A Small Peak at a Peruvian Girl's Projects, from Cusco to NASA

US Speaker Program

STEM Education: Women in Science

Peru May 19-27, 2017

Jackelynne Silva-Martinez

Aerospace Engineer

Mission Operations Integration

www.jackelynne.com

Education Timeline

1986

Cusco, Peru

Cusco:
Colegio Clorinda Matto de Turner
Colegio Maria de la Merced
UNSAAC
Arequipa:
Colegio Maria Auxiliadora
Lima:
Colegio Estados Unidos
UNI

NJ, USA

2002

2008

MAE

2012

2014

MAS-HF

EGMT

2015

2016

MASE

SSP

Research Work

- Human Factors in Aerospace Systems

  Human-Systems Integration: Minimizing Human Error across a Mission's Lifecycle

- Telemedicine in Space

  Remotely Guided Sonography for Long Term Space Missions

- Planetary Defense

  Project Manager, 34 members from 17 different countries with a 6 weeks timeline

- Lunar Exploration Architectures

  Trade analysis of SpaceX Falcon Heavy and SLS comparison with Orion as the crew vehicle based on balanced mass, cost, and reliability

- Collaborative Aerospace Life Cycle Systems Engineering Program
- Lean Processes
- Space Elevator Climber
- Reliability of Lunar Bases
- Bone-Mechanics

Work Experience

2005

- Paterson Board of Education
- Easy Pickings
- UCEDA
- PCCC

2012

2015-Present

2003

2007-2011

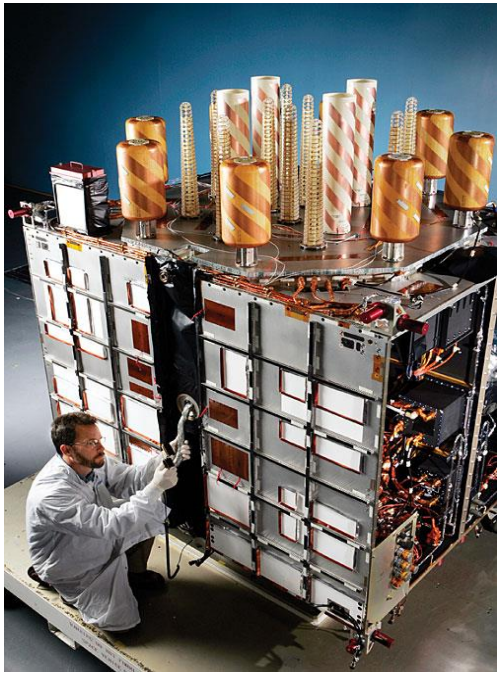
2014

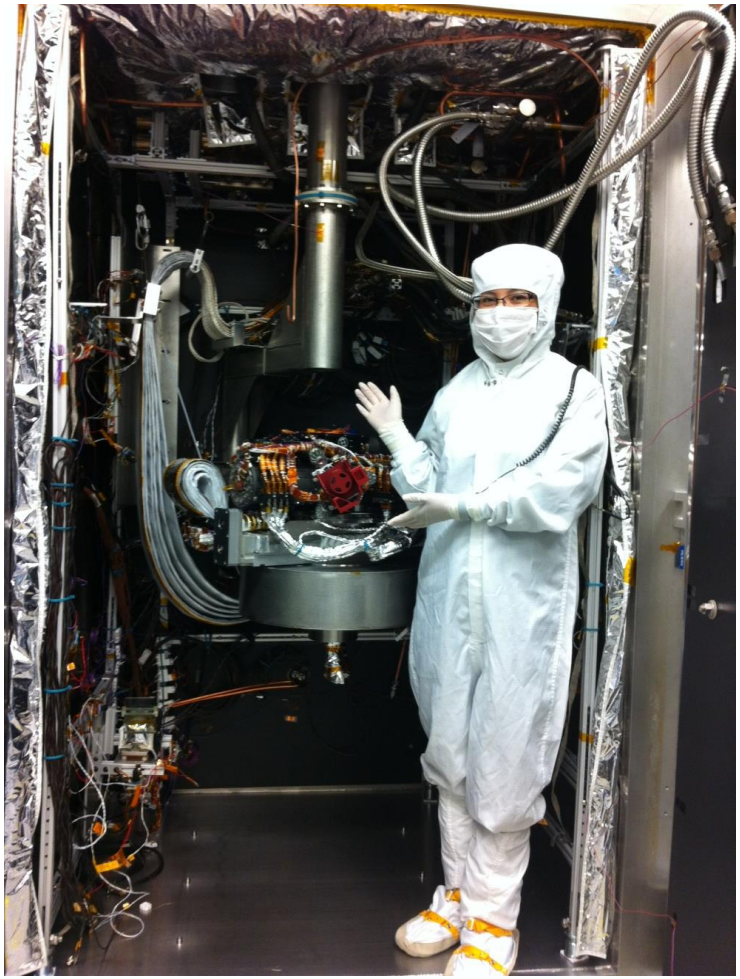
Lockheed Martin

Antennas Design
Mechanical Engineer
GPS III
GOES-R
VINASAT-2
JC-SAT

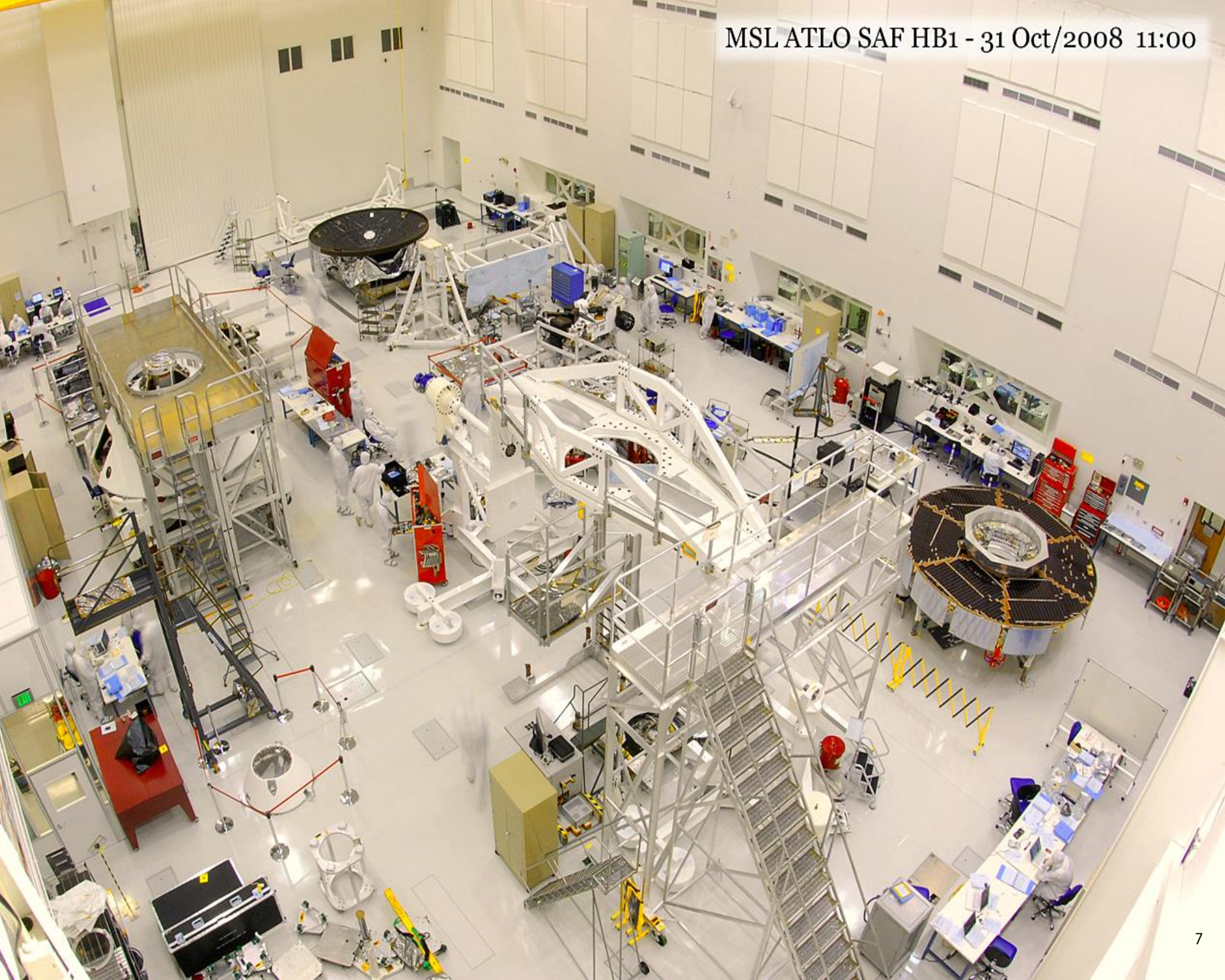
Assembly, Test, and Launch Operations
Systems Integration
Test Engineer
SBIRS
MUOS
B-SAT

