



EVA Technology Development Needs

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Pressure Garment

- Technology Needs:

- Liquid cooling garment

- Thermal Micrometeoroid Garment (TMG)

- » Dust resistant, abrasion resistant materials
 - » Scratch resistant visors
 - » Dust resistant components (bearing, zippers, seals, etc.)
 - » Thermal Insulation (i.e. flexible aerogel)
 - » Variable heat leak technologies

- Bio-sensors

- Maximum Absorption Garment

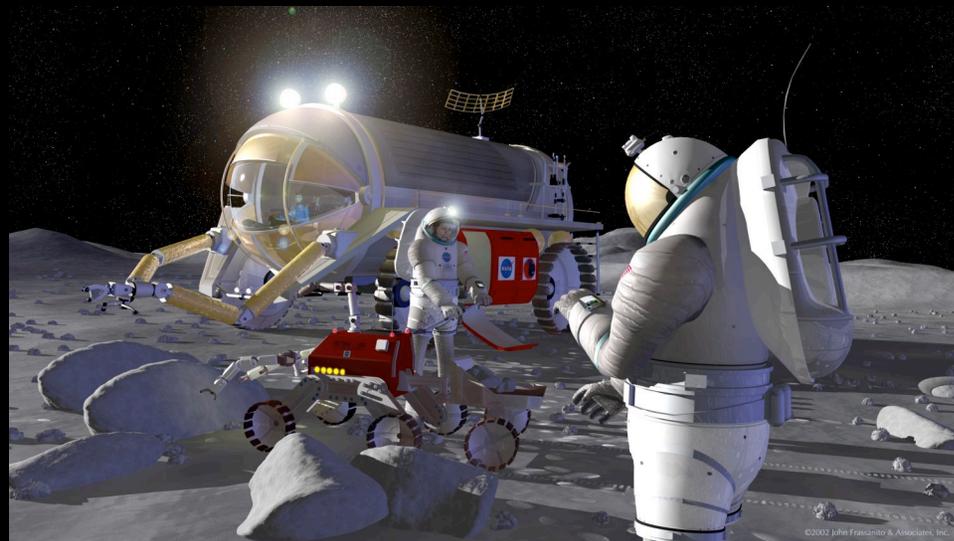
- Food/drink delivery systems





Life Support System

- Technologies:
 - Evaporative cooling
 - Alternative heat storage or heat rejection technologies (ice packs, radiators, heat pumps)
 - Lightweight robust water pump
 - Regenerable CO₂ removal systems
 - Lightweight, low power fans
 - Lightweight, robust O₂ storage
 - Variable Pressure Regulator
 - Oxygen connectors for dusty environments
 - Lightweight packaging materials





Power, Communications, Avionics, Informatics (PCAI)

- Technologies:
 - High energy density, safe rechargeable batteries (ETDP Power Project)
 - Miniaturized Rad Hard electronics for PCAI
 - Heads up and on cuff displays
 - Radio and Navigation technologies for Lunar missions





EVA Support Equipment

- Technologies:
 - Suit ports
 - Suit locks
 - Air locks
 - Recharge systems (power, water, O₂)
 - Dust removal
 - Human-robotics interfaces

