Mars Program Overview

“The Mars Exploration Program is delivering on the promise”

Roger Gibbs
Deputy Manager
Mars Program

February 27, 2013
Mars Exploration Program

2001 - 2012
- Mars Express (ESA)
- Mars Odyssey
- Mars Exploration Rovers
- Phoenix
- Mars Reconnaissance Orbiter
- Mars Science Laboratory

2013
- MAVEN

Future Mars Missions
- ESA Collaborations
- Mars Orbiter
- InSight
- ‘20 Mars Rover Mission

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Project Status

- **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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Mars Network Relay Performance

- 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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