

COPING WITH DUST FOR EXTRATERRESTRIAL EXPLORATION

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The author worked at NASA on the thermal control system for the Apollo Lunar Roving Vehicle (LRV), America's "Spacecraft on Wheels". This included thermal testing, modeling, and mission support during the Apollo 15, 16, and 17 Moon exploration missions in 1971 and 1972. Coping with Lunar Dust - the Moon exploration challenge that has haunted the author for over 46 years will be presented. This includes discussion of Previous Earth-based Dust Removal /Prevention Testing, Dust Effects on Apollo Lunar Extraterrestrial Missions, Dust Effects on Extended Lunar and Mars Extraterrestrial Missions, Dust Mitigation Options for Future Lunar Exploration, and Experience Based Recommendations for Coping with Dust. Comments on selected Strategic Knowledge Gaps (SKGs) prepared by the Lunar Exploration Analysis Group (LEAG) will also be discussed. The **L**unar **R**Oving Adventure (LUROVA) simulation game for STEM exploration and analysis will also be described.