

Astro/Space Frequently Seen Acronyms

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Acronym List for Space and Astronomy

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This list is offered as a reference for translating commonly appearing acronyms in the space-related newsgroups. If I forgot or botched your favorite acronym, please let me know! Also, if there's an acronym not on this list that confuses you, drop me a line, and if I can figure it out, I'll add it to the list.

Note: as of late 2000, I have changed the web location of the list, to a place where it's easier for me to tweak and update it. I have made a number of revisions that had accumulated during the past couple of years; thanks especially to Bill Owen of NASA and Robin Hill of BAE SYSTEMS. No doubt several corrections have slipped through the cracks; please alert me if this is the case.

The canonical version of this list is the HTML form, available at <http://tla.surly.org>. From that, I generate the text form for USENET posting.

Note that this is intended to be a reference for frequently seen acronyms, and is most emphatically not encyclopedic. If I incorporated every acronym I ever saw, I'd soon run out of disk space. :-)

The list will be posted at regular intervals, every 30 days. All comments regarding it are welcome; I'm reachable at tla@surly.org.

Note that this just tells what the acronyms stand for -- you're on your own for figuring out what they mean. Note also that the total number of acronyms in use far exceeds what I can list; special-purpose acronyms that are essentially always explained as they're introduced are omitted. Further, some acronyms stand for more than one thing; these acronyms appear on multiple lines.

Thanks to everybody who's sent suggestions since the first version of the list!

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PS: Strictly speaking, most of these are "initialisms" or "abbreviations" rather than "acronyms"; pedantically, it's only an "acronym" if you make a word out of it, like "laser" or "radar." In practice, though, everybody calls 'em acronyms.

A&A: Astronomy and Astrophysics
AAO: Anglo–Australian Observatory
AAS: American Astronomical Society
AAS: American Astronautical Society
AAVSO: American Association of Variable Star Observers
ACE: Advanced Composition Explorer
ACRV: Assured Crew Return Vehicle (or) Astronaut Crew Rescue Vehicle
AD: Analog to Digital
ADFRF: Ames–Dryden Flight Research Facility (now DFRC) (NASA)
AFAIK: As Far As I Know
AGN: Active Galactic Nucleus
AGU: American Geophysical Union
AIAA: American Institute of Aeronautics and Astronautics
AIPS: Astronomical Image Processing System
AIT: Assembly, Integration, and Testing
AJ: Astronomical Journal
ALEXIS: Array of Low Energy X–ray Imaging Sensors
ALPO: Association of Lunar and Planetary Observers
ALS: Advanced Launch System
ANSI: American National Standards Institute
AOA: Abort Once Around (Shuttle abort plan)
AOA: Angle Of Attack
AOCS: Attitude and Orbit Control System
Ap.J: Astrophysical Journal
APL: Applied Physics Laboratory (at Johns Hopkins)
APM: Attached Pressurized Module (a.k.a. Columbus)
APU: Auxiliary Power Unit
ARC: Ames Research Center (NASA)
ARC: Astrophysical Research Consortium
ARTEMIS: Advanced Relay TEchnology MISsion
ASA: Astronomical Society of the Atlantic
ASC: Agence Spatiale Canadienne (also CSA)
ASI: Agenzia Spaziale Italiana
ASP: Astronomical Society of the Pacific
ASRM: Advanced Solid Rocket Motor
ATDRS: Advanced Tracking and Data Relay Satellite
ATLAS: Atmospheric Laboratory for Applications and Science
ATM: Amateur Telescope Maker
ATM: Apollo Telescope Mount (on Skylab)
ATO: Abort To Orbit
ATV: Automated Transfer Vehicle
AU: Astronomical Unit
AURA: Association of Universities for Research in Astronomy
AW&ST: Aviation Week and Space Technology (a.k.a. AvLeak)

