

Summer of 2020

MARS

Program Status – August 17, 2020
Presented to Planetary Advisory Committee

Jim Watzin
Director – Mars Exploration Program

Michael Meyer
Chief Scientist

Congratulations!

UAE Mars Mission "HOPE"
July 19, 2020



Congratulations!



真负责 确保火星探测顺利执行



China launches ambitious Tianwen-1 Mars rover mission

July 23, 2020

Tianwen-1 is China's first fully homegrown Mars mission.

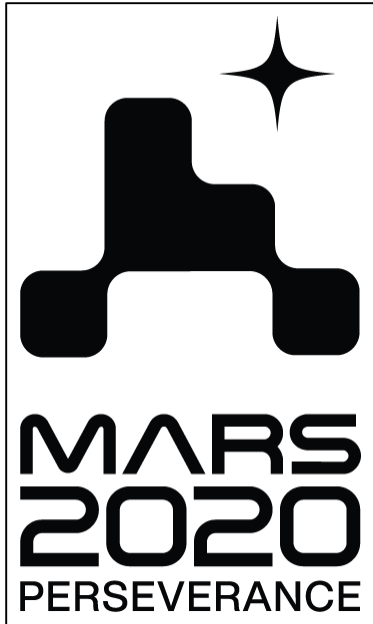
Congratulations!

