large, or else the drawing may have to be reduced in reproduction, often to the point where the lettering or other details are illegible.

Scale captions should be placed outside the grid area, usually at the bottom toward the right for the horizontal scale and at the left-hand side toward the top for the vertical scale. The scale caption should consist of (i) the name of the variable plotted, (ii) its symbol, if one is used in the text, and (iii) in parentheses, the abbreviation for the unit of measure; thus, Pressure p (lb/in.^{2}). Avoid using such captions as "Pressure in lb/in.^{2}" and "Pressure in lb per sq. in." The technical terms, symbols, and abbreviations on a drawing should be in accord with those used in the text of the article.

The *horizontal and vertical scales* for a graph should be chosen with care, so as to give a correct impression of the relationship plotted, for the choice of scales has a controlling influence on the apparent rate of change of the dependent variable. Except where a visual comparison of plotted magnitudes is important, the bottom (abscissa) and extreme left-hand (ordinate) coordinate lines need not represent the zero values of the variables plotted: this often results in a more effective graph as well as a saving of space.

The numerals representing the scale values should be placed outside the grid area. If the scale values are smaller than unity and are expressed in decimal form, a cipher should always precede the decimal point; thus, 0.20, not .20.

The use of many ciphers in scale numbers should be avoided, and the best way to do this is to reexpress the quantity plotted in terms of a larger unit of measurement. For example, suppose that originally the scale numbers are 15 000, 20 000, 25 000 . . . and that the scale caption is "Pressure (lb/in.^{2})"; these scale numbers can be changed to 15, 20, 25 . . . , provided that the unit is changed to 10^3 lb/in.^{2} If, in this example, the data are correct to three significant figures and it is desirable to indicate this fact, then the scale figures should be 1.50, 2.00, 2.50 . . . , and the unit, 10^4 lb/in.^{2} *Never* use captions of the types: "Velocity $\times 10^3$ in ft/sec" and "Velocity (ft/sec $\times 10^3$)." They are ambiguous, since they do not indicate clearly whether the scale numbers *have been* or *are to be* multiplied by 10^3.

Book Reviews

In general, unsolicited book reviews are not considered for publication. The editors reserve the right to reject solicited reviews.

Anyone who undertakes to prepare a book review has accepted certain obligations: to the author, to the publisher, to the editor, to the reputation of the journals, and especially, to the reader.

The reviewer should consider what a reader might like to know about a book. Is it a good book of its kind? In what way is it better or worse than its predecessors? What field does it cover? To what audience is it addressed? If the book is written for a popular audience, the reviewer should judge how successful it is for that audience. Would it be a good book to own? How well does it fulfill the stated aims of the author? If it is not a first edition, how has it been changed, if at all?

The reviewer owes it to the author, who has undoubtedly spent much time and effort on the book, to be fair. He should not magnify minor errors out of proportion to their importance, but he should point out without rancorous or polemical outbursts any weaknesses, important errors, or misconceptions. In short, the reviewer should give an appraisal of the book, not of the author. If it is a generally good book with some faults, or a generally bad book with some good points, this should be made clear to the reader. If the book lies outside the field of the reviewer's competence, which may mean that its title is misleading, he should return it to the editors, or, if someone he knows is competent both in the field of the book and in writing reviews, he should turn the book over to him for review and *notify* the editorial office. If the book does not merit a review, the editorial office should be notified promptly.

Promptness in a book reviewer is an especially desirable virtue. The longer the lapse between publication of a book and its review, the less valuable the review.

Reviews should be no longer than necessary. An optimum length is between 200 and 300 words, an approximate upper limit is 650 words. The length of a review need not be proportional to the merit of a book. In fact, the relation may be one of inverse proportion, for a book with some merit and many defects may require a long review.

The writing should be clear and concise, and the reviewer should remember that he is writing for some nonscientists as well as for specialists in one or another field of science. The reader should be able to tell whether or not the books reviewed in fields other than his own have merit. A librarian, for example, should be able to decide from the review whether or not the book in question should be purchased for library use.

News of Science

Nuclear Tests

The U.S. Atomic Energy Commission announced on 2 Apr. the sixth atomic explosion by the Soviet Union in the last 8 months. A Soviet test series, which included one large hydrogen blast, started last summer. Three smaller explosions were detected in August and two more have been reported this spring.

The announcement followed by a few hours word from the AEC that 15 newsmen and Civil Defense officials will be permitted to observe a United States nuclear test at the Pacific proving grounds at Eniwetok about 1 May. The AEC spoke of it as a "megaton range nuclear detonation." One megaton is the equivalent of 1 million tons of TNT.

The United States set off a hydrogen explosion at Eniwetok in March 1954 with a force reportedly equivalent to 14 million tons or more of TNT. By comparison, the Hiroshima atomic bomb yielded the equivalent of 20,000 tons of TNT.

The State Department has sent a note to the Japanese Government concerning the Pacific nuclear tests that includes the following statements.

"The United States is second to none in its desire for the safeguarded control and reduction of armaments, including nuclear weapons. . . .

"The United States Government is convinced that the proposed nuclear tests are vital to its own defense and the

defense of the free world because the possession and competence in the use of nuclear weapons by leading nations of the free world are the chief deterrent to aggression and to war. . . .