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AXAF: Advanced X-ray Astrophysics Facility
BAe: British Aerospace (now BAE SYSTEMS)
BATSE: Burst And Transient Source Experiment (on CGRO)
BBXRT: Broad-Band X-Ray Telescope (ASTRO package)
BDB: Big Dumb Booster
BEM: Bug-Eyed Monster
BH: Black Hole
BIMA: Berkeley Illinois Maryland Array
BIS: British Interplanetary Society
BMDO: Ballistic Missile Defense Office (was SDIO)
BNSC: British National Space Centre
BTW: By The Way
CARA: Center for Astrophysical Research in Antarctica
C&T: Communications & Tracking
CATS: Cheap Access To Space
CCAFS: Cape Canaveral Air Force Station
CCAS: Cape Canaveral Air Station (now once again CCAFS)
CCD: Charge-Coupled Device
CCDS: Centers for the Commercial Development of Space
CD-ROM: Compact Disc Read-Only Memory
CFA: Center For Astrophysics
CFC: ChloroFluoroCarbon
CFF: Columbus Free Flyer
CFHT: Canada-France-Hawaii Telescope
CG: Center of Gravity
CGRO: (Arthur Holley) Compton Gamma Ray Observatory (was GRO)
CHARA: Center for High Angular Resolution Astronomy
CIRRIS: Cryogenic InfraRed Radiance Instrument for Shuttle
CIT: Circumstellar Imaging Telescope
CM: Command Module (Apollo spacecraft)
CM: Center of Mass
CMBR: Cosmic Microwave Background Radiation
CMCC: Central Mission Control Centre (ESA)
CNES: Centre National d'Etude Spatiales
CNO: Carbon-Nitrogen-Oxygen
CNSR: Comet Nucleus Sample Return
COBE: COsmic Background Explorer
COMPTEL: COMPton TELEscope (on CGRO)
COSTAR: Corrective Optics Space Telescope Axial Replacement
COTS: Cheap Off The Shelf
CRAF: Comet Rendezvous / Asteroid Flyby
CRRES: Combined Release / Radiation Effects Satellite
CSA: Canadian Space Agency (also ASC)
CSM: Command and Service Module (Apollo spacecraft)
CSTC: Consolidated Space Test Center (USAF)
CTIO: Cerro Tololo Interamerican Observatory
CV: Cataclysmic Variable
CXBR: Cosmic X-ray Background Radiation
DC: Delta Clipper
DCX: Delta Clipper eXperimental
DDCU: DC-to-DC Converter Unit

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DDTE: Design, Development, Test, and Evaluation
DFRC: Dryden Flight Research Center
DFRF: Dryden Flight Research Facility (was ADFRF, now DFRC)
DMSP: Defense Meteorological Satellite Program
DOD: Department Of Defense (sometimes DoD)
DOE: Department Of Energy
DOT: Department Of Transportation
DRS: Data Relay Satellite
DRS: Direct Receiving Station
DSO: Deep Sky (or Space) Object
DSCS: Defense Satellite Communications System
DSN: Deep Space Network
DSP: Defense Support Program (USAF/NRO)
EAC: European Astronaut Centre
EAFB: Edwards Air Force Base
ECS: Environmental Control System
EDO: Extended Duration Orbiter
EGRET: Energetic Gamma Ray Experiment Telescope (on CGRO)
EJASA: Electronic Journal of the Astronomical Society of the Atlantic
ELV: Expendable Launch Vehicle
EMU: Extravehicular Mobility Unit
EOS: Earth Observing System
ER: Eastern Range (was ETR)
ERS: Earth Resources Satellite (as in ERS-1)
ESA: European Space Agency
ESIS: European Space Information System
ESO: European Southern Observatory
ESOC: European Space Operations Centre
ET: (Shuttle) External Tank
ETLA: Extended Three Letter Acronym
ETR: Eastern Test Range
EUV: Extreme UltraViolet
EUVE: Extreme UltraViolet Explorer
EVA: ExtraVehicular Activity
FAQ: Frequently Asked Questions
FAST: Fast Auroral SnapshoT explorer
FFT: Fast Fourier Transform
FGS: Fine Guidance Sensors (on HST)
FHST: Fixed Head Star Trackers (on HST)
FIR: Far InfraRed
FITS: Flexible Image Transport System
FOC: Faint Object Camera (on HST)
FOS: Faint Object Spectrograph (on HST)
FOV: Field Of View
FRC: Flight Research Center (old name for DFRC)
FRR: Flight-Readiness Review
FTL: Faster Than Light
FTP: File Transfer Protocol
FTS: Flight Telerobotic Servicer
FUSE: Far Ultraviolet Spectroscopic Explorer
FWHM: Full Width at Half Maximum

