Rubin Observatory Glossary and Acronym Definitions

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These are the full contents of the glossary definition file Tags are used by generateAcronyms.py to differentiate between overloaded entries. For information and usage see `https://lsst-texmf.lsst.io/lsstdoc.html#acronyms-or-glossaries`.

Entry	Description	Tags
1D	One-dimensional	Gen
2D	Two-dimensional	Gen
2MASS	Two-Micron All Sky Survey	Gen
3D	Three-dimensional	Gen
A/D	Analogue-to-Digital (converter)	Gen
AA	Authentication and Authorization	TS
AAAC	Astronomy and Astrophysics Advisory Committee	TS
AAAS	American Association for the Advancement of Science	Gen
AAPT	American Association of Physics Teachers	TS
AAS	American Astronomical Society	Gen
AAVSO	American Association of Variable Star Observers	TS
ABI	Application Binary Interface	Gen
ABOD	AURA Board of Directors	Gen
AC	Alternating Current	Gen
ACCS	Auxiliary Camera Control System	LSST DM
ACGIH	American Conference of Governmental Industrial Hygienists	Gen
ACM	Award Cash Management Service	OPS
ACWP	Actual Cost of Work Performed	Gen
AD	Associate Director	OPS
ADASS	Astronomical Data Analysis Software and Systems	Gen
ADC	atmospheric dispersion corrector	TS
ADC	Analogue-to-Digital Converter	Gen
ADCO	Associate Director for Chilean Operations	TS Gen
ADQL	Astronomical Data Query Language	Gen
ADS	Astrophysics Data System	OPS Gen
ADU	Analogue-to-Digital Unit	Gen
AED	Automated External Defibrillator	OPS

AEON	Alert Event Observatory Network	OPS Sci
AES	Advanced Encryption Standard	OPS
AGN	Active Galactic Nuclei	TS
AGU	American Geophysical Society	TS
AI	Artificial Intelligence	Gen
AIP	American Institute of Physics	Gen
AISES	American Indian Science and Engineering Society	DEI
AIT	Assembly Integration and Test	Gen
AIV	Assembly Integration and Verification	Gen
AJ	The Astronomical Journal	Sci
ALeRCE	Automatic Learning for the Rapid Classification of Events	OPS
ALD	Associate Lab Director	OPS DOE
ALICE	A Large Ion Collider Experiment	Gen
ALMA	Atacama Large Millimeter Array (ESO)	Gen
AMCL	AURA Management Council for LSST	LSST
AMCR	AURA management Council for Rubin Observatory	OPS Rubin
AMD	Advanced Micro Devices	OPS
AMPATH	Americas Pathway (Network)	Gen
AMPEL	Alert Management, Photometry, and Evaluation of Light curves	OPS
ANSI	American National Standards Institute	Gen OPS
ANTARES	Arizona-NOIRlab Temporal Analysis and Response to Events System	OPS
AOB	Any Other Business	Gen
AOC	AURA Oversight Council	OPS
AOS	Active Optics System	TS
AOSS	AURA Observatory Support Services	OPS
AP	Alert Production	LSST DM
APL	Apache Public License	LSST DM
APDB	Alert Production DataBase	DM
API	Application Programming Interface	Gen
APS	American Physical Society	TS
ARC	Advanced Resource Connector	DM
arcmin	arcminute minute of arc (unit of angle)	Gen
arcsec	arcsecond second of arc (unit of angle)	Gen
ASAP	As Soon As Possible	Gen
ASAS-SN	All-Sky Automated Survey for Supernovae	Sci

ASCII	American Standard Code for Information Interchange	Gen
ASDC	ASI Science Data Center (Italy)	OPS
ASI	Agenzia Spaziale Italiana	OPS
ASP	Astronomical Society of the Pacific	TS
AST	NSF Division of Astronomical Sciences	TS
AT	Auxiliary Telescope	TS
ATCA	Advanced Telecommunications Architecture	TS
ATCS	Auxiliary Telescope Control System	TSSW
ATLAS	A Toroidal LHC Apparatus	Gen
ATLAS	The Asteroid Terrestrial-impact Last	Sci
ATM	Adaptavist Test Management	LSST DM
AU	deprecated acronym for astronomical unit; use au instead	Gen
au	astronomical unit	Gen
AURA	Association of Universities for Research in Astronomy	Gen
AVS	Alert Vetting System	OPS
AWIS	Association for Women in Science	DEI
AWS	Amazon Web Services	Gen
B	Byte (8 bit)	Gen
b	bit	Gen
BAC	Budget At Complete	Gen
BAO	Baryon Acoustic Oscillations	Sci
BCE	Before Common Era	Gen
BCR	Baseline Change Request	CAM
BCWP	Budgeted Cost of Work Performed	Gen
BCWS	Budgeted Cost of Work Scheduled	Gen
BDC	Base Data Center	DM IT
BEE	back-end electronics	TS
BGP	Border Gateway Protocol	IT
BH	Black Hole	Sci
BJD	barycentric corrected Julian date	TS
BNF	Backus-Naur Form	Gen
BNL	Brookhaven National Laboratory	Gen
BOE	Basis of Estimate	Gen
BOF	Birds of a Feather (Sessions at ADASS)	Gen
BOT	Bench for Optical Testing	CAM
BPS	Batch Production Service	DF LDF DM

Bps	Bytes per second	Gen
bps	bit(s) per second	Gen
BSR	Business Systems Review	OPS
BTS	Base (La Serena) Test Stand	LSST
BTU	British Thermal Unit	OPS
CA	Control (or Cost) Account	Gen
CADC	Canadian Astronomy Data Centre	Gen
CALTECH	California Institute of Technology	Gen
CAM	CAMera	LSST DM
CAM	Control (or Cost) Account Manager	Gen
CAOM	Common Archive Observation Model	DM Gen
CARMENES	Calar Alto high-Resolution search for M dwarfs with Exoearths with Near-infrared and optical Echelle Spectrographs	DM Gen
CAS	Central Administrative Services	Adm
CASNET	AURA's financial reporting database	Adm
CB	Configuration Baseline	LSST DM
CBP	Collimated Beam Projector	DM LSST OPS
CC	Change Control	Gen
CCW	Camera Cable Wrap	CAM
CC-IN2P3	Centre de Calcul de l'IN2P3	Gen
CCB	Change Control Board	LSST DM
CCD	Charge-Coupled Device	Gen
CCOB	Camera Calibration Optical Bench	LSST DM
CCP	Change Control Process	Adm
CCS	Camera Control System	LSST DM
CDN	Content Delivery Network	DM IT
CD-4	Critical Decision 4	DOE
CDS	Centre de Donnes astronomiques de Strasbourg	Gen
CE	Communications Engagement	OPS
CE	Computing Element	DM
CEC	International in-kind Contribution Evaluation Committee	LSST
CEE	Communications, Education, and Engagement	OPS OIR
CEP	Cost Estimating Plan	OPS
CEPP	COVID-19 Exposure Prevention Plan	OPS
CERN	European Organization for Nuclear Research	Gen
CET	Community Engagement Team	OPS OIR

CfA	(Harvard-Smithsonian) Center for Astrophysics	Gen
CFD	computational fluid dynamics	TS
CFHT	Canada-France-Hawaii Telescope	TS
CFHT-LS	A 5-passband legacy imaging survey conducted at the Canada-France-Hawaii Telescope from 2003-2008	Sci
CFO	Chief Financial Officer	OPS
CFHTLS	Canada-France-Hawaii Telescope Legacy Survey	TS
CFR	Code of Federal Regulations	OPS
CI	Continuous Integration	Gen
CI	Cyber Infrastructure	Petabytes
CIS	Computer Infrastructure Support	TS
CLO	community.lsst.org - use of this acronym is discouraged. The language that should be used in official documents is "Community Forum" or "Vera C. Rubin Community Forum".	DM
CLP	Chilean Peso	OPS
CM	Configuration Management	LSST DM
CMB	Cosmic Microwave Background	Sci OPS
CMB-S4	Cosmic Microwave Background Stage 4	Sci OPS
CMDB	Configuration Management Database	LSST DM
CMMS	Computerized Maintenance Management System	OPS
CMOS	complementary metal-oxide semiconductor	TS
CMS	Compact Muon Solenoid	Sci OPS
CNN	Convolutional Neural Network	Sci
CNRS	Centre national de la recherche scientifique	Gen
ComCam	The commissioning camera is a single-raft, 9-CCD camera that will be installed in LSST during commissioning, before the final camera is ready.	Gen
COMPASS	Catalogues of Objects and Measured Parameters from All Sky Surveys	Gen
CORBA	Common Object Request Broker Architecture	Gen
COS	Center Operations Services	OPS
COTS	Commercial-Off-The-Shelf	Gen
COVID	COrona VIrus Disease	Gen
COVID19	COrona VIrus Disease 2019	Gen
CP	catalog prices	TS
CPI	Cost Performance Index	Gen

CPP	Calibration Production Processing	LSST DM
CPR	Cardiopulmonary resuscitation	Gen
CPU	Central Processing Unit	Gen
CQA	Compliance and Quality Administrator	
CR	Change Request	LSST DM
CR	Cosmic Ray	Gen
CRB	cluster reference boards	TS
CRIC	Computing Resource Information Catalogue	DM
CRIO	CompactRIO National Instruments	TSSW
CRTS3	Catalina Real-Time Transient Survey	TS
CS	citizen science	TS
CSA	Cooperative Support Agreement	Gen
CSC	Commandable SAL Component	TS
CSDC	Community Science Data Center	OPS OIR
CSM	Circum-Stellar Material	Sci
CSV	Comma Separated Values	Gen
CTA	Cherenkov Telescope Array https://www.cta-observatory.org/	Gen
CTIO	Cerro Tololo Inter-American Observatory	Gen
CUI	Controlled Unclassified Information	OPS
CV	Curriculum Vitae	Gen
CVE	Common Vulnerabilities and Exposures	IT
CVFMS	CernVM File System	DM
CVSS	Common Vulnerability Scoring System	IT
DAC	Data Access Center	LSST DM
DAF	data access framework	TS
DAQ	Data Acquisition System	LSST DM
DAX	Data Access Services	LSST DM
DB	DataBase	Gen
Db	Decibel	Gen
DBA	database administrator	TS
DBB	Data Backbone	LSST DM
DBBBM	Data Backbone Buffer Manager	DM
DBMS	DataBase Management System	Gen
DC	Data Center	LSST DM
DC2	Data Challenge 2 (DESC)	OPS
DCM	Directorate Communications Manager	OPS

