## THE RESULTS OBTAINED FROM RANGER VII

An exceptional meeting was scheduled on Monday 31 August 1964 at 15<sup>h</sup> 30<sup>m</sup> in the Auditorium Maximum of the Hamburg University, in order to allow astronomers to hear direct reports from the American scientists on the results obtained from the photographic close study of the Moon surface, by the space vehicle Ranger VII, flown on 1964 July 28, at 16<sup>h</sup> 50<sup>m</sup> U.T. Ranger VII has sent 4316 images from 13<sup>h</sup> 08<sup>m</sup> U.T. on 1964 July 31, obtained from six different cameras, from altitudes ranging from 1377 miles to 1000 feet above the Moon surface, just before Ranger VII finally crashed on the Moon surface.

Le Professeur V. A. Ambartsumian, Président de l'UAI, après quelques mots d'introduction, confie la présidence de cette séance exceptionnelle au Dr Urner Liddel, Lunar and Planetary Programs, NASA.

Le Président présente les différents orateurs qui exposent devant une salle comble les divers aspects des problèmes posés par l'expérience spatiale Ranger VII du 31 Juillet 1964.

- 1. U. Liddel. Introductory Remarks
- 2. H. M. Schurmeier, R. L. Heacock, B. P. Miller. The Ranger VII mission
- 3. G. M. Smith, D. E. Willingham, W. H. Kirhofer. Ranger VII camera calibration and performance
- 4. G. P. Kuiper, E. A. Whitaker. Presentation of Ranger VII Moon images
- 5. G. P. Kuiper. The surface of the Moon
- 6. E. M. Shoemaker: Interpretation of the small craters of the Moon's surface revealed by Ranger VII.

## I. INTRODUCTORY REMARKS

## U. Liddel

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The Moon on its course around the Earth has traveled but a few miles more than one revolution since its surface has been examined by the newest telescope devised by the minds of men. Ranger VII was an unusual telescope. It had six objective lenses, and the 'eyepiece' was a television screen. I am sure that it is but the first member of a new series of telescopes by means of which man will study the Universe.

The United States National Aeronautics and Space Administration is honored and proud to cooperate in the presentation of the results of these observations to this General Assembly of the International Astronomical Union. It is impossible to give credit to all the many persons, in addition to those authors whose names appear on this program, who made Ranger VII successful. I will mention only one, Mr Cunningham, who 'god-fathered' the program as Program Manager in NASA Headquarters. Suffice it perhaps to say that the spacecraft was built and launched by the Jet Propulsion Laboratory which is managed by the California Institute of Technology for the National Aeronautics and Space Administration.