

TABLE X.—Upper Mantle Project (UMP)—Phase II: Jan. 1, 1965, to Dec. 31, 1967, operational phase; phase III: 1968-70, terminal phase; analysis and interpretation of data will be emphasized; programs will be developed more fully, especially in countries slow to start

Purpose	International organization		U.S. participation	
	Sponsorship and participating bodies	Approximate annual budget	NAS-NRC	Budget
Study of UM and its influence on development of Earth's crust. Main programs: (1) Regional and related studies: geophysical-geochemical-geological traverses or band studies; thermal history of crust and UM; earth-tide studies of viscosity and mechanical behavior of UM; rocks and minerals at high temperatures and under high pressures; magmas and their relations to tectonics; paleomagnetic and paleoclimatic studies on continental drift hypotheses; (2) deep-drilling for scientific purposes; (3) world rift system; (4) continental margins and island arcs.	ICSU project coordinated by the Upper Mantle Committee, an IUGG committee set up jointly by IUGG and IUGS in association with IQU, IUPAC, IUPAP, IUTAM, and SCOR. UNESCO has also named a representative to the Committee. Liaison is maintained with CIG. World data centers are repositories of results.	The figure for the total amount being spent by all countries is not available. Samples: Canada, \$3,000,000; Japan, \$3,000,000; Federal Republic of Germany, \$400,000 per annum for 10 years; UNESCO budget allocation of \$30,000 for 1965-66.	Upper Mantle Committee of the Geophysics Research Board, NAS-NRC. Chairman of the Committee is Prof. Leon Knopoff, Department of Physics, UCLA. Dr. Knopoff is also Secretary General of the International UM Committee.	The U.S. contribution to the UMP consists largely of ongoing programs of universities and governmental agencies with some special redirection of efforts. Approximate annual expenditure is \$8,000,000 to \$10,000,000.

1 Especially, ARPA, Coast and Geodetic Survey, Geological Survey, Navy Oceanographic Office.

NOTE.—For further information, contact Dr. Pam broke J. Hart, Secretary, U.S. Upper Mantle Committee, NAS-NRC.