DCR	Differential Chromatic Refraction	Gen
DCT	Discovery Channel Telescope (Lowell Observatory)	TS
DDF	Deep Drilling Field	OPS
DDMPM	Data Management Deputy Project Manager	LSST DM
DDM	Distributed Data Management	DM
DDN	Data Delivery Network	Gen
DDOS	Distributed Denial Of Service	IT Gen
DDP	Derived Data Products (e.g. Rubin/Euclid)	OPS
DDS	Data Distribution System	TSSW
DE	dark energy	TS
DEC	Declination	Gen
DECam	Dark Energy Camera	OPS
deg	degree; unit of angle	Gen
DEI	Diversity, Equity, and Inclusion	DEI
DES	Dark Energy Survey	LSST DM OPS
DESC	Dark Energy Science Collaboration	LSST DM OPS
DESI	Dark Energy Spectroscopic Instrument	LSST DM OPS
DETF	Dark Energy Task Force (AAAC/HEPAP joint advisory sub-committee)	TS
DF	Data Facility	OPS DF DM
DIA	Difference Image Analysis	DM
DIMM	Differential Image Motion Monitor	Gen
DKIST	Daniel K. Inouye Solar Telescope	OPS
DLS	Deep Lens Survey	TS
DM	Data Management	LSST DM
DM-SST	DM System Science Team	LSST DM
DMCCB	DM Change Control Board	LSST DM
DMCS	Data Management Control System	LSST DM
DMIS	DM Interface Scientist	LSST DM
DMLT	DM Leadership Team	LSST DM
DMO	Data Management Organization	LSST DM
DMOC	Data Management Operations Chile	TS
DMOG	Data Management Operations Group	TS
DMPM	Data Management Project Manager	LSST DM
DMQA	Data Management Quality Assurance	LSST DM
DMS	Data Management Subsystem	LSST DM

DMS-REQ	Data Management System Requirements prefix	DM
DMSE	Data Management System Engineer	LSST DM
DMSR	DM System Requirements; LSE-61	LSST DM
DMSS	DM Subsystem Scientist	LSST DM
DMSST	DM System Science Team	LSST DM
DMTN	DM Technical Note	LSST DM
DMTR	DM Test Report	LSST DM
DNS	Domain Name Service	OPS
DOE	Department of Energy	Gen
DoF	Degree(s) of Freedom (also known as DOF)	Gen
DOI	Digital Object Identifier	DM OPS
DOM	Document Object Model	Gen
DoNM	Date of Next Meeting	Gen
DOS	Data Operations Services	OPS OIR
DOT	U.S. Department of Transportation	OPS
DP	Data Production	OPS
DP0	Data Preview 0	OPS
DP1	Data Preview 1	OPS
DP2	Data Preview 2	OPS
DPA	Data and Processing Architecture	OPS
DPAC	Data Processing and Analysis Consortium (Gaia)	Gen
DPC	Data Policy Committee	OPS
DPDD	Data Product Definition Document	LSST DM
DPLT	DP Leadership Team	OPS
DPP	Data Products Processing	TS
DQ	data quality	TS
DQA	data quality assurance	TS
DR	Data Release	LSST DM
DR1	Data Release 1	OPS
DR2	Data Release 2	OPS
DR10	Data Release 10	OPS
DR11	Data Release 11	OPS
DRB	Data Release Board	OPS
DRP	Data Release Production	LSST DM
DS9	Deep Space 9 (specific astronomical data visualisation application; SAOImage)	Gen

DTN	Data Transfer Node	LSST DM
DUNE	Deep Underground Neutrino Experiment	Sci
Duo	2 factor authentication system	LSST DM
DWDM	Dense Wave Division Multiplex	Gen LSST DM
EA	enterprise architect	TS
EAC	Estimate At Completion	LSST DM
EAS	Environmental Awareness System	TS
EB	ExaByte	Gen
EDC	EPO Data Center	OPS EPO
EDR	early data release	TS
EE	engineering estimate	TS
EEPROM	Electrically Erasable Programmable Read-Only Memory	Gen
EFD	Engineering and Facility Database	LSST DM
EIE	European Industrial Engineering - Italian engineering company (Dome)	LSST DM
EM	Electro Magnetic	Sci
EO	Electro Optical	CAM
EOS	Engineering Operations Services	OPS
EPA	Environmental Protection Agency	Gen
EPLS	Excludable Parties List	TS
EPO	Education and Public Outreach	LSST DM
EPOC	Education and Public Outreach Center	OPS
ESA	European Space Agency	Gen
ESAC	European Space Astronomy Centre	Gen
ESD	electrostatic discharge	TS
ESNet	Energy Sciences Network	Gen
ESO	European Southern Observatory	OPS
ESP	Early Science Program	OPS
ET	exposure time	TS
ETC	Estimate To Complete	Gen LSST DM
ETL	extract-transform-load	TS
ETS	engineering and technical devices	TS
ETU	Engineering Test Unit	LSST DM
EUI	Engineering User Interface System	PSE
EUPS	Extended Unix Product System	LSST DM
eV	electron-Volt	Gen

EVM	Earned Value Management	Adm Gen
EVMS	Earned Value Management System	Adm Gen
EXIST	Energetic X-ray Imaging Survey Telescope	TS
F2F	Face 2 Face (meeting)	DM
FAFF	First-Look Analysis and Feedback Functionality	TS
FAQ	Frequently Asked Question	Gen
FAR	Federal Acquisition Regulations	TS
FBOT	Fast blue optical transient	Sci
FBOTs	Fast blue optical transients	Sci
FDP	federated data product	TS
FDR	Final Design Review	LSST DM
FEA	Finite Element Analysis	OPS
FEC	Front-End Cage	TS
FEE	Front-End Electronics	TS
FELTs	Fast-Evolving Luminous Transients	Sci
FFRDC	Federally Funded Research and Development Center	Gen OPS
FFT	Fast Fourier Transform	Gen
FGCM	Forward Global Calibration Model	DM
FGST	Fermi Gamma-ray Space Telescope	Sci OPS
FIFO	First In First Out	Gen
FIPS	Federal Information Processing Standards	OPS
FITS	Flexible Image Transport System	Gen
FIU	Florida International University	Gen
FK5	Fifth Fundamental Catalogue	Gen
FLOP	FLoating point Operation	IT
FLOPS	FLoating point Operation per Second	IT
FMEA	failure modes and effect analysis	TS
FMECA	Failure Modes, Effects, and Causality Analysis	OPS OIR
FNAL	Fermi National Accelerator Lab	OPS
FOA	Facilities Operations in Arizona	OPS
FOC	Facilities Operations in Chile	OPS
FOH	Facilities Operations in Hawai'i	OPS
FoM	Figure of Merit	Gen
FoV	Field of View (also denoted FOV)	Gen
FOV	field of view	TS
FPA	Focal Plane Array	LSST

FPD	Fundamental Physics Directorate	OPS
FPGA	Field-Programmable Gate Array	Gen
FPRD	functional performance requirements document	TS
FPSL	Forced-Photometry Sensitivity Limit	TS
FRACAS	Failure Reporting Analysis and Corrective Action System	PSE
FrDF	French Data Facility	OPS
FS	File System	Gen
FSAAS	Filesystem as a Service	IT
FTE	Full-Time Equivalent	Adm Gen
FTS	File Transfer Service	OPS
FUSE	a user space filesystem framework	IT
FWHM	Full Width at Half-Maximum	Gen
FWP	Field Work Proposals	OPS
FY	Financial Year	OPS DM
FY20	Financial Year 20	OPS
FY21	Financial Year 21	OPS
FY22	Financial Year 22	OPS
FY23	Financial Year 23	OPS
FY24	Financial Year 24	OPS
FY25	Financial Year 25	OPS
GALAH	GALactic Archaeology with HERMES	DM
GAMA	Galaxy And Mass Assembly (survey)	Sci
GAVO	German Astronomical Virtual Observatory	Gen
GB	Gigabyte	Gen
Gb	Gigabit	Gen
GC	NSF Grant Conditions	TS
gcc	The GNU Compiler Collection; a C and C++ compiler	Gen
GCE	Google Compute Engine	IT
GCN	GRB Coordinates Network	Gen
GCP	Google Cloud Platform	IT
GCS	Generic Control System	TSSW
GDS	Guider Data System	TS
GFLOP	Giga FLOP	Gen
GFLOPS	Giga FLOP per Second	Gen
GID	Group Identifier	IT
GIS	Global Interlock System	

GLAST	Gamma-Ray Large Area Space Telescope	TS
GLONASS	GLObal NAvigation Satellite System	Gen
GMT	Giant Magellan Telescope	OPS
GMU	George Mason University	TS
GNU	GNU's Not Unix! An operating system and an extensive collection of free computer software	OPS DM
GPFS	General Parallel File System (now IBM Spectrum Scale)	Gen
GPL	GNU Public License	Gen
GPS	Global Positioning System	Gen
GPU	Graphics Processing Unit	Gen
GRB	Gamma-Ray Burst	Gen
GST	Greenwich Sidereal Time	Gen
GUI	Graphical User Interface	Gen
GW	Gravitational Wave	Sci OPS
HBCU	Historically Black Colleges and Universities	DEI
HBS	Hydraulic Bearing Support	TS
HD	historical data	TS
HDD	Hard Disk Drive	DM Gen
HEALPix	Hierarchical Equal-Area iso-Latitude Pixelisation	Gen
HEASARC	NASA's Archive of Data on Energetic Phenomena	Gen
HELP	Herschel Extragalactic Legacy Project	Gen
HEP	High Energy Physics	Gen
HEPAP	HEP Advisory Panel	TS
HIPS	Hierarchical Progressive Survey	Gen
HPC	High Performance Computing	DM
HPO	Head of Program Operations	OPS
HQ	Head Quarters	OPS
HR	Human Resources	Gen
HSC	Hyper Suprime-Cam	Gen
HSI	Hispanic Serving Institutions	DEI
HSM	Hierarchical Storage Management	DM
HST	Hubble Space Telescope	Gen
HTC	High Throughput Computing	DM
HTM	Hierarchical Triangular Mesh	Gen
HTML	HyperText Markup Language	Gen
HTTP	HyperText Transfer Protocol	Gen

HVAC	Heating, Ventilation, and Air Conditioning	OPS
HW	HardWare	Gen
I&T	Integration and Test	Gen
IaC	Infrastructure as Code	IT
IAM	Identity and Access Management	IT
IaS	Infrastructure as a Service	IT
IAU	International Astronomical Union	Gen
IBM	International Business Machines	Gen
ICBS	International Communications and Base Site	LSST DM
ICD	Interface Control Document	Adm
ICoD	Interface Compliance Document	Adm
IDA	Interface Design Artifact	TS
IDAC	Independent Data Access Center	DM OPS
IDF	Interim Data Facility	OPS
IDL	Interactive Data Language	Gen
IIP	image ingest and processing	TS
ILC	Inner Loop Controller	PSE
IMF	Initial Mass Function	DM
IMS	Integrated Master Schedule	PSE
ImSim	Image Simulation	Sims
IN2P3	Institut National de Physique Nucléaire et de Physique des Particules	Gen
IoA	Institute of Astronomy (Cambridge; also denoted IOA)	Gen
IP	Internet Protocol	DM
IPA	FreeIPA is an integrated security information management solution	DM
IPC	International Program Coordinator	OPS
IPC	International Program Coordinator	OPS
IPAC	No longer an acronym; science and data center at Caltech	Gen
IPEDS	Integrated Postsecondary Educational Data System	DEI
IPS	Integrated Project Schedule	Adm
IPsec	Internet Protocol Security	DM
IR	infrared	TS
IRAF	Image Reduction and Analysis Facility	Hist
IRIS	e-Infrastructure for Research and Innovation for STFC	OPS
IRNC	International Research Network Connections	TS