Stretch Assignments:
Mission Support
Cubesats
Metamaterials
IRAD
CRAD
Lean Six Sigma

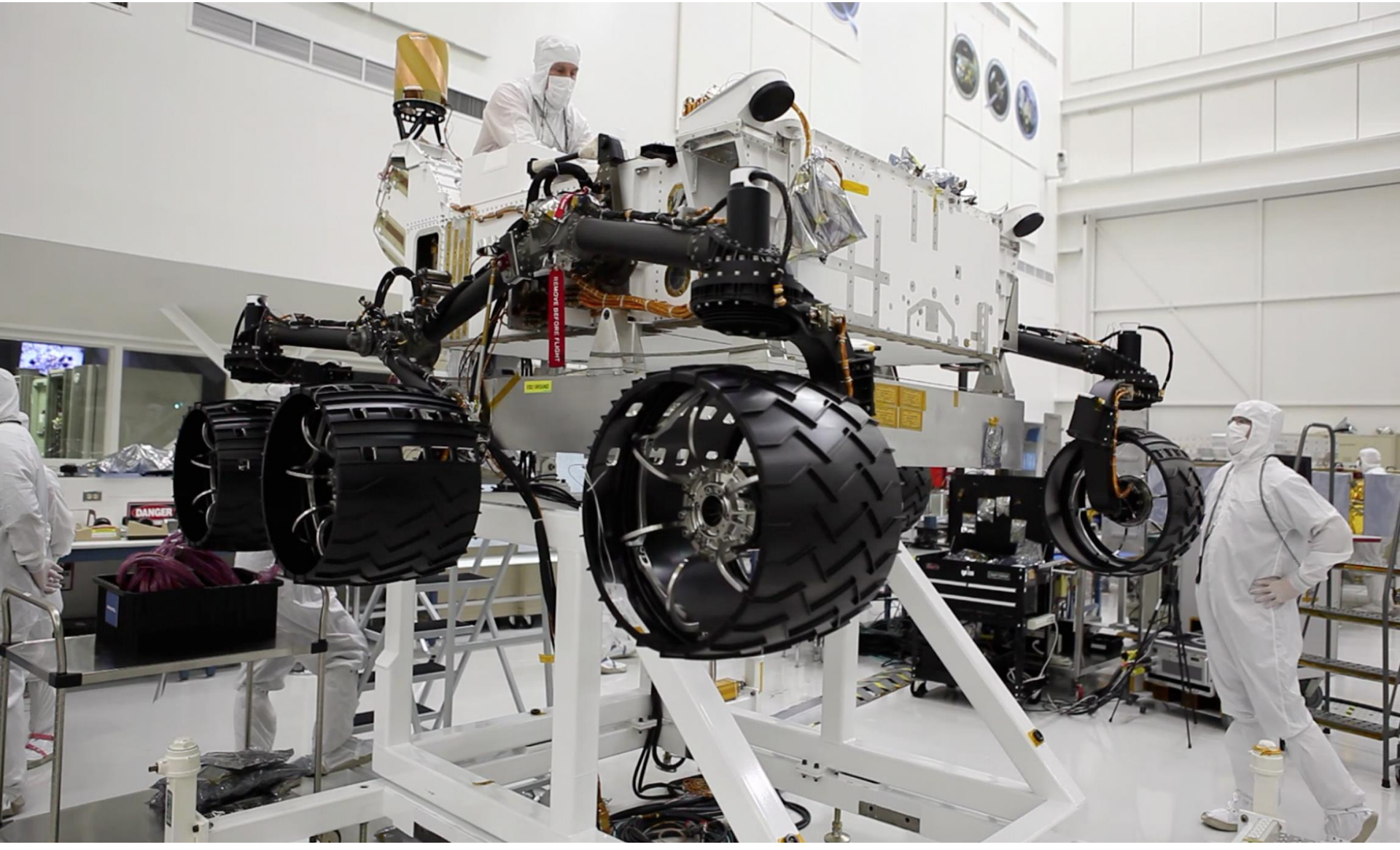




Mechanical Engineer Test Operator, Robotic Manipulators and Deployable Booms Verification & Validation surface tests for sample acquisition, processing and handling


