

Acronyms

The first thing we had to learn was the crazy acronyms that NASA uses all over the place: “SRMs” are the solid rocket motors, which make up most of the “SRBs,” the solid rocket boosters. The “SSMEs” are the space shuttle main engines; they burn “LH” (liquid hydrogen) and “LOX” (liquid oxygen), which are stored in the “ET,” the external tank.

Everything's got letters. And not just the big things: practically every valve has an acronym, so they said, “We'll give you a dictionary for the acronyms—it's really very simple.” Simple, sure, but the dictionary is a great, big, fat book that you've gotta keep looking through for things like “HPFTP” (high-pressure fuel turbopump) and “HPOTP” (high-pressure oxygen turbopump).

Then we learned about “bullets”—little black circles in front of phrases that were supposed to summarize things. There was one after another of these little goddamn bullets in our briefing books and on the slides.

“What Do You Care What Other People Think?” Further Adventures of a Curious Character Richard P. Feynman 1989

Acronym	Definition
	A accept
	A ampere
	A analysis
A & P	astrometry and photometry
A-hr	amp-hour
A-STR	autonomous star tracker
A/D	analog to digital
AA	associate administrator
AA	asteroid acquisition
AA-STR	active pixel sensor based autonomous star tracker
AAC	analog acquisitioncard
AAC	analog to analog converter
AAM	asteroid approach maneuver
ABC	agency baseline commitment
ACE	attitude control engineer
ACPM	attitude control performance monitor
ACQ	acquisition
ACS	attitude control system
ADAMS	automated dynamic analysis of mechanical systems
ADC	analog-to-digital converter
ADM	asteroid departuremaneuver
AEHF	Advanced Extremely High Frequency
AETD	Applied Engineering and Technology Directorate
AFB	air force base
AFRL	Air Force Research Laboratory
AFT	allowable flight temperature
Agmt	agreement
Ah	amp-hour
AIM	ATL interface manager
AKPM	attitude knowledge performance monitor
Al	aluminum
Alloc	allocation
am	ante meridiem
Amb	ambient
AMNH	American Museum of Natural History
Amp	amplifier
ANSI	American National Standards Institute
Ant	antenna
AO	announcement of opportunity
APD	avalanche photodiode

APID application process identifier definition
APL Johns Hopkins Applied Physics Laboratory
Ar argon
ARC automatic range calibration
ARC NASA Ames Research Center
arcsec arcsecond
Arg Peri argument of periapsis
ARPM articulation performance monitor
ARR assemble test and launch operations readiness review
ARW angle random walk
AS&D ASRC Federal Space & Defense
AS9100 Aerospace Standard 9100
ASC Advanced Scientific Concepts Inc
ASC Agence spatiale canadienne
asec arcsecond
ASI Agenzia Spaziale Italiana
ASIC application specific integrated circuit
ASIST advanced system for integration and spacecraft test
ASU Arizona State University
AT attenuator
ATL absolute target list
ATLO assembly, test, and launch operations
atm atmosphere
ATP authorization to proceed
AU astronomical unit
AU avionics unit
Au gold
AWD award
az azimuth
B baseline
b boresight
B-Br Phase B-Bridge
Ball Ball Aerospace and Technologies Corporation
BATC Ball Aerospace & Technologies Corporation
BB/EDU brassboard/engineering development unit
BCDA battery charge/discharge assembly
BCM battery charge module
BCM battery control module
BI back-side illuminated
BIP backshell interface plate
BOE basis of estimate

BOL beginning of life
BOM bill of materials
BPF band pass filter
bps bits per second
BPSK Binary Phase Shift Keying
BRDF bi-directional reflectance distribution function
BRM baseline reference mission
BS backshell
BTP build to print
BWG beam waveguide
C carbon
C celcius
C code
c.f. conferre
C&DH command and data handling
C3 launch energy
Ca calcium
Cal-Tech California Institute of Technology
CAPTEM Curation and Planning Team for Extraterrestrial Materials
CAT category
CBE current best estimate
CC cable cut
CC contamination control
cc cubic centimeter
CCA circuit card assembly
CCB change control board
CCD charge-coupled device
CCID MIT Lincoln Laboratory CCD
CCM camera control module
CCP contamination control plan
CCSDS Consultative Committee for Space Data Systems
CCU charge control unit
CCWG Contamination Control Working Group
Cd cadmium
CD compact disc
CDA controllable drive actuators
CDH command and data handling
CDIO Conceive, Design, Implement, and Operate
CDR critical design review
CDRL contract data requirements list
CDS circuit data sheet

CDS correlated double sample
CDU command detector unit
CE chief engineer
CERR critical event readiness review
CEWG Contamination Engineering Working Group
CfA Harvard-Smithsonian Center for Astrophysics
CFD computational fluid dynamics
CFR Code of Federal Regulations
CFR code of foreign relations
CG center of gravity
CHIPS Cosmic Hot Interstellar Plasma Spectrometer
CI Ivuna-like carbonaceous chondrite
CID cable interconnect diagram
CIP common industrial protocol
CIPS cyberspace infrastructure planning system
CK contamination knowledge
CK pointing NAIF SPICE kernel
Cl chlorine
CL confidence level
CLA coupled loads analysis
CLSRB current launch schedule review board
cm centimeter
CM configuration management
CM1 Mighei-type carbonaceous chondrite of petrologic type 1
CMC Center Management Council
CMIC C&DH Module InterfaceCard
CMIC central memory interface card
CMIC Control Module I/F Card
CMMI Capability maturity modal integration
CMMI capability maturity model integration
CMOS complementary metal-oxide-semiconductor
CNES Centre National d'Études Spatiales
CNF Cost No Fee
CO Colorado
Co-I co-investigator
Coax co-axial
COBE COsmic Background Explorer
COF center of figure
COG center of gravity
CoI co-investigator
COLA COLLision Avoidance