IRSA	Infrared Science Archive	Gen
IRU	indefinable right to use	TS
IS	Interface Scientist	LSST DM
ISD	Interface Support Document	
ISM	interstellar medium	TS
ISO	International Standards Organisation	Gen
ISR	Instrument Signal Removal	LSST DM
IT	Information Technology	Gen
ITAR	International Traffic in Arms Regulations	Gen
ITC	Information Technology Center	LSST DM
ITIL	Information Technology Infrastructure Library	Gen
ITO	IT Operations	OPS OIR
ITSC	Information Technology Services Committee	Adm
IUSE	Improving Undergraduate STEM Education	Sci
IVOA	International Virtual-Observatory Alliance	Gen
JBOD	Just a Bunch of Disks	OPS
JEDI	Job Execution and Definition Interface	OPS
JD	Julian Date	Gen
JDBC	Java DataBase Connectivity	Gen
JDR	Joint Directors Review	LSST
JHU	Johns Hopkins University	Gen
JIT	Just In Time	Gen
JOG	Joint Oversight Group	Adm
JPL	Jet Propulsion Laboratory (DE ephemerides)	Gen
JRE	Java Runtime Environment	Gen
JSON	JavaScript Object Notation	Gen
JSR	Joint Status Review	LSST DM
JTM	Joint Technical Meeting	LSST DM
JVM	Java Virtual Machine	Gen
JWST	James Webb Space Telescope (formerly known as NGST)	Gen
JWT	JSON Web Token	DM
KASI	Korea Astronomy and Space Science Institute	Gen
K8S	Kubernetes provisioning system	IT LSST DM
KB	KiloByte	Gen
KBO	Kuiper-Belt Object	Gen
kbps	kilobits per second	Gen

KIPAC	Kavli Institute for Particle Astrophysics and Cosmology	Sci
KISS	Keep It Simple, Stupid	Gen
KPM	Key Performance Metric	LSST DM
KPMO	Kitt Peak Mountain Operations	OPS
KPNO	Kitt Peak National Observatory	OPS
KW	Kilowatt	Gen
L1	Lens 1	TS
L2	Lens 2	TS
L3	Lens 3	TS
L4	Lens 4	TS
LAG	List of Acronyms and Glossary	Gen
LAN	Local Area Network	Gen
LAPACK	Linear Algebra PACKage	Gen
LASER	Light Amplification by Stimulated Emission of Radiation	Gen
LaTeX	(Leslie) Lamport TeX (document markup language and document preparation system)	Gen
LATISS	LSST Atmospheric Transmission Imager and Slitless Spectrograph	TS
LBT	Large Binocular Telescope	TS
LBTO	Large Binocular Telescope Observatory	OPS
LCA	Document handle LSST camera subsystem controlled documents	CAM
LCLS	Linac Coherent Light Source	Gen
LCO	Las Cumbres Observatories	Gen
LCR	LSST Change Request	LSST DM
LCURM	AIP Liaison Committee on Underrepresented Minorities	DEI
LDAP	Lightweight Directory Access Protocol	IT
LDF	LSST Data Facility	LSST DM
LMC	Large Magellanic Cloud	Sci
LDM	LSST Data Management (Document Handle)	LSST DM
LDO	LSST Document Operations (Document Handle)	LSST OPS
LED	Light-Emitting Diode	Gen
LEP	LSST EPO (Document Handle)	LSST EPO
LF	luminosity function	TS
LFA	Large File Annex	TS
LG	Local Group	Sci
LHC	Large Hadron Collider (at CERN)	Gen
LHN	long haul network	TS

LIGO	Laser Interferometer Gravitational-Wave Observatory	TS
LILA	Links Interconnecting Latin America	TS
LINCC	LSST Interdisciplinary Network for Collaboration and Computing	OPS
LISA	Laser Interferometer Space Antenna	TS
LLNL	Lawrence Livermore National Laboratory	Gen
LOE	Level of Effort	Gen
LOP	LSST Operations Plan	TS
LOTO	Lock Out Tag Out	TS
LOVE	LSST Operations Visualization Environment	LSST DM
LOY	LSST Operations Year	OPS
LPGL	Lesser Public GNU general License	Gen
LPM	LSST Project Management (Document Handle)	LSST DM
LSB	Low Surface Brightness	Sci
LSE	LSST Systems Engineering (Document Handle)	LSST DM
LSP	LSST Science Platform (now Rubin Science Platform)	LSST DM
LSR	LSST System Requirements; LSE-29	LSST DM
LSST	Legacy Survey of Space and Time (formerly Large Synoptic Survey Telescope)	Gen
LSSTC	LSST Corporation	Adm
LSSTPO	LSST Project Office	Adm
LTS	LSST Telescope and Site (Document Handle)	TS
LUT	Look-Up Table	Gen
LV	Local Volume	Sci
LVV	LSST Verification and Validation	Gen
LZ	LUX-ZEPELIN (Dark Matter Mission)	Sci
M1	primary mirror	TS
M1M3	Primary Mirror Tertiary Mirror	LSST
M2	Secondary Mirror	LSST
M3	tertiary mirror	TS
MAC	Media Access Control	IT
MACHO	massive compact halo object	TS
MASCARA	Multi-site All-Sky CAmeRA	TS
MAF	Metric Analysis Framework	OPS
MASS	Multi-Aperture Scintillation Sensor	TS
MAST	Mikulski Archive for Space Telescopes	Gen
MB	MegaByte	Gen

Mb	Megabit (1000000 bit)	Gen
MBA	main belt asteroid	TS
MBE	model-based engineering	TS
MBps	Megabits per second	Gen
MBSE	model-based systems engineering	TS
MBTU	Mega British Thermal Unit	OPS
MC	Monte-Carlo (simulation/process)	Gen
MCM	Master Control Module	TS
MCMC	Monte Carlo Markov Chain	Gen
MEMS	micro-electronic mechanical systems	TS
MERRA	Modern-Era Retrospective analysis for Research and Applications	NASA
MIDAS	Munich Image Data Analysis System (ESO)	Gen
MIE	Major Item of Equipment	OPS
MJD	Modified Julian Date (to be avoided; see also JD)	Gen
ML	Machine Learning	Sci
MMA	Multi Messenger Astronomy	OPS
MMT	Multiple Mirror Telescope	OPS
MNRAS	Monthly Notices of the Royal Astronomical Society	TS
MOA	Memo Of Agreement	OPS
MOC	Multi Ordered Catalogue	VO DM
MODTRAN	MODerate resolution TRANsmission model	TS
MOF	Multi-Object Multi-Band Fitting	OPS
MOPS	Moving Object Processing System (deprecated; see SSP)	LSST DM
MOSFET	Metal-Oxide Semiconductor Field-Electric Transistor	Gen
MOU	Memo Of Understanding	OPS
MPA	Max Planck Institute for Astrophysics	Gen
MPC	Minor Planet Center	Gen
MPO	Memorandum Purchase Order	OPS DOE
MPP	Massively Parallel Process	DM
MPS	NSF Mathematical and Physical Sciences directorate	OPS
MPS/AST	NSF Mathematical and Physical Sciences directorate's Division of Astronomical Sciences	OPS
MREFC	Major Research Equipment and Facility Construction	Gen
MREN	Montenegrin Research and Education Network	Gen
MSB	Most Significant Bit	Gen
MSE	Maunakea Spectroscopic Explorer	Sci

MSO	Mid-Scale Observatories	OPS OIR
MT	Main Telescope	TS
MTU	Maximum Transmission Unit	IT NET
MTBF	Mean Time Between Failures	OPS
MTDC	Modified Total Direct Costs	OPS
MTM1M3	Main Telescope M1M3	TS
MTM2	Main Telescope Secondary Mirror	TS
MTOFC	Main Telescope Optical Feedback Control	TS
MTTR	Mean Time To Repair	OPS
MYDB	My Database	DM Gen
NACME	National Action Council for Minorities in Engineering	DEI
NAOJ	National Astronomical Observatory of Japan	Gen
NAS	National Academy of Science	Sci
NAS	Network Attached Storage	DM
NASA	National Aeronautics and Space Administration	Gen
NAT	Network Address Translation	IT
NAT	nodal aberration theory	TS
NCOA	National Center for Optical-Infrared Astronomy	Gen
NCOIRA	(Obsolete now NOIRLab) National Center for Optical and Infrared Astronomy	TS
NCR	Non Conformance Report	PMO
NCSA	National Center for Supercomputing Applications	Gen
NCW	Non Conformance Waiver	PMO
NEA	Near-Earth Asteroid	Gen
NED	NASA/IPAC Extragalactic Database	Gen
NEO	Near-Earth Object	Gen
NERSC	National Energy Research Scientific Computing Center	OPS
NET	Network Engineering Team	LSST DM
NFPA	National Fire Protection Association	OPS
NFS	Network File System	Gen
NGSS	Next-Generation Science Standards	OPS
NGVLA	Next Generation Very Large Array	OPS
NIR	Near Infrared	Sci
NIST	National Institute of Standards and Technology (USA)	Gen
NLR	National Lambda Rail	TS
NLT	NOIRLab Leadership Team	OPS

NMOC	NSF's OIR Lab Management Oversight Council	Gen
NNSA	National Nuclear Security Administration	OPS
NOAA	National Oceanic and Atmospheric Administration	Gen
NOAO	National Optical Astronomy Observatories now NOIRLab	Gen
NOC	Network Operations Center	NET
NOGLSTP	National Organization of Gay and Lesbian Scientists and Technical Professionals	DEI
NOIR	NSF's National Optical-Infrared Astronomy Research Laboratory; `https://nationalastro.org`	Gen
NOS	NSF's OIR Lab Operations Services	OPS OIR
NPCF	National Petascale Computing Facility	OPS OIR
NRAO	National Radio Astronomy Observatory	Gen
NRC	National Research Council	OPS
NSB	National Science Board	TS
NSBP	National Society of Black Physicists	DEI
NSF	National Science Foundation	Gen
NSF's OIR Lab	NSF's National Optical-Infrared Astronomy Research Laboratory; `https://nationalastro.org`	Gen
NSO	National Solar Observatory	OPS
NSS	NOAO Support Services	OPS
NSTA	National Science Teachers Association	OPS
NTP	Network Time Protocol	OPS
NTS	NCSA Test Stand	DM CAM
NUV	Near Ultraviolet	Sci
NVMe	Non Volatile Memory Express	DM IT
NYT	New York Times	Gen
OAB	Outreach Advisory Board	EPO
OBS	Organisation Breakdown Structure	Gen
OC	AURA Observatory Council	OPS
OCDD	Operations Concept Definition Document	OPS
OCPS	OCS Controlled Pipeline System	TS DM
OCS	Observatory Control System	LSST DM
ODBC	Open DataBase Connectivity, a standard API for SQL databases.	LSST DM
OGA	Other Government Agencies	OPS
OHEP	Office of High-Energy Physics	TS
OI	Organization International	OPS

