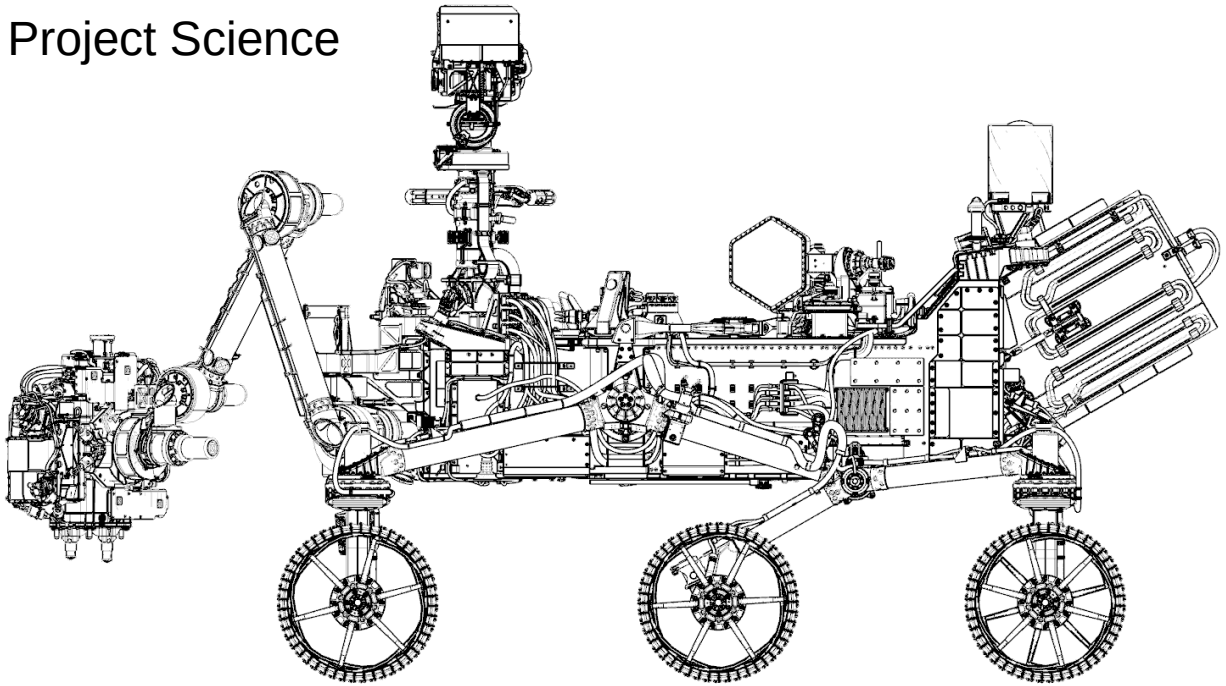
Jet Propulsion Laboratory
California Institute of Technology