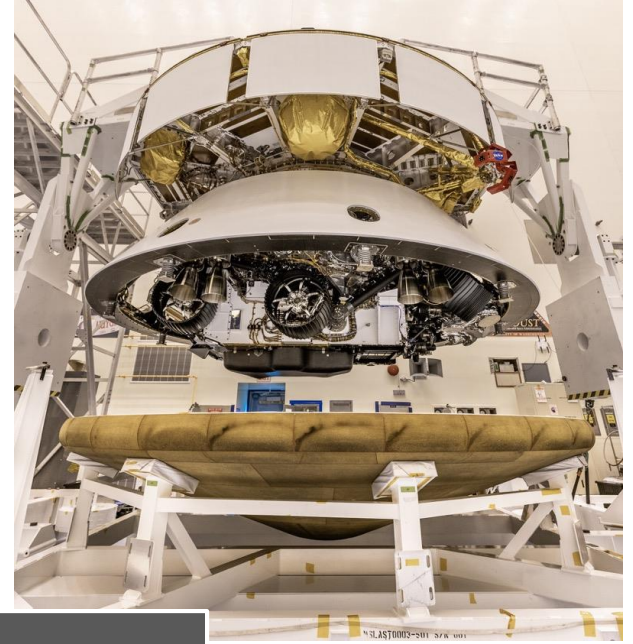


Mars 2020 Launched July 30, 2020
Atlas V Launch Vehicle

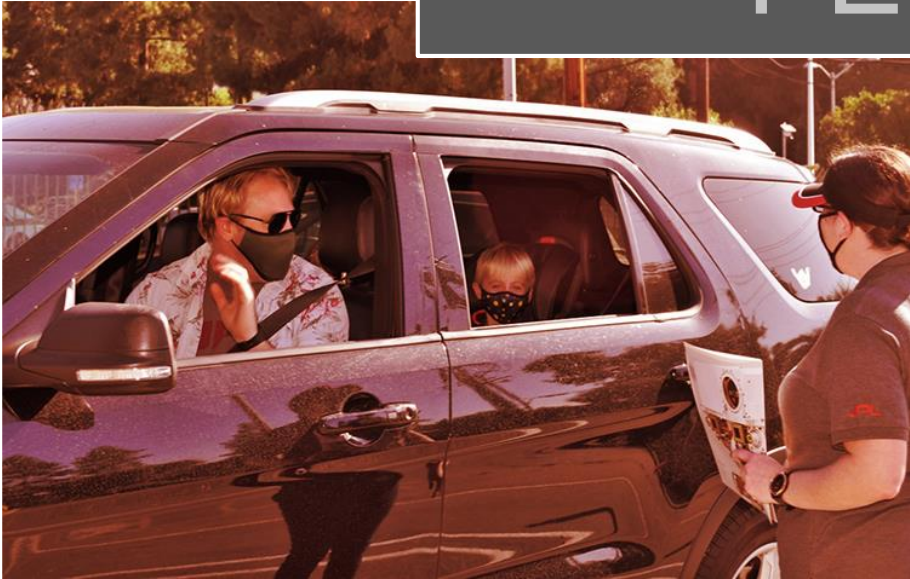


Landing at Jezero Crater
Feb 18, 2021



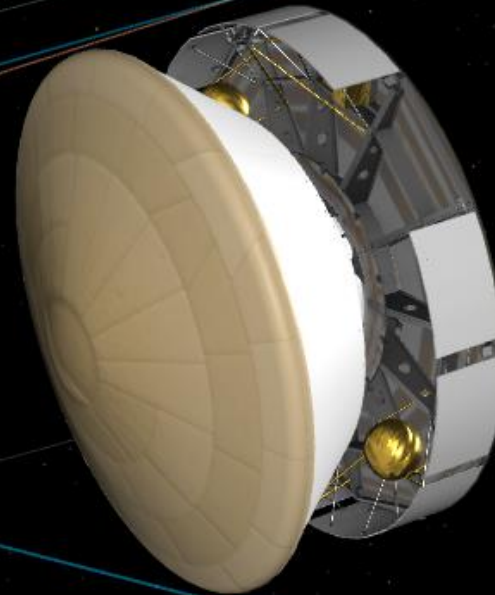
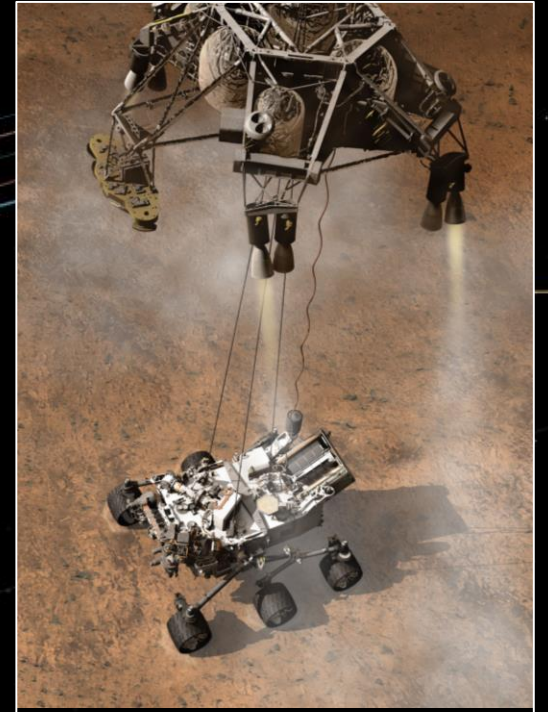


PERSEVERANCE



Mars 2020 / Perseverance is now Cruising to Mars

- All subsystems currently operating nominally
- Trajectory Control Maneuver (TCM) #1 – Aug (14)
- Post-Launch Assessment Review – Sept
- TCMs to Refine Flight Path – Dec/Jan
- Surface phase V&V and Operational Readiness Tests (ORTs) – Fall/Winter
- Surface Operations Readiness Review – Jan
- Entry, Descent, and Landing Feb 18, 2021



https://eyes.nasa.gov/apps/orrery/#/sc_perseverance

InSight Status

Spacecraft and instruments are operating well, with slightly higher than expected dust accumulation on the solar panels

Current seismic catalog contains nearly 500 events believed to be marsquakes, including more than 50 thought to be moderately sized, distant quakes

Preliminary seismic analyses indicate a crustal thickness of 20-40 km

First-ever magnetic measurements from Mars' surface reveal crustal magnetization features not detectable from orbit and pulsations that may be useful for probing interior resistivity variations

InSight is accumulating what will be the most complete data set of simultaneous, high-rate atmospheric pressure, temperature and wind measurements ever acquired on Mars

HP³ mole recovery activities are in the final stages, with the back of the mole now a cm or so below ground level. The last activity will be to cover the mole with regolith and attempt to continue to hammer to 3-5 m depth



MEP Summary

M2020 is healthy and on stable cruise to Mars

- Operations team has settled into its routine

Moving ahead with MSR Formulation activities

All legacy missions continue to operate effectively and productively

- Provided adequate funding
- Adapted to remote operations exceptionally well

Continuing to explore potential implementation models for the Mars Ice Mapper mission

COVID has affected how we work, but not how well we work. The MEP continues to be healthy and productive.