OIR	optical and infrared astronomy	TS
OLE	Observatory Logging Environment	TS
OMB	Office of Management and Budget	OPS
OOB	Out Of Bound (Alternative network access)	IT
OODS	Observatory Operations Data Service	DM
OPCC	Oficina de Protección de la Calidad del Cielo	OPS
OPD	optical path difference	TS
OPS	Operations	LSST DM
OpSim	Operations Simulation	Sims
OPSTN	Operations Technical Note	LSST DM
ORR	Operations Readiness Review	OPS
OS	Operating System	Gen
OSHA	Occupational Safety and Health Administration	OPS
OSI	open systems interconnect	TS
OSPL	OpenSplice DDS - the underlying messaging system for SAL	TS
OSS	Observatory System Specifications; LSE-30	LSST DM
OSX	Macintosh Operating System (obsolete; now macOS)	Gen
OTB	Over Target Baseline	Gen
OTS	observatory telemetry system	TS
P5	The Particle Physics Project Prioritization Panel is a scientific advisory panel tasked with recommending prioritization for U.S. investment in particle physics research, on the basis of various funding scenarios.	Adm
P6	Primavera, a comprehenvive project management tool	Adm
PanDA	Production ANd Distributed Analysis system	OPS
Pan-STARRS	Panoramic Survey Telescope and Rapid Response System	Gen
Parsl	Parallel Scripting Library `http://parsl-project.org/`	DM
PASP	Publications of the Astronomical Society of the Pacific	Sci
PB	PetaByte	Gen
PBI	Predominantly Black Institution	DEI
PCA	Principal Component Analysis	Gen
PCB	printed circuit boards	TS
PCI	Peripheral Component Interconnect	Gen
PCW	Project Community Workshop	LSST DM
PD	Program Development	OPS
PDAC	Prototype Data Access Center	LSST DM

PDF	Portable Document Format	Gen
PDF	Probability Density Function	Gen
PDR	Preliminary Design Review	LSST DM
PDR1	Public Data Release 1 (HSC)	OPS
PDR2	Public Data Release 2 (HSC)	OPS
PDU	Power Distribution Unit	LSST DM
PEP	Project Execution Plan	Adm
PFS	Prime Focus Spectrograph	Gen
PHA	potentially hazardous asteroids	TS
photo-z	photometric redshift	Sci
PI	Principle Investigator	Sci OPS
PII	personally identifiable information	TS
PLL	Phase-Locked Loop	Gen
PM	Project Manager	LSST DM
PMCS	Project Management Controls System	LSST DM
PMM	precision measuring machine	TS
PMO	Project Management Office	Adm
PMP	(DM) Project Management Plan; LDM-294	LSST DM
PO	Program Operations	OPS
POC	Proof Of Concept	Gen
POC	People Of Color	DEI
POCIT	People Of Color In Tech	DEI
POE	POly Esters	OPS
POI	Point Of Interest	OPS
POP	Project Operating Plan	LSST OPS
POSIX	Portable Operating System Interface	Gen
PPDB	Prompt Products DataBase	DM
PPE	Personal Protection Equipment	OPS
PR	Pull Request	Gen
PRC	Procurement Charge	OPS DOE
PRT	Personal Research Time	OPS
PS	Project Scientist	LSST DM
PSD	power spectral density	TS
PSE	Project Systems Engineering	PSE
PSF	Point Spread Function	Gen
PST	Project Science Team	LSST DM

PSTN	Project Science Technical Note	LSST DM
PVI	Processed Visit Image	DM
PWI	Predominantly White Institution	DEI
QA	Quality Assurance	Gen
QAP	Quality Assurance Plan	TS
QC	Quality Control	Gen
QE	quantum efficiency	TS
QSERV	LSST Query Services	TS
RA	Right Ascension	Gen
RAC	Resource Allocation Committee	OPS
RAID	Redundant Array of Inexpensive Disks	Gen
RAL	Rutherford Appleton Laboratory (UK)	Gen
RAM	Random Access Memory	Gen
RAVE	Radial Velocity Experiment (spectroscopic survey)	TS
RBSE	Research-Based Science Education (AURA)	OPS
RC	Release Candidate	Gen
RCC	Raft Control Rate	CAM
RCEC	Rubin Construction Executive Committee	Gen
RCI	Raft Communication Interface	CAM
RCM	Raft Communication Module	CAM
RDBMS	Relational Database Management System	Gen
RDO	Rubin Directors Office	OPS
RDP	Rubin Data Production	OPS
REB	Readout Electronics Board	LSST DM
REN	Research and Education Network	OPS
RENATER	Réseau National de télécommunications pour la Technologie l'Enseignement et la Recherche	OPS
REO	Rubin Education and Outreach	OPS
REST	REpresentational State Transfer	IT
REUNA	Red Universitaria Nacional	Gen
RFC	Request For Comment	LSST DM
RFP	Request For Proposals	PMO
RFQ	Request For Quotations	LSST OPS
RM	Release Manager	LSST DM
RMS	Root-Mean-Square	Gen

RNP	Rede Nacional de Ensino e Pesquisa (National Education and Research Network Brazil)	IT
ROE	Royal Observatory Edinburgh	OPS
ROO	Rubin Observatory Operations	OPS
ROOT	Object-oriented data analysis framework developed at CERN	Gen
ROP	Rubin Operations Plan	OPS
RPF	Rubin system PerFormance	OPS
RPM	RPM Package Manager (originally Red Hat Package Manager; now a recursive acronym)	IT
RS232C	Standard 25-pin serial connection between computers and modems	Gen
RSA	Raft Sensor Array	CAM
RSE	Rucio Storage Element	OPS
RSP	Rubin Science Platform	DM
RSS	square root of the sum of the squares	TS
RSS	Resident Set Size	DM
RTA	responsible technical authority	TS
RTD	Resistance Temperature Detector	OPS
RTI	rise time invariance	TS
RTM	Raft Tower Module	CAM
RTN	Rubin Technical Note	LSST DM
RTV	raster to vector	TS
S3	(Amazon) Simple Storage Service	IT
SAACC	South American Astronomy Coordination Committee	LSST
SaaS	Software as a Service	Gen
SAC	Science Advisory Committee	LSST Adm
SACNAS	Society for Advancement of Chicanos/Hispanics and Native Americans in Science	DEI
SAGA	Satellites Around Galactic Analogs (Survery)	Sci
SAL	Service Abstraction Layer	OPS TSSW
SAMP	Simple Application Messaging Protocol	Gen
SAO	Smithsonian Astrophysical Observatory	Gen
SAPP	Science Algorithms, Pipelines, and Products	TS
SATA	Serial Advanced Technology Attachment	IT DM
SBS	Shared Business Services	OPS OIR
SC	Science Collaboration	DM

SCADA	Supervisory Control And Data Acquisition	TS
SCIDAR	Scintillation Detection And Ranging	TS
SCOC	Survey Cadence Optimization Committee	OPS
SCOSC	Survey Cadence Optimization Strategy Committee	OPS
SDQA	Science Data Quality Assessment	DM LSST
SDS	Science array Data acquisition Subsystem	TS
SDSS	Sloan Digital Sky Survey	Gen
SE	System Engineering	Rubin
SED	Spectral Energy Distribution	Sci
SEM	Systems Engineering Manager	Adm
SEMP	Systems Engineering Management Plan	LSST DM
SEWG	Survey Evaluation Working Group	OPS
SFR	Supplemental Funding Request	Adm
SHA-1	Secure Hash Algorithm 1	Gen
SHE	Safety, Health, and Environmental	
SHPE	Society of Hispanic Professional Engineers	DEI
SI	Système International (International System of units defined by ISO)	Gen
SIA	Simple Image Access	Gen
SIT	System Integration, Test	LSST OPS
SITCOM	System Integration, Test and Commissioning	LSST OPS
SKA	Square Kilometer Array	Sci
SKF	Svenska Kullagerfabriken	PMO
SKU	Stock Keeping Unit (Google)	OPS
SLA	Service Level Agreement	Gen
SLAC	SLAC National Accelerator Laboratory	LSST DM
SMARTS	Small and Moderate Aperture Research Telescope System	OPS
SMBH	Supermassive Black Hole	Sci
SMC	Small Magellanic Cloud	Sci
SN	SuperNovae	Sci
SNANA	SuperNova ANAlysis (https://snana.uchicago.edu/)	Sci
SNAPS	Solar System Notification Alert Processing System	OPS
SNR	Signal to Noise Ratio	DM
SO	scientific operations	TS
SOAP	Simple Object Access Protocol	Gen
SOAR	Southern Astrophysical Research Telescope	Gen

SOC	Security Operations Centre	OPS IT
SOC	Science Operations Centre	Gaia
SODA	Server-side Operations for Data Access	Gen
SODAR	sonic detection and ranging	TS
SOF	Single-Object Fitting	OPS
SOG	science operations group	TS
SOML	Steward Observatory Mirror Lab (University of Arizona)	Gen
SOS	Science Operations Services	OPS
SOW	Statement Of Work	Gen
SP	Survey Performance	Sci
SP	System PerFormance	OPS
SP	Story Point	DM
SPI	Schedule Performance Index	Gen
SPIE	The international society for optics and photonics	Gen
SPL	Science PipeLines	DM
SQL	Structured Query Language	Gen
SQR	SQuARE document handle	LSST DM
SQuaRE	Science Quality and Reliability Engineering	LSST DM
SQuaSH	Science Quality Analysis Harness	DM
SRCF	Stanford Research Computing Facility	OPS
SRD	LSST Science Requirements; LPM-17	LSST DM
SRT	Science Raft Tower	CAM
SS	Subsystem Scientist	LSST DM
SSC	Survey Strategy Committee	OPS
SSD	Solid-State Disk	Gen
SSH	Secure SHell	Gen
SSID	Service Set Identifier	IT
SSL	Secure Sockets Layer	IT
SSM	Subsystem Manager	Adm
SSO	Solar System Object	DM
SSP	Solar System Processing	LSST DM
SST	Simonyi Survey Telescope	Gen
SST	Subsystem Science Team	LSST DM
stdin	standard input	Gen
stdout	standard output	Gen
STEM	Science, Technology, Engineering and Math	Gen

