

directly into home antennae on the ground. All the people would have to do is put up about a 2-foot dish, pointing at one point in the sky, and they could receive the T.V. signals directly. This would be television broadcast by satellite. The present relays, by contrast, work through a large ground station with a big dish on the ground, which in turn rebroadcasts the television programs locally. David Sarnoff of RCA once said that with such an advanced television broadcast system, we could eradicate illiteracy from the face of the globe within 10 years.

NEED FOR A SPACE STATION

(From appendix F; Dr. von Braun, MSFC)

"If we want to utilize fully man's capability in space, we shall need a space station. We shall need a capability for man to stay in orbit for long periods of time so that he can work and rest and sleep and eat under conditions as similar as possible to what he is used to here on earth. You saw today our humble beginnings in this area in our Orbital Workshop, and we feel that this is really a bargain-basement deal to come to grips with the habitation problems in outer space. We don't propose to have all our future space stations built into empty tanks of rockets, but we feel since these Saturn-IB's are going up there anyway, this is the cheapest and easiest way to learn. Techniques on how to build space stations can very well be based on this learning too. Long stay-time in space involves not only building a space station, but also the provision of a logistics supply system. We can have a space station that is good for several years, but nobody would like to stay there for the life of the station. So we have to rotate crews; we have to fly new supplies up there; we have to bring data back to the ground; we have to update equipment; we have to support this entire system with logistic supply systems. It was actually this interrelationship between the logistic supply system and the conduct of science at the far end of this logistic supply system that motivated Robert Gilruth and Max Faget of the Houston Center and Ernst Stuhlinger and myself from the Marshall Center to take a trip to Antarctica a few weeks ago.

"We had long felt that there was a great deal of similarity between some aspects of the space program and the Antarctica program. Of course, we knew they don't wear space suits in Antarctica, and you can't wear a parka on the Moon. Also, they don't fly in rockets to the South Pole, but in turboprops. But other than that, we found our belief fully confirmed that many operational aspects of work in Antarctica and future work in space are similar enough to make fullest use of the tremendous body of practical experience accumulated down there over the years. When they have sudden emergencies on the ice, their logistics system must respond just as quickly as ours will have to respond in space. And, the scientists in those remote polar stations are just as vulnerable and just as dependent on the working of this long logistic supply system as an astronaut scientist would be in a space station. We just wanted to know how this interface between science and operational support looks and how it really works. We learned a great deal."