CONOPS concept of operations
COP center of pressure
COS Cosmic Origins Spectrograph
COSPAR Committee on Space Research
COTR Contracting Officer Technical Representative
COTS commercial off-the-shelf
CP center of pressure
Cp center of pressure
CP check point
CP coupler
CPAF cost plus award fee
CPC control program component
cPCI compact peripheral component interconnect
CPE certified principal engineer
CPE community and public engagement
CPFF Cost plus Fixed Fee
CPI cost efficiency
CPM communication performance monitor
CPNF Cost-Reimbursable No-Fee
CPS C&DH power supply
CPU Central Processing Unit
CR change request
Cr chromium
CR confirmation review
CR confirmation review
CRM Continuous Risk Management
CSA Canadian Space Agency
CSCI computer software configuration item
Csl cesium iodide
CSO chief safety and mission assurance officer
CSR concept study report
CTC chief test conductor
CTD command and telemetry database
CTE coefficient of thermal expansion
CTP consent to proceed
Cu copper
CU University of Colorado
CUI common user I/F
CV cost variance
CVCM collected volatile condensable materials
CVD chemical vapor deposition

- CVS concurrent versions system
- CWG Cost Working Group
 - d day
 - d delta notation (isotopic ratio)
 - D design
 - D deuterium
 - D scenerio drove module scoring
 - D- dextrorotatory
- D/A Digital to Analog
- D/L downlink
- D12 Discovery 12
 - DA double amplitude
- DAWG Data and Archive Working Group
 - DB database
 - dB decibels
 - DB duplex back-to-back
 - dBi Decibels relative to isotropic
 - dbm power ratio in decibels
- DBPM data bus performcance monitor
 - DC direct current
 - dc direct current
- DCDC DC-to-DC converter
- DCMA Defense Contract Management Agency
- DDOR delta-differential one-way ranging
- DDOR Delta-Differential One-way Ranging
- delta-V Change in Velocity
- Desat Desaturate
 - DG Director General
- DGB disk gap band
- DID data items description
- DIS deputy instrument scientist
- DISR Descent Imager-Spectral Radiometer on Huygens
- DKF DSN keyword file
 - DL downlink
- DLA declination of the launch asymptote
- DLLE downlink loss executive
- DLR Deutsches Zentrum für Luft- und Raumfahrt
 - dm decimeter
 - DN digital numbers
- DNA deoxyribonucleic acid
- DNFPO Discovery and New Frontiers Program Office

DoD Department of Defense
DoD depth of discharge
DOF degree of freedom
DOORS dynamic object-oriented requirements system
DPI deputy principal investigator
DPLR data-parallel line relaxation
DPM deputy project manager
DPM/R deputy project manager for resources
DPS deputy project scientist
DPU digital processing unit
DRAM dynamic random access memory
DRM design reference mission
DSM Deep-Space Maneuver
DSMC direct simulation monte carlo
DSMS Deep Space Mission System
DSN deep space network
DTCI data telemetry command interface
DTCI Data Telemetry Command Interface
DTCI-U Universal Data Telemetry Command Interface
DTGS deuterated triglycine sulfate
DV change in velocity
DVR-8 8-port digital video recorder
Dwgs drawings
DX diplexer
E east
e emissivity
E entry
E research
e.g. *exempli gratia*
E/PO education and public outreach
EA Environmental Assessment
EAC estimate at completion
EAGER-PAK Cobham Life Support's Explosively Actuated Gas Energy Release
EAPS Earth Atmospheric and Planetary Sciences
ECB engineering change board
ECC Emergency Control Center
ECR engineering change request
ECS environmental control systems
EDAC Expandable Digital to Analog Converter
EDL Entry, Descent, and Landing
EDR Engineering Data Records

EDR Engineering Design Review
EDU Engineering Development Unit
EEE electrical, electronic, and electromechanical
EEECB EEE control board
EELV Evolved Expendable Launch Vehicle
EEPROM electrically erasable programmable read only memory
EGA Earth gravity assist
EGSE electrical ground support equipment
EIA Electronic Industries Alliance
EIS Environmental Impact Statement
ELV expendable launch vehicle
EM engineering model
EMF electromotive force
EMF Lockheed Martin Electronic Manufacturing Facility
EMI/EMC Electromagnetic Interference and Electromagnetic Compatibility
EMI/EMC electromagnetic interference/capability
EMP Environmental Management Plan
EMPA Electron Microprobe Analysis
EO-1 Earth Observing One Mission
EOCY end of calendar year
EOL end of life
EOS/Aura Earth Observing System: Aura
EP Earth point
EPF extended payload fairing
EPR engineering peer review
EPS electrical power subsystem
EPSA Lockheed Martin Electrical Parts Stress Analysis
EQM engineering qualification model
ERB executive review board
ERD environmental requirements document
ESD electrostatic discharge
ESMD Exploration Systems Mission Directorate
ESP Emission of Solar Protons
Est estimated
ESTEC European Space Research and Technology Centre
ETC estimate to complete
etc et cetera
ETESP Earth targeting and entry safety plan
ETU engineering test unit
EV earned value
eV electron volt

