

## APPENDIX E

### Grants for the International Geophysical Year Program

<b>AURORA AND AIRGLOW</b>			
AIR FORCE CAMBRIDGE RESEARCH CENTER:			
Data Reduction-Patrol Spectrograph-----	\$66, 060	Data Reduction-Antarctic Ice Sampling, Isotope Ratios-----	22, 990
NATIONAL BUREAU OF STANDARDS: Airglow Data Reduction-----	21, 775	OHIO STATE UNIVERSITY: Antarctic Data Reduction and Publication-----	27, 150
Operational Costs and Coordination of Northern Stations----	10, 327	UNIVERSITY OF WASHINGTON: Meteorological Studies and Data Reduction in Western United States (Blue Glacier)-----	7, 300
<b>COSMIC RAYS</b>		Data Reduction of Arctic Sea Ice Physics-----	6, 022
UNIVERSITY OF IOWA:			
Data Reduction in High Altitude Cosmic Ray Measurements in the Arctic-----	5, 482	<b>GRAVITY MEASUREMENTS</b>	
UNIVERSITY OF MARYLAND: Reduction of Cosmic Ray Counter Data-----	2, 000	ARCTIC INSTITUTE OF NORTH AMERICA:	
UNIVERSITY OF MINNESOTA: Monitoring and Data Reduction of Cosmic Ray Intensities at High Altitude-----	24, 380	Recruitment, Hiring, and Travel of Scientists for the Antarctic-	1, 500
UNIVERSITY OF NEW HAMPSHIRE: Reduction and Study of Neutron Intensity-Time Variations----	3, 536	UNIVERSITY OF CALIFORNIA: Observation and Data Reduction of Mean Rigidity of the Earth-	9, 450
UNIVERSITY OF NEW MEXICO: Data Reduction-Semidiurnal Planetary Variation of Atmospheric Pressure-----	3, 600	COLUMBIA UNIVERSITY: Reduction of Gravity Measurements-----	3, 200
<b>GEOMAGNETISM</b>		UNIVERSITY OF WISCONSIN: Antarctic Data Reduction and Publication-----	9, 980
UNIVERSITY OF CALIFORNIA: Operation of Jarvis and Palmyra Magnetic Stations-----		Gravity Measurements in Connection with the International Geophysical Year Gravity Program-----	6, 500
U.S. COAST AND GEODETIC SURVEY:			
Data Reduction and Publication in Coordinating and Administering the Geomagnetism Program-----	103, 610	<b>IONOSPHERIC PHYSICS</b>	
<b>GLACIOLOGY</b>		UNIVERSITY OF ALASKA: Operation of an Atmospheric Whistler Station in Alaska--	5, 630
AMERICAN GEOGRAPHICAL SOCIETY:		DARTMOUTH COLLEGE: Data Reduction of Atmospheric Whistlers-East-----	23, 900
Data Reduction of Glacier Observations in Southern Alaska-----	13, 915	NATIONAL BUREAU OF STANDARDS: Operation of South American Ionospheric Sounding Stations-----	4, 461
Data Reduction of Photogrammetry and Mapping-----	7, 500	Operation of Six Antarctic Stations in Ionospheric Physics Network-----	16, 701
ARCTIC INSTITUTE OF NORTH AMERICA:		Ionospheric Quality Control and Training-----	5, 130
Recruitment, Hiring, and Travel of International Geophysical Year Scientists for the Antarctic-----	19, 280	Equatorial VHF Ionospheric Forward Scatter Measurements--	1, 012
Data Reduction in Glaciology on Mt. Michelson-----	29, 850	Fixed Frequency Backscatter Measurements-----	3, 599
Logistic Equipment and Supplies-----	8, 000	Data Reduction and Publication for VHF Oblique Incidence Sporadic-E Field Strength Measurements-----	14, 234
CALIFORNIA INSTITUTE OF TECHNOLOGY:		Ionospheric Quality Control and Publication-----	82, 017
Data Reduction-Glacier Dynamics of Blue Glacier Olympic Mountains-----	2, 000	PENNSYLVANIA STATE UNIVERSITY:	
		Atmospheric Absorption-Pulse Method-----	1, 848
		True Height Determination----	8, 488

