SIGNIFICANT RESULTS FROM MANNED MARS RECONNAISSANCE

SCIENTIFIC

RETURNED SURFACE SAMPLE:

- CHEMICAL COMPOSITION OF RETURNED SURFACE SAMPLE OF MARS.
- EXISTING OR FOSSIL LIFE FORM IN RETURNED SAMPLE.
- PHYSICAL PROPERTIES OF RETURNED SAMPLE.

PHOTOGRAPHY:

- MAPPING OF 85% OF MARTIAN SURFACE WITH RESOLUTION BETTER THAN ONE KM.
- SEASONAL VARIATIONS IN SUFACE AND ATMOSPHERE.
- MULTISPECTRAL IMAGING OF SURFACE AND ATMOSPHERE FOR COMPOSITITION, STRUCTURE, AND TEMPERATURE DISTRIBUTION.
- PHYSICAL SHAPE OF PLANET MARS.

ATMOSPHERE:

- ALTITUDE PROFILES OF ATMOSPHERIC TEMPERATURE, PRESSURE, DENSITY, AND COMPOSITION.
- LOCAL WEATHER VARIATION ON MARS SURFACE.

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FIGURE 12

SIGNIFICANT RESULTS FROM MANNED MARS RECONNAISSANCE (CON'T)

SOLID BODY PROPERTIES

- INTERNAL ACTIVITY OF PLANET.
- GRAVITATIONAL AND MAGNETIC FIELD OF PLANET.
- PHYSICAL PROPERTIES OF SURFACE.

ENROUTE EXPERIMENTS

- TELESCOPIC OBSERVATIONS OF MOONS OF MARS.
- STEREOPHOTOGRAPHS OF SOLAR EVENTS.
- LIFE HISTORY OF SUN SPOTS AND FLARES.
- VISUAL OBSERVATIONS OF SOLAR SYSTEM AND STELLAR OBJECTS.

TECHNOLOGICAL

- LONG TERM SPACE SYSTEMS CAPABILITIES.
- EXPLOITATION OF EXISTING HARDWARE.
- ENGINEERING DESIGN DATA FOR FUTURE SYSTEMS.
- VERIFICATION OF ENGINEERING DESIGN PHILOSOPHIES FOR PLANETARY MISSIONS.
- PLANETARY OPERATIONS EXPERIENCE.

PRESTIGE

- FIRST MANNED INTERPLANETARY FLIGHTS.

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FIGURE 13