MSL ATLO SAF HB1 - 31 Oct/2008 11:00

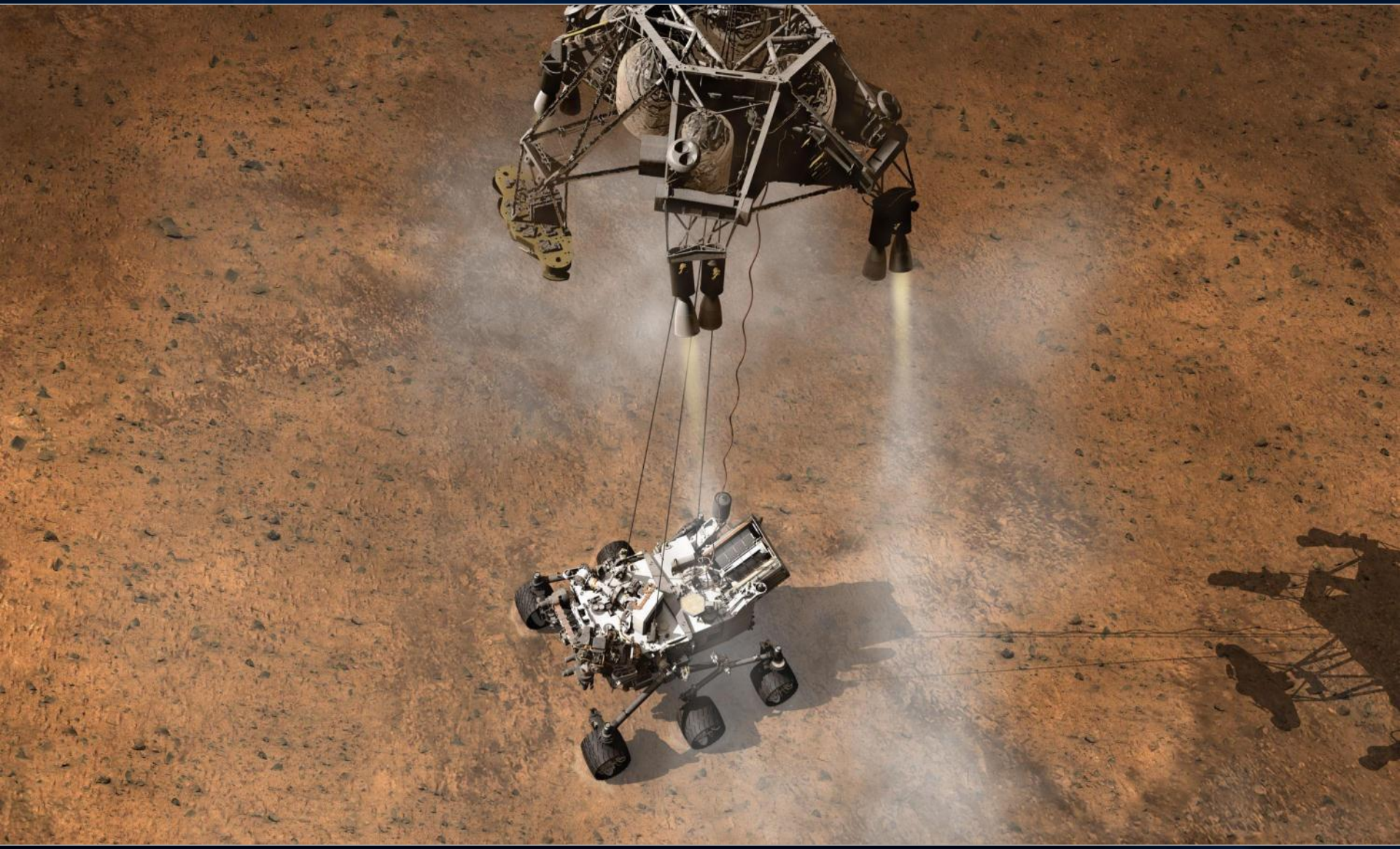
Installation of the Rover Wheels



Assembled Rover

MSL Launch: Nov 26, 2011

On August 5, 2012 PDT (Aug. 6 UTC) Curiosity touched down safely on Mars



Landing Event 8/5/12

CURIOSITY

The Rover Family

Spirit/Opportunity (2004)

Sojourner (1997)

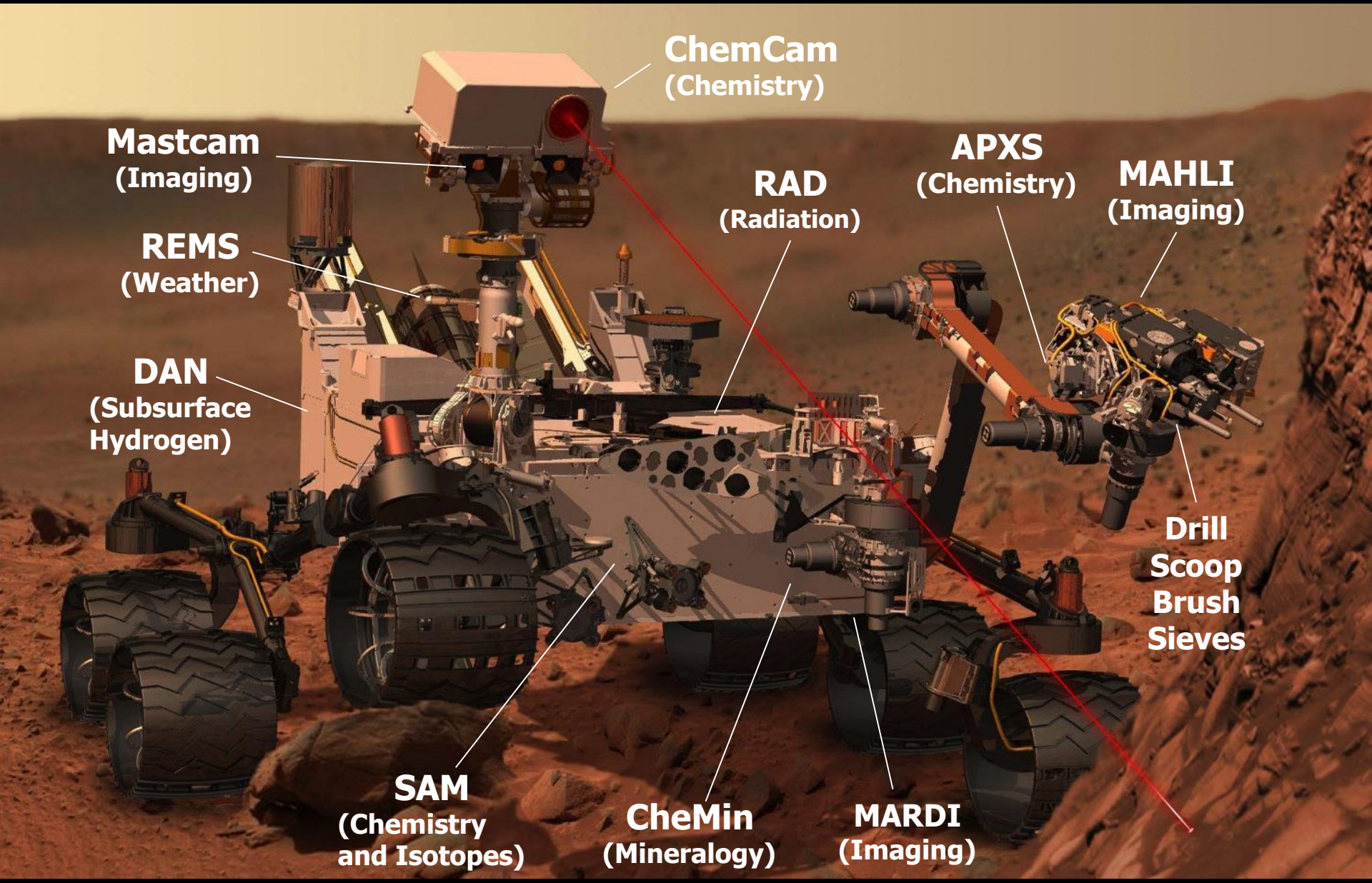
Curiosity (2011)

Curiosity is twice the size
of Mars rovers Spirit and Opportunity
and five times as heavy.