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FYI: For Your Information
GAS: Get-Away Special
GBT: Green Bank Telescope
GCVS: General Catalog of Variable Stars
GEM: Giotto Extended Mission
GEM: Galileo Europa Mission
GEO: Geosynchronous Earth Orbit
GDS: Great Dark Spot
GHRS: Goddard High Resolution Spectrograph (on HST)
GIF: Graphics Interchange Format
GLOMR: Global Low-Orbiting Message Relay
GLOW: Gross Lift-Off Weight
GMC: Giant Molecular Cloud
GMRT: Giant Meter-wave Radio Telescope
GMT: Greenwich Mean Time (also called UT)
GOES: Geostationary Orbiting Environmental Satellite
GOX: Gaseous OXYgen
GPC: General Purpose Computer
GPS: Global Positioning System
GR: General Relativity
GRB: Gamma Ray Burster
GRC: Glenn Research Center (NASA)
GRO: Gamma Ray Observatory (now CGRO)
GRS: Gamma Ray Spectrometer (on Mars Observer)
GRS: Great Red Spot
GSC: Guide Star Catalog (for HST)
GSFC: Goddard Space Flight Center (NASA)
GTO: Geostationary Transfer Orbit
GVI: Global Village Idiot
HAO: High Altitude Observatory
HD: Henry Draper catalog entry
HEAO: High Energy Astronomical Observatory
HeRA: Hermes Robotic Arm
HF: High Frequency
HGA: High Gain Antenna
HLC: Heavy Lift Capability
HLV: Heavy Lift Vehicle
HMC: Halley Multicolor Camera (on Giotto)
HOTOL: HORIZONTAL TakeOff and Landing (a proposed SSTO craft)
HR: Hertzsprung-Russell (diagram)
HRMS: High Resolution Microwave Survey
HRI: High Resolution Imager (on ROSAT)
HSP: High Speed Photometer (on HST)
HST: Hubble Space Telescope
HTH: Hope This Helps
HTHL: Horizontal Takeoff Horizontal Landing
HTVL: Horizontal Takeoff Vertical Landing
HUT: Hopkins Ultraviolet Telescope (ASTRO package)
HV: High Voltage
IAPPP: International Amateur/Professional Photoelectric Photometry
IAU: International Astronomical Union

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IAUC: IAU Circular
ICE: International Cometary Explorer
IDA: International Dark-sky Association
IDL: Interactive Data Language
IGM: InterGalactic Medium
IGY: International Geophysical Year
IIRC: If I Recall Correctly
IMHO: In My Humble Opinion
IMO: International Meteor Organization
INTEGRAL: INTERNATIONAL Gamma-Ray Astrophysics Laboratory
IOTA: Infrared-Optical Telescope Array
IOTA: International Occultation Timing Association
IPS: Inertial Pointing System
IR: InfraRed
IRAF: Image Reduction and Analysis Facility
IRAS: InfraRed Astronomical Satellite
IRFNA: Inhibited Red Fuming Nitric Acid
ISAS: Institute of Space and Astronautical Science (Japan)
ISM: InterStellar Medium
ISO: Infrared Space Observatory
ISO: International Standards Organization
ISPM: International Solar Polar Mission (now Ulysses)
ISPP: In-Situ Propellant Production
ISS: International Space Station
ISY: International Space Year
IUE: International Ultraviolet Explorer
IUS: Inertial Upper Stage
JEM: Japanese Experiment Module (for SSF)
JGR: Journal of Geophysical Research
JILA: Joint Institute for Laboratory Astrophysics
JPL: Jet Propulsion Laboratory
JSC: Johnson Space Center (NASA)
KAO: Kuiper Airborne Observatory
KPNO: Kitt Peak National Observatory
KSC: Kennedy Space Center (NASA)
KTB: Cretaceous-Tertiary Boundary (from German)
L: Lagrange (as in Lagrange points L1 through L5)
LANL: Los Alamos National Laboratory
LaRC: Langley Research Center (NASA)
LASER: Light Amplification by Stimulated Emission of Radiation
LDEF: Long Duration Exposure Facility
LEM: Lunar Excursion Module (a.k.a. LM) (Apollo spacecraft)
LEO: Low Earth Orbit
LeRC: Lewis Research Center (NASA; now GRC)
LEST: Large Earth-based Solar Telescope
LFSA: List of Frequently Seen Acronyms (!)
LGA: Low Gain Antenna
LGM: Little Green Men
LH: Liquid Hydrogen (also LH2 or LHX)
LITVC: Liquid Injection Thrust Vector Control
LLNL: Lawrence-Livermore National Laboratory

