



NASA'S JOURNEY TO

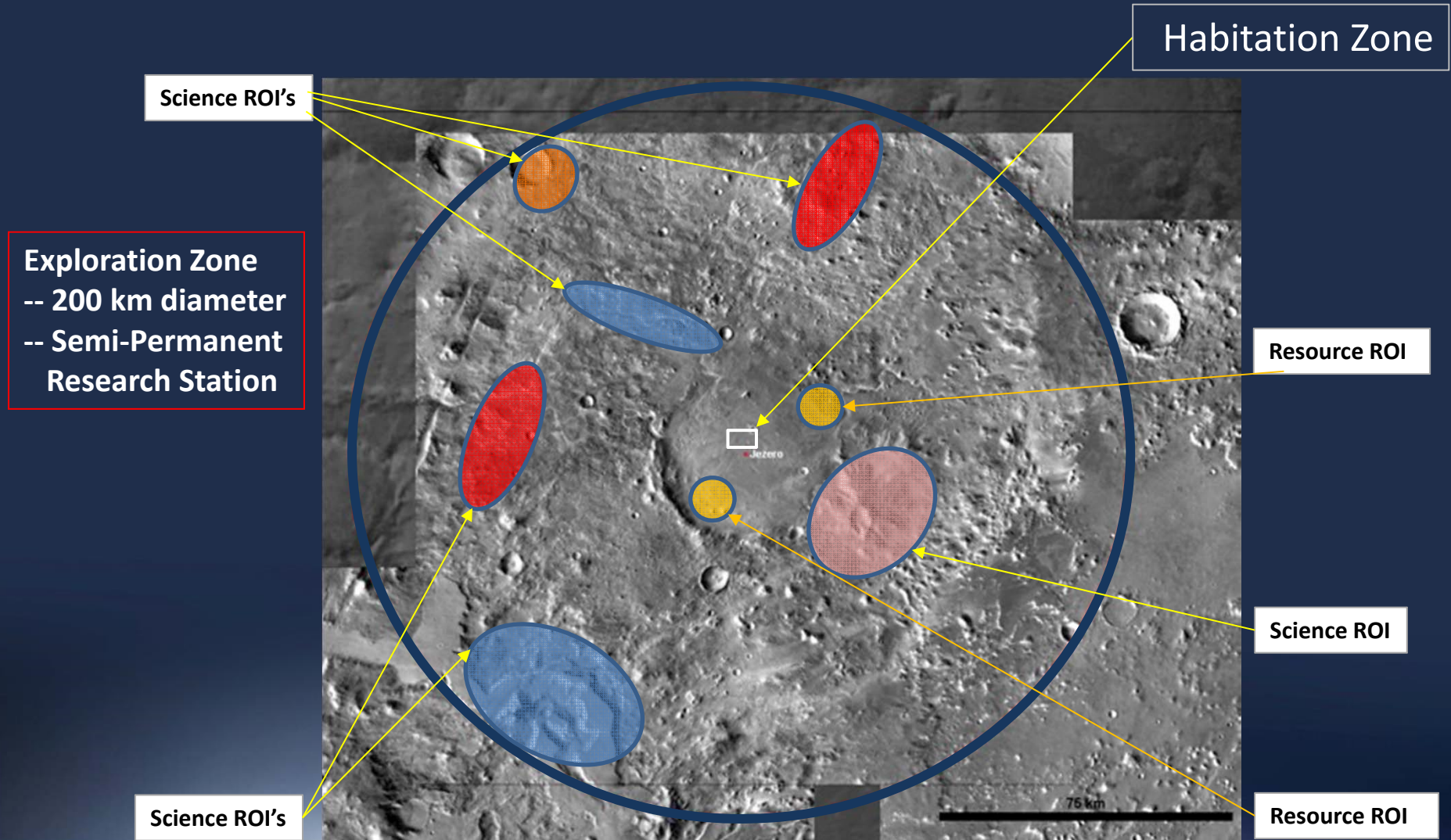
MARS

National Academy of Sciences: Looking to the Future: an Evolution on Approaches to Planetary Protection.

