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SUMMARY OF IGY PROJECTS
AFFECTED BY RECENT DOD FISCAL ACTIONS

<u>IGY Program and Funding</u>	<u>Institution</u>	<u>Summary of Problem</u>	<u>DOD Funding</u>
1. <u>Rocketry Program</u>			
(i) Fort Churchill: IGY projects 10.5, 6, 7, 14 & 16 (\$1,630,000)	Geophysics Research Directorate (GRD); Naval Research Laboratory (NRL); Signal Corps Engineering Laboratories (SCEL); Ballistic Research Laboratories (BRL)	The Department of Army has advised that support rendered the Ft. Churchill facility is to be curtailed for lack of funds. The effect of this action would be the substantial elimination of the entire US IGY Rocketry Program for which the U.S. IGY National Committee has provided \$2,529,800 to carry out; serious damage to national prestige and US rocketry progress; and sharp reduction in international commitments undertaken by the USNC-IGY Committee.	An additional amount of \$545,000 is required to continue operation of Ft. Churchill -- \$395,000 for FY 58 and \$150,000 for FY 59. Present Army budget provides \$700,000 for support of Ft. Churchill -- \$600,000 for FY 58 and \$100,000 for FY 59.
(ii) 10.20 Alpatron - Sphere Experiment (\$75,500)	University of Michigan	The principal support for this IGY project is provided by the Geophysics Research Directorate (GRD) under contracts (Nos. AF19 (604)-545 and AF19(604)-999). GRD has deferred allocation of funds past critical date of October 1, and University of Michigan officials have advised that available funds under the IGY grant are insufficient to permit continuation of this project past December, 1957. The delays in funding will cause elimination of 17 or	A total of \$261,180 is required to complete this project: \$191,575 for work in connection with Contract AF19(604)-999 and \$69,605 for contract AF19(604)-545.

(Continued)



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(Continued - (ii) 10.20)		18 IGY research rocket firings and the dispersal of highly trained upper air rocket research staffs at Michigan. Because project has been classified as technical development work, recent lifting of budget restrictions regarding research funds does not apply.	
(iii) Eclipse Rocketry Project	--	U. S. National Committee approved inclusion in IGY Program of plans for eclipse expedition to South Pacific in October, 1958 with understanding that IGY funds were not required and Department of Navy has made ship available for expedition. NRL has requested \$150,000 to purchase rockets for firing during solar eclipse. USNC Executive Committee strongly supports scientific objectives of expedition but is unable at present time to offer financial support for these firings.	Total of \$150,000 is required.



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2. <u>Solar Eclipse Expedition</u>	High Altitude Observatory (HAO); Geophysics Research Directorate (GRD); Naval Research Laboratory (NRL).	This planned expedition, which involves scientists of many US institutions as well as cooperative arrangements with other nations, will be greatly reduced in scientific value because of the discontinuance of DOD support for special instrumentation being developed by HAO under contract with GRD (No. AF19(804)-2053).	Original GRD commitment of \$135,000 is still required before next March; \$35,000 of this amount has been received and expended by HAO, but no assurance of continued support can be obtained from GRD and an urgent request for an immediate allocation of \$60,000 is being held up.
3. <u>GRD, AFCRC Activities</u>			
1) Solar Activity and World Day Programs: IGY project 12.11 & 16 (\$19,000)	High Altitude Observatory (HAO) and the Geophysics Research Directorate (GRD)	HAO is receiving partial support under contract (No. AF19(609)-2140) for this work with Geophysics Research Directorate which has prohibited obligation of funds under a closely related GRD project, until after January 1, 1958. The effect of this action will be the loss of a skilled and highly trained staff at HAO and the severe curtailment of weekly solar and geophysical activity reports. This action will also preclude further use of IGY funded solar observatory equipment, curtail operations at a key station in the world warning network, reduce the timeliness and accuracy of special reports to IGY Rocketry and Cosmic Ray project directors and hamper the Special World Interval (SWI) program at Ft. Belvoir. (Oral assurances have been received from DOD and GRD that support to this project will continue after January 1)	Total GRD commitment of \$55,000 for FY 1958 is involved; \$15,000 of this amount is needed by HAO immediately, for use until release of the balance "after January 1, 1958".



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(Continued) (ii) Work at Lamont: IGY project 9.20, "Arctic Oceanography"	Lamont Geological Observatory (LGO), and the Geophysics Research Directorate (GRD)	This unfunded IGY project is a contribution to the IGY by GRD which has contracted (Contract No. AF19(604)-2030) with Lamont Geological Observatory to carry out the necessary work on the ice floe island at Station "A". In addition to carrying out oceanographic experiments, Lamont personnel are manning the equipment on the island for the aurora, geomagnetism, gravity and seismology programs. The elimination of this project would create a gap in IGY measurement stations in the Arctic and endanger the continuance of logistic support provided by the Air Force.	The Lamont contract with GRD currently is funded at \$57,000 and expires in November of 1957. Lamont expected this contract to be renewed for operations next year for a longer period of time and increased to about \$80,000.
(iii) Cosmic Ray Work at Chicago: IGY projects 2.7 and 2.8 (\$156,196)	University of Chicago and Geophysics Research Directorate (GRD)	Contract AF19(604)-1288 of the GRD supports five IGY neutron monitor stations and the reduction of data from several projects such as the recent shipboard cosmic ray measurements in the Antarctic, under Dr. J. A. Simpson's direction. Dr. Simpson has already begun to close down these operations. The Air Force Office of Scientific Research has also notified Dr. Simpson of a 5% cut in Contract OSR-AF(600)-666, which will cause curtailment of data reduction from cosmic ray balloon flights during the IGY.	For FY 1958: \$75,000 for contract AF19(604)-1288 and \$120,000 for contract OSR-AF(600)-666.