<b>STANFORD UNIVERSITY :</b>	
Data Reduction in Establishing the Latitude Dependence and Occurrence at Conjugate Geomagnetic Locations of Whistlers in the West-----	35, 805
Fixed Frequency Backscatter Measurements-----	13, 275
<b>LONGITUDE AND LATITUDE</b>	
<b>U.S. COAST AND GEODETIC SURVEY :</b>	
Longitude and Latitude Measurements in Hawaii-----	4, 000
<b>METEOROLOGY</b>	
<b>SMITHSONIAN INSTITUTION :</b>	
Data Reduction-Earth Albedo Observations-----	4, 000
<b>U.S. WEATHER BUREAU :</b>	
Data Reduction and Publication. Procurement of Equipment and Supplies for Antarctica-----	41, 950
Arctic Ice-Floe Meteorological Stations-----	103, 000
Reduction and Preparation for Publication of Arctic and Antarctic Meteorological Data----	7, 625
29, 800	
<b>OCEANOGRAPHY</b>	
<b>UNIVERSITY OF CALIFORNIA :</b>	
Procurement of Equipment for Use in the Island Observatories-----	7, 000
Data Reduction for Deep Current Program in the Pacific-----	5, 000
<b>COLUMBIA UNIVERSITY :</b>	
Operational Costs and Data Reduction of Deep Current Oceanography in the Atlantic-----	43, 000
<b>TEXAS A &amp; M :</b>	
Data Reduction in Deep Current Oceanography in the Atlantic-----	3, 000
<b>WOODS HOLE OCEANOGRAPHIC INSTITUTION :</b>	
Operational Costs and Related Expenses in Deep Current Oceanography in the Atlantic-----	5, 000
<b>ROCKETRY</b>	
<b>U.S. DEPARTMENT OF THE ARMY :</b>	
Procurement of Rockets and Equipment and Partial Operational Costs on Guam-----	20, 000
<b>SEISMOLOGY</b>	
<b>ARCTIC INSTITUTE OF NORTH AMERICA :</b>	
Antarctic Seismology Program (Personnel)-----	4, 690
<b>CALIFORNIA INSTITUTE OF TECHNOLOGY</b>	
Data Reduction-Equipment for Use in the Antarctic-----	3, 450
Data Reduction in the Study of Crustal Strain Accumulation-----	540
<b>U.S. COAST AND GEODETIC SURVEY :</b>	
Procurement of Seismographs for Operations in the Pacific Ocean Area-----	2, 350
<b>COLUMBIA UNIVERSITY :</b>	
Seismic Measurements in the Atlantic-----	8, 000
Data Reduction and Publication-----	12, 420
<b>UNIVERSITY OF WISCONSIN :</b>	
Data Reduction and Publication. Seismic Exploration of Coastal Areas-----	19, 435
1, 500	

<b>SOLAR ACTIVITY</b>	
<b>UNIVERSITY OF HAWAII</b>	
Solar Activity Flare Patrol in Hawaii-----	3, 500
<b>HIGH ALTITUDE OBSERVATORY</b>	
Visual Observations-----	5, 000
<b>UNIVERSITY OF MICHIGAN</b>	
Operational Costs and Data Reduction of McMath-Hulbert Observatory Solar Activity Program-----	3, 950
<b>NATIONAL BUREAU OF STANDARDS</b>	
Data Reduction and Publication-----	19, 686
<b>RENSELAER POLYTECHNIC INSTITUTE</b>	
Data Reduction of Indirect Flare Detection Instrumentation----	1, 725
<b>WORLD DAYS</b>	
<b>NATIONAL BUREAU OF STANDARDS</b>	
Operation of U.S. and World Warning Center-----	72, 810
<b>GENERAL RELATED SCIENTIFIC SUPPORT</b>	
<b>ARCTIC INSTITUTE OF NORTH AMERICA</b>	
Antarctic Scientific Field Supervision Costs (4)-----	790
Antarctic Scientific Field Supervision Costs (6)-----	950
<b>U.S. DEPARTMENT OF THE INTERIOR</b>	
Scientific Station Leader in the Antarctic-----	3, 550
<b>U.S. DEPARTMENT OF THE NAVY</b>	
Antarctic Scientific Field Supervision Costs-----	6, 301
<b>U.S. WEATHER BUREAU</b>	
Antarctic Planning Staff-----	6, 290
<b>WORLD DATA CENTER</b>	
<b>UNIVERSITY OF ALASKA</b>	
Archives in Aurora-----	58, 310
<b>AMERICAN GEOGRAPHICAL SOCIETY</b>	
Archives in Glaciology-----	40, 407
<b>U.S. COAST AND GEODETIC SURVEY</b>	
Archives in Geomagnetism, Gravity, and Seismology-----	61, 800
<b>CORNELL UNIVERSITY</b>	
Archives in Aurora-----	63, 750
<b>HIGH ALTITUDE OBSERVATORY</b>	
Archives in Solar Activity-----	18, 360
<b>UNIVERSITY OF MINNESOTA</b>	
Archives in Cosmic Rays-----	29, 774
<b>NATIONAL BUREAU OF STANDARDS</b>	
Operation of the Data Coordination Office-----	71, 660
Archives in Airglow and Ionosphere-----	113, 370
<b>NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL</b>	
Rocket and Satellite World Data Center "A"-----	19, 500
<b>TEXAS A. &amp; M.</b>	
Archives in Oceanography-----	49, 372
<b>U. S. WEATHER BUREAU</b>	
Archives in Meteorology-----	71, 000
<b>INTERDISCIPLINARY RESEARCH</b>	
<b>CRUST AND CORE</b>	
<b>CALIFORNIA INSTITUTE OF TECHNOLOGY</b>	