165 lbs	Instruments	11 lbs
1,982 lbs	Weight	384 lbs

Curiosity

Mars Exploration Rover

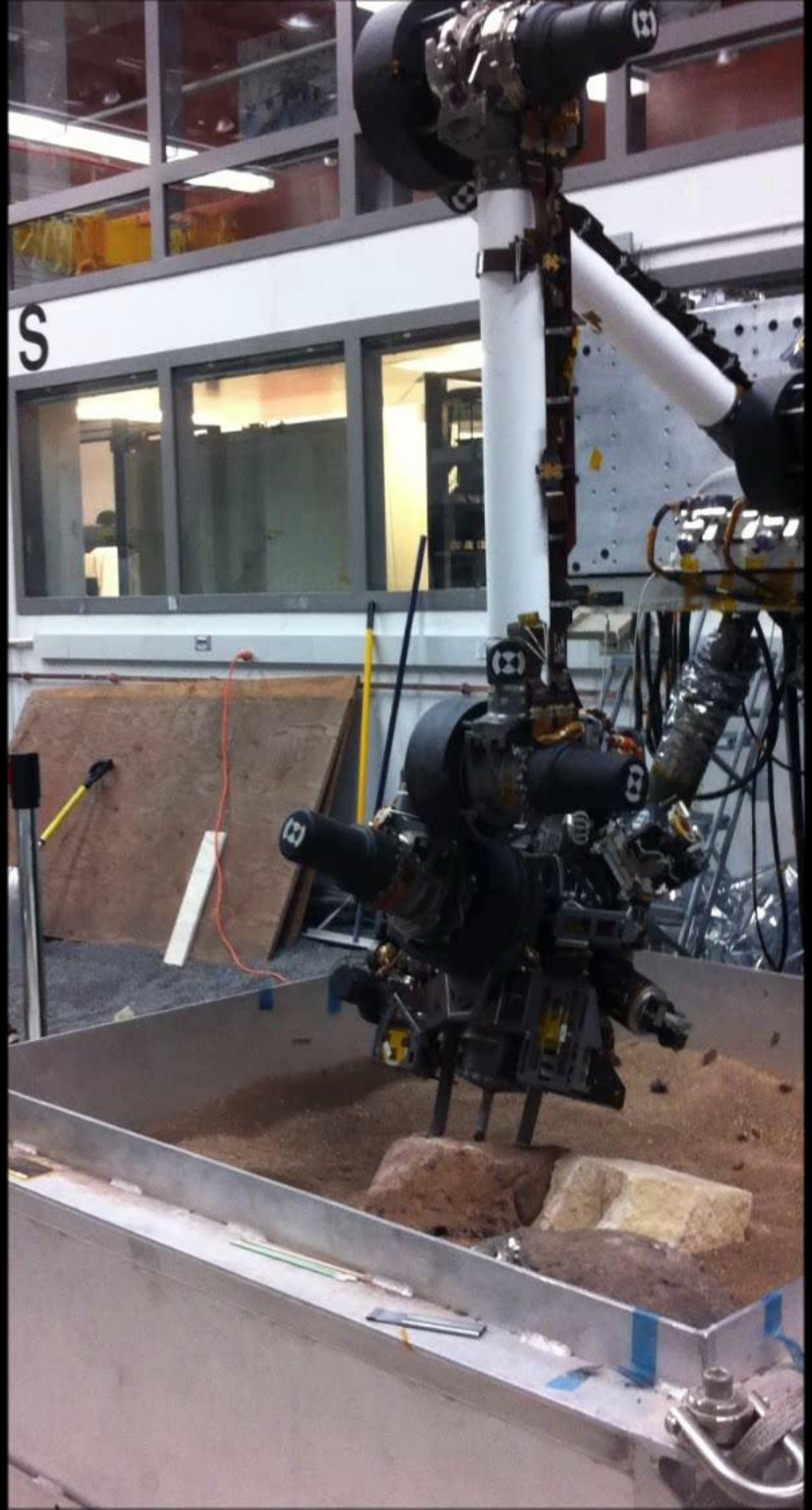


CURIOSITY

Curiosity's Science Payload

Rover Traverse

