

The Möbius loop has fascinated mathematicians and parlor magicians for years. At Sandia, researchers recently discovered that it also forms the basis for excellent nonreactive resistors. An elementary Möbius resistor can be made by adhering two 1-foot strips of aluminum tape to opposite sides of a dielectric ribbon (1), twisting these a half turn (2) and joining their ends. Current leads soldered to opposite surfaces of the loop (3) complete the unit. The design formulas governing this basic configuration permit endless variations in performance, size, and shape. Besides being nonreactive, Möbius resistors will not couple to metallic objects, external fields, or themselves, nor will handling, folding or winding disturb the balance.

Sandia scientists and engineers work in many fields, including: test equipment design, reliability studies; component development; aerothermodynamics; and aerospace nuclear safety.

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ings Goddard Library, scheduled to be built by 1968. Dr. Goddard, who was an alumnus of Clark University, served on its faculty from 1914 to 1942. During this time he was engaged in theoretical and technical research on rocket propulsion; this work is now regarded as the basis for recent developments in the field.

In addition to published papers, the collection includes his 214 patents, notebooks dating from 1905 to 1939, eighteen volumes reporting his test work at Roswell, N.M., between 1930 and 1942, personal diaries (1898-1945), correspondence, and original films of test flights, much of which was taken by Mrs. Goddard.

Lexicon

Basic Books, Inc., of New York has recently published the Concise Dictionary of Atomics by Alfred Del Vecchio. The book defines terms, symbols, and abbreviations used in atomic and nuclear physics, nuclear chemistry, and radiology. Short biographical notes on individuals who have contributed to the development of atomic science are also included. The dictionary is 262 pages long and sells for \$6.

Sound in sea water

Volume 21 of the Mathematical Tables Series of Pergamon Press has been issued under the title, Tables of the Velocity of Sound in Sea Water, by L. S. Bark, P. P. Ganson, and N. A. Meister (translated from the Russian by D. E. Brown). The tables are presented in two parts: Part 1 covers a temperature range from -2°C to +33°C and a salinity range from 0 to 20 parts per thousand; Part 2 has the same temperature range but a salinity range from 20 to 40 parts per thousand. Values are listed in Part 1 for temperature increments of 0.1°C and salinity increments of 0.4 parts per thousand. In Part 2. the tabulated increments are 0.05°C and 0.2 parts per thousand, respectively. The velocities given were computed according to Del Grosso's formula. The book is 180 pages long and is distributed in the United States by the Macmillan Company of New York at a price of \$10.