



National Aeronautics and
Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California



Mars Exploration Directorate

Mars Program Overview

*“The Mars Exploration Program is delivering on
the promise”*

Roger Gibbs
Deputy Manager
Mars Program

February 27, 2013



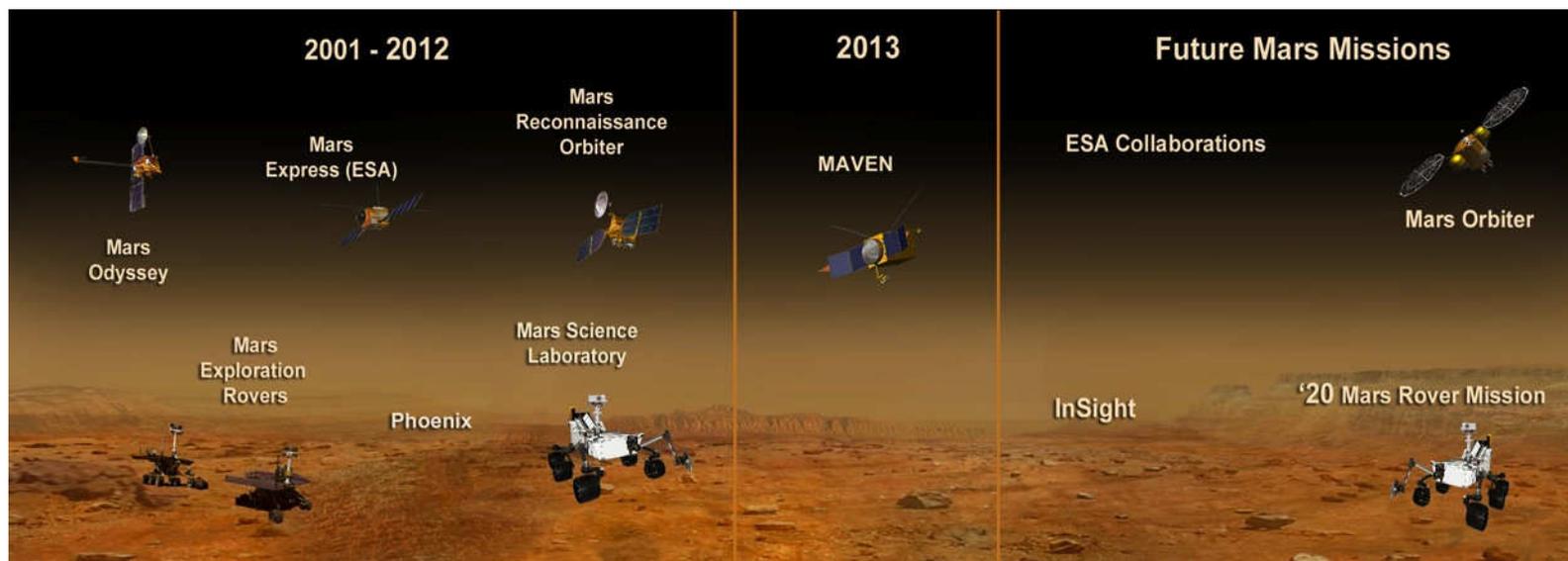
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Mars Exploration Program



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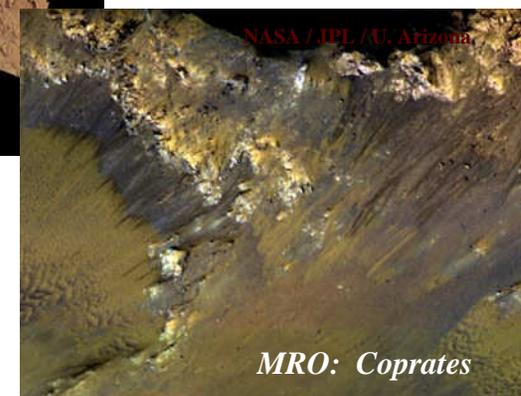
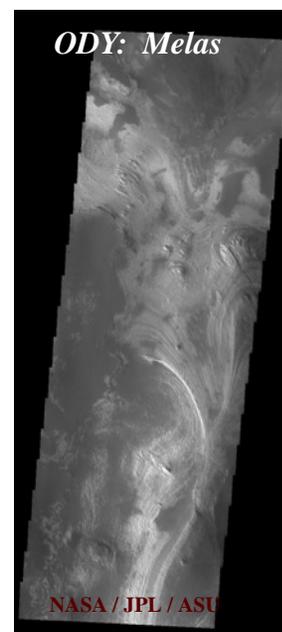
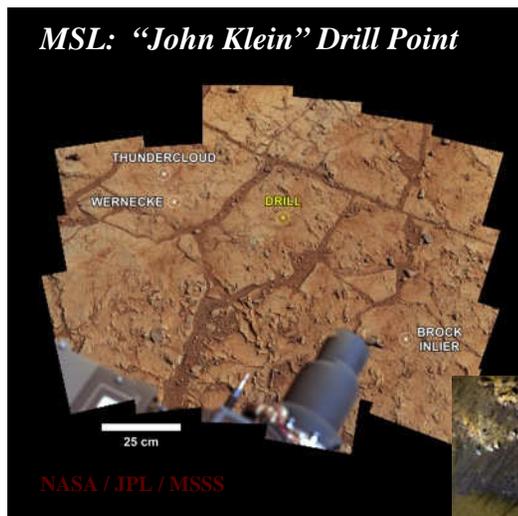
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Project Status