"The United States Government is convinced that no world-wide health hazard exists from the past or planned tests. In this connection the United States proposed a resolution unanimously adopted by the United Nations Tenth General Assembly establishing a scientific committee on radiation, of which Japan is a member, to facilitate pooling and distribution of all available scientific data on the effects of radiation upon man and his environment. During the forthcoming tests the United States will make every effort to eliminate any danger and to minimize any inconvenience to maritime commerce and fishing. . . .

"In view of precautions which will attend the tests and the widespread dissemination of information with respect to maximum permissible levels of radiation, the United States Government anticipates no economic losses from radioactive contamination of marine life."

Meteorological Buoy

A robot marine weather station, so compact it can be anchored like a navigational buoy to send weather data from remote areas, has been developed by the National Bureau of Standards. The buoy can be left unattended for as long as 6 months. Preliminary tests in Chesapeake Bay show that the station has a radio range of more than 800 miles. If moored in certain areas of the Caribbean, it might give warning of forming hurricanes.

The station is 20 feet in length and 10 feet wide, with a draft of slightly more than 3 feet. It is constructed of aluminum and other nonmagnetic alloys.

The vessel, which has two masts, can be anchored in waters as deep as 3600 feet. Four watertight wells extending below the deck hold all the electronic and meteorological equipment assembled in compact, shock-mounted units.

U.N. Economic and Social Council Agenda

The 21st session of the United Nations Economic and Social Council opened in New York on 17 Apr. Scientific items to be considered, as they appear on the provisional agenda, are as follows.

International cooperation on cartography. The council will have before it a report of the Secretary-General emphasizing three points on cooperation in this field.

The first deals with the United Nations Regional Cartographic Conference for Asia and the Far East which was held at Mussoorie, India, in February 1955 and with the recommendations adopted there which are of particular concern to the United Nations. The recommendations were that the United Nations assist governments in the solution of various problems, such as limits of mapping responsibility for the International Map of the World on the Millionth Scale, first-order triangulation and leveling connections between neighboring countries, and gravity observations at sea, as well as strengthening cooperation in cartography.

The second point refers to continued consultations with governments on the adoption of a standard method of writing geographic names on maps, as requested by the council at its 15th session.

The third point concerns means to further the completion of the international one-millionth map of the world, as requested by the 15th session of the council.

International cooperation with respect to water-resource development. At its 18th session, the council considered an interim report which noted that in many areas the supply of water is proving inadequate to meet the growing demand, that this is a deterrent to economic growth, and that the situation calls for full knowledge of all water resources and for their management in a fashion permitting maximum benefits from them. The interim report singled out a few areas in which it was felt that international action should be taken and examined ways and means of coordinating activities at different levels.

The suggestions of the interim report met with wide acceptance in the council and led to the adoption of a resolution which requested that the Secretary-General pursue along the proposed lines the endeavors toward strengthening international technical cooperation and report to the council on the results with recommendations on further appropriate action.

This report of the Secretary-General reviews the progress made during the past 2 years at the international and regional levels and singles out some important problems for further consideration by the United Nations.

World calendar reform. In the summer of 1954, the council discussed a proposal by India that the United Nations should adopt a plan prepared by the "World Calendar Association, Inc." for the reform of the Gregorian calendar. The objective of the plan is the adoption of a new universal and invariable calendar based on astronomical data and on the movement of the earth around the sun.

The council asked the Secretary-General to obtain the views of governments on the desirability of calendar reform and placed the matter on the agenda of its 19th session, in the spring of 1955. At its 19th session, the council decided to defer the question to its 21st session.

Studies on atomic energy as a factor in economic development. The United States is proposing this item, as a matter of urgency, with a view to having prepared for submission to the council at an early session an analysis and evaluation of reports and materials available concerning the possible uses of atomic energy for purposes of economic development, particularly of underdeveloped countries.

Convening of an international conference on the creation of new resources of energy and materials. This item has been placed on the supplementary list at the request of France. In an explanatory memorandum, France explains that a general raising of the standards of living cannot be brought about simply by the conservation of existing resources but depends, above all, on the creation of new resources. These resources can be created (i) either in the field of energy, by the rational use of new sources of power (atomic energy, solar energy, wind energy, tidal energy, and so forth), or (ii) in the realm of materials available by the investigation of natural resources that have not yet been exploited (new materials derived from the sea, and so forth), and, more generally, by the development of methods that will enable man to control natural conditions (techniques concerned with artificial rain, soil improvement, cultivation without soil, and so forth).

AAAS Theobald Smith Award

Nominations are requested for the AAAS Theobald Smith award of $1000 and a bronze medal, which has been given yearly since 1937 (except for a lapse during the war years) by Eli Lilly and Company under the auspices of the AAAS. The award will be presented at the association's 123rd meeting in New York, 26–31 Dec.

The prize is given for "demonstrated research in the field of the medical sciences, taking into consideration independence of thought and originality." Any U.S. citizen who was less than 35 years of age on 1 Jan. 1956 is eligible. Research is not judged in comparison with the work of more mature and experienced investigators. The vice president of AAAS Section N–Medical Sciences and four fellows will form the committee of award.

Nominations may be made by fellows of the AAAS. Six copies of all data to be