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LM: Lunar Module (a.k.a. LEM) (Apollo spacecraft)
LMC: Large Magellanic Cloud
LN2: Liquid N2 (Nitrogen)
LOX: Liquid OXYgen
LPO: La Palma Observatory
LPV: Long Period Variable
LRB: Liquid Rocket Booster
LSR: Local Standard of Rest
LTP: Lunar Transient Phenomenon
M: Messier (as in M31, M13, M57, etcetera)
MACRO: Monopoles, Astrophysics, and Cosmic Ray Observatory
MB: Manned Base
MCC: Mission Control Center
MCD: Minimum Cost Design
MECO: Main Engine CutOff
MGS: Mars Global Surveyor
MLI: Multi-Layer Insulation
MMH: MonoMethyl Hydrazine
MMT: Multiple Mirror Telescope
MMU: Manned Maneuvering Unit
MNRAS: Monthly Notices of the Royal Astronomical Society
MO: Mars Observer
MOC: Mars Observer Camera (on MO and MGS)
MOL: Manned Orbiting Laboratory
MOLA: Mars Observer Laser Altimeter (on Mars Observer)
MOMV: Manned Orbital Maneuvering Vehicle
MOTV: Manned Orbital Transfer Vehicle
MPC: Minor Planets Circular
MPEC: Minor Planets Electronic Circular
MPL: Mars Polar Lander
MRSR: Mars Rover and Sample Return
MRSRM: Mars Rover and Sample Return Mission
MSFC: (George C.) Marshall Space Flight Center (NASA)
MTC: Man Tended Capability
NACA: National Advisory Committee on Aeronautics (became NASA)
NASA: National Aeronautics and Space Administration
NASDA: NAtional Space Development Agency (Japan)
NASM: National Air and Space Museum
NASP: National AeroSpace Plane
NBS: National Bureau of Standards (now NIST)
NDV: NASP Derived Vehicle
NEAR: Near Earth Asteroid Rendezvous (now named NEAR Shoemaker)
NERVA: Nuclear Engine for Rocket Vehicle Application
NGC: New General Catalog
NICMOS: Near Infrared Camera / Multi Object Spectrometer (HST upgrade)
NIMS: Near-Infrared Mapping Spectrometer (on Galileo)
NIR: Near InfraRed
NIST: National Institute of Standards and Technology (was NBS)
NLDP: National Launch Development Program
NOAA: National Oceanic and Atmospheric Administration
NOAO: National Optical Astronomy Observatories