Arm Operations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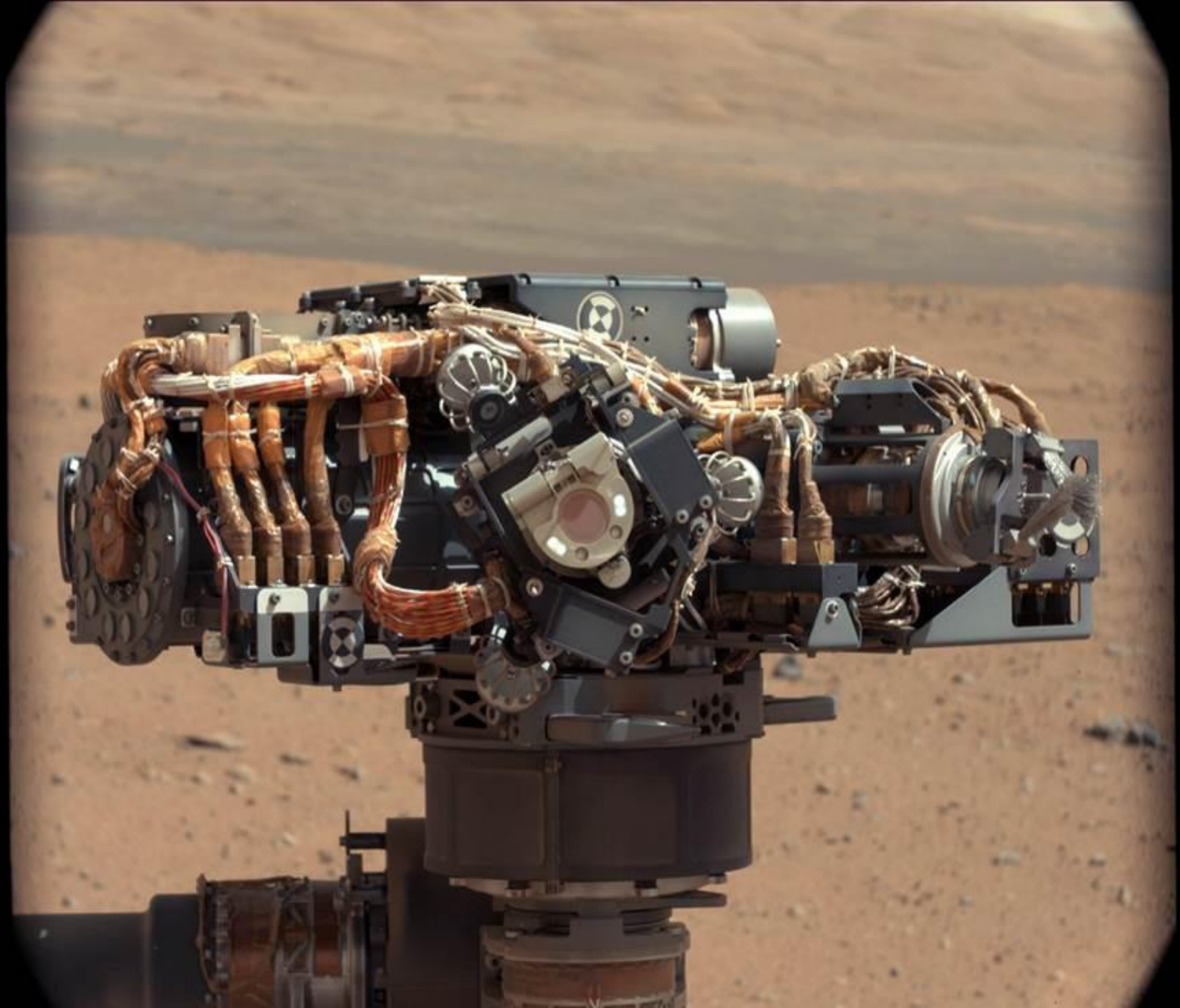
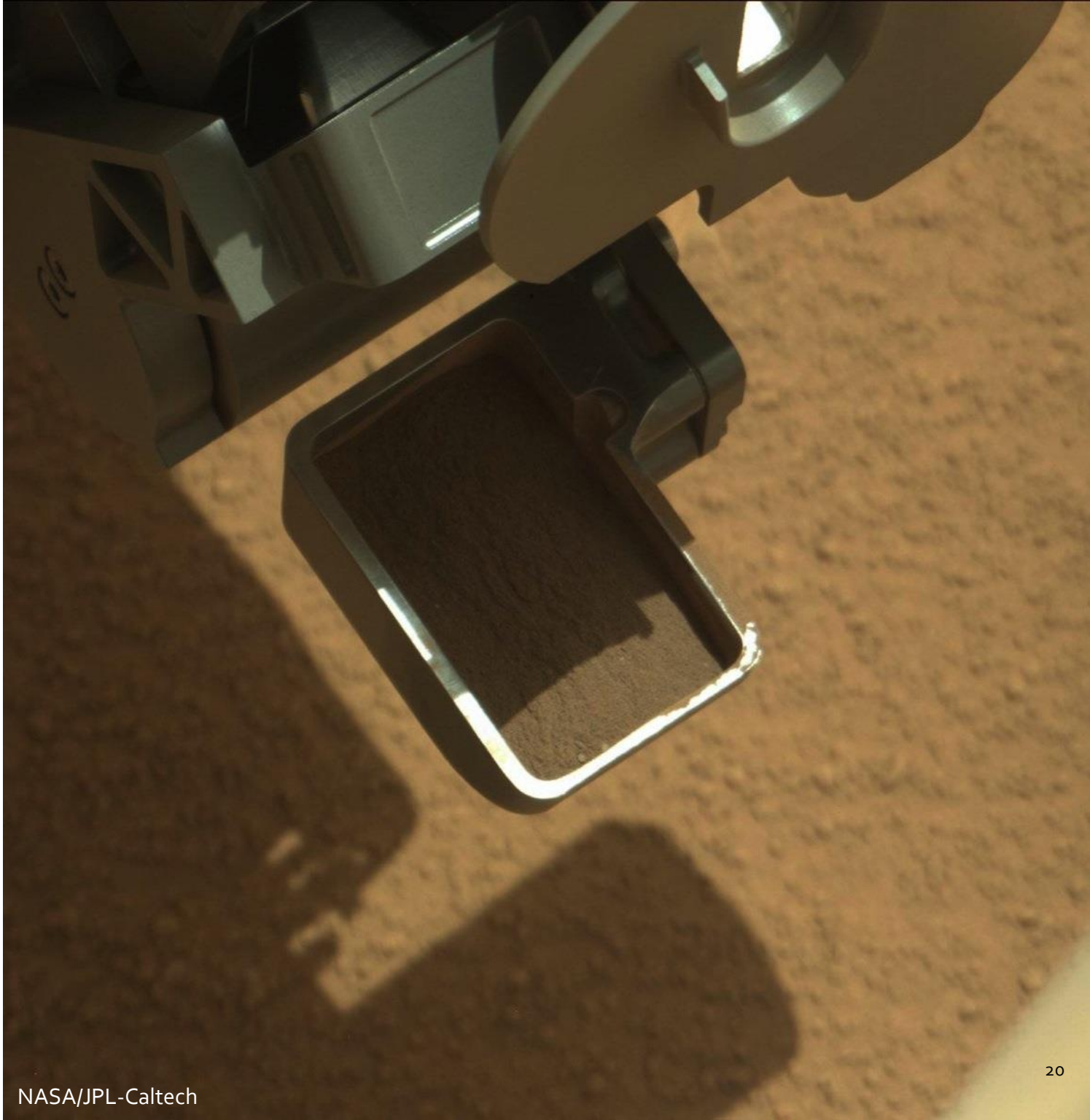
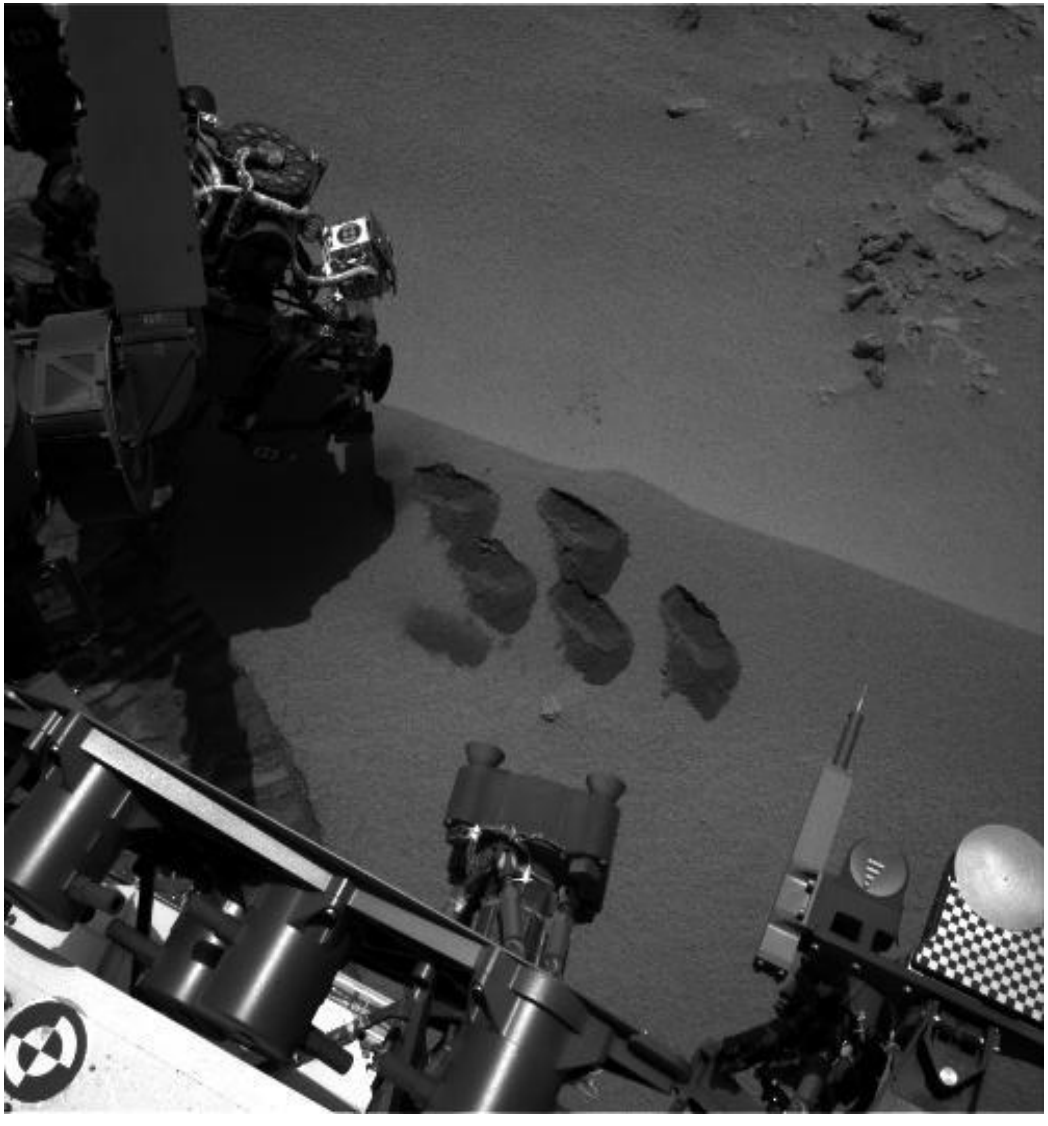