Study of Long Period and Extensometer Data-----	30, 000	UNIVERSITY OF MICHIGAN Solar Flare Studies-Flare Mechanism-----	29, 500
Analytical Studies of Crustal Structure-----	22, 195	Solar Flare Studies-Line Spectra-----	27, 500
UNIVERSITY OF CALIFORNIA Study of Marine Seismic Data-----	20, 882	UNIVERSITY OF MINNESOTA High Altitude Balloon Observations-----	10, 000
U.S. COAST AND GEODETIC SURVEY Analysis of Arctic, Antarctic, and Pacific Records-----	20, 000	NATIONAL BUREAU OF STANDARDS Theoretical Studies of High Atmosphere Data-----	200, 000
COLUMBIA UNIVERSITY Analysis of Land and Sea Gravity and Seismic Data-----	46, 000	NEW YORK UNIVERSITY Analysis of Synoptic Cosmic Ray Data-----	22, 000
UNIVERSITY OF WISCONSIN Analysis of Gravity Observations-----	29, 613	PENNSYLVANIA STATE UNIVERSITY Analysis of Height Distribution-RAND CORPORATION Ionospheric Dynamics-----	80, 000
Crustal Structure Determination Using Gravity and Travel Time Measurements-----	19, 435	RENSSELAER POLYTECHNIC INSTITUTE Analysis of Solar Phenomena and Radio Noise-----	22, 000
HEAT AND WATER		STANFORD UNIVERSITY : Ionospheric Backscatter Data--	40, 000
UNIVERSITY OF CALIFORNIA Geochemical Data (CO <sub>2</sub> Studies) - Analysis of Oceanographic Data-----	15, 000		
Polar Vortex Studies-----	54, 703	SPECIAL RESEARCH	
COLUMBIA UNIVERSITY Analysis of Oceanographic Data-----	32, 660	CARNEGIE INSTITUTION OF WASHINGTON : Special Research Surveys by Distinguished Scientists From Abroad-----	122, 300
HIGH ALTITUDE OBSERVATORY Theoretical Study of Ozone Data-----	44, 000	UNIVERSITY OF CHICAGO : Special Research Surveys by Distinguished Scientists From Abroad-----	46, 000
OHIO STATE UNIVERSITY Antarctic Water Budget Study-- Analysis of Antarctic Micrometeorological Data-----	12, 000		
TEXAS A. & M. Analysis of Oceanographic Data-----	10, 350	EARTH SATELLITE—SCIENTIFIC EXPERIMENTS	
UNIVERSITY OF WASHINGTON Analysis of Oceanographic Data-----	37, 973	U.S. DEPARTMENT OF THE ARMY : Micrometeor Detection-----	25, 000
Analysis of Blue Glacier Micrometeorological Records-----	30, 000	UNIVERSITY OF ILLINOIS : Radio Interferometry and Data Analysis-----	9, 627
U.S. WEATHER BUREAU Antarctic Troposphere and Stratosphere Structure-----	6, 568	LINFIELD RESEARCH INSTITUTE : Absolute Signal Strength and Frequency Measurements-----	5, 550
Atmospheric and Oceanic Circulation-----	149, 000	NATIONAL BUREAU OF STANDARDS : Interferometer and Doppler Measurements of Satellite Radio Transmissions-----	42, 732
WOODS HOLE OCEANOGRAPHIC INSTITUTION Analysis of Oceanographic Data-----	77, 000	Electron Density Profiles-----	14, 439
	60, 000	PENNSYLVANIA STATE UNIVERSITY : Doppler Measurements From Spaced Locations-----	33, 258
UPPER ATMOSPHERE		STANFORD UNIVERSITY : Electron Density and Radio Propagation Studies Utilizing Satellite Transmissions-----	23, 000
UNIVERSITY OF ALASKA Study and Analysis of Alaskan Data-----	200, 000	UNIVERSITY OF WISCONSIN : Radiation Balance of the Earth--	7, 500
UNIVERSITY OF CALIFORNIA Line Island Data-----	18, 287	EARTH SATELLITE — OPTICAL TRACKING	
U.S. COAST AND GEODETIC SURVEY Study of Equatorial Enhancement of Transients and Study of Activity Patterns and Magnetic Storm Onsets at Polar Latitude-----	32, 000	SMITHSONIAN INSTITUTION : Cost of Optical Tracking Stations-----	190, 000
UNIVERSITY OF COLORADO Analysis of High Atmosphere Data-----	50, 000	Operation of Optical Tracking Stations-----	102, 200
FRANKLIN INSTITUTE Analysis of Synoptic Cosmic Ray Data-----	38, 000	Administration of a Visual Observing Program-----	149, 000
HIGH ALTITUDE OBSERVATORY Research in Solar and Solar-Terrestrial Problems-----	6, 325	Observation, Reduction, Analysis, and Central Operation-----	325, 122
UNIVERSITY OF MARYLAND Analysis of Cosmic Ray Data--	8, 000	SOCIETY OF PHOTOGRAPHIC SCIENTISTS AND ENGINEERS : Volunteer Photographic Tracking-----	22, 000
			\$4, 882, 750