STFC	UK Science and Technology Facilities Council	OPS
SU	Stanford University	OPS
SUI	Science User Interface (original name for the LSP Portal and API Aspects)	LSST DM
SUIT	Science User Interface and Tools (LSST Data Management WBS element and team, responsible for LSP Portal Aspect)	LSST DM
SV	Science Validation	LSST DM
SW	Software (also denoted S/W)	Gen
SWE	Society of Women Engineers	DEI
T/CAM	Technical/Control (or Cost) Account Manager	LSST DM
T&S	Telescope and Site	LSST DM
TAC	Time Allocation Committee	OPS
TACABS	absolute time-recording accuracy (millisecond)	TS
TACC	Texas Advanced Computing Center	Gen
TACREL	internal (relative) time-recording accuracy (millisecond)	TS
TAI	International Atomic Time	Gen
TAP	Table Access Protocol	Gen
TB	TeraByte	Gen
TBA	To Be Announced	Gen
TBC	To Be Confirmed	Gen
TBD	To Be Defined (Determined)	Gen
TBR	To Be Resolved	Gen
TC	Thermocouple	LSST DM
TCAM	Technical Control (or Cost) Account Manager	DM
TCP	Transmission Control Protocol	IT
TCS	Telescope Control System	TS DM
TCT	Technical Control Team (obsolete; now DMCCB)	LSST DM
TDE	Tidal Disruption Event	Sci
TDEs	Tidal Disruption Events	Sci
TEA	Top End Assembly	TS
TESS	Transiting Exoplanet Survey Satellite, a space telescope for NASA's Explorer program	Sci
TFLOP	Tera FLOP	Gen
TLD	Top Level Domain	IT
TLS	Transport Layer Security	IT
TMA	Telescope Mount Assembly	TS DM

TMT	Thirty Meter Telescope	OPS
TNO	trans-Neptunian object	TS
TOO	Target Of Opportunity	Sci
ToO	Target of Opportunity	Sci
TOPCAT	Tool for OPerations on Catalogues And Tables	Gen
TOWG	Technical Operations Working Group	TS
TPC	Total Project Cost	PMO
TPU	Tensor Processing Unit	DM
TS	Test Specification	LSST DM
TSIP	Telescope System Instrumentation Program	OPS
TSS	Telescope and Site Software	LSST
TTS	Tucson Test Stand	LSST
TVSS	transient voltage surge suppressor	TS
UA	University of Arizona	TS
UAP	Unidentified Aerial Phenomena	Sci
UCL	University College London (UK)	Gen
UDP	User Datagram Protocol	Gen
UHV	Ultra-high vacuum	LSST OPS
UI	User Interface	Gen
UID	User Identifier	IT
UIUC	University of Illinois at Urbana-Champaign	TS
UK	United Kingdom	Gen OPS
UKDF	United Kingdom Data Facility	OPS
UKIDSS	UKIRT Infrared Deep Sky Survey	Gen
UKIRT	United Kingdom Infrared Telescope	Gen
UML	unified modeling language	TS
UNSO	United States Naval Observatory	TS
UPS	uninterruptible power supply	TS
URL	Universal Resource Locator	Gen
US	United States	Gen
USB	Universal Serial Bus	IT
USD	United States dollar	TS
USDF	United States Data Facility	OPS DF DM
USNO	United States Naval Observatory	Gen
UT	Universal Time	Gen
UT1	Universal Time 1	Gen

UTC	Coordinated Universal Time	Gen
UV	Ultraviolet	Sci
UW	University of Washington	Gen
UWS	Universal Worker Service (IVOA standard)	Gen
UX	User Experience	Gen
VCD	Verification Control Document	LSST DM
VE	vendor estimate	TS
VF2F	Virtual Face 2 Face (meeting)	DM
VISTA	Visible and Infrared Survey Telescope for Astronomy	Gen
VLA	Very Large Array (NRAO)	Gen
VLAN	Virtual Local Area Network	IT
VLBA	Very Long Baseline Array	Gen
VLBI	Very Long Baseline Interferometry	Gen
VLT	Very Large Telescope (ESO)	Gen
VLTI	Very Large Telescope Interferometer (ESO)	Gen
VM	Virtual Machine	Gen
VNOC	Virtual Network Operations Center	NET
VO	Virtual Observatory	Gen
VOIP	Voice Over Internet Protocol	IT DM
VOMS	VO Management Service	DM
VPC	Virtual Private Cloud	IT
VPN	virtual private network	TS
VQ	vendor quote	TS
VRO	(not to be used)Vera C. Rubin Observatory	Gen
VST	VLT Survey Telescope	Gen
W3C	World Wide Web Consortium	Gen
WAN	Wide Area Network	Gen
WBS	Work Breakdown Structure	Gen
WCA	Workplace Culture Advocate	Gen
WCAG	Web Content Accessibility Guidelines	OPS
WCS	World Coordinate System	Gen
WEPAN	Women in Engineering ProActive Network	DEI
WFD	Wide Fast Deep	OPS
WFIRST	Wide Field Infrared Survey Telescope	OPS
WFM	WorkFlow Management	DM
WFS	WaveFront Sensor	TS

WG	Working Group	LSST DM
WIED	Women In Engineering Division	DEI
WISE	Wide-field Survey Explorer	Gen
WIYN	(No longer an acronym - formerly:) Wisconsin, Indiana University, Yale University, NOAO (National Optical Astronomy Observatories) Observatory	Gen
WL	Weak gravitational Lens cosmic shear	Sci
WLMS	work load management service	TS
WMS	Work Management System	OPS
WOUCAO	Windows on the Universe Center for Astronomy Outreach	OPS
WP	Work Package	OPS
WRHEN	Western Hemisphere Research & Education Networks	TS
WSDL	Web Services Description Language	Gen
WWT	World Wide Telescope	TS
XHTML	eXtensible HyperText Markup Language	Gen
XML	eXtensible Markup Language	Gen
XMM	X-ray Multi-mirror Mission (ESA; officially known as XMM-Newton)	Gen
XSD	XML Schema Definition	Gen
XSEDE	Extreme Science and Engineering Discovery Environment	OPS
XSL	eXtensible Stylesheet Language	Gen
XSLT	eXtensible Stylesheet Language Transformation	Gen
YAML	Yet Another Markup Language	Gen
ZD	zenith distance	TS
ZTF	Zwicky Transient Facility	Gen
Accident	An undesired event that results in harm to people, damage to property, or loss to process. Accidents result from contact with a substance or source of energy above the threshold limit of the body structure	Adm
Accruals	Accounts on a balance sheet that represent liabilities and non-cash-based assets used in accrual-based accounting; these accounts include, among many others, accounts payable, accounts receivable, goodwill, future tax liability, and future interest expense	Adm
adaptive moments	The second moments of the source intensity distribution, which are used for measuring source shapes. This approach is close to optimal for measuring the shapes of faint galaxies	Sci

afw	LSST's pipeline library code and primitives including images and tables	DM
aggregate metric	An aggregation of multiple point metrics. For example, the overall photometric repeatability for a particular tract given given the repeatability of multiple individual stars in the tract. See also: "metric"	DM QA
aggregation	The process of reducing multiple input values to a single output, e.g., a metric value, computed from a collection of input values. For example, a sum or average of a metric computed over patches to produce an aggregate metric at tract level. See also: "metric", "aggregate metric"	DM QA
airmass	The pathlength of light from an astrophysical source through the Earth's atmosphere. It is given approximately by sec z, where z is the angular distance from the zenith (the point directly overhead, where airmass = 1.0) to the source	Sci
AMPEL	AMPEL (Broker) is a modular and scalable platform with explicit provenance tracking, suited for systematically processing large — possibly complex and heterogeneous — datasets either in real time or offline.`https://ampelproject.github.io/`	OPS
Automatic Learning for the Rapid Classification of Events	The ALeRCE broker is a Chilean-led broker which is processing the alert stream from the ZTF and a Community Broker for the Vera C. Rubin Observatory and its LSST, as well as other large etendue survey telescopes. `http://alerce.science/`	OPS
Alert	A packet of information for each source detected with signal-to-noise ratio > 5 in a difference image by Alert Production, containing measurement and characterization parameters based on the past 12 months of LSST observations plus small cutouts of the single-visit, template, and difference images, distributed via the internet	DM
Alert Production	Executing on the Prompt Processing system, the Alert Production payload processes and calibrates incoming images, performs Difference Image Analysis to identify DIASources and DIAObjects, and then packages the resulting alerts for distribution.	DM
Alert Production DataBase	A dedicated, internal database system used to support LSST Alert Production. Does not support end-user access.	DM

algorithm	A computational implementation of a calculation or some method of processing	Sci
Alternate Standard Visit	A single observation of an LSST field comprised of one 30 second exposure	DM
Amplifier	An electronic component of a CCD that is used to recover the signal during read-out. For LSST, multiple amplifiers on each CCD will enable simultaneous read-out of adjacent regions of each detector. Often this term is used, not quite correctly, as a synonym for a read-out channel	CAM
Apache Parquet	A columnar storage data persistence format maintained by the Apache project	DM QA
aperture correction	A correction that is applied to fluxes of sources that were measured within a finite aperture, to account for the source flux that lies outside the aperture. This correction is usually based upon a model of the PSF as derived from bright, isolated stars. From the model one can derive the magnitude of the correction with aperture size and its variation with position in the image, which asymptotically approaches 1.0 at infinite aperture. Fluxes of sources in crowded fields are often measured with small apertures to avoid contamination, and then corrected with this approach	DM
Archive	The repository for documents required by the NSF to be kept. These include documents related to design and development, construction, integration, test, and operations of the LSST observatory system. The archive is maintained using the enterprise content management system DocuShare, which is accessible through a link on the project website www.project.lsst.org	Adm
Archive Center	Part of the LSST Data Management System, the LSST archive center is a data center at NCSA that hosts the LSST Archive, which includes released science data and metadata, observatory and engineering data, and supporting software such as the LSST Software Stack	DM

Arizona-NOIRlab Temporal Analysis and Response to Events System	ANTARES is a real-time astronomy system under development at NOIRLab. `https://antares.noirlab.edu`	OPS
Archiver	The IIP component responsible for transferring raw images and metadata to OODS and DBB in real time	DM
Association of Universities for Research in Astronomy	consortium of US institutions and international affiliates that operates world-class astronomical observatories, AURA is the legal entity responsible for managing what it calls independent operating Centers, including LSST, under respective cooperative agreements with the National Science Foundation. AURA assumes fiducial responsibility for the funds provided through those cooperative agreements. AURA also is the legal owner of the AURA Observatory properties in Chile	Adm
Association Pipeline	An application that matches detected Sources or DIASources or generated Objects to an existing catalog of Objects, producing a (possibly many-to-many) set of associations and a list of unassociated inputs. Association Pipelines are used in Alert Production after DIASource generation and in the final stages of Data Release processing to ensure continuity of Object identifiers	DM
astrometry	In astronomy, the sub-discipline of astrometry concerns precision measurement of positions (at a reference epoch), and real and apparent motions of astrophysical objects. Real motion means 3-D motions of the object with respect to an inertial reference frame; apparent motions are an artifact of the motion of the Earth. Astrometry per se is sometimes confused with the act of determining a World Coordinate System (WCS), which is a functional characterization of the mapping from pixels in an image or spectrum to world coordinate such as (RA, Dec) or wavelength	Sci
astronomical object	A star, galaxy, asteroid, or other physical object of astronomical interest. Beware: in non-LSST usage, these are often known as sources	Sci