A scoop full of Mars sand



NASA/JPL-Caltech

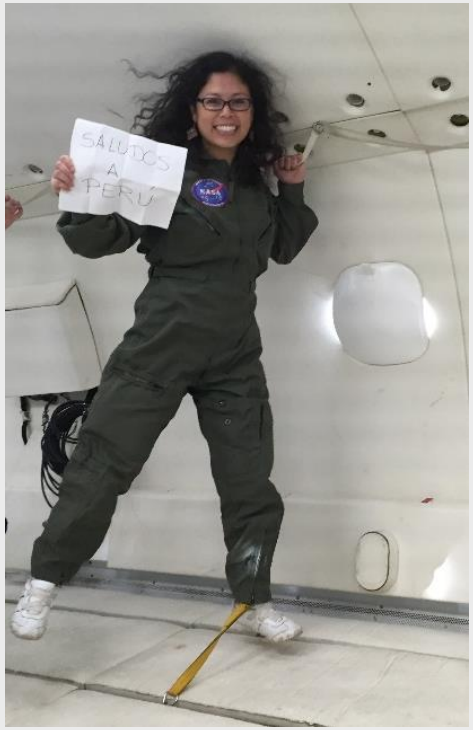
Curiosity on Rocknest



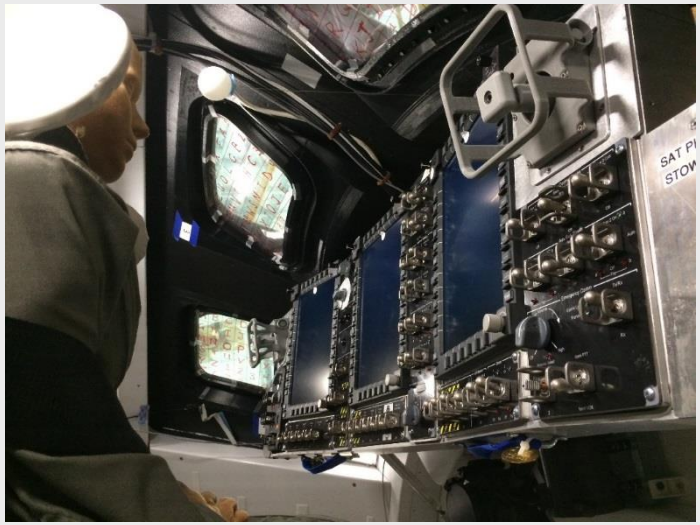
T-38 Display Software Model

J85 Engine Gage Displays and Throttles

J85 Engine Tach Generator &
T5 Resistance Tester



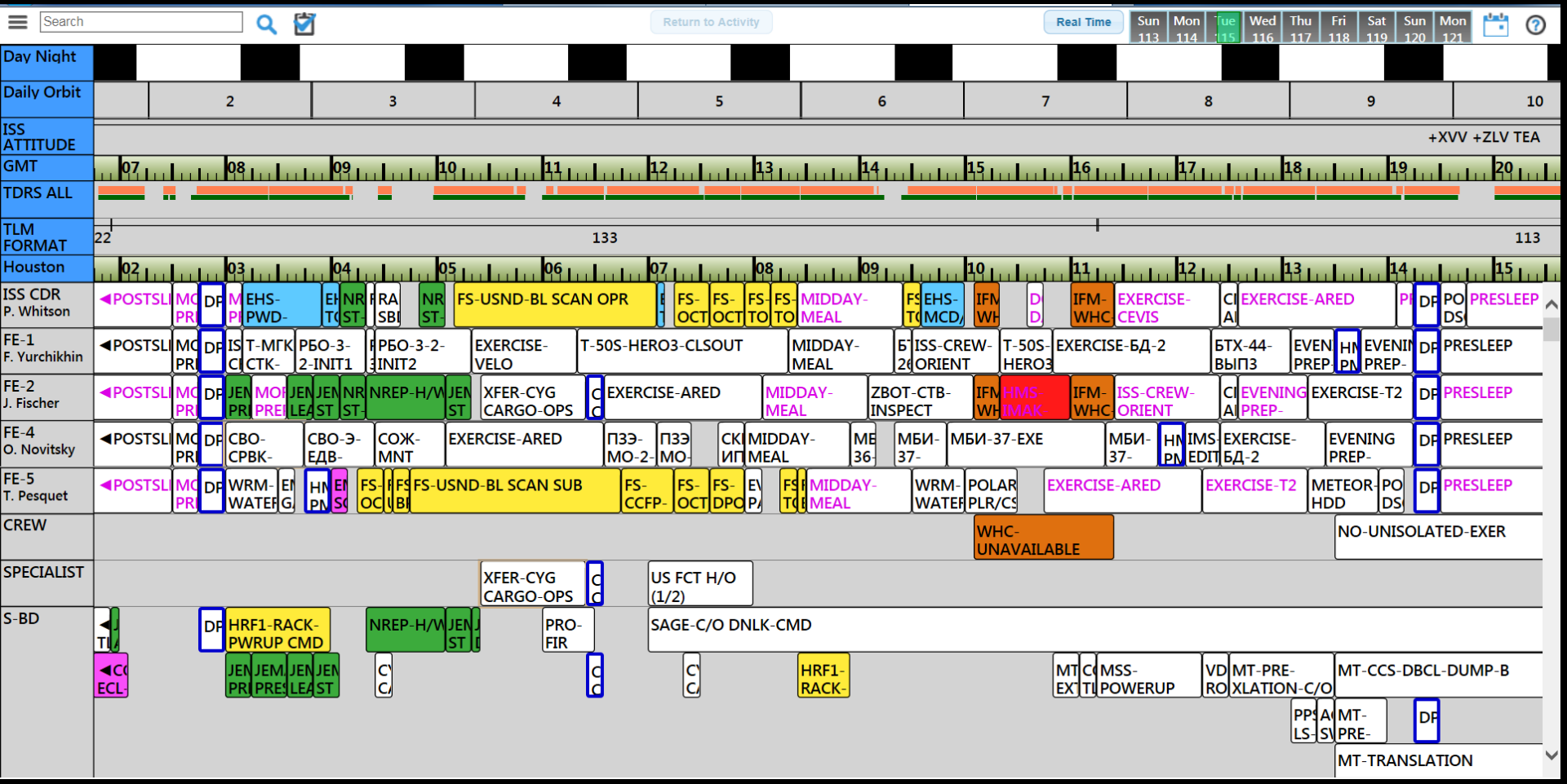
- Usability tests
- Human-in-the-loop tests
- Crew survivability



