

Four scientists chosen to study samples of moon surface

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Four University of California, San Diego scientists are among 110 scientists from the United States and six other countries who have been chosen to conduct experiments with the first samples of the Moon's surface returned to the Earth by U. S. astronauts.

They are: Dr. Gustaf O. Arrehenius, Professor of Marine Geology; Dr. James R. Arnold, Professor of Chemistry; Dr. A. E. Engel, Professor of Geology; and Dr. Harold C. Urey, Professor of Chemistry-at-Large. Their appointments were announced by the National Aeronautics and Space Administration in Washington, D.C.

It is planned that the two astronauts who first land on the Moon in the Apollo program will return approximately 50 pounds of lunar material to Earth.

The samples will be studied by scientists of a variety of disciplines to determine the composition of the lunar surface and to search for evidence of its origin.

The four major investigative areas are mineralogy and petrology, chemical and isotope analysis, physical properties, and biochemical and organic analysis.

Dr. Arrehenius, who was named Associate Director of the Institute for the Study of Matter at UCSD last year, will work in the first area in an effort to determine microstructure characteristics and composition of the material. Dr. Arnold, who joined the faculty at UCSD in 1958, will work in the area of chemical and isotope analyses in an effort to determine cosmic ray and solar particle activation effects. Dr. Engel, who came to the San Diego campus in 1959, will also work in the area of chemical and isotope analysis by conducting wet chemical analysis for major elements.

Dr. Urey, who won the Nobel Prize in 1934 for the discovery of heavy hydrogen, will work in two areas. He will attempt to determine isotopic abundances in the material and he will also try to determine the presence or absence of lipids, amino acids and "Polymer-type" organic matter in the samples.

The work of the four scientists will be conducted on the UCSD campus with most of the operations performed under vacuum in order to keep the collected material in an environment similar to the Moon's. All of the operations with the samples will be performed behind biological barriers to eliminate organic and inorganic contamination.

Some 130 proposals for scientific studies of the lunar samples involving more than 400 scientists were received by NASA. Selection of the investigators was made by NASA's Associate Administrator for Space Science and Applications, Dr. Homer E. Newell, upon the recommendation of the Space Science Steering Committee.