Attribute	A quantitative performance parameter in the context of the SysML based SysArch model used to generate a requirements document	SE
AURA Management Council for LSST	, group reporting to the AURA Board of Directors that oversees the activities of the LSST Project Office and advocates the mission of the LSST	Adm
AURA Management Council for Rubin Observatory	, group reporting to the AURA Board of Directors that oversees the activities of the Rubin Observatory Directors Office and advocates the mission of the observatory	Adm
AURA-O	AURA Observatory in Chile	Gen
AuxTel	LSST's 1.2-meter Auxiliary Telescope will measure atmospheric transmission and will be used to calibrate LSST images.	Gen
background	In an image, the background consists of contributions from the sky (e.g., clouds or scattered moonlight), and from the telescope and camera optics, which must be distinguished from the astrophysical background. The sky and instrumental backgrounds are characterized and removed by the LSST processing software using a low-order spatial function whose coefficients are recorded in the image metadata	DM
Babamul	Caltech's event broker	OPS
Base Facility	The data center located at the Base Site in La Serena, Chile. The Base Facility is composed of the Base portion of the Prompt Enclave directly supporting Observatory operations, the Commissioning Cluster, an Archive Enclave holding data products, and the Chilean Data Access Center	DM
Base Year Cost	The cost of a particular project element as of a year chosen to represent an arbitrary cost level of 100, usually the year the project plan was created or refreshed. New, up-to-date base years are periodically introduced to keep data current	Adm
Baseline	The point at which project designs or requirements are considered to be 'frozen' and after which all changes must be traced and approved	Adm

Baseline, Cost	The 'frozen' total costs required for completion of the project based on known resources (staff, physical assets, knowledge, etc.) that will be needed	Adm
Baseline, Design	The baseline defining the site specific preliminary design of the LSST subsystems and their associated hardware and software deliverables required to meet the requirements and definitions of the System Baseline	Adm
Baseline, Functional	The baseline defining at the highest level the scientific, functional, and performance requirements for what the LSST Observatory is and what it must do as a whole	Adm
Baseline, Schedule	The 'frozen' amount of time required for completion of the project based on known resources (staff, physical assets, knowledge, etc.) that will be needed	Adm
Baseline, System	The baseline defining the high level set of functional and performance requirements for the LSST system and each of the LSST subsystems (Camera, Telescope and Site, and Data Management), the Observatory Control System, and Education and Public Outreach	Adm
Baseline, Technical	The 'frozen' requirements, specifications, designs, and allocations needed for completion of the project based on known resources (staff, physical assets, knowledge, etc.) that will be needed	Adm
Basis of Estimate	justification for arriving at a particular cost estimate, including estimating methods, approach taken, prices used, assumptions made; an analyzed and carefully calculated number	Adm
Batch Production	Computational processing that is executed as inputs become available, in a distributed way across multiple enclaves when needed, while tracking status and outputs. Examples of Batch Production include offline processing for Prompt Data Products, calibration products, template images, and Special Programs data products. Prioritization protocols for the various types of batch production are given in LDM-148	DM
brighter-fatter effect	The common term used to refer to one of the photometric qualities of the LSST camera: sources with a higher flux have a broader PSF. This is accounted for during calibration	DM

Broker	Software which receives and redistributes Alerts, and may also perform processing such as filtering for certain characteristics, cross-matching with non-LSST catalogs, and/or light-curve classification, in order to identify and prioritize targets for follow-up and/or make scientific analyses.	DM
Builder	Individuals who have accumulated 2 FTE years worth of employment/contributions to the LSST Project	Adm
Business Manager	The person responsible for all business activities of the LSST Project and the LSST Corporation; he or she serves as liaison to AURA CAS, develops and monitors contracts, and serves as the LSST Corporation Secretary	Adm
Butler	A middleware component for persisting and retrieving image datasets (raw or processed), calibration reference data, and catalogs	DM
Buyer	Includes the terms 'Buyer' 'subcontract administrator or officer' 'contracts administrator or officer' sub-award administrator, or any other LSSTC authorized procurement official as used herein are inter-changeable	Adm
CA-FACTS	NSF Cooperative Agreement Financial & Administrative Terms and Conditions	Gen
Cadence	The sequence of pointings, visit exposures, and exposure durations performed over the course of a survey	Sims Sci
CalExp	A particular type of Butler dataset that consists of an image corresponding to a single CCD, which has been characterized and calibrated. (A Butler term.)	DM
Calibrated Science Image	Deprecated term; see Processed Visit Image	DM
calibration	The process of translating signals produced by a measuring instrument such as a telescope and camera into physical units such as flux, which are used for scientific analysis. Calibration removes most of the contributions to the signal from environmental and instrumental factors, such that only the astronomical component remains	DM

Calibration Image	Any of a set of images used in the Instrument Signature Removal pipeline to remove distortions caused by the telescope, detector, or other sources, from the raw images. Includes darks, flats, tunable-laser dome flats, etc	DM
Calibration Scientist	The person responsible for the system calibration plan who establishes the requirements for the constituent elements of the calibration hardware, software, and operational data. The Calibration Scientist works under the direction of the Systems Engineering group	DM
Camcol	In the SDSS survey, a camera column is the range (in declination) covered by a single sensor in the camera	CAM
Camera	The LSST subsystem responsible for the 3.2-gigapixel LSST camera, which will take more than 800 panoramic images of the sky every night. SLAC leads a consortium of Department of Energy laboratories to design and build the camera sensors, optics, electronics, cryostat, filters and filter exchange mechanism, and camera control system	CAM
camera	An imaging device mounted at a telescope focal plane, composed of optics, a shutter, a set of filters, and one or more sensors arranged in a focal plane array	Sci
Camera Crosstalk-Corrected Image	An image from the Camera system that has had crosstalk removed but has not been processed by the Instrument Signature Removal pipeline	DM
Catch-up Archiver	The Archiver for any images missed by the real time archiver	DM
CatSim	The catalog simulator simulates the properties and distributions of stars, galaxies, and asteroids that LSST expects to observe.	Sci
Center	An entity managed by AURA that is responsible for execution of a federally funded project	Adm
Central Administrative Services	AURA corporate division responsible for providing accounting, procurement, and business IT support services to AURA centers	Adm

Change Control	The systematic approach to managing all changes to the LSST system, including technical data and policy documentation. The purpose is to ensure that no unnecessary changes are made, all changes are documented, and resources are used efficiently and appropriately	Adm
Change Control Board	Advisory board to the Project Manager; composed of technical and management representatives who recommend approval or disapproval of proposed changes to, deviations from, and waivers to a configuration item's current approved configuration documentation	Adm
Change Control Board Chair	The person responsible for CCB administration and implementation of approved changes to the project technical, cost, and schedule baselines; the CCB Chair is also the Systems Engineering Manager (SEM)	Adm
Change Control Process	collection of formal documented procedures used to apply technical and administrative direction and monitoring processes to the Project. Proposed changes to items under change control must undergo impact analysis to assess their effect(s) on project cost, schedule and performance capabilities. All changes to items under change control must be approved by the Project Manager, or if certain thresholds apply, by the LSST Director and/or the NSF. See LPM-19	Adm
Change Controlled Documents	Those documents which have been designated by the project as under formal configuration control	Adm
Channel	An amplifier on an LSST camera CCD (see sensor). For LSST there are 16 amplifiers for each science sensor, resulting in 16 parallel data channels from each device. The 16 channels comprising a sensor are numbered from "0,0" through '1,7'. This term may also refer to the raw data from a read-out amplifier of a sensor	CAM
Charge-Coupled Device	a particular kind of solid-state sensor for detecting optical-band photons. It is composed of a 2-D array of pixels, and one or more read-out amplifiers	CAM Sci

Chi-squared Coadd Image	A Coadd Image that is the weighted sum of multiple input images, where for each input: coadd.image += image.image**2 / image.variance coadd.mask |= image.weightMap += weight For bad pixels, coadd and weightMap are not altered. Note that the inputs must be aligned to a common projection and pixel grid and corrected to the same photometric scale and zero-point	DM
Chief Scientist	The principal scientific advisor to the LSST Director; he or she acts as an interface to the science community in order to ensure that the LSST program is scientifically and technologically well founded and that the specifications are appropriate for achieving the scientific goals of the project	Adm
cloud	A visible mass of condensed water vapor floating in the atmosphere, typically high above the ground or in interstellar space acting as the birthplace for stars. Also a way of computing (on other peoples computers leveraging their services and availability).	DM
CmdLineTask	A special kind of Task that can read its inputs and write its outputs using a Butler, and can run easily from the command-line. CmdLineTask is a specific implementation of the concept of a command-line task. CmdLineTasks are being phased out in favor of PipelineTasks.	DM
Coadd Image	An image that is the combination of multiple input images. The inputs are aligned to a common projection and pixel grid, corrected to the same photometric scale and zero-point, with bad pixels and artifacts rejected. (Image PSFs may also be matched prior to co-addition.) Coadd Images have had non-astrophysical background removed	DM
COBRA	The trade name for an integrated suite of project management software programs that work together to track all aspects of an ongoing construction job	Adm
Collimated Beam Projector	The hardware to project a field of sources onto discrete sections of the telescope optics in order to characterize spatial variations in the telescope and instrument transmission function, and to monitor filter throughput evolution during the survey. Images obtained using the CBP will be used in calibration	DM

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command-line task	An enhancement of a Task in the LSST Stack context, it is the equivalent of a data processing pipeline and may be run directly from the shell command-line. A command-line task minimally consists of: a configuration and metadata, an argument parser, and a run method and a runner script	DM
Commissioning	A two-year phase at the end of the Construction project during which a technical team a) integrates the various technical components of the three subsystems; b) shows their compliance with ICDs and system-level requirements as detailed in the LSST Observatory System Specifications document (OSS, LSE-30); and c) performs science verification to show compliance with the survey performance specifications as detailed in the LSST Science Requirements Document (SRD, LPM-17)	Adm
Compliance	Adherence to the laws, regulations, award terms and conditions, specifications, and internal policies applicable to the LSST Project	Adm
Compliance and Quality Administrator	The person who directs activities designed to ensure the LSST Project's compliance with all applicable laws, regulations and internal policies. The CQA reports directly to the LSST Project Manager. However, if appropriate and applicable, s/he also may directly report significant compliance issues and matters to the LSST Director and the NSF	Adm
configuration	A task-specific set of configuration parameters, also called a 'config'. The config is read-only; once a task is constructed, the same configuration will be used to process all data. This makes the data processing more predictable: it does not depend on the order in which items of data are processed. This is distinct from arguments or options, which are allowed to vary from one task invocation to the next	DM
Configuration Item	Any component of the LSST system, such as requirements, specifications, designs, characteristics, and/or documents describing the aforementioned, that has reached a baseline point and is under change control	Adm