Mars 2020 Science Update

Ken Williford

on behalf of Mars 2020 Project Science



MEPAG

July 26, 2019

MARS 2020 PROJECT

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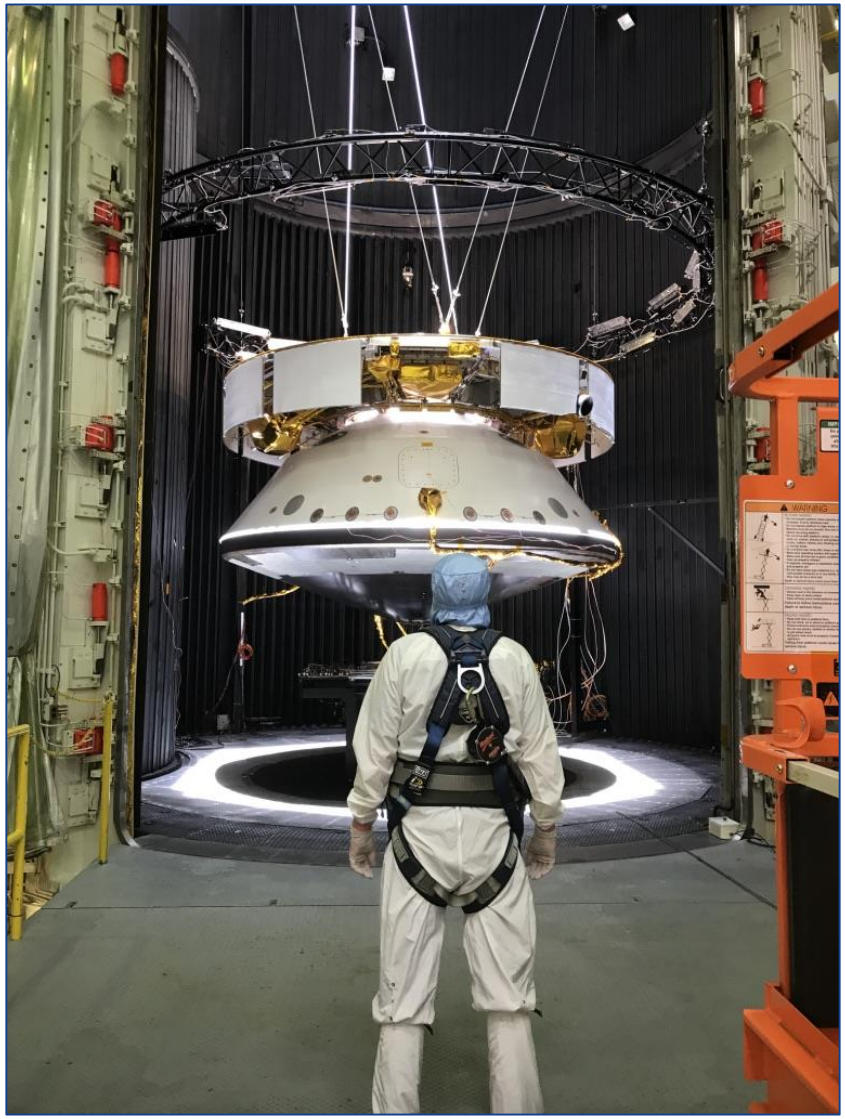
Assembly Test Launch Operations (ATLO)

