

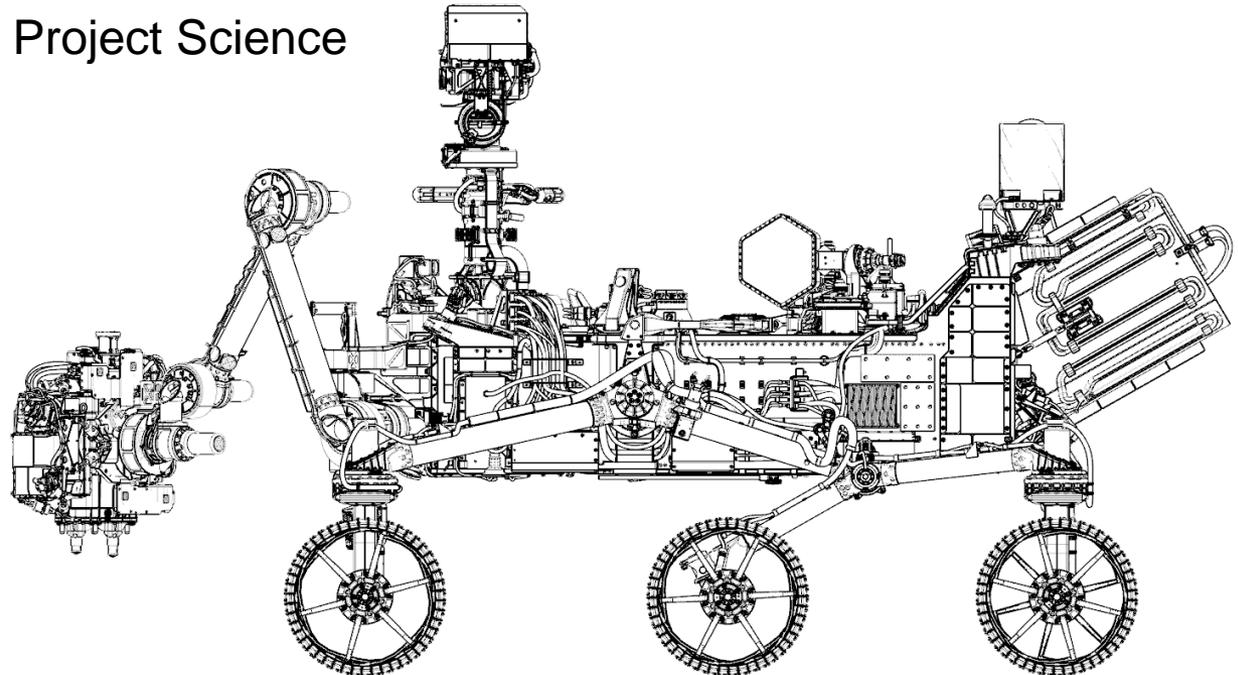
Mars 2020 Science Update

Ken Williford

on behalf of Mars 2020 Project Science

MEPAG

July 26, 2019



MARS 2020
PROJECT



Assembly Test Launch Operations (ATLO)



<https://www.youtube.com/watch?v=PaNiYPgIK58>

ATLO



ATLO





ATLO

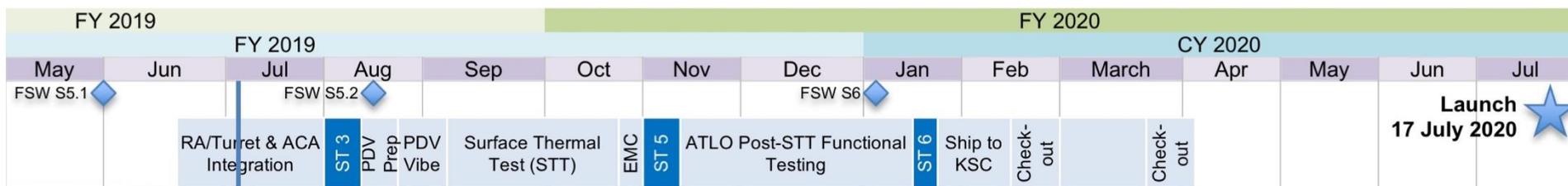
Instrument/Subsystem	Integration	Functional
EECAM	Green	Green
Mastcam-Z	Green	Green
MEDA	Green	Green
MOXIE	Green	Yellow
PIXL	Green	Green
RIMFAX	Green	Yellow
SCS	Yellow	Yellow
SHERLOC	Green	Green
SuperCam	Green	Green

