

Dr. James Arnold, University of California: "Here at the University of California at San Diego, scientists are using the techniques of modern chemistry and of structural analysis to try to answer the question of the origin of the solar system.

"Now to do analyses we need samples. We have the crust of the earth but the crust of the earth has had such a colorful history that most of the traces of its origins have been lost. We have the meteorites and a very rich field has grown up here. We've used modern instruments such as mass spectrometers, low level counters, to learn a great deal from these objects. We've learned such things as the age of the solar system—4.6 billion years—most of what we know about the origin of the elements, and much more. But we don't know exactly where the meteorites come from. We do not have these samples in context. So we look elsewhere.

"Now there are many controversies about the moon, but there is one thing about which I think we all agree, and that is that the surface of the moon is very old. The processes of erosion which take place on the earth do not take place there to the same extent. We should be able to find clues, fingerprints of the moon's origin. Now Apollo will bring us back samples of the moon and the importance of this is so great that the scientists concerned have assigned sample return the highest scientific priority on the Apollo missions.

"The Apollo Applications program can bring us samples from the moon in context, in a known relation to the lunar environment. We can bring these samples back to our laboratories; we can study them with our instruments; we can make discoveries and apply those discoveries and further measurements on similar samples. We can, in fact, do generations of work on the samples from a single mission. Perhaps, we can even give firm answers to the question of the origin of the solar system itself."

Dr. Leo Goldberg, Harvard/Smithsonian Astrophysical Observatory: "Here in this laboratory, we assemble, test, and calibrate astronomical instruments used in observing the sun from rockets and satellites.

"Observations from space are of fundamental importance to astronomy, which has long been retarded by the restrictions imposed by the earth's atmosphere and

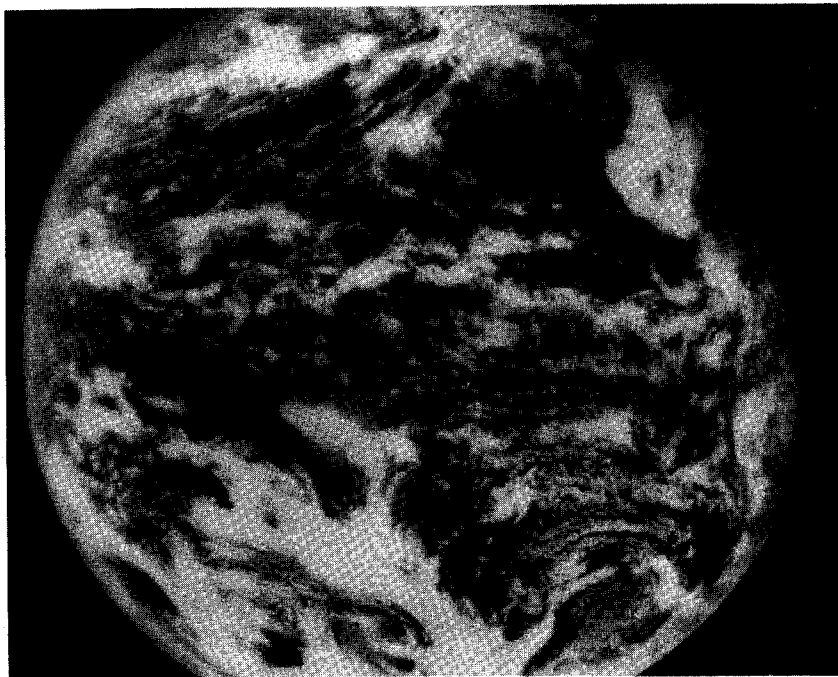


FIGURE 6C