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NORAD: NORth American aerospace Defense
NRAO: National Radio Astronomy Observatory
NRO: National Reconnaissance Office
NS: Neutron Star
NSA: National Security Agency
NSF: National Science Foundation
NSO: National Solar Observatory
NSSDC: National Space Science Data Center
NTR: Nuclear Thermal Rocket(ry)
NTT: New Technology Telescope
OAO: Orbiting Astronomical Observatory
OCST: Office of Commercial Space Transportation
OMB: Office of Management and Budget
OMS: Orbital Maneuvering System
OPF: Orbiter Processing Facility
ORFEUS: Orbiting and Retrievable Far and Extreme Ultraviolet Spectrometer
OSC: Orbital Sciences Corporation
OSCAR: Orbiting Satellite Carrying Amateur Radio
OSSA: Office of Space Science and Applications
OSSE: Oriented Scintillation Spectrometer Experiment (on CGRO)
OT: Off-Topic
OTA: Optical Telescope Assembly (on HST)
OTHB: Over The Horizon Backscatter
OTV: Orbital Transfer Vehicle
OV: Orbital Vehicle
PAM: Payload Assist Module
PAM-D: Payload Assist Module, Delta-class
PDS: Planetary Data System
PI: Principal Investigator
PLSS: Portable Life Support System
PM: Pressurized Module
PMC: Permanently Manned Capability
PMIRR: Pressure Modulated InfraRed Radiometer (on Mars Observer)
PMT: PhotoMultiplier Tube
PPM: Positions and Proper Motions (catalog)
PSF: Point Spread Function
PSR: PulSaR
PV: Photovoltaic
PVO: Pioneer Venus Orbiter
QSO: Quasi-Stellar Object
RADAR: RAdio Detection And Ranging
RAS: Royal Astronomical Society
RASC: Royal Astronomical Society of Canada
RCI: Rodent Cage Interface (for SLS mission)
RCS: Radar Cross Section
RCS: Reaction Control System
REM: Rat Enclosure Module (for SLS mission)
RF: Radio Frequency
RFI: Radio Frequency Interference
RFNA: Red Fuming Nitric Acid

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RIACS: Research Institute for Advanced Computer Science
RMS: Remote Manipulator System
RNGC: Revised New General Catalog
ROTFL: Rolling On The Floor Laughing
ROSAT: ROentgen SATellite
ROUS: Rodents Of Unusual Size (I don't believe they exist)
RSA: Russian Space Agency
RSN: Radio SuperNova
RSN: Real Soon Now
RTG: Radioisotope Thermoelectric Generator
RTLS: Return To Launch Site (Shuttle abort plan)
SAA: South Atlantic Anomaly
SAGA: Solar Array Gain Augmentation (for HST)
SAMPEX: Solar Anomalous and Magnetospheric Particle EXplorer
SAO: Smithsonian Astrophysical Observatory
SAR: Search And Rescue
SAR: Synthetic Aperture Radar
SARA: Satellite pour Astronomie Radio Amateur
SAREX: Search and Rescue Exercise
SAREX: Space Amateur Radio Experiment
SAS: Space Activity Suit
SAS: Space Adaptation Syndrome
SAT: Synthetic Aperture Telescope
S/C: SpaceCraft
SCA: Shuttle Carrier Aircraft
SCT: Schmidt–Cassegrain Telescope
SDI: Strategic Defense Initiative
SDIO: Strategic Defense Initiative Organization (now BMDO)
SEDS: Students for the Exploration and Development of Space
SEI: Space Exploration Initiative
SEST: Swedish ESO Submillimeter Telescope
SETI: Search for ExtraTerrestrial Intelligence
SID: Sudden Ionospheric Disturbance
SIR: Shuttle Imaging Radar
SIRTF: Space (formerly Shuttle) InfraRed Telescope Facility
SL: (Comet) Shoemaker–Levy
SL: SpaceLab
SLAR: Side–Looking Airborne Radar
SLC: Space Launch Complex
SLS: Space(lab) Life Sciences
SMC: Small Magellanic Cloud
SME: Solar Mesosphere Explorer
SMEX: SMAll EXplorers
SMM: Solar Maximum Mission
SN: SuperNova (e.g., SN1987A)
SNR: Signal to Noise Ratio
SNR: SuperNova Remnant
SNU: Solar Neutrino Units
SOFIA: Stratospheric Observatory For Infrared Astronomy
SOHO: SOLar Heliospheric Observatory
SPAN: Space Physics and Analysis Network