https://www.youtube.com/watch?v=PaNiYPglK58

ATLO



ATLO

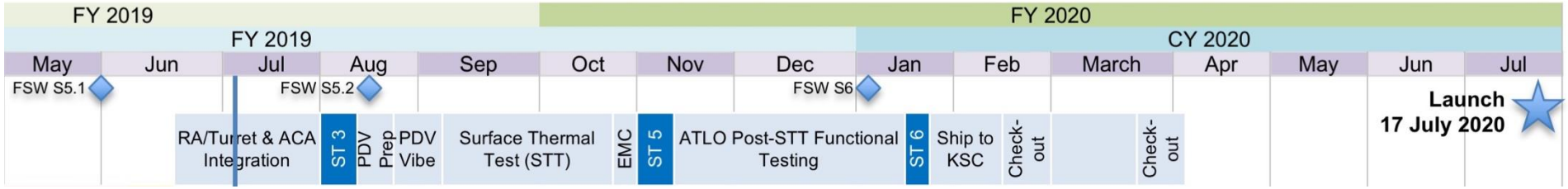
ATLO

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

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

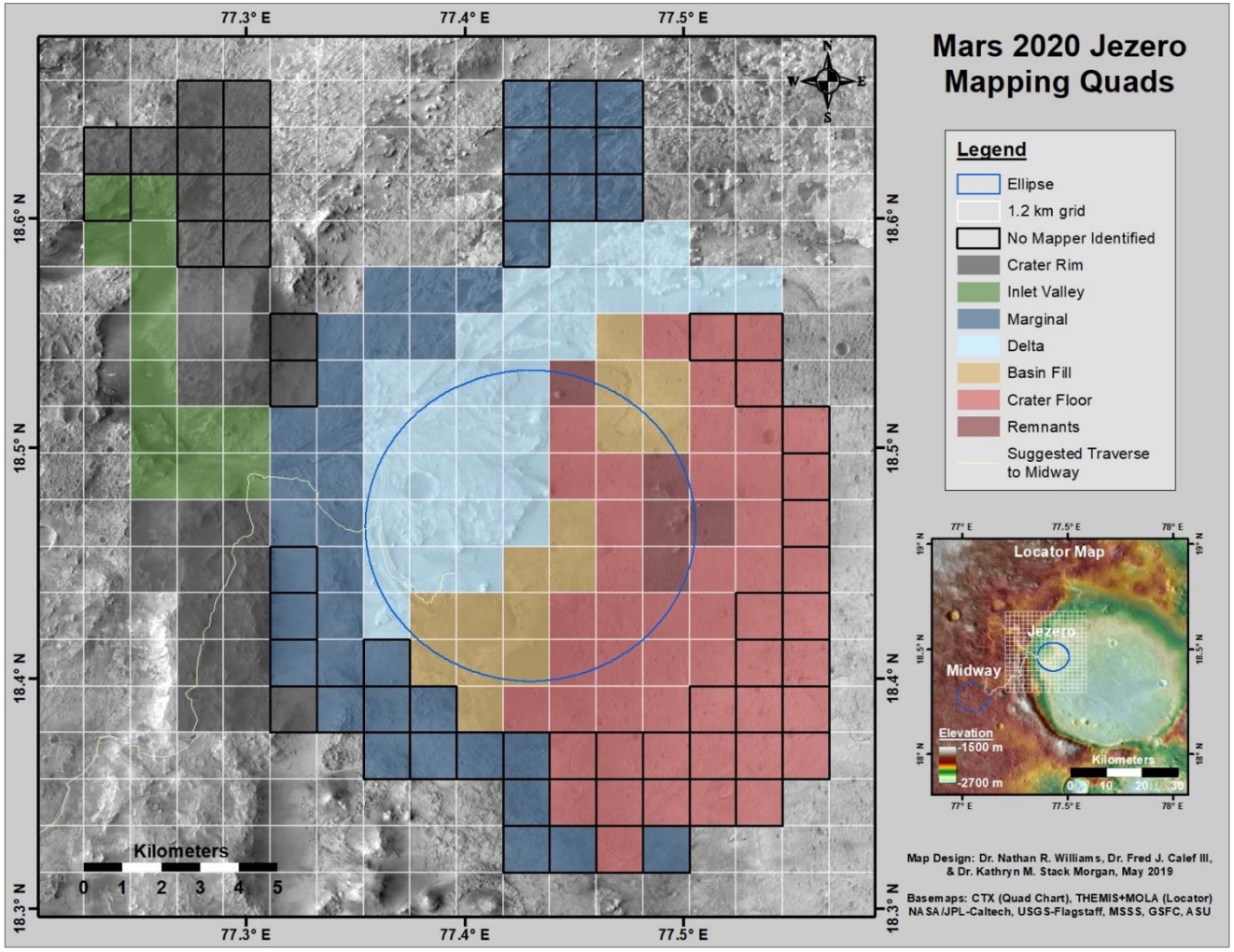


ROASTT

- **R**over **O**perations **A**ctivities for **S**cience **T**eam **T**raining
- ROASTT 2018: strategic and campaign planning
- ROASTT 2019: campaign implementation and tactical
- ROASTT 2020: emphasis on sample-related decisions

