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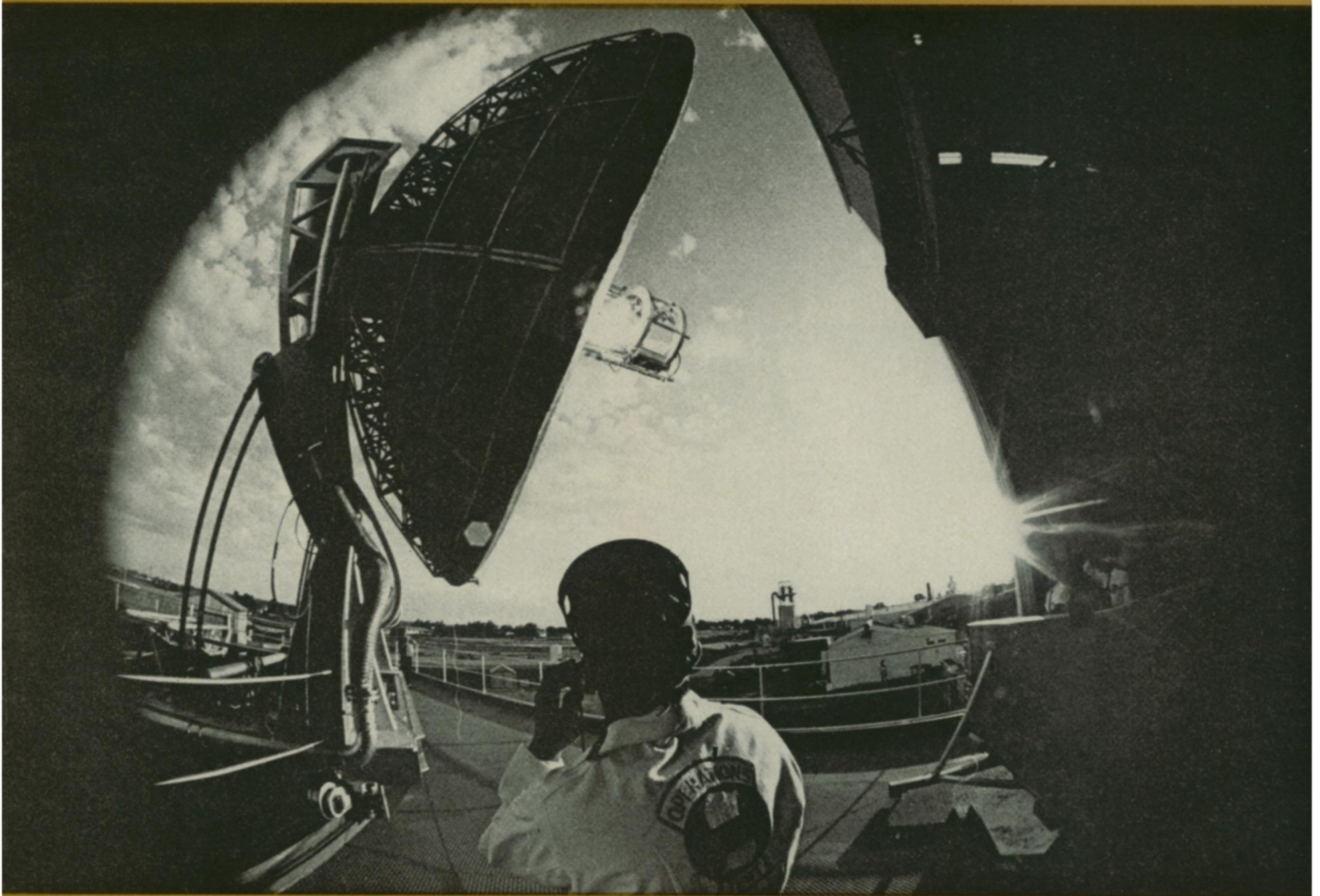
December 5, 1964

VOL. 86, NO. 23 PAGES 353-368

SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



Goodyear

Sun-Seeker

See Page 361

A SCIENCE SERVICE PUBLICATION

One of a series briefly describing GM's research in depth

Design Augmented by Computers

. . . is a current important focus of research at the General Motors Research Laboratories. Recently, for example, we announced our experimental GM DAC-I system (Design Augmented by Computers), a large computer complex under development since the late 1950's.

Still in the prototype stage, this new design system enables the designer to walk into our man-computer communication laboratory with a drawing . . . work on a design problem using an immense reservoir of programs and data stored in the computer . . . and walk out with one or more new drawings under his arm.