Constraint	An external limitation imposed on a delivered item under which it must meet its requirements (e.g. the survey performance must be met under the constraint of the historical weather pattern of the chosen site). A constraint is not a characteristic possessed by the system or subsystem itself	Adm TS CAM DM SE
Construction	The period during which LSST observatory facilities, components, hardware, and software are built, tested, integrated, and commissioned. Construction follows design and development and precedes operations. The LSST construction phase is funded through the NSF MREFC account	Adm
Contingency	The project's overall reserves in excess of the documented baselines for budget, schedule, and technical scope. Held in order to accommodate unexpected events or circumstances that represent potential risk to the project	Adm
Contingency Management	The formal process that provides the ability and flexibility to solve unforeseen issues that may impact the project's budget, schedule, and technical performance. The process incorporates activity-based uncertainties and high impact event-based uncertainties	Adm
Contract	A binding legal agreement between parties obligating the one (typically the 'seller') to furnish certain supplies or services and the other (typically, the buyer) to compensate the seller for the supplies or services with some form of consideration, (typically money). The term, 'contract' is used interchangeably with 'sub-award' 'agreement' 'memorandum of understanding and/or agreement' and 'purchase order' Each is a term used to differentiate between a purchase-order-format type document and a complex purchase in a subcontract/sub-award-format type document. These also include awards and notices of awards; job orders or task letters issued under basic ordering agreements; letter contracts; orders, such as purchase orders and subcontracts under which the order becomes effective by written acceptance or performance; and bilateral contract modifications	Adm
Cost Estimate	An approximation of total costs required for completion of the project based on known resources (staff, physical assets, knowledge, etc.) that will be needed	Adm

Critical Decision 4	Approve Start of Operations or Project Completion. CD-4 approval marks the achievement of the completion criteria (i.e., KPPs) defined in the PEP (or in the PRD, for NNSA projects), and if applicable, subsequent approval of transition to operations.	DOE
cycle	The time period over which detailed, short-term plans are defined and executed. Normally, cycles run for six months, and culminate in a new release of the LSST Software Stack, however this need not always be the case	DM
dashboard	A visual display of the most important information needed to achieve one or more objectives, consolidated and arranged on a single screen so that the information can be monitored at a glance (as in Few, S., 2013, Information Dashboard Design, Analytics Press, 2 edn.)	DM QA
Data Access Center	Part of the LSST Data Management System, the US and Chilean DACs will provide authorized access to the released LSST data products, software such as the Science Platform, and computational resources for data analysis. The US DAC also includes a service for distributing bulk data on daily and annual (Data Release) timescales to partner institutions, collaborations, and LSST Education and Public Outreach (EPO).	DM
Data Backbone	The software that provides for data registration, retrieval, storage, transport, replication, and provenance capabilities that are compatible with the Data Butler. It allows data products to move between Facilities, Enclaves, and DACs by managing caches of files at each endpoint, including persistence to long-term archival storage (e.g. tape)	DM
data collection	A data collection in the second-generation (Gen2) Butler (referred to as a data repository in earlier generations) consists of hierarchically organized data files, an inventory or registry of the contents (i.e., metadata from the data files) stored in an sqlite3 file, and a Mapper file that specifies to the LSST Stack software the camera model to apply when accessing the data in the data repository	DM

Data Identifier	A specification of one or more specific metadata that allow the selection of data from a collection. The specific metadata vary, depending on the origin of the data, but often include some sort of visit identifier, a sensor or CCD, and a filter. For details of syntax, see the Data Identifiers page	DM
Data Management	The LSST Subsystem responsible for the Data Management System (DMS), which will capture, store, catalog, and serve the LSST dataset to the scientific community and public. The DM team is responsible for the DMS architecture, applications, middleware, infrastructure, algorithms, and Observatory Network Design. DM is a distributed team working at LSST and partner institutions, with the DM Subsystem Manager located at LSST headquarters in Tucson	DM
Data Management Subsystem	The Data Management Subsystem is one of the four subsystems which constitute the LSST Construction Project. The Data Management Subsystem is responsible for developing and delivering the LSST Data Management System to the LSST Operations Project	DM
Data Management System	The computing infrastructure, middleware, and applications that process, store, and enable information extraction from the LSST dataset; the DMS will process peta-scale data volume, convert raw images into a faithful representation of the universe, and archive the results in a useful form. The infrastructure layer consists of the computing, storage, networking hardware, and system software. The middleware layer handles distributed processing, data access, user interface, and system operations services. The applications layer includes the data pipelines and the science data archives' products and services	DM
Data Product	The LSST survey will produce three categories of Data Products. Prompt, Data Release, User Generated. Previously referred to as Levels 1, 2, and 3	DM
Data Release	The approximately annual reprocessing of all LSST data, and the installation of the resulting data products in the LSST Data Access Centers, which marks the start of the two-year proprietary period	DM

Data Release Data Product	These products will be made available annually as the result of coherent processing of the entire science data set to date. These will include calibrated images; measurements of positions, fluxes, and shapes; variability information such as orbital parameters for moving objects; and an appropriate compact description of light curves. The Data Release Data Products will include a uniform reprocessing of the difference-imaging-based Prompt Data Products	DM
Data Release Processing	Deprecated term; see Data Release Production	DM
Data Release Production	An episode of (re)processing all of the accumulated LSST images, during which all output DR data products are generated. These episodes are planned to occur annually during the LSST survey, and the processing will be executed at the Archive Center. This includes Difference Imaging Analysis, generating deep Coadd Images, Source detection and association, creating Object and Solar System Object catalogs, and related metadata	DM
data repository	A data repository consists of hierarchically organized data files, an inventory or registry of the contents (i.e., metadata from the data files) stored in an sqlite3 file, and a Mapper file that specifies to the LSST Stack software the camera model to apply when accessing the data in the repository. With the second-generation (Gen2) Butler, the term repository will be replaced by data collection	DM
database schema	A database schema defines how content is structured, as described in a formal language supported by the database management system. It refers to a mapping of the data model to the database structure, as realized in the partitioning of information into fields within tables of related information	DM

deblend	Deblending is the act of inferring the intensity profiles of two or more overlapping sources from a single footprint within an image. Source footprints may overlap in crowded fields, or where the astrophysical phenomena intrinsically overlap (e.g., a supernova embedded in an external galaxy), or by spatial co-incidence (e.g., an asteroid passing in front of a star). Deblending may make use of a priori information from images (e.g., deep CoAdds or visit images obtained in good seeing), from catalogs, or from models. A 'deblend' is commonly referred to in terms of 'parent' (total) and 'child' (component) objects	DM
declination	Often abbreviated Dec, it is a part of an equatorial coordinate pair that expresses the angular distance (usually expressed in degrees) from the Celestial Equator, measured along great circles that intersect the Equatorial poles. Positions south of the equator are given negative sign	Sci
deepCoadd	A Coadd Image designed to produce detections as maximum depth. Produced by AssembleCoaddTask	DM
deepDiff	A Difference Image that results from subtracting a template from a CalExp	DM
Department of Energy	cabinet department of the United States federal government; the DOE has assumed technical and financial responsibility for providing the LSST camera. The DOE's responsibilities are executed by a collaboration led by SLAC National Accelerator Laboratory	Adm
Deputy Director	The person who supports the Director in the execution of the overall LSST project and assumes his or her duties and authority during any short term or extended absence, planned or unplanned	Adm
Descope	A strategic downward revision to project objectives	Adm
deVaucouleurs profile	The radial distribution of flux of an astronomical source that is characterized as: $I(r)=I0exp(7.67(r/re)1/4)$ An elliptical version of this profile can be fit to every detected source, yielding the deVaucouleurs parameters.	Sci

DIAObject	A DIAObject is the association of DIASources, by coordinate, that have been detected with signal-to-noise ratio greater than 5 in at least one difference image. It is distinguished from a regular Object in that its brightness varies in time, and from a SSObject in that it is stationary (non-moving)	DM
DIASource	A DIASource is a detection with signal-to-noise ratio greater than 5 in a difference image	DM
Difference Image	Refers to the result formed from the pixel-by-pixel difference of two images of the sky, after warping to the same pixel grid, scaling to the same photometric response, matching to the same PSF shape, and applying a correction for Differential Chromatic Refraction. The pixels in a difference thus formed should be zero (apart from noise) except for sources that are new, or have changed in brightness or position. In the LSST context, the difference is generally taken between a visit image and template.	DM
Difference Image Analysis	The detection and characterization of sources in the Difference Image that are above a configurable threshold, done as part of Alert Generation Pipeline	DM
Differential Chromatic Refraction	The refraction of incident light by Earth's atmosphere causes the apparent position of objects to be shifted, and the size of this shift depends on both the wavelength of the source and its airmass at the time of observation. DCR corrections are done as a part of DIA	DM
Director	The person responsible for the overall conduct of the project; the LSST director is charged with ensuring that both the scientific goals and management constraints on the project are met. S/he is the principal public spokesperson for the project in all matters and represents the project to the scientific community, AURA, the member institutions of LSSTC, and the funding agencies	Adm
Docker	A system for packaging and distributing software using self-contained containers which may be run on any Linux system; https://www.docker.com/	DM
Document	Any object (in any application supported by DocuShare or design archives such as PDMWorks or GIT) that supports project management or records milestones and deliverables of the LSST Project	Adm

Document Specialist	The person responsible for maintaining the Project's document archive (DocuShare) as well as providing editing and technical writing services. He or she also coordinates administrative support to the Project Management Office and the distributed Project team	Adm
DocuShare	The trade name for the enterprise management software used by LSST to archive and manage documents	Adm
drill down	Move from a higher level aggregation of data to its inputs. For example, given data describing a tract, to drill down to constituent patches and then to objects. Also refers to the act of identifying an issue in a high-level summary of the data (e.g. an aberrant metric value) and interactively investigating its inputs to find the source of the problem	DM QA
Earned Value	A measurement of how much work has been completed compared to how much was expected to have been completed at a given point in the project	Adm
Earned Value Management	A project management technique for objectively measuring project performance and progress in terms of budget and schedule	Adm Gen
Earned Value Management System	A set of tools, techniques and procedures which are used to implement a EVM approach to project management	Adm Gen
Education and Public Outreach	The LSST subsystem responsible for the cyberinfrastructure, user interfaces, and outreach programs necessary to connect educators, planetaria, citizen scientists, amateur astronomers, and the general public to the transformative LSST dataset	EPO
Eimage	An output product of PhoSim, an Eimage is a simulation of the response of a single sensor, where the outputs of the constituent amps have been integrated, and the effects of variations in pixel-to-pixel sensitivity and amplifier gains have been removed	Sims
element	A node in the hierarchical project WBS	DM
Enclave	Individually defined portions of the computational resources at the Summit, Base, NCSA, and Satellite Facilities, such as the Prompt Enclave, the Archive Enclave, etc.	DM

