	552,070
Logged-in to other NSF programs; IF-split-funding	82	For instr and technique development (ITD)	67,399
		Other (workshops, REU, etc.)	172,473
		Awarded through interagency transfers	607,689
		For facility support (FS)	607,689