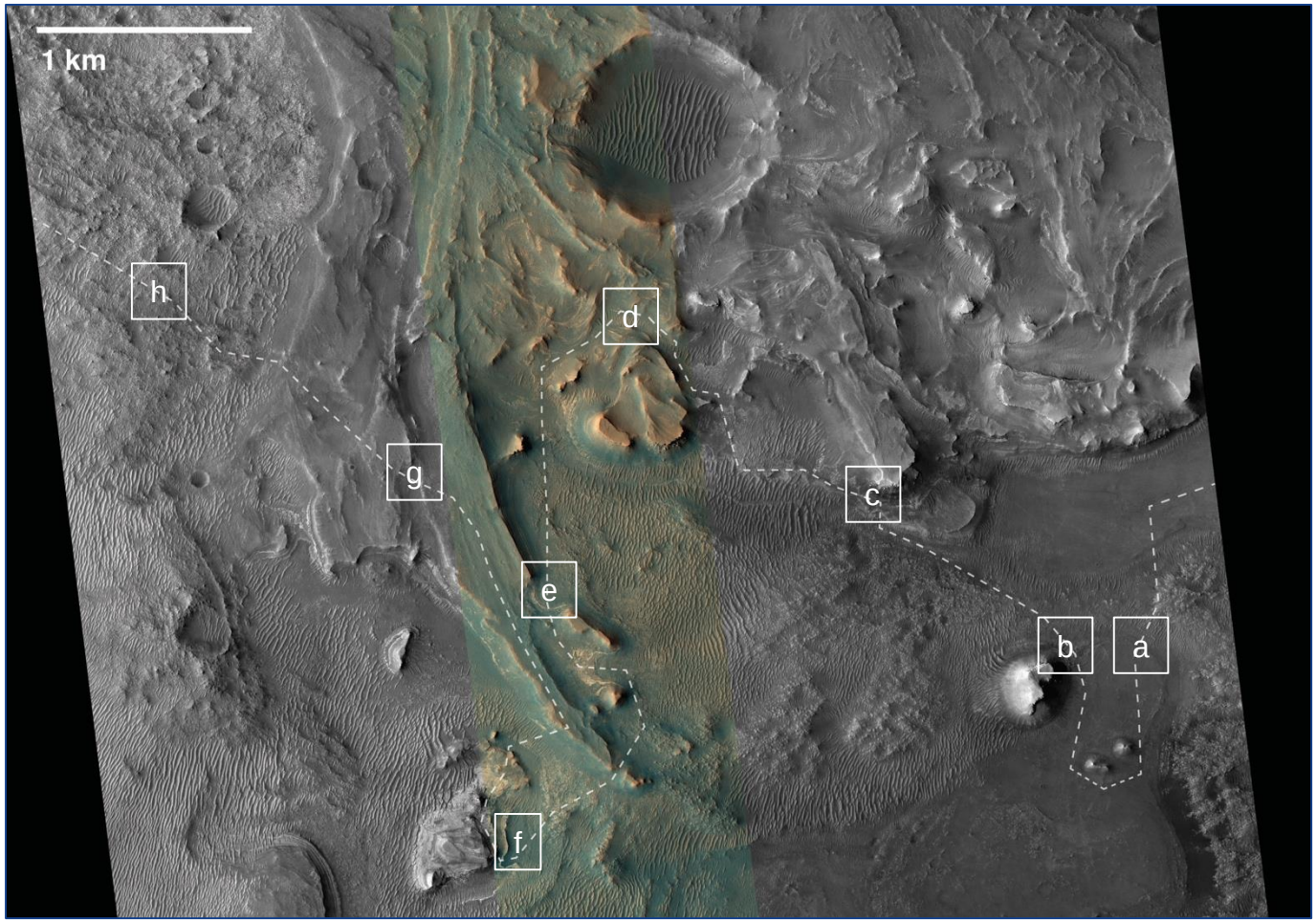
Strategic operations underway

- 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

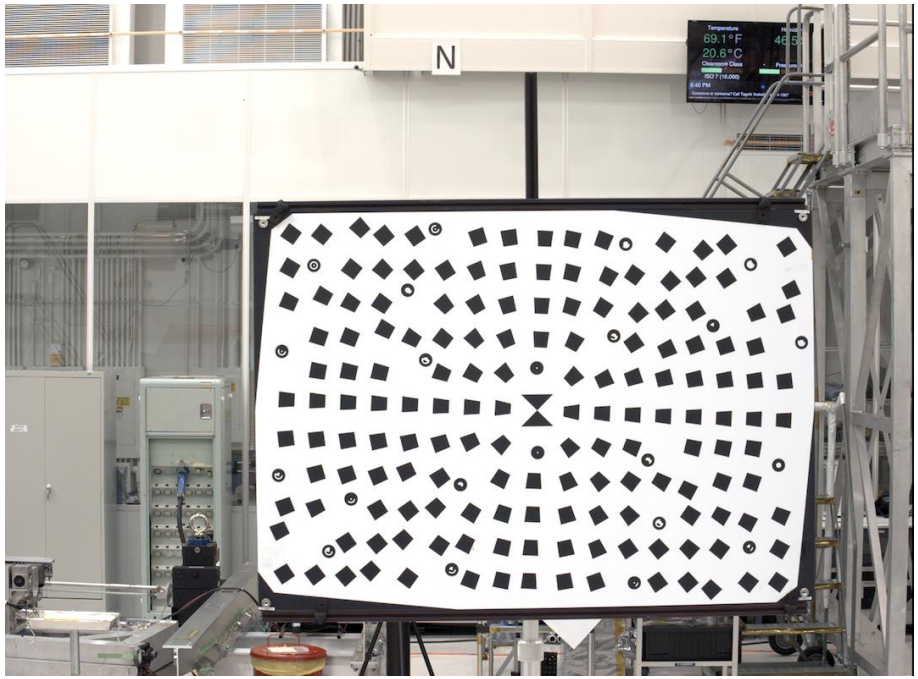
Publications

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

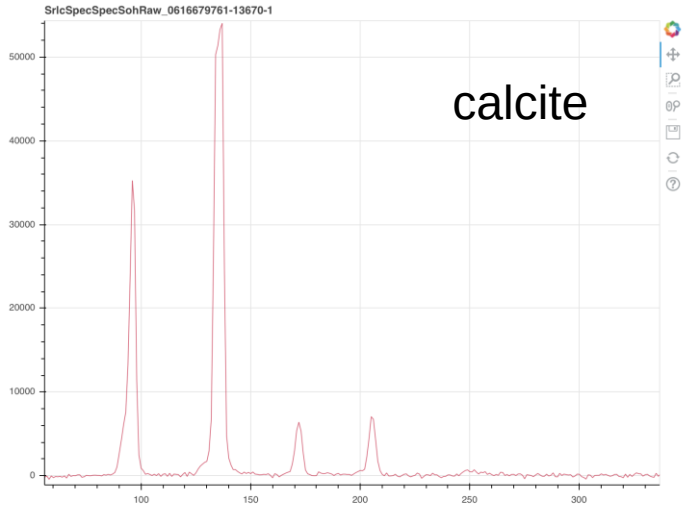