JPL

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- **MAVEN:**
 - On schedule to launch this fall
 - Now in Environments Testing in Denver
- **MSL:**
 - Analyzing first drilled rock materials in Yellowknife Bay
- **MRO:**
 - Detecting new areas of Recurring Slope Lineae (RSLs), e.g., in Valles Marineris
 - SHARAD returning to operations
- **ODY:**
 - Successful transition to Side B
 - Continuing to fill gores in THEMIS coverage
 - Drifting to later local times
- **MEX:**
 - Finished period of good radar coverage (periapsis in the dark)
- **MER-B:**
 - Finishing Cape York survey
 - Preparing to start move to Solander Point



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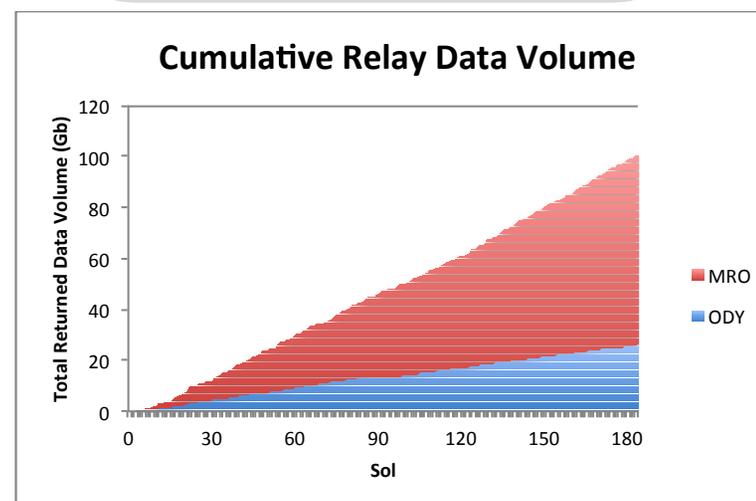
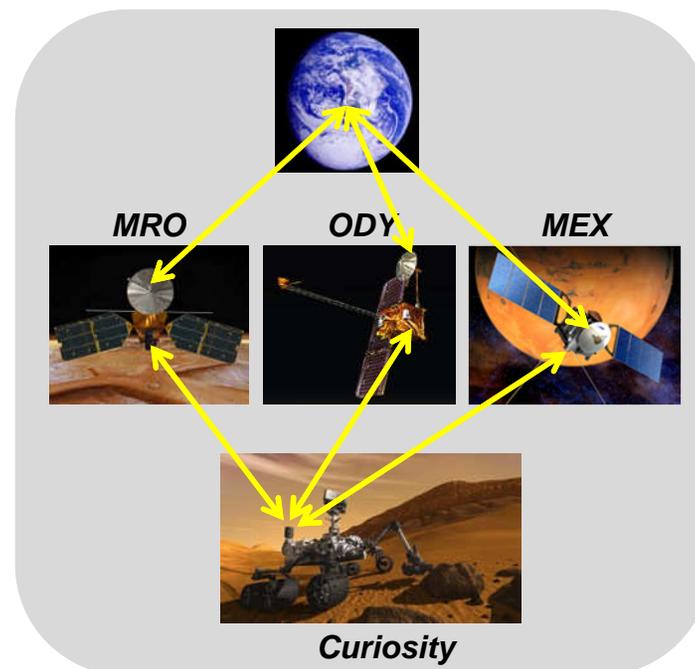
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Mars Network Relay Performance



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- Curiosity is returning large amounts of science data via an international network of Mars relay orbiters
 - Over **100 Gigabits** of data returned through Sol 184
 - Averaging over **550 Mb/sol**, well above MSL project requirements
- **MRO:**
 - High performance relay based on new Electra UHF Transceiver capabilities
- **ODY:**
 - Real-time data return during MSL EDL
 - Continues to serve as the workhorse relay orbiter for Opportunity
- **MEX:**
 - Tracking of MSL carrier during EDL
 - Backup relay asset for Curiosity surface ops – conducting monthly demonstration relay passes to verify MSL-MEX telemetry and command functions



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