NASA/Richard (Rick) M. Davis
Assistant Director for Science and Exploration
Co-Lead Mars Human Landing Sites Study

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Exploration Zone Layout



ROI = Regions of Interest

Field Station Analog-McMurdo, Antarctica

Emplacement

British National Antarctic Expedition 1902

R.F. Scott's "winter quarters hut" - Used for both local scientific research and as a logistical base for traverses inland.



Permanent occupation - 1955

Naval Air Facility McMurdo - Part of "Operation Deep Freeze" to support the International Geophysical Year; included a collection of semi-permanent structures (e.g., tents, Jamesway huts).

Consolidation



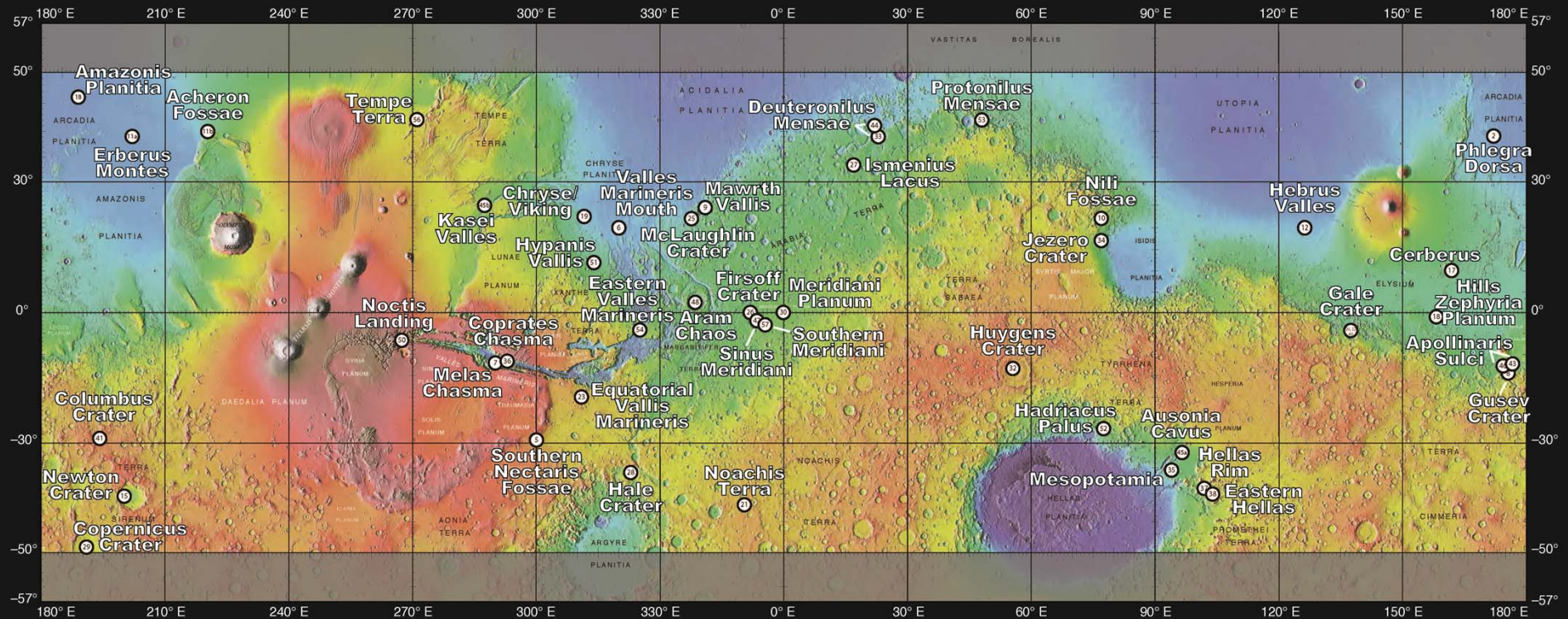
McMurdo Station Today

Antarctica's largest community and a functional, modern-day science station, including a harbour, three airfields (two seasonal), a heliport, and more than 100 permanent buildings

Utilization



Potential Exploration Zones for Human Missions to the Surface of Mars



Exploration Zones proposed for humans to Mars.
 Numbers correspond to the abstract submission #.
 At the equator, circles are ~100km radius.