EVM Earned Value Management
EVMS Earned Value Management System
Ex. External
Expl. Exploration
F Full
f/ focal ratio
FA full angle
FAR Federal Acquisition Regulation
FAST Facilitated Access to the Space Environment for Technology Development and
FCO functional check out
FD Flight Dynamics
FDLC final dynamic loads cycle
FDS flight dynamics subsystem
Fe iron
FEDS front end data system
FEM finite element model
FET field-effect transistor
FHT fault history table
FI front-illuminated
FIB focused ion beam
FK frame NAIF SPICE kernel
Flt Flight
Flt Dyn Flight Dynamics
FM Flight Manager
FMEA failure mode and effects analysis
FMECA Failure Mode Effects and Criticality Analysis
FO Foldout
FONSI Finding Of No Significant Impact
FOR Flight Operations Review
FOS Faint Object Spectrograph
FOV field of view
FP fault protection
FPA focal plane array
FPDD fault protection design document
FPE focal plane electronics
FPGA field-programmable gate arrays
FPR fault protection executive
FPVT fault protection verification test
FRR flight readiness review
FS flight system
FS performed in Flight System Test

FSC flight software component
FSM Flight System Manager
FSW flight software
ft foot
FT-IR Fourier transform infrared spectroscopy
FTA fault tree analysis
FTE full time equivalent
FVT functional validation test
FVT functional verification test
fwd forward
FWHM full width at half maximum
FY fiscal year
G Billion
g force of gravity
g gram
G green
GALEX Galaxy Evolution Explorer
GB Gigabytes
Gb Gigabytes
Gbit gigabit
Gbits gigabits
GBoF Great Balls of Fire: Comets, Asteroids and Meteors
GC-MS gas chromatography with mass spectrometry
GCR galactic cosmic rays
GDS ground data software
Ge germanium
GEMS Gravity and Extreme Magnetism
GEVS general environmental verification specification
GFE government furnished equipment
GFP Government Furnished Property
GHe helium gas
GHz gigahertz
GIDEP government-industry data exchange program
GIF guidance, navigation, and control interface card
GN&C guidance, navigation, and control
GN2 nitrogen gas
GNC guidance, navigation, and control
GND ground
GOES Geostationary Operational Environment Satellites
GOES-R Geostationary Operational Environmental Satellite-R Series
GOLD Rules Goddard Open Learning Design, GSFC Standard 1000

GOWG ground operations working group
GPIB general purpose interface bus
GPR Goddard procedural requirement
GR gold rules
GRAIL Gravity Recovery and Interior Laboratory
GRAM global reference atmospheric model
Grav gravity
GRNS Gamma Ray and Neutron Spectrometer
GRS Gamma Ray Spectrometer
GRT ground readiness test
GSE ground support equipment
GSFC NASA Goddard Space Flight Center
GSM Ground Systems and Mission Operations
GSRT Goddard System Review Team
GV global variable
H hydrogen
H/K Housekeeping
H/W Hardware
H1RG HgCdTe astronomical wide area infrared imager with 1024×1024 pixels, refere
H2O water
HA half angle
HARA hypersonic air radiation algorithm
HBCU/MI Historically Black Colleges and Universities/Minority Institutions
HCD hardware command distribution
HCO Harvard College Observatory
He helium
HED Howardite, Eucrite, Diogenite meteorites
HELT high energy lasers
HEOMD NASA's Human Exploration and Operations Mission Directorate
HEPA high efficiency particulate air
HEPS High-Efficiency Power Supply
HETE-2 The High Energy Transient Explorer
HFS high fidelity simulator
Hg mercury
HGA high gain antenna
HgCdTe mercury cadmium telluride
Hi high
HiRISE High Resolution Imaging Science Experiment
HK Housekeeping
HKPS housekeeping power supply
HLFP High Level Fault Protection

HLP higher-level data products
HPLV-1 high pressure latchvalve
HQ headquarters
hr hour
HRVDM Hubble Robotic Vehicle Deorbit Module
HS heatshield
HSPD-12 Homeland Security Directive 12
HST Hubble Space Telescope
htr heater
HUB Historically Underutilized Business
HUBZ Historically Underutilized Business Zones
HW hardware
HWIL hardware in the loop
Hz hertz
I inspection
I iodine
I/F interface
I/O input/output
I&T integration and testing
IAO Industry Assistance Office
IAR independent assessment review
IBR integratedbaseline review
IC Ithaca College
ICD interface control document
ICDH interface control and data handling
ICESat Ice Cloud, and Land Elevation Satellite
ICP-MS Inductively Coupled Plasma Mass Spectroscopy
ID identity
IDP internet data protocol
IDR interim design review
IES Ion and Electron Sensor
IEST Institute of Environmental Sciences and Technology
IFOV instantaneous field of view
IIS Indigo Information Services, LLC
IK instrument NAIF SPICE kernel
IM instrument manager
IMAGE Imager for Magnetopause-to-Aurora Global Exploration
IMP Imager for Mars Pathfinder
IMS integrated master schedule
IMU Inertial Measurement Unit
in inch

