Jet Propulsion Laboratory
California Institute of Technology

Mars Exploration Program

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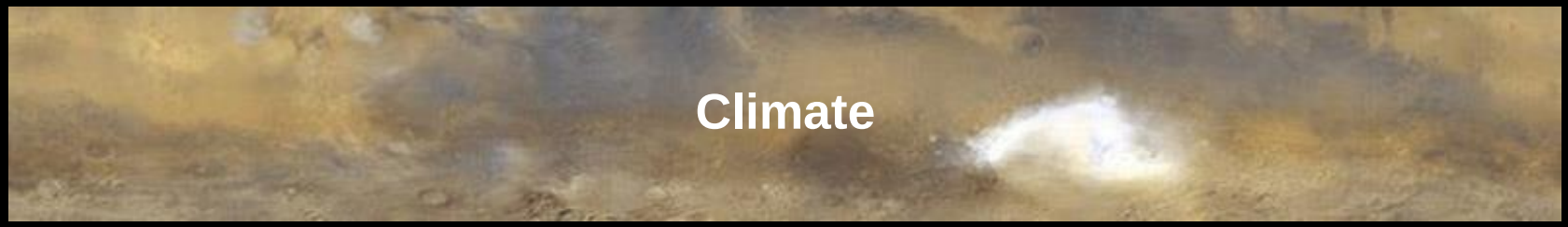
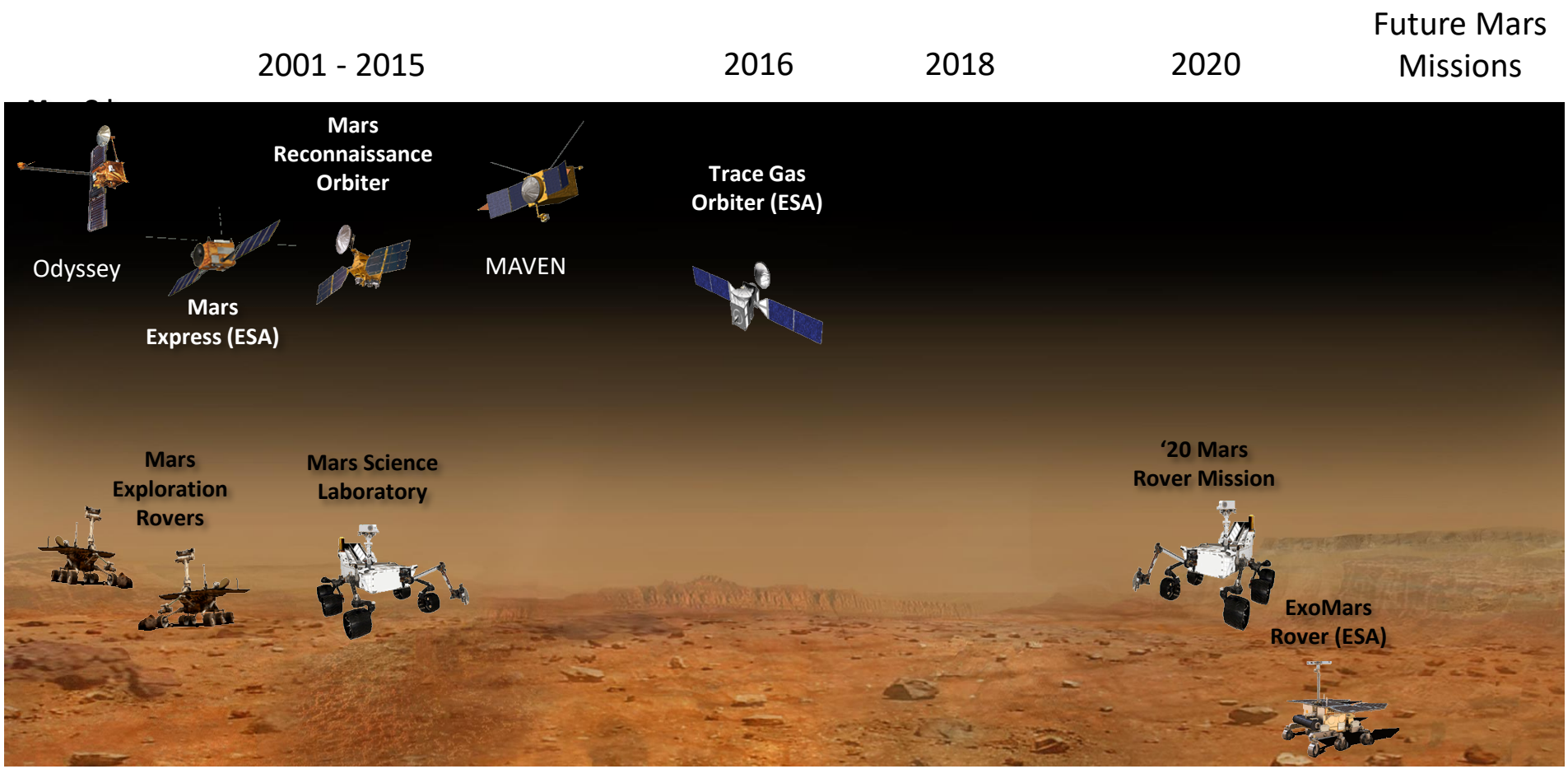
Mars Exploration Program Science Goals



