

films OF THE WEEK

Listing is for readers' information of new 16mm and 8mm films on science, engineering, medicine and agriculture for professional, student and general audiences. For further information on purchase, rental or free loan, write to distributor.

CHEM STUDY FILM LOOPS. Super 8mm, 4 min. each, for use in Technicolor super 8mm projector. Nine color films on "Acid Base Indicators," "Alkali Metal Reactions With Chlorine And With Water," "A Copper-Silver Electrochemical Cell," "An Electrochemical Cell (animated mechanism)," "Ion Exchange," "Molecular Motion In Condensed Phases," "Molecular Vibrations (using models)," "An Organic Mechanism" and "A Silver-Hydrogen Electrochemical Cell." Four b&w films on "Absolute Zero," "Crystals And X-Ray Diffraction," "Gas Pressure" and "A Problem In Diffraction." Purchase \$20.50 for each color film, \$18.50 for each b&w film from Modern Learning Aids, 1212 Ave. of the Americas, New York, N.Y. 10036.

LASER LIGHT. 16mm, color, sound, 37 min. Guides the audience through an explanation of the wave nature of light and the meaning of "coherent" and "incoherent" light. Using computer animation, it shows where laser light originates—in the basic particles of matter. The computer follows with a "drawing" of a stylized laser, showing how it works and how the word "laser" came into being. This is followed by demonstrations of various types of lasers—ruby rod, the helium-neon, argon and krypton gas lasers, and lasers using common liquid dyes and plastic materials. Also shown are various applications of the laser. Purchase \$375 or rental \$37.50 from Motion Picture Department, Scientific American, 414 Madison Ave., New York, N.Y. 10017.

PIZZA PIZZA DADDY-O. 16mm, b&w, sound, 18 min. Provides an anthropological and folkloric record of singing games played by Afro-American girls in the fourth grade of a school in Los Angeles. Because the singing game has nearly vanished within the Anglo-American community, the total tradition is at present the cultural property of black children. The tradition appears to show in almost schematic form one of the principal patterns through which European and African elements have combined in America. Audience: college, adult. Purchase \$110 or rental \$6.50 from University of California Extension Media Center, Berkeley, Calif. 94720.

TELEVISION: LINE BY LINE. 16mm, color, sound, 11 min. Uses animation to explain the principles of television. Begins with a demonstration of the photoelectric effects and the recording of the light intensity at successive points in a picture as an electrical current of varying strength. A detailed explanation of the camera tube is then given. This is followed by an explanation of the operation of the receiving set, showing that it depends on the varying electrical signals that send a modulated beam of electrons which are swept from side to side and from top to bottom on the inside of the picture tube. Audience: high school. Purchase \$145 or rental \$8 from International Film Bureau, 332 S. Michigan Ave., Chicago, Ill. 60604.

to the editor

A dissent

Kendrick Frazier's report on "The New View of the World" (SN: 11/8, p. 430) was so typical of the present-day, follow-the-leader type of non-thinking that I must take a few swings at the whole earth-science establishment.

Time was, say 100 years ago, when any speculation about the origin of massive earth features would have been met by a dozen critics to one or two supporters. Now, when some authority proposes a hypothesis like ocean floor spreading, every junior scientist in the country jumps on the bandwagon. Criticism, it seems, is rude, egotistical and out of style.

Sea-floor spreading is a prime example of a vaporous idea that has gained almost universal support. These me-too scientists are piling hypothesis upon hypothesis with little regard for known physical laws or common sense. Thermodynamics, gravity, conservation of angular momentum, friction, all are ignored in the rush to get on the wagon.

Thus continents become plates; continental drift becomes sea-floor spreading; and the layers of the earth take on new names from month to month. In his article, Frazier quotes Dr. LePichon, who has extended the continents to include six plates covering the entire surface of the earth, which he says ". . . provides a consistent picture of the global pattern of surface motion, based on the data from sea-floor spreading." Reasons, it seems, are no longer necessary; one simply backs up one speculation with another. How the continents may have drifted apart in this solid ice-pack of crust is not considered.

Dr. Egon Orowan, professor emeritus at Massachusetts Institute of Technology, in the November SCIENTIFIC AMERICAN uses the word transvection in connection with what he calls ". . .

the hot pole somewhere in the Indian Ocean." Being mystified with this new word I looked it up in my Random House Unabridged and found this: Transvection—the act of transporting, as of a witch by a devil through the air.

So this is the way continents move?
Allan O. Kelly
Carlsbad, Calif.

(Webster says transvection is the "act of conveying or carrying over." Ed.)

A slight error

The article "Out from Under" (SN: 11/29, p. 505), dealing with orbiting astronomical telescopes, was most interesting. However, there was a slight error in the article: A difference of one magnitude represents a factor of 2.512 in brightness, not a factor of 10 as stated in the article. A magnitude difference of two represents a factor of $(2.512)^2$ or 6.31 in brightness and a magnitude difference of five represents a factor of $(2.512)^5$ or 100 in brightness.

Joel S. Levine
Director of the
Astronomical Observatory
Department of Physics
Brooklyn College of
The City University of New York

In outlining the advantages of orbiting telescopes over surface telescopes, you state that "Since each magnitude represents a factor of 10 in increasing faintness, 29th magnitude is one millionth as bright as the 23rd magnitude . . ." In fact, magnitude is defined such that a difference of five magnitudes signifies a brightness ratio of 100. A 29th magnitude star is about 250 times as faint as a 23rd magnitude star.

I am curious about how many letters similar to this one you will receive.

Harold G. Rackett
Oklahoma State University
School of Chemical Engineering
Stillwater, Okla.

(There were several. Ed)

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