



Polar Exploration and Resource Extraction

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Hydrogen at the Poles

Hydrogen, in any form, is an important resource on the Moon

– Propellant, life support, energy storage, chemistry

Hydrogen is believed to be concentrated in polar cold traps

Exploration for hydrogen has commonalities with and risks for lunar science

– Commonalities: Search for location, concentration, sources

– Risks: Contamination of fragile environment, disruption of information of value to science

Exploration Considerations

Hydrogen form, sources, and distribution – highest order objective for science and resources

- Includes isotopic studies to characterize sources

- Understand polar volatile transfer processes -

- Guide to preserving environment, exploring for resources

- Before intensive exploitation begins

- More detailed scientific study of any hydrogen

- Stratigraphy (including detailed isotopic studies)

- Must not be precluded by resource extraction

- processes

- Polar hydrogen preserve?