for out-of-state students; at private co-educational institutions, the median charge was $1868; and at private men's colleges $2282. Representative total costs for the current academic year are Caltech, $2874; MIT, $3030; Princeton, $3020; and Harvard, $2890. Tight money is also a factor in delaying construction of educational facilities. In Texas, for example, the building of nine state senior colleges may be held up by failure of the state to market about $20 million in 4% bonds; the interest rate is apparently too low to attract many buyers in today's market.

Though physics students are paying higher charges to attend college, correspondingly higher salaries await them when they graduate. The final report of the College Placement Council salary survey shows that physics bachelors were offered an average of $7968 per year during the 1965–66 recruiting season, while an MS in physics was worth an average of $9312 per year, and the physics doctorate $13 656 per year. The US Civil Service, endeavoring to maintain a competitive position in the scientific job market, announced new rules that would enable beginning PhD physicists with superior qualifications to earn up to $13 201 at grade 12.

Equipment costs up. Inflationary increases were also noticeable in a PHYSICS TODAY check of standard equipment costs at major laboratories. Purchasing agents stressed, however, that big rises could only be measured with accuracy in such standard repetitive laboratory gear as electronic hardware, transformer components, glass tubing, etc. It was impossible, they added, for them to estimate price rises in increasingly sophisticated research equipment. Brookhaven indicated that the costs of standard equipment this year had risen between 5 and 10% compared with an average of between 1.5 and 2% in years past. Oak Ridge concurred with the Brookhaven estimates and the AEC said that price increases for many laboratory items greatly exceeded those of previous years.

Another survey of physics educational suppliers found that costs this year had gone up between 5 and 10%, which is about the same price increase as in years past. "Everybody in this field," said one major supplier, "is trying to hold the line. But with wage and overtime pressures what they are, we just don't know what will happen."

Johnson acts. In his 8 Sept. message to Congress on slowing down the overheated economy, the President said "I have already directed that lower-priority federal programs be reduced $1.5 billion in fiscal 1967. Federal agencies have been directed to defer, stretch out and otherwise [reduce] new orders and commitments. Each major agency has been given a savings target, with orders to meet that target."

What this will mean when agency budget officers implement Johnson's orders, can only be conjectured now. The President, and Eisenhower before him, has sought such reductions in the past. AEC budget officers told PHYSICS TODAY that judging from their past experience, they will probably delay for six to ten months about a dozen projects. These projects will involve university computers, small accelerators and other items now in the preliminary planning stage. Last year, in response to a similar Johnson order, the AEC deferred some six facilities involving about $30 million. A National Science Foundation budget officer said only that "you can be sure they are going to make a very close scrutiny of all our programs to see where money can be scraped."

President signs education bill

One of the ironies of the $3.6 billion higher education bill that President Johnson signed on 3 November is that higher education got almost exactly what it asked for but considerably less than what Congress was willing to provide. Testifying before Congress earlier in the year, The American Council for Education and other groups expressed the view that, because of the Vietnam situation, it was reasonable to fund higher education programs, and in particular the facilities programs, at roughly the same levels as last year. This view was questioned by Senators Wayne Morse (D-Ore.), Robert Kennedy (D-N.Y.) and Ralph Yarborough (D-Tex.), who rebuked higher-education spokesmen for rubberstamping the administration's proposals. Tell us what you

need, not what is politically feasible, the senators said to them, in effect. Nevertheless ACE maintained its position that the figures submitted were reasonable and were minimal for maintaining a satisfactory program in higher education throughout the country. When Congress, however, asked ACE to submit estimates on sums necessary for 1968 and 1969, the Council considerably boosted its figures over 1967.

Congress ultimately gave higher education approximately what it had sought. The final figures for undergraduate facilities include $453 million in fiscal 1967, $735 million in 1968 and $943 million in 1969. For construction of graduate facilities, Congress provided $60 million in fiscal 1967 and $120 million in both 1968 and 1969. In real terms, then, how much does this leave for higher-education construction during the current fiscal year? Taking into account that the law allows a maximal federal contribution of one third and that the federal share in past years has varied between one third and one fourth, educators expect that colleges and universities will participate in about $1.5–2 billion in construction this year.

College science improvement

The new College Science Improvement Program (COSIP) of the National Science Foundation has been welcomed enthusiastically by many but not all of those concerned with strengthening college physics departments. Designed primarily to help improve science education at predominantly undergraduate institutions, the program has $10 million during this year with which to provide grants of up to $100 000 per year for a period of up to three years. "Strong preference," says the foundation, "will be given during the first year to those colleges, which, during the most recent three-year period . . . granted 100 or more baccalaureates in the sciences."

In a season of blistering Congressional attacks on the foundation's overall budget, COSIP not only survived intact but received the express recommendation of the House appropriations committee, which no doubt saw in it a vehicle for broader geographic distribution of NSF funds. Together with the Departmental Science Development Program, COSIP is one of the few new programs the foundation has planned in an otherwise tight year.

Primary focus of COSIP is on improvement of teaching with the program operating under broad guidelines. According to NSF director Leland Haworth, colleges will be encouraged "to form a coördinated plan to improve the preparation of students for careers in science. Plans may center in efforts to develop a single department, a group of related academic units or the entire science division."

NSF offered the following examples of activities that would be encompassed under the new program: additional training for faculty members; planning of course and curriculum improvement, including consultation from outside the college; purchase of instructional equipment; initiation of such scholarly activities as review and interpretative articles, modest research projects and related activities—where appropriate, with the assistance of undergraduates; increase of teaching faculty through various means including establishment of postdoctoral teaching fellowships; employment of faculty to replace regular instructors engaged in further training or in course improvement; renovation or remodeling of existing facilities for science; interinstitutional activities such as coöperative arrangements for undergraduate courses, programs of special faculty training courses or seminars, and joint faculty-student projects.

Wide approval. The great majority of physics teachers contacted by PHYSICS TODAY indicated they were very favorably impressed with COSIP. They see the new program as the only significant help for the small colleges that has appeared. The virtue of the program, they say, is that it is open-ended, allowing for across-the-board improvements. It will permit the schools to bring in some major pieces of equipment and cause them to re-examine their teaching activity. COSIP will also facilitate an exchange of ideas between the small colleges and prominent physicists and otherwise