INAF Osservatorio Astrofisico di Arcetri
InGaAs indium gallium arsenide
IO input/output
IP internet protocol
IP Internet Protocol
IPEP IV&V project execution plan
IPETS Integrated Parametric Estimating Tool Set
IPTO initial powered turn-on
IR infrared
IR&D internal research and development
IRAD Internal Research and Development
IRCD interface requirements control document
IRD interface requirements document
IRT independent review team
IS Instrument Scientist
IS isolator
ISC current under short circuit
ISE instrument systems engineer
ISM Instrument System Manager
ISO Infrared Space Observatory
ISO International Standards Organization
ISO Isolator
ISS Imaging Science Subsystem
IT information technology
ITAR international traffic in arms regulations
ITLO integration, test, and launch operations
IV&V Independent Verification and Validation
IVV Independent Verification and Validation
IWG Instrument WorkingGroup
J joule
J-Asteroid java asteroid mission-planning and analysis for remote sensing
J2000 Julian date 2451545.0 TT
JAXA Japan Aerospace Exploration Agency
JHU Johns Hopkins University
JPIP JointProject Implementing Plan
JPL NASA Jet Propulsion Laboratory
JSC NASA Johnson Space Center
JWST James Webb Space Telescope
K K shell emission line
K kelvin
K potassium

K thousand
K12 kindergarten through twelfth grade
kbit kilobit
KBO Kuiper Belt Object
kbps kilobits per second
KC Kingsborough Community College of the City University of New York
KDP key decision point
keV kiloelectron volt
keV Thousand electron volts
kg kilogram
kHz Thousand hertz
km kilometer
KOZ keep-out zone
KPMP key project management practices
krad Thousand rads (10 gray)
Krad(Si) 100 kiloergs/grams of silicon
KSC NASA Kennedy Space Center
ksi kilopound per square inch
kx spring force
kΩ kilohm
L launch
l length
L level
L levorotatory
L x C likelihood versus consequence
L- Pre-Launch
L+ Post-Launch
L2MS Two Step Laser Desorption Mass Spectrometry
LAC LEISA Atmospheric Corrector
LAPST Lunar and Planetary Sample Team
LaRC NASA Langley Research Center
LAURA Langley Aerothermodynamic Upwind Relaxation Algorithm
lbf pound force
lbs pounds
LC launch complex
LC-MS Liquid Chromatography Mass Spectrometry
LCROSS Lunar Crater Observation and Sensing Satellite
LEISA Linear Etalon Imaging Spectral Array
LELT low energy lasers
LGA low gain antenna
Li lithium

LIDAR Light Detection and Ranging
LiSO2 lithium sulfate
LIT lost in time
LL Lincoln Laboratory
LL long lead
LL long-lead
LLC Limited Liability Company
LLIL limited life items list
LLN lessons learned network
LM Lockheed Martin Corporation
LM-SSC Lockheed Martin Space Systems Company
LMA Lockheed Martin Aeronautics
LMCO Lockheed Martin Corporation
LMSSC Lockheed Martin Space Systems Company
LOC lines-of-code
LOLA Lunar Orbiter Laser Altimeter
LOS loss of sample
LOTIS Livermore Optical Transient Imaging System
LPF large payload fairing
LPI Lunar and Planetary Institute
LPL Lunar and Planetary Laboratory
LRD launch readiness date
LRD Launch Readiness Date
LRO Lunar Reconnaissance Orbiter
LROC Lunar Reconnaissance Orbiter Camera
LRR launch readiness review
LSAPT Lunar Sample Analysis and Planning Team
LSK Leapsecond Kernel
LSM launch segment manager
LSP Launch Service Program
LSSP launch site support plan
LSTO launch service task order
LTR low thrust REA
LUT lookup-table
LV latch valve
LV launch vehicle
LV Launch Vehicle
LVDS low voltage differential signal
LVF linear variable filter
LVPS low voltage power supply
LWS Living With A Star

LxC likelihood versus consequence
 m meta
 m meter
 M million
 M mitigate
 M&P Materials and Processes
 M55J/PC a graphite/polycyanate composite
 MA mission assurance
 MAAF Michael Army Air Field
 MAC-M motor articulator control module
 MAC88105,11 MacAlpine Hills Icefield meteorite 88105 split 11
 MACM motor articulator control module
 MAD motor articulation driver
 MADC motor controller card
 MAIP mission assurance implementation plan
 MAR mission assurance requirement
 MAVEN Mars Atmosphere and Volatile Evolution
 Mb megabits
 MB megabytes
 Mbps megabits per second
 Mbyte megabyte
 MCPM momentum control performance monitor
 MD Mission Director
 MDA MacDonald, Dettwiler and Associates
 MDC Motor Drive Card
 MDR mission definition review
 MDR Mission Design Review
 ME main engine
 Me methyl
 ME month end
 MeanEclp Mean Ecliptic
 MEB main electronics box
 MEI Muñiz Engineering, Incorporated
 MEL master equipment list
 MEOP maximum expected operating pressure
 MER Mars Exploration Rover
 MESR noise equivalent spectral radiance
 MESSENGER Mercury Surface, Space Environment, Geochemistry, and Ranging
 MEV maximum expected value
 MEV Maximum Expected Value
 MeV megaelectron volts

