

The Moon: its past development and present behavior

by J.H. Tatsch. Tatsch Associates, Sudbury, Mass. (1974) 338 p. \$10

What is known today as the 'Lunar Science Team' is a 'mutual-admiration society' with much inbred thinking. As a member of this Team, I am all for injecting new blood into the system. So I was pleased to receive for review a book about the Moon written by someone who is not a Team member.

The book is divided into 12 chapters, the first 5 (113 pages) dealing with the presumably related topics of the origin of the Solar System; the Earth-Moon System; the Moon's cousins (some Moon-like materials in other parts of the Solar System);

the Earth's tectonosphere; and the asteroids, meteorites, and tektites. The next 6 chapters (72 pages) deal with hard-core data on lunar rocks and minerals; lunar structure and composition; the Moon's thermal history; lunar magnetism; the Moon's seismicity; and the Moon's gravity field. The last chapter (84 pages) is devoted to the summary and conclusions. There are 51 pages of references, and an 18-page index. The book includes a few hand-drawn sketches, but not a single photograph.

I expected at least a fresh approach to thinking about the Moon. Instead, I found a disorganized hodgepodge of rewording, some misquotations, and mostly outdated reports of the same Lunar Science Team.

One apparently original thought is put forth in the chapter dealing with the Earth-Moon System. It proposes a 'dual primeval planet hypothesis' which creates the Moon by 'octantal' fragmentation of a hypothetical body 'Earth Prime' much like and in the vicinity of the Earth. The dynamical aspects of the hypothesis are not mathematically treated, and the assumptions taken into consideration are not well defined.

The book seems to have been written over a long period of time without much updating, resulting in needless repetition and numerous errors. For example, referring to the age of mare volcanism on the Moon it is stated on p. 54 that 'the lunar magmas ceased flowing, abruptly, about 3.6 b.y. ago.' This is corrected on p. 187 by stating that 'mare volcanism covered a span of about 0.64 b.y. beginning about 3.7 b.y. ago.' However, this is later wrongly contradicted by stating that 'age-wise, the mare basalts range from 3.9 to 3.6 b.y.' (p. 224). Is the reader supposed to take his pick?

The book is a hard-cover, photographically reduced typewritten manuscript; i.e., type was not set and justified in the usual manner. It shows many signs of hasty preparation, including numerous typographical errors. For example, one encounters strange words such as 'Marth' (p. 18), 'terrahedra' (p. 25), 'csse' (p. 27), 'ehe' (p. 32), and 'chronritic' (p. 44).

In all fairness, I would like to say that, *first*, the material in chapters 7 (lunar structure and composition) and 12 (summary and conclusions), if completely revised and reorganized, could provide a reasonable summary of lunar science. *Second*, J.H. Tatsch has attempted to fill an 'information gap' for which the Lunar Science Team is responsible. Today's book market does not include a single reasonable synthesis of lunar-science data.

It is now time to make recommen-

dations. To the interested layman and student, avoid this book and save your money; it may mislead you. To the lunar science community, get cracking and provide an alternative.

Farouk El-Baz
Smithsonian Institution
Washington, D.C.