

ON THE MOON WITH APOLLO 15

A Guidebook to Hadley Rille and the Apennine Mountains

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PREFACE

Never before in man's history has it been possible for more than a few people to witness major scientific discoveries. Yet with each Apollo mission to the Moon's surface, millions of people throughout the world can watch through television the activities of the astronauts. The understanding by the viewer of those activities and his sense of sharing in the scientific excitement of the mission are greatly increased when there is a general understanding of the scientific and engineering aspects. Yet for most of us, the usual discussions are clouded with jargon.

My purpose in writing this guidebook is to give in simple terms information about the Apollo 15 mission to the Moon's surface so you can share with me the excitement of the scientific exploration of the Hadley-Apennine region of the Moon.

Many people helped me prepare this guidebook. Richard Baldwin and Gordon Tevedahl collected background material. George Gaffney coordinated all art work. Jerry Elmore, Norman Tiller, Ray Bruneau and Boyd Mounce drew most of the original sketches. Andrew Patnesky provided several new photographs. The manuscript was improved greatly as a result of comments by Jack Schmitt, George Abbey, Verl Wilmarth, James Head, Donald Beattie, Rosemary Wang, Herbert Wang, Ruth Zaplin, Mary Jane Tipton, and my seventeen-year-old daughter Debra. My secretary Jean Ellis helped with many revisions. To all of these people, I express my thanks.

GENE SIMMONS
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HOW TO USE THIS GUIDEBOOK

Excellent commentaries have been available over television for each previous Apollo mission. However, because of the increased complexity of the surface operations on Apollo 15 and because of the greater amount of time devoted to science-activities, I believe that a written guide would be welcomed by the interested viewer of Apollo 15. The material in this guidebook is intended to be used in conjunction with the other material shown over commercial TV.

The science-activities of the astronauts on the surface are divided between "experiments" and "traverses". For the experiments, the astronauts set up equipment on the Moon that collects data and (generally) transmits the data back to Earth. These experiments are described briefly in the section "Lunar Surface Scientific Experiments and Hardware". The reader need not read about all the details of each experiment on first reading. Quite frankly, even I find that section somewhat tedious to read, probably because it is rather complete, but I have chosen to keep it in the present form so that you may refer to the individual experiments as you wish. I do recommend scanning this section before the first EVA in order to understand something about each of the experiments.

Most of the astronaut's time on the lunar surface will be spent on the traverses. The section "Traverse Descriptions" is a guide to those activities. It tells in general terms the things the astronauts will do on each traverse and indicates what they will do next. It should be used in the same way that a flexible itinerary for a vacation trip through New England would be used. Refer to it during the traverse. But do not try to read it in great detail before the traverse.

The section "Lunar Geology Experiment" should be read before the traverses begin. There you will find descriptions of the tools that are used, the various kinds of photographs taken, and so on.

Finally, you should know that a glossary and list of acronyms are included in the rear of the guidebook. I expect the definitions and short discussions to be found there will help in understanding some of the terms and concepts now in common use in the scientific exploration of the Moon.