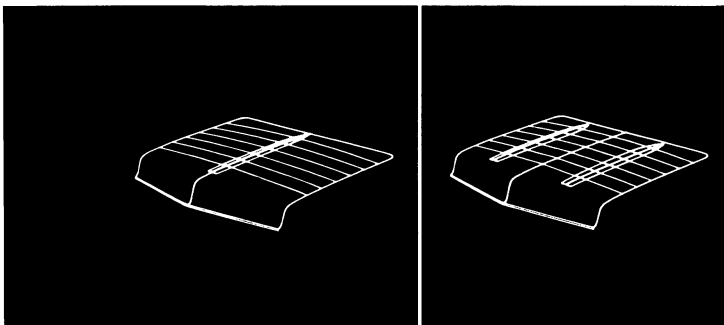
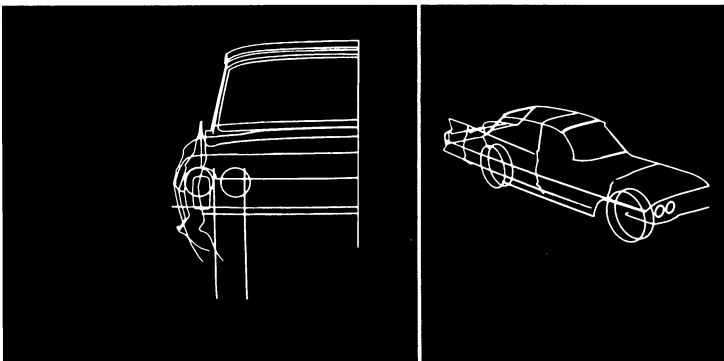
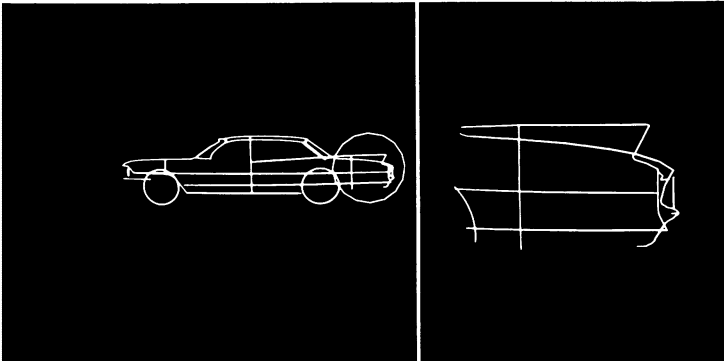
These amazing capabilities have come from a string of noteworthy advances in computer hardware and software tied neatly into an operational on-line system. For example, a program-controlled image processor can read free-form curves from drawings directly into the computer. A graphic console permits dynamic two-way "conversational communication" of graphic information between designer and computer. Intricate programming systems permit efficient time-sharing of the computer's central processing unit and space-sharing of its core memory. Permanent photographic copies of new designs are available within 30 seconds.

The General Motors DAC-I system is currently being studied by GM's Fisher Body and Styling Staff designers to determine the feasibility of utilizing man-computer teams in the design of automobiles. It's another example of how General Motors is opening the door to a more productive, more creative tomorrow.

General Motors Research Laboratories

Warren, Michigan

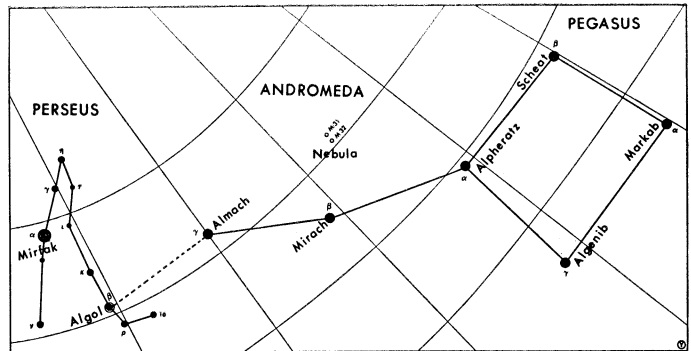
Top photo shows a designer at the graphic console of the GM DAC-I system. Underneath are computer-produced displays of what he sees when he enlarges, changes views or modifies a design stored in the computer memory.



To help all beginning star-watchers . . . the classic of naked-eye observation again available.

The Friendly Stars by Martha E. Martin \$1.00

Revised by Donald Menzel, Harvard Observatory



In any given field of study there are usually one or two introductory books that stand apart from similar works, either because of their acceptance by readers or because of the respect accorded to them by professionals in the field. In astronomy Martha Evans Martin's "The Friendly Stars" is just such a book. Not only has it introduced hundreds of thousands of readers to the stars and constellations, but it is warmly regarded by practicing astronomers, many of whom were first attracted to astronomy by this book. Unfortunately, it has long been out of print and difficult to obtain, while—until this edition—parts of it were necessarily out of date.

This minor classic, first published more than 50 years ago, covers the stars and other celestial bodies that can be seen without the aid of a telescope or other equipment, presenting them not as dull compilations of data, but as "personalities" of the sky, that you will want to locate in the heavens and examine. Yet the author has managed to bring her topic to life without either sacrificing scientific accuracy or becoming skimpy or oversimplified. She covers exactly the right ground to give a beginner a basic, completely reliable entry to sky observation.

Mrs. Martin begins her study of the heavens with an account of the rising and setting of the stars (with times for latitude 41° North, reasonably accurate for almost all observers in the U.S.A.). Chapters then follow on the brightest stars visible at this latitude: Capella, Arcturus, Spica, Vega, Deneb, Altair, Antares, Pomalhaut, Regulus, Aldebaran, Rigel, Betelgeuse, Sirius, Procyon, etc. For each star she imparts a wealth of information on rising, position in the sky and locating it by orientation with the Big Dipper and Polaris, viewing times, size, brightness, distance from Earth, color, class, age, path, constellation and whatever else is interesting and germane.

Other chapters are devoted to discussions of stars in general: their number, history of their names; significance of classification; calculation of distance; double stars; the Pleiades, other constellations, including some below the equator.

Throughout this work Mrs. Martin maintains a sparkling, light style that conveys in an informal, enthusiastic manner, an enormous amount of basic material. And because she has concentrated upon stars and

formations visible to the naked eye, she opens up a whole wonderful world to persons without access to any kind of equipment.

We feel that no better book has ever been written in this area, and that it cannot be excelled as an introduction for a bright youngster who is curious about the heavens. It is also a first-rate background for anyone who plans more advanced study, for the person who is considering purchase of a telescope, for the student in other fields, and for any adult who would like to know more about stars.

This present edition has been thoroughly revised by Professor Donald H. Menzel, Director, Harvard College Observatory, with 23 new illustrations, charts, etc. by Professor Ching-Sung-Yu. It is now completely up to date and suitable.

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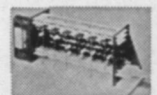


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