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4. <u>University of Alaska: IGY projects 1.7, 1.14, 1.43, 6.20, and 6.27 (\$582,850)</u>	Geophysical Institute, University of Alaska	Funding of several basic contracts of the Geophysical Institute has been suspended or terminated by the Department of Defense. Loss of DOD support will cause dispersal of highly trained scientists and crippling of the U.S. Arctic IGY program. The contracts involved follow: DA 36-039 SC-71137 (Absorption, backscatter, sporadic-E and meteor trails) AF19(604)-1817 Atmospheric Ozone AF19(604)-1732 and 2163 Magnetic storms Nonr 1289(00) Airglow spectrum ONR 161 & 188 Barth currents, magnetic observations, and radio propagation NObsr72528(1718) VLF receiver site and propagation studies AF19(635)-2887 Radio stars AF19(604)-1859 Arctic radio propagation	72,854 req'd. to extend 33,185 " " " 58,220 " " " 2,000 " " " 39,910 " " " 175,853 req'd. to extend with Bu Ships 6,279 reduction 33,185 request for added funds
5. <u>Aurora & Airglow Operations at Cambridge, Chicago, Saskatoon, Shingleton, and Williams Bay: IGY projects 1.4 & 1.25 (\$47,463)</u>	Geophysics Research Directorate (GRD) of Air Force Cambridge Research Center (AFCRC)	GRD contract AF19(122)-480 with the University of Chicago to carry out auroral observations at several locations expired September 30, 1957, and has not been renewed. Effect of a cessation of funds would be an immediate loss of personnel and a severe reduction of work at these key aurora and airglow stations.	University of Chicago has submitted a budget of \$40,000 to GRD for one year's operations beginning October 1, 1957.



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6. <u>Study of Neutron Intensity Variations: IGY project 2.30 (unfunded)</u>	University of New Hampshire	GRD has indicated that contract (AF 19(604)-1150) with the University of New Hampshire would not be considered for several months. This possible interruption of funds will cause the Mt. Washington, N.H., neutron monitor station to be closed immediately and the Durham, N.H., station by December 1, with consequent serious gaps in the continuity of measurements. University officials have advised recently that GRD will continue to support this project.	AFCRC has informed University of New Hampshire officials that contract will be extended without additional funds for a four month period, after which favorable action on an extension with funds will be taken.
7. <u>Gravimeter Measurements: IGY projects 5.7, 3 & 16 (\$92,370)</u>	University of Wisconsin, and Woods Hole Oceanographic Institution (WHOI)	These IGY projects provide for the establishment of a world-wide network of gravity stations and are heavily dependent upon support rendered by the Air Force Cambridge Research Center (AFCRC), (Contract No. AF19(604)-2157). This contract is between AFCRC and WHOI and it has been extended for 4 months to allow the expenditure of unused funds. Elimination of this support would seriously affect the IGY projects, as this support provides for transportation needs to the various stations in order to make pendulum observations at key locations to provide a system of first order bases for tying together gravity networks and to provide calibration points for gravimeter observation. The loss of this source of funds would cause serious disruption to the world-wide network of gravity stations.	Budget under contract AF19(604)-2157 is for \$49,000.



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8. Whistlers - West IGY project 6.10 (\$150,000 plus \$18,000 for conjugate stations in Alaska under project 6.27 plus \$164,300 for Dart- mouth under project 6.11)	Stanford University	A contract with the Air Force (No. AF18(603)-126) has been extended for fourteen months but at a reduced amount. A closely related contract with the Office of Naval Research (No. Nonr-225(27)), which expired July 31, 1957, has not been renewed. The effect of these actions will be the immediate loss of the major part of the trained staff.	AF18(603)-126 contract renewed for only \$42,300 rather than \$52,000 requested, leaving a difference of \$9,700. ONR has given verbal assurance that \$20,000 will be provided under Nonr-225(27) for a year's operation beginning August 1, 1957. The University had requested \$40,000, thus there is a difference of \$20,000 under this contract.
9. Solar Radio Noise Patrol: IGY project 12.15	Cornell University	This unfunded IGY project is supported by the Office of Naval Research (ONR) which has informed Cornell that its \$25,000 annual contract (Nonr 401(27)) will be cancelled. Oral assurances have been received from ONR that some support will be continued throughout the rest of this calendar year. Cancellation of this contract will cause immediate termination of this important IGY station which includes the only 200 Mc solar radio flare patrol station between Europe and Boulder, Colorado.	\$25,000 annually.