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Prepared By: Lindsay Hays, Mars Program Office
 lhays@jpl.nasa.gov

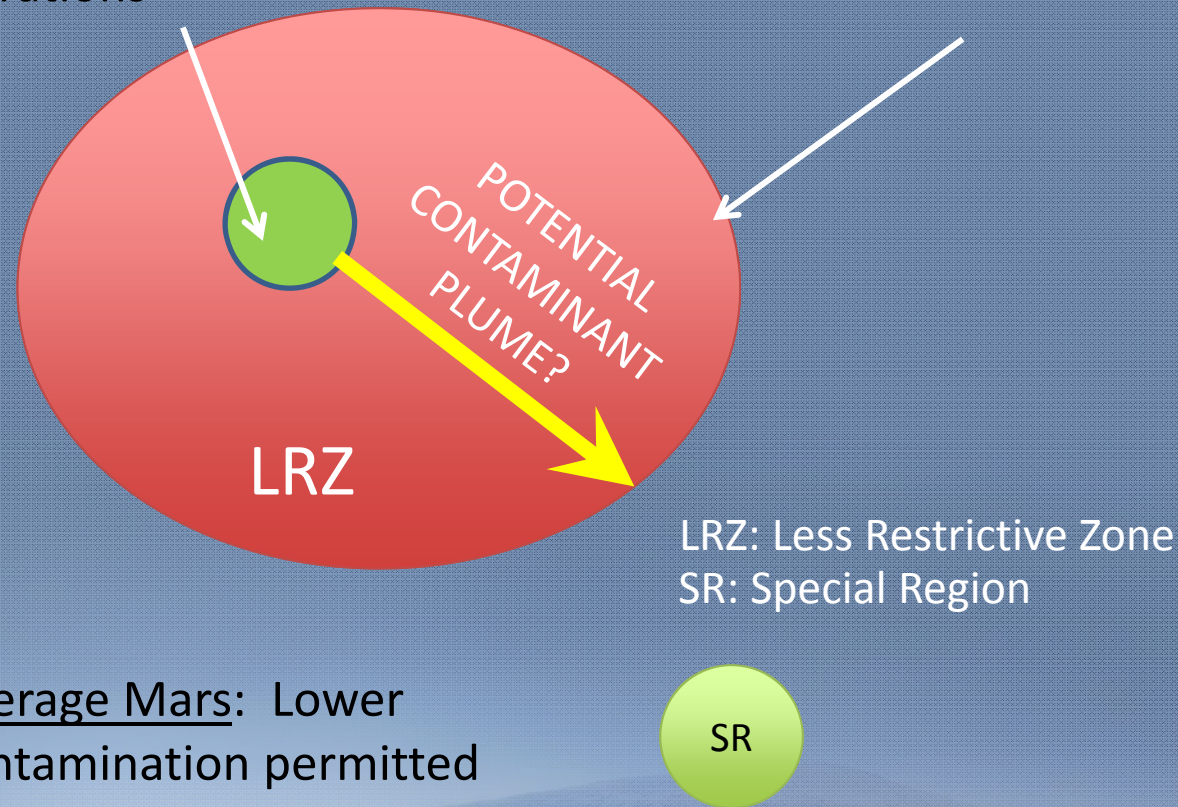
MARS

Possible Approaches Based on Analogs

Human Exploration

Zone (HEZ): Area of human surface operations

How much contamination could be allowed to reach this limit within TBD time?



Average Mars: Lower contamination permitted