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SPDM: Special Purpose Dextrous Manipulator
SPOT: Satellite Pour l'Observation de la Terre
SPS: Solar Power Satellite
SR: Special Relativity
SRB: Solid Rocket Booster
SRM: Solid Rocket Motor
SSF: Space Station Fred (er, Freedom) (Superseded by ISS)
SSI: Solid-State Imager (on Galileo)
SSI: Space Studies Institut
SSME: Space Shuttle Main Engine
SSPF: Space Station Processing Facility
SSPS: Sky Survey Prototype System
SSRMS: Space Station Remote Manipulator System
SSRT: Single Stage Rocket Technology
SST: Spectroscopic Survey Telescope
SST: SuperSonic Transport
SSTO: Single Stage To Orbit
STIS: Space Telescope Imaging Spectrometer (to replace FOC and GHRS)
STS: Shuttle Transport System (or) Space Transportation System
STScI: Space Telescope Science Institute
STSDAS: Space Telescope Science Data Analysis System
SWAS: Submillimeter Wave Astronomy Satellite
SWF: ShortWave Fading
TAL: Transatlantic Abort Landing (Shuttle abort plan)
TAU: Thousand Astronomical Unit (mission)
TCS: Thermal Control System
TDRS: Tracking and Data Relay Satellite
TDRSS: Tracking and Data Relay Satellite System
TEA: Torque Equilibrium Attitude
TES: Thermal Emission Spectrometer (on Mars Observer)
TIROS: Television InfraRed Observation Satellite
TLA: Three Letter Acronym
TOMS: Total Ozone Mapping Spectrometer
TOPS: Toward Other Planetary Systems
TPS: Thermal Protection System
TSS: Targeted Search System
TSS: Tethered Satellite System
TSTO: Two Stage To Orbit (also 2STO)
UARS: Upper Atmosphere Research Satellite
UBM: Unpressurized Berthing Mechanism
UDMH: Unsymmetrical DiMethyl Hydrazine
UFO: Unidentified Flying Object
UGC: Uppsala General Catalog
UHF: Ultra High Frequency
UIT: Ultraviolet Imaging Telescope (Astro package)
UKST: United Kingdom Schmidt Telescope
USAF: United States Air Force
USMP: United States Microgravity Payload
USNO: United States Naval Observatory
UT: Universal Time (a.k.a. GMT, or Zulu Time; cf UTC)
UTC: Coordinated Universal Time (subtly different from UT)

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UV: UltraViolet
UVS: UltraViolet Spectrometer
VAB: Vehicle Assembly Building (formerly Vertical Assembly Building)
VAFB: Vandenberg Air Force Base
VEEGA: Venus–Earth–Earth Gravity Assist (Galileo flight path)
VHF: Very High Frequency
VLA: Very Large Array
VLBA: Very Long Baseline Array
VLBI: Very Long Baseline Interferometry
VLF: Very Low Frequency
VLT: Very Large Telescope
VMS: Vertical Motion Simulator
VOIR: Venus Orbiting Imaging Radar (superseded by VRM)
VPF: Vertical Processing Facility
VRM: Venus Radar Mapper (now called Magellan)
VTHL: Vertical Takeoff Horizontal Landing
VTVL: Vertical Takeoff Vertical Landing
WD: White Dwarf
WFF: Wallops Flight Facility
WFPC: Wide Field / Planetary Camera (on HST)
WFPCII: Replacement for WFPC
WIYN: Wisconsin / Indiana / Yale / NOAO telescope
WR: Western Range (was WTR)
WSF: Wake Shield Facility
WSMR: White Sands Missile Range
WTR: Western Test Range
WUPPE: Wisconsin Ultraviolet PhotoPolarimeter Experiment (Astro package)
XMM: X–ray Multi Mirror
XUV: eXtreme UltraViolet
YSO: Young Stellar Object
Z: Zulu (see UT)

— Mark Bradford (tla@surly.org) <> To err is human, to moo bovine.
"It is good to have an open mind, but not at both ends."