Docking Hatch Opening HITL

https://www.youtube.com/watch?v=X-IokatihQo&feature=youtu.be

Mission Planning Operations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Return to Activity
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F. Yurchikhin
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J. Fischer
FE-4
O. Novitsky
FE-5
T. Pesquet
CREW
SPECIALIST
S-BD
POSTSLEEP
PRESLEEP
DP
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FS-USND-BL SCAN OPR
FS-OCT
MIDDAY-MEAL
EXERCISE-CEVIS
EXERCISE-ARED
T-МГК-СТК-
РБО-3-2-INIT1
РБО-3-2-INIT2
EXERCISE-VELO
T-50S-HERO3-CLSOUT
ISS-CREW-ORIENT
T-50S-HERO3
EXERCISE-БД-2
БТХ-44-ВЫП3
EVENING PREP-
XFER-CYG CARGO-OPS
EXERCISE-T2
СВО-СРВК-
СВО-Э-ЕДВ-
СОЖ-MNT
ПЗЭ-МО-2-
МБИ-37-
МБИ-37-EXE
IMS-EDIT
EXERCISE-БД-2
EVENING PREP
WRM-WATER
POLAR PLR/CS
METEOR-HDD
WHC-UNAVAILABLE
NO-UNISOLATED-EXER
US FCT H/O (1/2)
HRF1-RACK-PWRUP CMD
NREP-H/W
PRO-FIR
SAGE-C/O DNLK-CMD
MSS-POWERUP
MT-PRE-XLATION-C/O
MT-CCS-DBCL-DUMP-B
MT-PRE-
MT-TRANSLATION


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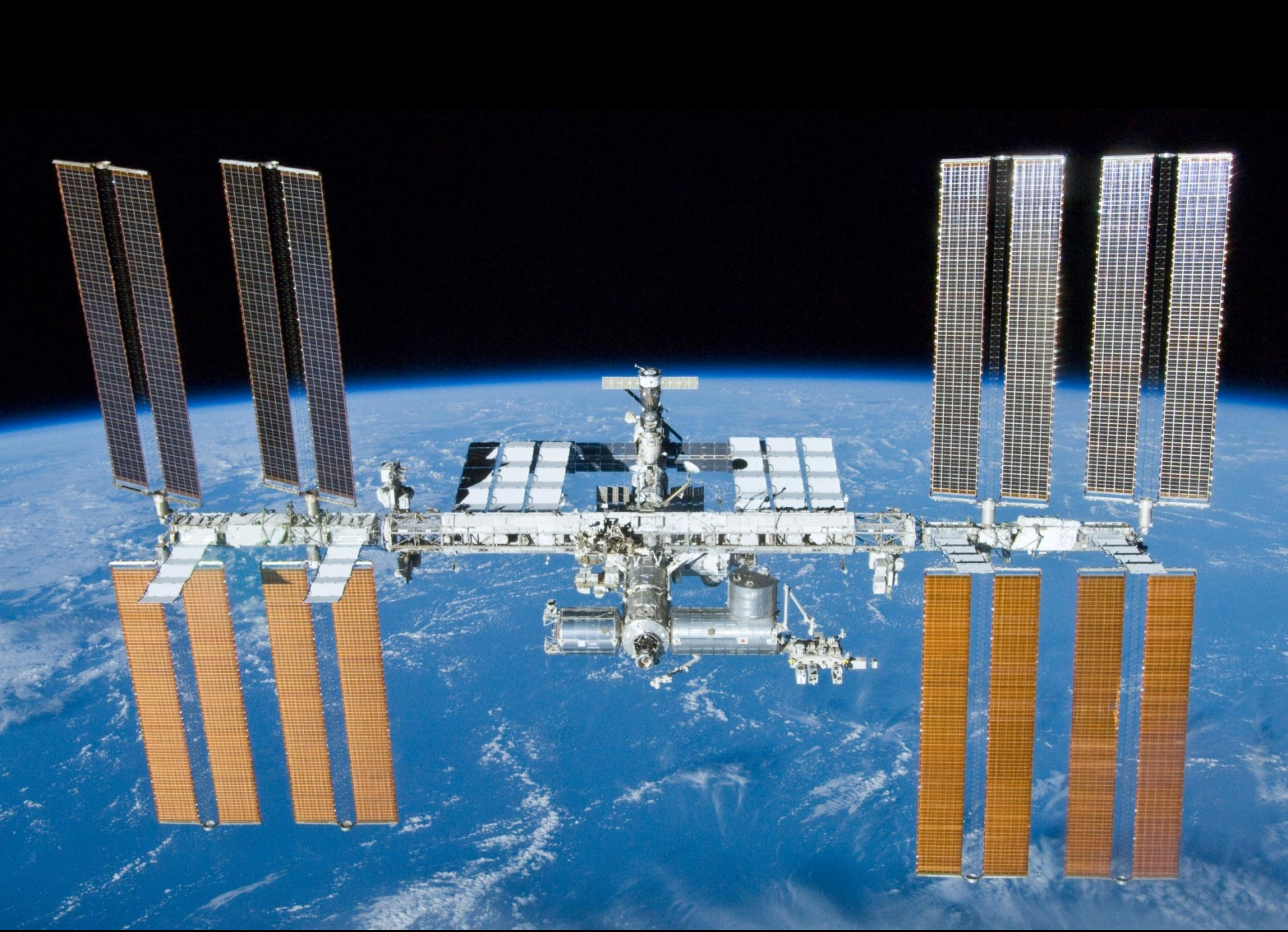



MISSION CONTROL CENTER
SPARTAN
IBO
OPS PLANNER

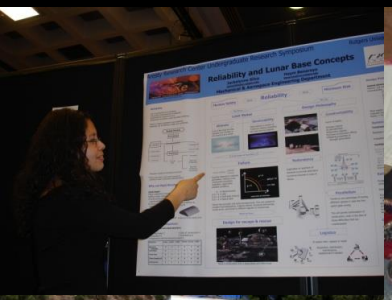

NASA

Welcome Jackelynne to CO7 Flight Planning and Procedures

Hobbies

- AIAA Young Professionals Council
- AIAA Space Architecture Technical Committee
- SGAC (Space Generation Advisory Council for the UNCOPUOS)
- IAF Workforce Development and Young Professionals Committee

