

MARS/VENUS RECONNAISSANCE PROGRAM FEATURES UTILIZATION AND MODIFICATION OF PRESENT SYSTEMS

MAJOR COMPONENTS

EARTH ENTRY MODULE
MISSION MODULE
SPACECRAFT PROPULSION
EARTH ORBIT ESCAPE STAGE
PROPELLANT TANKERS
LAUNCH SYSTEM
LAUNCH FACILITIES
MISSION CONTROL CENTER
COMMUNICATION AND CONTROL NET

DEVELOPMENT BASE

MODIFIED APOLLO COMMAND MODULE
GROWTH FROM EARTH ORBITAL ACTIVITIES
APOLLO SERVICE MODULE AND LEM
MODIFIED SATURN S-II OR SATURN S-IV B STAGES
MODIFIED S-II
SATURN V
SATURN V
APOLLO
APOLLO + DSIF

TECHNOLOGY EXTENSIONS

ELECTRIC POWER SYSTEMS
LIFE SUPPORT SYSTEMS
ASTRONOMICS (GUIDANCE, COMMUNICATIONS, ETC)
ORBITAL OPERATIONS

HYPERBOLIC ENTRY
LONG-TERM RELIABILITY CONCEPTS
LONG TERM SPACE STORABLE PROPELLANTS
STERILIZATION TECHNIQUES

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FIGURE 14

We have the development base and we have the major components reasonably well defined.

Mr. DADDARIO. Your remarks indicate that you don't give one target superiority over another. You seem to indicate that both the Mars and Venus programs offer you a choice without discriminating one as against the other. Your charts sometime refer just to Mars and you never have a Venus chart. You have Mars charts and Mars-Venus charts which seems to indicate that you do, in fact, tend to indicate at this time that your objectives will be more toward Mars than Venus, is that so?

Dr. MUELLER. I think they are both equally interesting objectives. We have a limited amount of resources so that we have had to concentrate on one.

Mr. DADDARIO. At this point in time it is Mars.

Dr. MUELLER. It is also true that we have a much greater knowledge about the Martian environmental characteristics than we do about Venus so therefore we can do better planning.

Mr. DADDARIO. Did we make the choice of Mars over Venus because of certain observations that come back to us from our satellite activity and then find as we examine that information, we have some question about its accuracy? Have we then come to some other judgment that perhaps we have made the choice too soon to operate for Mars rather than Venus?

Dr. MUELLER. I believe the scientific community has fluctuated between Mars and Venus being the most desirable planet for study for the past 25 years. There seems to be some vacillation between the two. I think they are equally interesting. I think that the scientific community does tend to be divided.