MySpaceCompany Mission Plan

Mission Plan

Mars Mission Overview:

Mars, once potentially habitable, presents evidence of past water activity and geological diversity. Our mission will explore Martian terrain and subsurface regions for biosignatures and climatic data. Rovers will conduct geochemical and seismic surveys while orbiters collect atmospheric readings.

Scientific Goals:

Detect past microbial life indicators within sediment layers. Map distribution of water ice beneath the Martian surface. Analyze daily and seasonal atmospheric changes.

Mission Timeline and Operations:

The mission will commence in 2026, progressing through several key phases. Phase 1 in year 2026 focuses on rover deployment across Valles Marineris and Jezero Crater. Phase 2 in year 2027 focuses on thermal mapping of regolith using infrared spectrometry. Phase 3 in year 2028 focuses on soil coring and spectrographic analysis of clay deposits. Phase 4 in year 2029 focuses on subsurface scanning using ground-penetrating radar. Phase 5 in year 2030 focuses on aerobraking-assisted satellite deployment.

Research Methodologies:

Advanced instrumentation will be utilized to capture and transmit high-fidelity scientific data from Mars. This includes the use of spectrometers, atmospheric sensors, and surface imaging devices where applicable. Collected data will be analyzed using AI-driven systems to detect patterns and anomalies. Each instrument will undergo rigorous calibration to maintain measurement accuracy across temperature fluctuations and radiation exposure.

Expected Challenges:

Managing limited solar power during dust storms. Preventing contamination of Martian surface environments. Landing precision in rugged terrain with high elevation variance.