ENTRO DE IENCIA ULTURA IDERAZGO
CENTER OF SCIENCE, LEADERSHIP, AND CULTURE


Reliability and Lunar Base Concepts









SA-SGW
SOUTH AMERICAN
SPACE GENERATION WORKSHOP
Sponsors
INAP







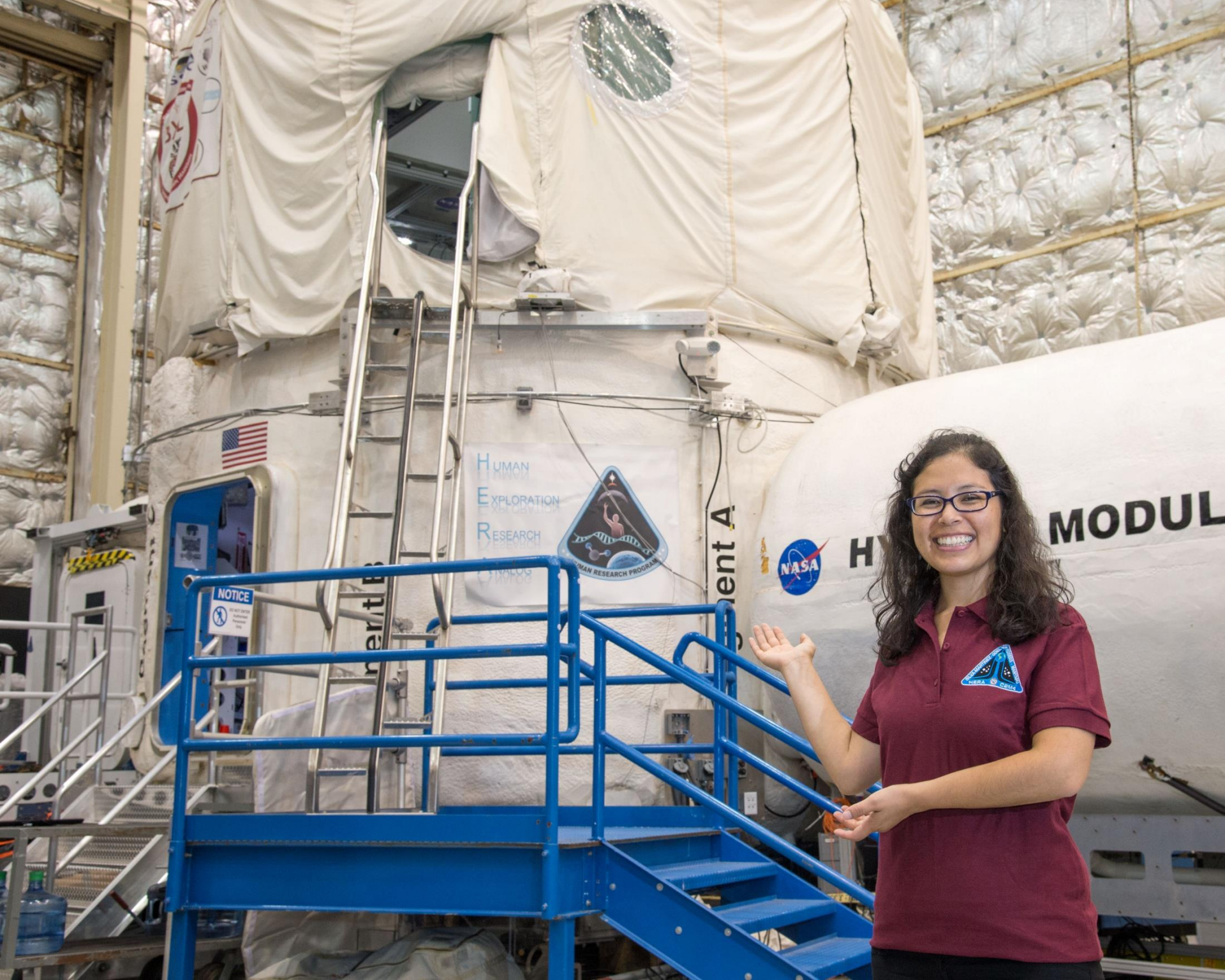






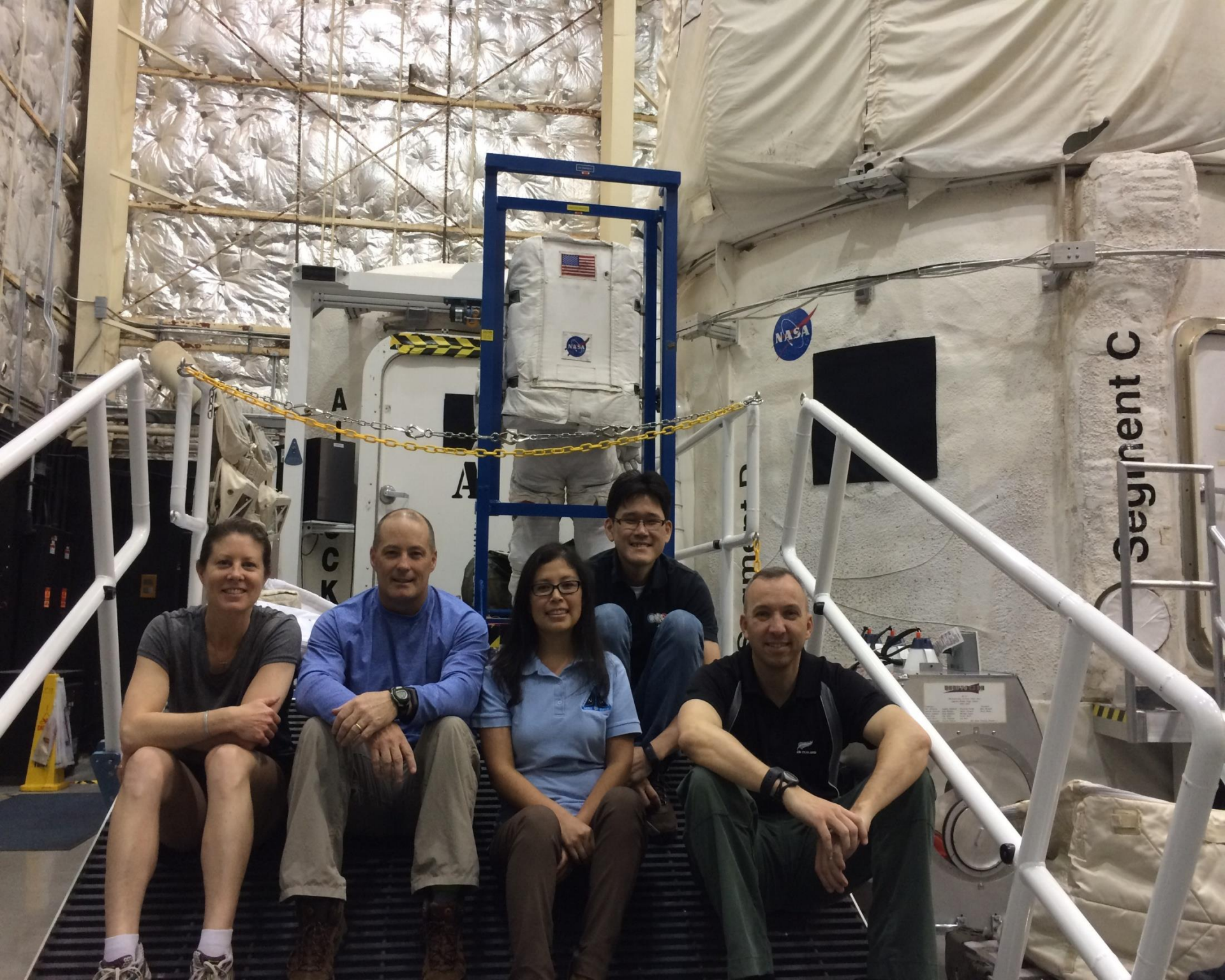


SILVA-MARTINEZ • GOEL
ROGERS • MANYAPU
HERA
C2M4


HUMAN
EXPLORATION
RESEARCH
ANALOG
NOTICE
NASA
MODUL


Segment C


BXL
Segment C
Segment D


NASA
Segment C

Palpanis - Silva-Martinez - Bakken - Goncharov - Harrison - Klos - Nguyen - Nguyen
MDRS Crew 155
24 OCT - 8 NOV
2015
1st Engineers


MDRS Crew 1
Executive Off


MDRS Crew 155
Executive Officer


MDRS Crew 155
Executive Officer


NGUYEN
HARRISON
KLOS

Points to Remember

- Do good in school and go for higher education
- Get involved in school activities, emphasis on leadership
- Apply for scholarships/internships/programs
- Never forget your roots
- School doesn't make the students, it's the students who make the school
- Set a short-term plan, and long-term plan, and be open to change
- Follow your dreams, little by little you will get there
- Discover your passion
- Be the best at what you do!


Jackelynne Silva-Martinez
www.jackelynne.com
Keep Exploring!
Sigan Explorando!
Thank you!
¡ Gracias !