MFB multi-function bus
Mg magnesium
mg milligram
MG Mixed Gravel
MGA medium gain antenna
MGS Mars Global Surveyor
MGSE mechanical ground support equipment
MHz megahertz
MICD mission interface control document
micro-g microgravity
micron micrometer
MIF Maneuver Implementation File
MIL military standard
mil Thousandth of an inch (25.4 μm)
MIMU Miniature Inertial Measurement Unit
min minute
Mini-TES Miniature Thermal Emission Spectrometer
MIPS mandatory inspection points
MIPS million instructions per second
MIS management information system
MIT Massachusetts Institute of Technology
MIUL materials identification and usage lists
MIWG mission integration working group
MIXS Mercury Imaging X-Ray spectrometer
mJ millijoule
MLI multi-layer insulation
mm millimeter
MM mission management
MMR monthly management review
MMS Magnetospheric Multiscale
Mn manganese
mN millinewton
MOC Mission Operations Center
MOI moment of inertia
MOIT moment of inertia test
MOM mission operations manager
MOR mission operations review
MoS₂ molybdenum disulfide
MOSFET metal-oxide-semiconductor field-effect transistor
MOU Memorandum of Understanding
MP match point

MPCB materials and process control board
MPCP mishap preparedness and contingency plan
MPD mission phase discriminator
MPDR mission preliminary design review
MPE Materials & Processes Engineer
MPM Micro-Frame Program Manager
Mrad million rads (10 kilogray)
mrad milliradian
MRB material review board
MRD mission requirements document
MRO Mars Reconnaissance Orbiter
MRR mission requirements review
MS Mass Spectrometry
MS Microsoft
ms millisecond
MSA mission support area
MSA multi-mission support area
MSE mission systems engineer
MSFC NASA Marshall Space Flight Center
MSL Mars Science Laboratory
MSR Mars Sample Return
MSR monthly status review
MSR Monthly Status Review
MSSS Malin Space Science Systems
MST Lockheed Martin Mission Systems Training
Mt mount
MTF modular transferfunction
MTF multipurpose test facility
MUS mission unique services
MUX multiplexer
Mv Apparent Visual Magnitude
MWG management working group
Myr million years
mΩ milliohm
N newton
N nitrogen
N north
N-SAT-110 a geostationary communications satellite
N.C. normally closed
N/A non-aplicable
N₂ nitrogen gas

N₂H₄ hydrazine
Na sodium
NAIF Navigation and Ancillary Information Facility
NAIS NASA Acquisition Internet Service
nanoSIMS Nanoscale Secondary Ionization Mass Spectrometry
NAR Non-Advocacy Review
NASA National Aeronautics and Space Administration
NavCam navigation camera
Nd neodymium
ND neutral density
Nd:YAG neodymium-doped yttrium aluminium garnet
NDI nondestructive inspection
NEAR Near Earth Asteroid Rendezvous - Shoemaker
NEDe Noise Equivalent Delta Emissivity
NEO Near-Earth Object
NEPA National Environmental Policy Act
NEQAIR nonequilibrium air radiation
NESC NASA Engineering and Safety Center
NESR noiseequivalent spectral radiance
NExT New Exploration of Comet Tempel-1
NF New Frontiers
NF-3 New Frontiers cycle 3
NFDPO Discovery and New Frontiers Program Office
NFP New Frontiers Program
NFPO New Frontiers Program Office
NFSS New Frontiers in the Solar System
NFT natural feature tracking
ng nanogram
Ni nickel
NICMOS Near Infrared Camera and Multi-Object Spectrometer
NID NASA Interim Directive
NIR Near Infrared
NIRCam Near Infrared Camera
NIST National Institute of Standards and Technology
NLS NASA launch services
NLT not later than
nm nanometer
NMNH National Museum of Natural History
NMP N-methyl-2-pyrrolidone
No number
NOAO National Optical Astronomy Observatory

NOSSE New Opportunities in Solar System Exploration
NPD NASA Policy Directive
NPP National Polar-Orbiting Operational Environmental Satellite System (NPOESS)
NPR NASA procedural requirement
NRC National Research Council
NRE Non-recurring engineering
ns nanosecond
NSF National Science Foundation
NSI NASA standard initiator pyrotechnic device
NSS non-standard services
NSSDC National Space Science Data Center
NTE not to exceed
NVR non-volatile residue
o ortho
O oxygen
O-Rex OSIRIS-REx
O-REx OSIRIS-REx
OAP off-axis parabolic
OCAMS OSIRIS-REx Camera Suite
OCO Orbiting Carbon Observatory
OCSSG Organic Contamination Science Steering Group
OD orbit determination
ODC Other Direct Charge
ODM orbit departure maneuver
ODOCS OSIRIS-REx document server
ODY Mars Odyssey
OE Opposition Effect
OIA Office of Instruction and Assessment
OIA operational interface agreement
OL battery on-line
OLA OSIRIS-REx Laser Altimeter
ONIMS OSIRIS-REx Neutral and Ion Mass Spectrometer
OpNav optical navigation
OPO Optical Parametric Oscillator
OPT OSIRIS-REx PlanningTool
OPZ operational pointing zone
OREX OSIRIS-REx
Orgs organizations
ORR operational readiness review
ORT operational readiness tests
OS operating system

