against this year's $1.196 billion for the conduct of research. And the National Institutes of Health, holding to modest requests, are maintaining research at the expense of training.

And in the Federal support of research on college and university campuses, which under the Johnson Administration has come to be the support of higher education, rather than of science, a spending level $104 million over this year's $1.414 billion is being sought. But for the longer haul, signaled by the request for new spending authority, the jump is only $63 million over this year's stringent $1.5 billion.

President Johnson has tried to take some of the curse off the holdback in support of science education. Where possible, this year, he is proposing extension of a practice he initiated in earlier tight years: substituting loan guarantees or interest subsidies on loans for direct grants wherever possible.

Grants for academic facilities, for instance, were $307 million in fiscal 1968, $242 million this year and are scheduled at $150 million for next. But Federal subsidies for interest on private loans, which didn't exist for this purpose in 1968, jump in the next budget from $145 million to $250 million.

And while National Defense Education Act loans to students will drop this year from $442 million to $398 million, available Federal interest subsidies to students, making private bank loans more feasible, will jump from $750 million to $924 million.

The continued plateau in spending for the development of expensive new systems is chiefly the result of the cutbacks in the space program.

But that cutback did not become an overall reduction because of the start the Department of Defense is making on the kind of expenditures that promise, ultimately, to eat up the savings that develop with the reduction of U.S. commitments in Southeast Asia. Defense is going ahead with deployment of the Sentinel antiballistic missile; Defense is proceeding with, and AEC is developing the powerplants for, Vice Adm. Hyman Rickover's new classes of deep, swift and quiet submarines; and the Manned Orbiting Laboratory, a resurrection of the Rover nuclear-propelled rocket and new aircraft are all beginning to move.

In addition, the $36 million growth in Defense spending on oceanography makes up the bulk of the Government-wide growth from $472 million to $528 million, and the Defense Department's jump in space spending authority, from $2.08 billion to $2.22 billion, is approaching the heady regions once exclusively the province of the National Aeronautics and Space Administration's $3.599 billion now allocated to space.

SCIENCE FOUNDATION

One to talk about

"We are glad to have a budget we can talk about," says Dr. Louis Levin, executive associate director of the National Science Foundation. The budget that makes him glad would allow the NSF to spend about $85 million more than the $435 million it disbursed in fiscal year 1969, an increase that would bring spending only slightly above the level of previous years.

The National Science Foundation was one of the most severely hit agencies in last year's budget cutting. The $520 million in obligational authority requested for 1970 thus represents only a slight increase over the $505 million spent in fiscal 1968, and is in fact slightly less than the $527 million originally requested for fiscal 1969. The 1970 request would represent new appropriation of $500 million since the NSF has some unobligated funds left over.

Though if approved it will in fact be the largest NSF budget ever, this year's request does not represent manna for the foundation's hungry clients. Inflation makes it probable, officials admit, that no more and possibly less research can be bought with the 1970 kitty than the foundation bought in 1968.

The foundation is supposed to be a significant channel of Federal support to research in colleges and universities. Dr. Levin says the foundation would like to provide about a third of the money for this purpose, but the 1970 budget does not increase the proportion beyond the current 15 percent.

The foundation's share of the 1970 academic research budget is $255 million, up from $210 million last year. Total Federal support of academic research will be about $1.5 billion.

Most of the increase in the Science Foundation's academic research support is ticketed for support of institutions, rather than for grants to individual researchers. The institutional support total goes from $41 million in fiscal 1969 to a total of $74 million in 1970.

The foundation's University Science Development program, the so-called centers of excellence, is up to $30 million from $20 million in 1969. This will allow adding two or three new institutions to those carried over from previous years.

Another NSF program, Departmental Science Development, which makes grants to whole academic departments, is up by $2 million, from $8 million to $10 million. This will allow addition of three or four new departments.

Meanwhile funds for grants to individuals remain virtually at the same levels as in fiscal 1969 except for a new item of $10 million for interdisciplinary studies of social problems.

The NSF budget also asks $5 million for the International Biological Program (up from $500,000), a project for large-scale ecological studies.

In addition, there is $6.5 million for the Ocean Sediment Coring Project (up from $2.5 million); $3 million for resurfacing the Arecibo radio telescope to give it better resolving power; $2 million for a new oceanographic vessel with laboratory modules for different sorts of research that can be lifted on and off like container freight according to the purpose of a given voyage; $10 million for the National Sea Grant Program (up from $6 million), which gives grants for oceanographic studies in colleges.

DEFENSE

Funding the new craft

The Department of Defense budget for fiscal year 1970 is $83 billion, up from $81.3 billion in fiscal year 1969 but about $20 billion to $30 billion less than the Joint Chiefs of Staff wanted. About $500 million of the $1.7 billion increase is for research, development, testing and evaluation, the biggest single R&D increase in the 1970 pot. Most of this increase, $400 million, is in advanced manned strategic aircraft, improvements in missile technology, a variety of new fighter and attack planes, antisubmarine warfare development and ship missile systems.

The main projects slated for increases are the VSX antisubmarine warfare aircraft; two Navy supersonic fighters, the F-14A and F-14B; the early warning aircraft, virtually a flying radar station; the F-15 fighter, and the Advanced Manned Strategic Aircraft, a bomber.

An idea of their importance is reflected in this year's RDT&E costs and next's: $63 million for 1969 and $165 million for 1970 for the antisubmarine aircraft; $160 million now and $225 million in 1970 for the F-14A and F-14B fighters; $45 million in this year and $75 million in fiscal 1970 for the early warning plane; $45 million in 1969 and a fourfold increase in 1970, to $175 million, for the F-15 fighter, and $25 million now and $77 million in fiscal 1970 for the AMSA.