All instrument flight models installed/integrated, remaining functional tests for MOXIE and RIMFAX awaiting change in rover configuration. Arm, turret and corer integrated and tested, awaiting ACA integration and functional.



Upcoming Milestones

- Sept-Oct 2019 Surface Thermal Test (STT)
- Feb 2020 Ship to KSC
- Feb 2020 ROASTT 2020
- Mar 2020- Operational Readiness Tests
- July 2020 Launch
- Feb 2021 Landing



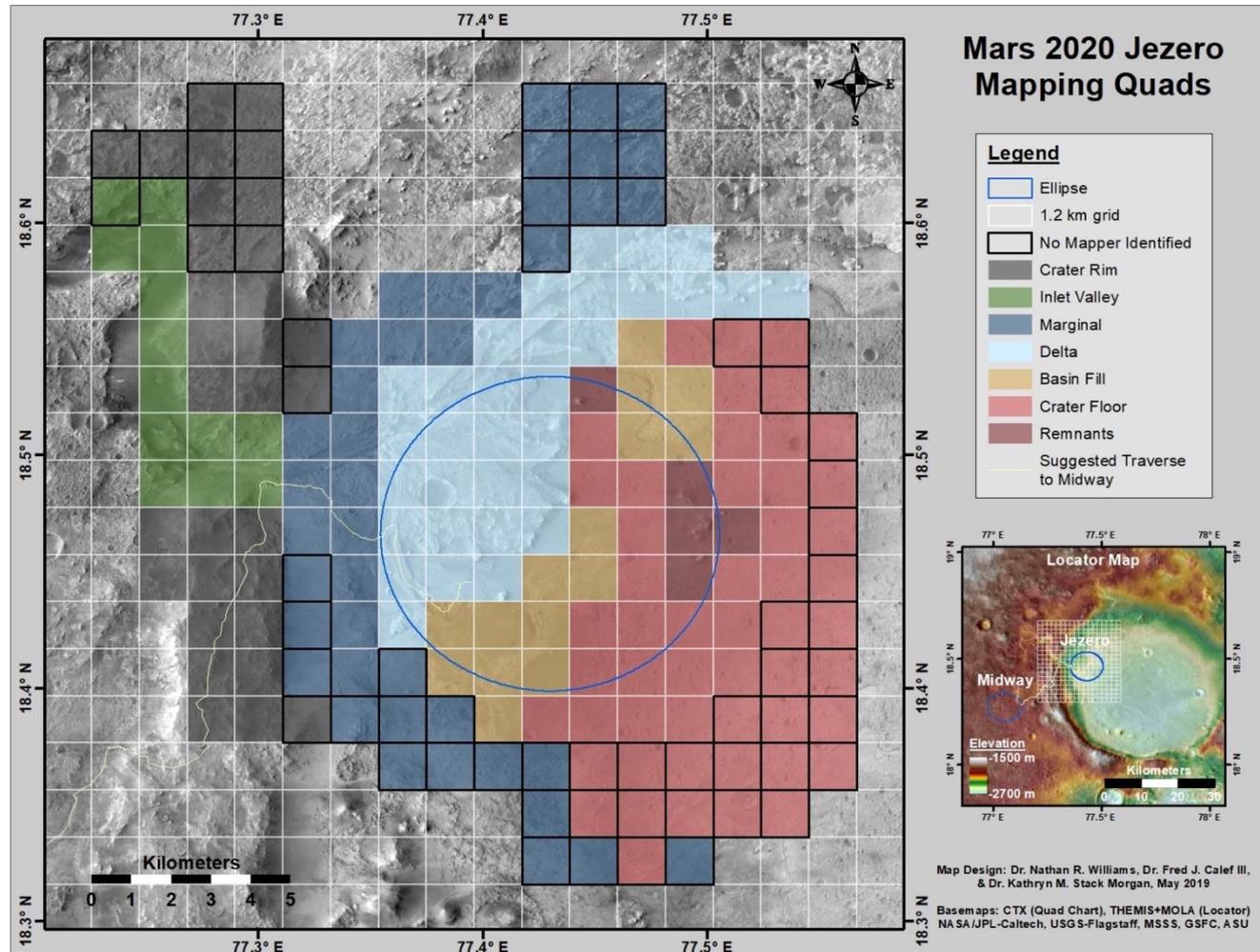
ROASTT

- **Rover Operations Activities for Science Team Training**
- ROASTT 2018: strategic and campaign planning
- ROASTT 2019: campaign implementation and tactical
- ROASTT 2020: emphasis on sample-related decisions