OSIRIS Origins, Spectral Interpretation, Resource Identification, and Security NASA Di:
OSIRIS-REx Origins, Spectral Interpretation, Resource Identification, and Security–Regolith
OTES OSIRIS-REx Thermal Emission Spectrometer
OVIRS OSIRIS-REx Visible and Infrared Spectrometer

- p para
- P partial
- P participates in scenario
- P Phosphorous
- p ratio of the circumference to diameter of a circle
- P/N part number
- PA Power Amplifier

PAAD pointing and alignment document
PAIP Product Assurance Implementation Plan
PAL program asset library
PAO Public Affairs Office
PAPL program approved parts list
PAPU pyro and propulsion unit

- PAR performance assurance requirements
- Pb lead

PBRA portfolio based risk assessment
PCA pressurant control assembly
PCB parts control board
PCB printed circuit board
PCK planetary constants NAIF SPICE kernel

PCPM power control performance monitor

- PCR polymerase chain reaction
- Pd paladium

PDACS power distribution and control system
PDDU power distribution and drive unit

- PDF Probability Distribution Function

PDLC preliminary dynamic load cycle
PDP propulsion, diode & pyro
PDR preliminary design review
PDS planetary data system

- PE preliminary examination
- PER pre-environmental review

PFM proto-flight model
PFR problem failure report

- pg picogram

PGSR Preliminary Ground System Review

- Ph phase

Ph.D. doctor of philosophy
PHA potentially hazardous asteroid
PHST packaging, handling, storage, and transportation
PHX Phoenix
PI principal investigator
PIA propellant isolation assembly
PICA phenolic impregnated carbon ablator
PIP Project Implementation Plan
PIU Propulsion and Pyrotechnic Initiation Unit
PLA program level requirement
PLAR Post-Launch Assessment Review
PLF payload fairing
PLRA program level requirements appendix
PM Phase Modulation
pm post meridiem
PM project manager
PM Project Manager
PMAD power management and distribution
PMD propellant management device
PMP parts, materials, and processes
PMPCB parts, materials and processes control board
PO purchase order
POD point of departure
POP pyro or propulsion card
PowerPC Performance Optimization With Enhanced RISC – Performance Computing
ppb parts per billion
PPCO Project Planning and Control Officer
ppm parts per million
PPO Planetary Protection Officer
PPP Planetary Protection Plan
PPS pulse per second
pps Pulse Per Second
PR problem report
PR/PFR problem reporting/problem failure reporting
PRA Probabilistic Risk Assessment
PRE project reliability engineer
Prox-Ops proximity operations
PRT platinum resistance thermometer
PS project scientist
PSA parts stress test
PSE Project Systems Engineer

PSF point spread function
PSFD particle size frequency distribution
PSI Planetary Science Institute
psi pounds per square inch
psia pounds per square inch absolute
PSR pre-ship review
PSSP Participating Sample Scientist Program
PSWG payload safety working group
Pt platinum
PV pyrovalve
PVT pressure, volume, and temperature
PWB printed wiring board
px pixel
PY pyro
PYLD payload
Pyro pyrotechnic
Q qualification unit
Q quarter
QA quality assurance
QE Quantum efficiency
QED Quarterly Executive Dialog
QLLC quick look loads cycle
QNOTE quality note
QSR Quarterly Status Reviews
Qual qualification
R radius
R red
R rehearsal
R release
R requirements
R resolving power
r roll
R&A research and analysis
R&R retention and release
RAAN Right Ascension of the Ascending Node
RAC Robotic Arm Camera (Phoenix)
RAD 750 Radiation-Hardened PowerPC 750
RADEQUIL generalized radiation transfer code
RAL reverberant acoustic lab
RAO Resource Analysis Office
RBA risk based assessment

RBF remove before flight
RBSP Radiation Belt Storm Probes
RCP Right-Circularly Polarized
RDCU requirements, design, code, and unit
RDM RadiationDesign Margin
RDR Reduced Data Record
Re-Eng reengineered
RE/CE radiated emissions/conducted emissions
REA rocket engine assembly
ReEng reengineered
REPM rendezvous performance monitor
REXIS Regolith X-ray Imaging Spectrometer
RF radio frequency
RFA request for action
Rg range
RLA right ascension of the launch asymptote
RM risk manager
RMAPP risk management application
RMC Risk Management Coordinator
RMD Risk Management Database
RMDB risk management database
RMRB Risk Management Review Board
RMS root mean square
RNA ribonucleic acid
ROI region of interest
ROIC readoutintegrated circuit
ROM rough order of magnitude
ROMP rink and opportunities managemnt plan
ROSES Research Opportunities in Space and Earth Sciences
rpm revolutions per minute
RQ36 Asteroid (101955) Bennu
RRT risk reduction tests
RS-422 recommended standard 422
RS-422 Recommended Standard 422
RSS residual sum of squares
RT real time
RVV requirements verification and validation
RWA reaction wheel assembly
Rx Receive
RY real year
s second