For a general overview, see

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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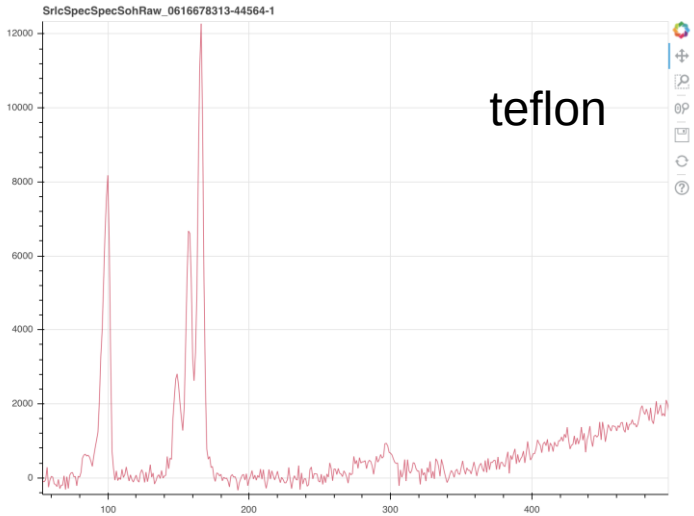
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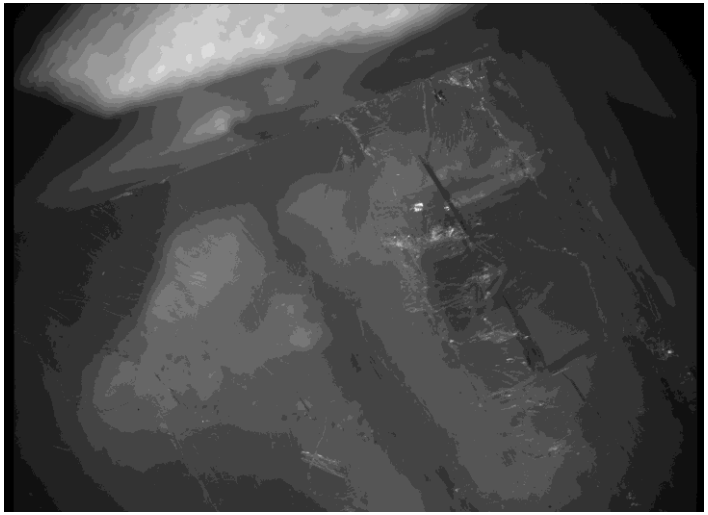