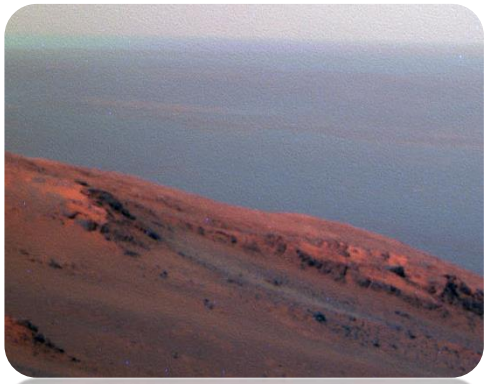
Prepare for Human Exploration

Mars Exploration Program Missions

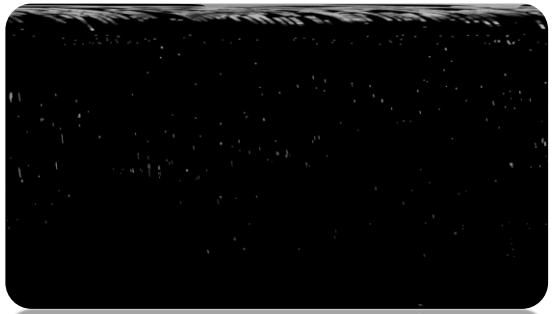


Mars Exploration Program Highlights

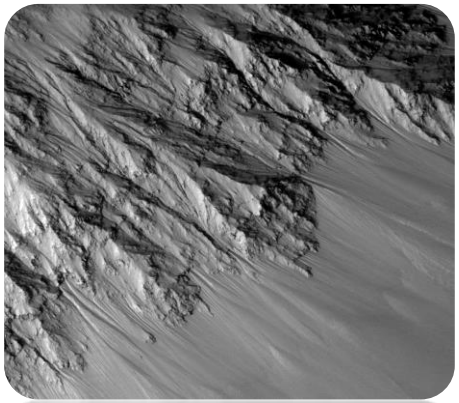
Opportunity: Journey to Perseverance Valley



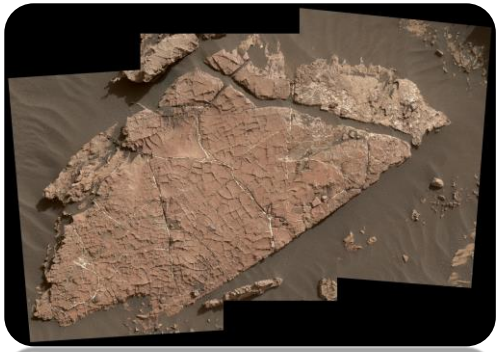
MRO: >50,000 orbits Completed Global 6m Resolution Imagery



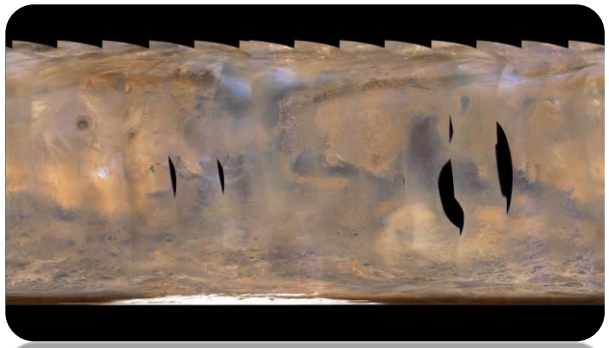
MRO: Continuing Observations of Recurring Slope Lineae



Curiosity: >4.5 years since landing



MAVEN Tracks Back-to-back Regional Storms



Mars 2020 Landing Site Finalists

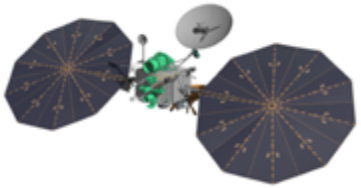
Possible Mars Sample Return Scenarios

Mars 2020

- Select & Acquire Samples

Orbiter

- Rendezvous & Sample Containment
- Return to Earth
- Earth Entry Vehicle



Sample Retrieval/Launch into Mars orbit

- Small Fetch Rover to Retrieve Samples
- Small MAV on Fixed Platform
- Launch Samples from Mars Surface to ~500km Orbit