S south
S standard deviation
S sulfur
S waveguide switch
S/A solar array
S/C spacecraft
S/N signal to noise ratio
S/W software
S&ES Lockheed Martin Space Systems Sensing & Exploration Systems
S&MA safety and mission assurance
SA sample analysis complete
SA Solar Array
SAE Society of Automobile Engineers
SAIC Science Applications International Corp.
SAM Sample Analysis at Mars
SAMY solar array -Y
SAMYG solar array -Y gimbal
SAP Systems, Applications, and Products in Data Processing
SAPY solar array +Y
SAPYG solar array +Y gimbal
SARA sample acquisition and return assembly
SAS solar array simulator
SASM solararray switching modules
SATAG solar array two axis gimbal
SAWG spectral analysis working group
SB Small Business
SBIRS Space-Based Infrared System
SBN SmallBodies Node
SC sun cone
SC/OC circular- polarization state/opposite circular- polarization state
SCATHA Spacecraft Charging at High Altitude
scc standard cubic centimeter
SCD source control drawings
SCE Student Collaboration Experiment
scf/hr standard cubic feet per hour
SCFH standard cubic feet per hour
SCLK Spacecraft Clock
SCM software configuration management
SCSPEC spacecraft specification
SDA science data analysis
SDB Small Disadvantaged Business

SDD silicon drift detector
SDM system design meeting
SDO Solar Dynamics Observatory
SDP safety data package
SDP science data processing
SDP Software Development Plan
SDR system definition review
SDRAM synchronous dynamic random-access memory
SDRL subcontract data requirements list
SDST Small Deep-Space Transponders
SDST synchronous dynamic random access memory
SE system engineering
SEER-SEM Parametric Software Cost Estimating Tool
SELTS self test software
SEM scanning electron microscope
SEMP system engineering management plan
Sen Senior Scientist
SEO Science Enhancement Options
Sep separation
sep/spin Separation / Spin-up
SEQ sequence
SERVB Systems Engineering Risk Validation Board
SES Lockheed Martin Space Exploration Systems
SETI Search for Extraterrestrial Intelligence
SEU single event upset
SEWG Systems Engineering Working Group
SF sensor frame
SFC spacecraft flight computer
SFO schedule folout
Si silicon
SiC silicon carbide
SIDECAR system for image digitization, enhancement, control, and retrieval
SIM simulator
SIMS Secondary Ionization Mass Spectrometry
SIQT software item qualification test
SIR System Integration Review
SIRTF Spitzer Space Telescope (formerly Space Infrared Telescope Facility)
SIS software interface specification
SLA super light weight ablator
SLO suspended load operations
SLOC software lines of code

SMA safety and mission assurance
SMART-1 Small Missions for Advanced Research in Technology-1
SMAWG Safety and Mission Assurance Working Group
SMD Science Mission Directorate
SME safe mode executive
SME subject matter expert
SMM sample mass measurement
SMM system management mode
SMSR Safety and Mission Success Review
Sn tin
SNC Sierra Nevada Corporation
SNET start no earlier than
SNR signal to noise ratio
SNVL Lockheed Martin Space Systems in Sunnyvale, CA
SO₂ sulfur dioxide
SOC Science OperationsCenter
SOC state of charge
Soft-SIM Software Simulator
SoftSim software simulator
SOSC space operations and simulation center
SOW statement of work
SPAR Systems Parametric Analysis and Risk
SPAS spacecraft performance analysis software
SPC stereophotoclinometry
SPD SMD Policy Document
SPE solar particle events
SPE Sun-Probe-Earth
SPEAD simulation for prediction of entry article demise
SPF single point failure
SPI schedule efficiency
SPICE Spacecraft, Planet, Instrument, Constants, and Events
SPIDER spacecraft imbedded distributed error response
SPK ephemerides NAIF SPICE kernel
SPM science performance monitor
SPOC science processing and operations center
SPR software problem report
SQA software quality assurance
SQPM sequence performance monitor
sr steradian
SRAM static random access memory
SRB software review board

- SRB solid rocket booster
- SRB standing review board
- SRC sample return capsule
- SRCC safety requirements compliance checklist
- SRR system requirements review
- SRS software requirement specification
 - SS special study
 - SS stainless steel
- SSA sunsensor assembly
- SSB Space Support Building
- SSD JPL Solar System Dynamics
- SSER Solar System Exploration Roadmap
- SSI Space Science Institute
 - SSI Surface Stereo Imager
 - SSL Space Systems Laboratory
- SSM software systems management
- SSMO Space Science Mission Operations
- SSPP system safety program plan
- SST spacecraft self test
- STA star tracker assembly
- STAT schedule test and assessment tool
- STD technical standard
- STEM science, technology, engineering, and mathematics
- STEREO Solar TERrestrial RELations Observatory
 - STI science team interface
 - STL spacecraft test laboratory
- STOP structural thermal optical performance
- StowCam stow camera
 - STP Solar Terrestrial Probes
 - STR startracker
- STRATCOM Strategic Command
 - STV system thermal vacuum
- SUROM startup ROM (Read Only Memory)
 - SV schedule variance
 - SVT system verification test
 - SW software
- SwAT software assurance tool
- SWE software engineering
- SwRI Southwest Research Institute
 - SXC Soft X-Ray Camera
 - SXM solar x-ray monitor