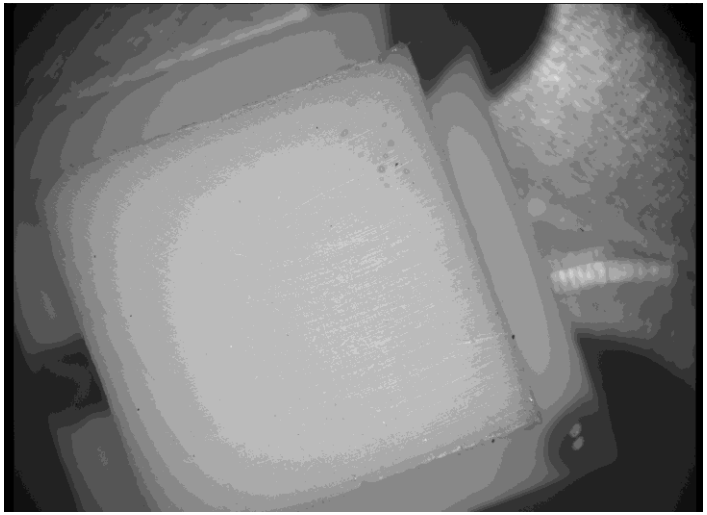

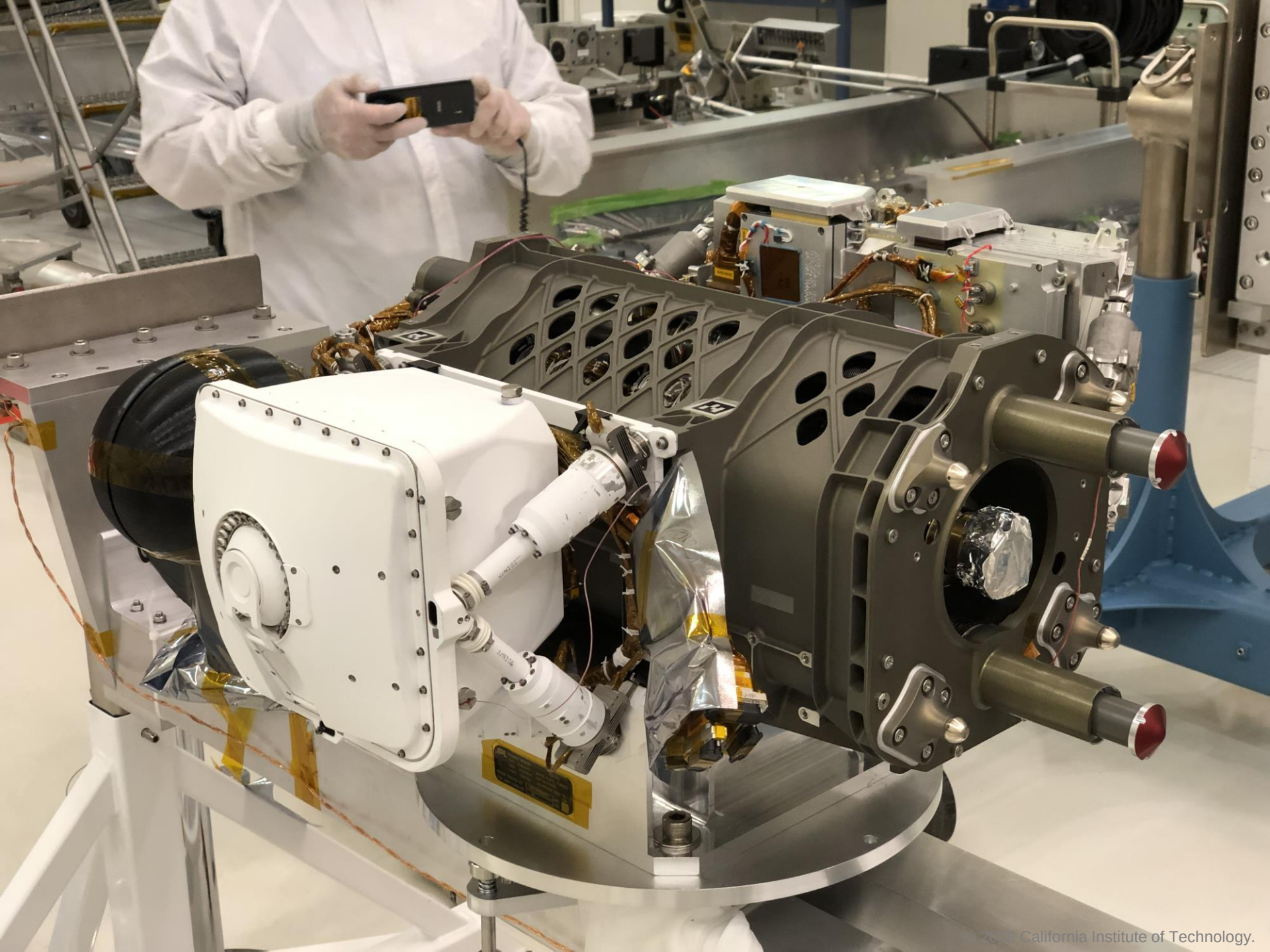

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