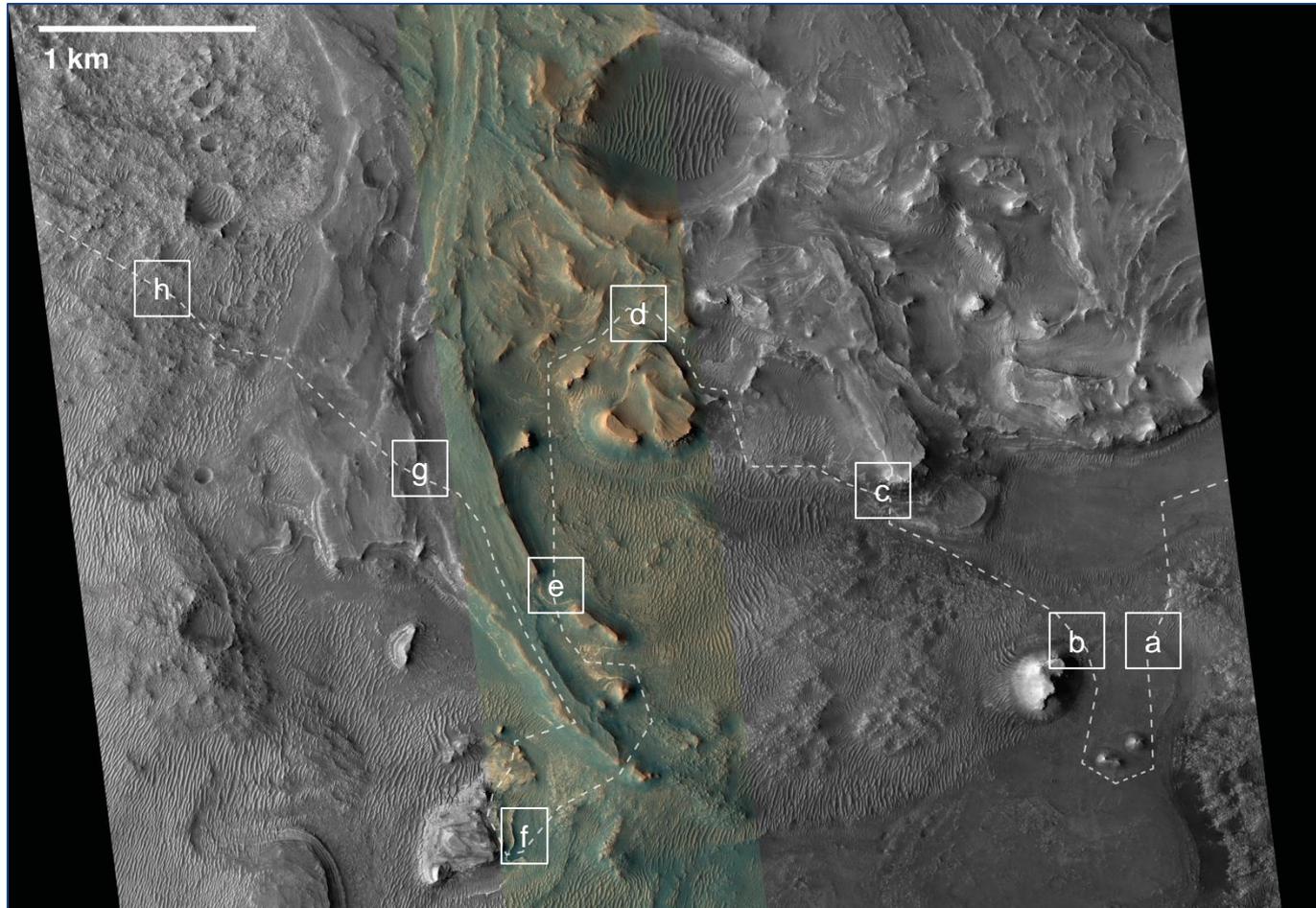
Strategic operations underway

- Science team mapping exploration area at 1:5000 scale



Strategic operations underway

- Identification and prioritization of options for exploration and sampling





Participating scientists

- Results of first PS call focused on returned sample science (RSSPS) forthcoming
- General PS call expected later in 2019



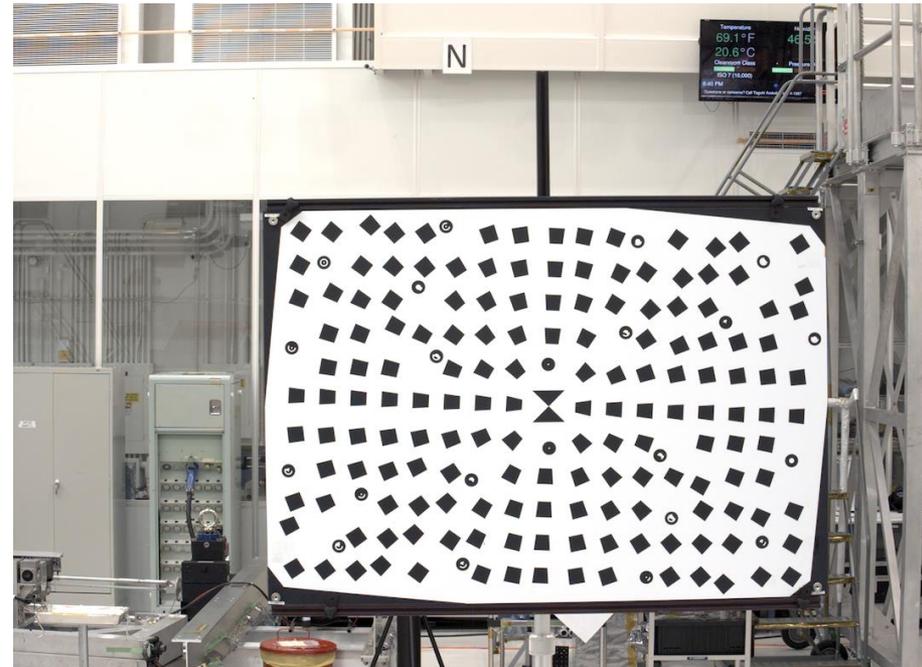
Publications

- Preparing a collection of manuscripts for publication in *Space Science Reviews* prior to landing.

For a general overview, see

Williford, K.H, K.A. Farley, K.M. Stack, A.C. Allwood, D. Beaty, L. Beegle, R. Bhartia, A.J. Brown, M. de la Torre Juarez, S.-E Hamran, M.H. Hecht, J. Hurowitz, J.A. Rodriguez-Manfredi, S. Maurice, S. Milkovich, R.C. Wiens, 2017. The NASA Mars 2020 rover mission and the search for extraterrestrial life, In: *From Habitability to Life on Mars*, Cabrol, N.A., and E.A. Grin, eds., Chapter 11, Elsevier.

Mastcam-Z



SHERLOC