Sys system
T temperature
T test
T threshold
T time
t time
T-0 time zero
T-1 Digital Signal 1
TA Authority
TAA Technical Assistance Agreements
TAG touch and go
TAGCAM touch and go camera system
TAGSAM touch-and-go sample acquisition mechanism
TBD to be determined
TBR to be resolved
TBT turn-burn-turn
TBX to be determined or reviewed
TCC test control center
TCM trajectory correction maneuver
TCPI to complete performance index
TCS thermal control subsystem
TDF test data folder
TDF test development folder
TDP Technology Development Plan
TDRS Tracking and Data Relay Satellite
TDRSS Tracking and Data Relay Satellite System
TDU technology development unit
TE test engineer
TEC thermo-electric coolers
TEGA Thermal and Evolved Gas Analyzer
TEM Transmission Electron Microscopy
TES Thermal Emission Spectrometer
TFP telecom forecaster predictor
Th thorium
Ti titanium
TIA Telecommunications Industry Association
TID Total Ionizing Dose
TIL thermal isolation layer
TIM technical interchange meeting
TIRS Thermal Infrared Sensor
tIm telemetry

TLM telemetry
 TLS Tagish Lake meteorite simulant
 TLS TAGSAM head, Launch container, and SRC canister
 TLYF test like you fly
TMCO Technical Management Cost
 TML total mass loss
 TOC Total Organic Carbon
 TOCZ temporary operational clean room
TOF-SIMS Time Of Flight Secondary Ion Mass Spectrometry
 ToR terms of reference
 ToT time of touch
TPM technical performance measures
 TPS The Planetary Society
 TPS thermal protection system
 TRL technical readiness level
 TS Thermal Spectrometer
 TT Terrestrial Time
TTACS test telemetry and command system
 TV thermal vacuum
TVAC thermal vacuum
 tvac thermal vacuum
 TVC Thrust Vector Control
TWTA traveling wave tube amplifier
 TX transmit
TXIB 2,2,4-trimethyl-1,3-pentanediol diisobutyrate
 U university
 U uranium
 U.S. United States of America
U.S.C. United States code
 UA University of Arizona
 UBC University of British Columbia
 UC University of Colorado
UCF University of Central Florida
 UDP user datagram protocol
 UFE unallocated future expenses
 UHP ultra high purity
 UL uplink
 ULA United Launch Alliance
 ULDL uplink/downlink card
UNAM Universidad Nacional Autónoma de México
 UPS uninterruptable power supply

UPW ultrapure water
URC University Research Centre
UROP Undergraduate Research Opportunities Program
UROP undergraduate research opportunity
US United States of America
USA United States of America
USAF United States Air Force
usec microsecond
USM universal switch modules
UT unit test
UTC coordinated universal time
UTJ Ultra Triple Junction
UTK University of Tennessee, Knoxville
UTTR Utah Test and Training Range
UULE uplink loss executive
UV ultraviolet
V visual
V volt
V&V Verification and Validation
VAR variance analysis report
VC-HS visably clean-highly sensitive
VCO voltage controlled oscillator
VDC direct current voltage
VIF vertical integration facility
VIP Very Important Person
VL voltage across the inductor
VLC verification loads cycle
VM virtual machine
VML virtual machine language
VNS Vision Navigation Sensor
VOC voltage open circuit
Voc voltage open circuit
Vol volume
VOSB Veteran Owned Small Business
VP vice president
vs versus
VT voltage-temperature
VxWorks a real-time operating system made and sold by Wind River Systems of Alamed
W watch
W watt
W west

w/ with
WBS work breakdown structure
WC worst case
WCA worst case analysis
wd work day
WI Wisconsin
WIRE Wide-Field Infrared Explorer
WISE Wide-field Infrared Survey Explorer
WMAP Wilkinson Microwave Anisotropy Probe
WOA work order authorization
WOSB women-owned small businesses
WSTF WhiteSands Test Facility
WTS Waveguide Transfer Switches
XANES X-ray Absorption Near Edge Structure
Xe xenon
Xfer transfer
XIS X-Ray Imaging Spectrometer
Xport transport
XRD X-ray diffraction
XRF x-ray fluorescence
XSS-11 Experimental Satellite System-11
Y yellow
yr year
ZTJ triple junction cell technology
 $\Delta\lambda$ Difference in Wavelength
 ΔV change in velocity
 ΔMOI change in moment of inertia
 Γ thermal inertia
 λ wavelength
 μrad microradians
 μm micrometer
 μJ microjoule
 μg microgram
 $\mu\text{-g}$ microgravity
 μ Sun angle
1553 military standard (MIL-STD-1553) serial data bus
533Q quarterly contractor financial management report
533M monthly contractor financial management report
3D three dimensional
34BWG 34-meter beam waveguide
2D two dimensional

2002 CD asteroid 141424 (2002 CD)

2001 AE2 asteroid 138911 (2001 AE2)

1999 JU3 asteroid 162173 (1999 JU3)

1992 FE asteroid (5604) 1992 FE

‰ per mil

" inch

ance pixels, and guide window capability