Encumbrances	A contingent liability, contract, purchase order, payroll commitment, tax payable, or legal penalty that is chargeable to an account; it ceases to be an encumbrance when paid out or when the actual liability amount is determined and recorded as an expense	Adm
ephemeris	An ephemeris (pl: ephemerides) gives the predicted positions of astronomical objects or artificial satellites in the sky with time. The ephemerides are computed from mathematical models of motion of the object and the Earth. In LSST Solar System Processing, it refers to a predicted position (RA/Dec/time/etc) of a Solar System Object (SSObject)	Sci
epic	A self contained work with a concrete deliverable which my be scheduled to take place with a single cycle and WBS element	DM
epoch	Sky coordinate reference frame, e.g., J2000. Alternatively refers to a single observation (usually photometric, can be multi-band) of a variable source	Sci
Escalation	Change in the cost or price of specific goods and services in a given economy over a period	Adm
eups	ExtUPS (usually abbreviated as eups) is the software component management system that is used for the LSST Stack. It enables a choice of which versions of components should be used for a software build, and ensures that a consistent set is chosen. See the Eups Tutorial for details	DM
eups-tag	A versioned tag for eups that identifies a build product with its git-source SHA-1 identifier	DM
exponential profile	The radial distribution of flux of an astronomical source that is characterized: $I(r)=I0exp(.68(r/re))$ The normalization 1.68 is chosen so that the model radius is a half-light radius. An 2-dimensional elliptical version of this profile is fit to every detected source	Sci
Filter	A filter in astronomy is an optical element used to restrict the passband of light reaching the focal plane, it transmits a selected range of wavelengths. Filters elements are often named after standard photometric passbands, such as those used in the SDSS survey: u, g, r, i, z	CAM

Fink	Fink is a community driven project, open to anyone, that processes time-domains alert streams and connects them with follow-up facilities and science teams. `https://fink-broker.org`	OPS
Firefly	A framework of software components written by IPAC for building web-based user interfaces to astronomical archives, through which data may be searched and retrieved, and viewed as FITS images, catalogs, and/or plots. Firefly tools will be integrated into the Science Platform	DM
Flexible Image Transport System	an international standard in astronomy for storing images, tables, and metadata in disk files. See the IAU FITS Standard for details	DM
flux	Shorthand for radiative flux, it is a measure of the transport of radiant energy per unit area per unit time. In astronomy this is usually expressed in cgs units: erg/cm2/s	Sci
Focal plane array	A focal plane array (FPA) is the arrangement of multiple sensors in the focal plane of a camera. For LSST, the FPA is divided into an array of contiguous rafts, upon which 9 science sensors are mounted 3x3. Additional engineering sensors are mounted on rafts near the periphery to support wavefront sensing and telescope guiding	CAM
footprint	See 'source footprint', 'instrumental footprint', or 'survey footprint', 'Footprint' is a Python class representing a source footprint	DM
forced photometry	A measurement of the photometric properties of a source, or expected source, with one or more parameters held fixed. Most often this means fixing the location of the center of the brightness profile (which may be known or predicted in advance), and measuring other properties such as total brightness, shape, and orientation. Forced photometry will be done for all Objects in the Data Release Production	DM
ForcedSource	DRP table resulting from forced photometry	DM
Full-Time Equivalent	A unit equivalent to one person working full time for one year with normal holidays, vacations, and sick time. No paid overtime is assumed	Adm Gen
GalSim	GalSim is open-source software for simulating images of astronomical objects (stars, galaxies) in a variety of ways.	Sci

GEANT	pan-European data network for the research and education community	Gen
General Parallel File System	The bulk data storage provided through a POSIX filesystem interface at the LSST Data Facility. Refers specifically to IBM's General Parallel File System; also known as IBM Spectrum Scale	DM QA
git	A distributed revision control system, often used for software source code. See the Git User Manual for details. Not developed by LSST DM	DM
git-tag	The tag assigned to a particular SHA-1 identifier which associates the git source with an eups-tag of the build product	DM
Global Interlock System	A safety system that makes mechanisms or functions of the observatory system mutually dependent in order to prevent equipment from harming people or equipment by preventing one element from changing state due to the state of another element, and vice versa	TS
Handle	The unique identifier assigned to a document uploaded to DocuShare	Adm
Head of Safety	See Safety Manager	Adm
Hierarchical Triangular Mesh	is a partitioning scheme to divide the surface of the unit sphere into spherical triangles. It is a hierarchical scheme and the subdivisions have roughly equal areas. HTM is used to index the coordinates in the object databases for faster querying speeds	DM Sci
Image Decorrelation	A method of improving the noise properties of the Difference Image in cases where the Template Image has a significant amount of noise, in order to use the same detection thresholds for defining DIASources	DM
Image Reduction and Analysis Facility	a collection of software written at the National Optical Astronomy Observatory (now NOIRLab) geared towards the reduction of astronomical images in pixel array form.	DM

Image Simulation	High fidelity end-to-end simulations of the sky; these simulated images are used in designing and testing algorithms for use by Data Management; evaluating the capabilities and scalability of the reduction and analysis pipelines; testing and optimizing the scientific returns of the LSST survey; and providing realistic LSST data to the science collaborations to evaluate the expected performance of LSST. Under the direction of the Systems Engineering group, the Image Simulation group's principle goal during construction is to deliver a simulator to support commissioning	Sims
Incident	An undesired event, which under slightly different circumstances, could have resulted in harm to people, damage to property, or loss to process	Adm
Independent Data Access Center	Externally supported and administered versions of the DAC to serve the full, or a limited subset of, the LSST data products and/or software to authorized users.	DM
Information Technology Services Committee	Internal LSST Project Office committee charged with managing project IT services, including advising management on which services LSST should use. The ITSC's goals are 1) to ensure interoperability exists among products, 2) to combine, reuse and/or, recycle existing services when possible, 3) to prevent applications from becoming stagnant or security hazards, 4) to make recommendations on whether a particular tool remains 5) to keep the project informed of what is going on at all spectrums, and 6) to make recommendations for how the Project Office will transition into commissioning and operations	Adm
Information Technology Systems Administrator	The person responsible for maintaining the Project Office's servers, networks, and computing hardware; he or she also provides technical support to the Project Management Office and the distributed Project team	Adm
Instance Catalog	A catalog of astronomical sources containing source type, coordinates, brightnesses, and SEDs for use in creating simulated LSST images with PhoSim. Synonym with trim file	Sims

Institutional Member	An organization such as an institute, observatory, university, or company committed to making an intellectual, financial, or other significant contribution to LSST operations or to preparing the scientific community to use the LSST dataset. They are members of the LSST Corporation and pay an annual membership fee in an amount established by the LSSTC Board of Directors	Adm
Interactive Data Language	a programming language used for data analysis. Harris Geospatial `https://www.harrisgeospatial.com/Software-Technology/IDL`	DM
Instrument Signature Removal	Instrument Signature Removal is a pipeline that applies calibration reference data in the course of raw data processing, to remove artifacts of the instrument or detector electronics, such as removal of overscan pixels, bias correction, and the application of a flat-field to correct for pixel-to-pixel variations in sensitivity	DM
instrumental footprint	The size and shape of a region on the sky that is covered by the field of view of an instrument, or part of an instrument, e.g., the LSST Camera, or ComCam, or a single LSST CCD. Often represented by a geometric region defined in field-angle space	DM
Integrated Project Schedule	Complete picture of the entire project life cycle. By incorporating all project phases into the same model, the IPS allows the project team to plan the critical interfaces not only among project work elements but also among the design, construction, commissioning, and operations phases	Adm
Interface Control Document	A Document that describes, defines, and controls the interface(s) of a system, thereby bounding its requirements. The description includes the inputs and outputs of a single system or element. An ICD may also describe the interface between two systems or subsystems. The purpose of the ICD is to communicate all possible inputs to and all potential outputs from a system for some potential or actual user of the system in operations. The internal interfaces of a system or subsystem are typically not documented in an ICD, but rather in a system design document	Adm

Interface Support Document	Constrains an ICD through such things as dictionaries, protocols, or definitions of system-wide architectural frameworks by which the subsystem teams must abide. However, ISDs do NOT contain requirements. ISDs are written by the subsystem teams with a stake in the subject matter; they are change controlled documents	Adm
International Affiliate	An organization outside of the United States or Chile such as an institute, university, consortium, or government agency that has agreed to share in the annual operating costs of the LSST in exchange for data rights for a specified list of principal investigators during LSST operations and commissioning. These data rights may include access to specified project resources prior to operations. Rights also come with responsibilities, similar to those required of U.S.-based scientists, regarding unauthorized redistribution of data	Adm
J2000	Julian Date referring to the instant of 12 noon (midday) on January 1, 2000. IAU standard equinox.	Sci
JIRA	issue tracking product (not an acronym but a truncation of Gojira the Japanese name for Godzilla)	Gen
Joint Oversight Group	oversight body comprised of representatives from the NSF and DOE; the JOG meets regularly with LSST senior management to coordinate the Project's activities	Adm
jointcal	The jointcal package optimizes the astrometric and photometric calibrations of a set of astronomical images that cover a sky tract and were obtained as a series of visits, which may be spread out in time. The jointcal algorithms incorporates object matching both between visits and to reference star catalogs, and produces more accurate distortion and throughput models than if the astrometry and photometry were fit independently. Jointcal is a part of the Science Pipelines	DM

Julian Date	The Julian Date (JD) of any instant is the Julian day number for the preceding noon (UTC), plus the fraction of the day elapsed since that instant. The Julian day number is a running sequence of integral days, starting at noon, since the beginning of the Julian Period; JD 0.0 corresponds to noon on 1 January 4713 BCE. Various Julian Date converters are available on the Web. For example, 18h 00m 00.0s UT on 2014-July-01 (near the start of LSST construction) corresponds to JD 2456840.25	Sci
Kubernetes	A system for automating application deployment and management using software containers (e.g. Docker); `https://kubernetes.io`	DM
Lasair	a broker for astronomers studying transient and variable astrophysical sources. It is being developed as a collaboration between the University of Edinburgh and Queen's University, Belfast to build a broker service for alerts generated by the LSST at the Vera Rubin Observatory. `https://lasair.roe.ac.uk/`	OPS
Level 1 Data Product	Deprecated term; see Prompt Data Product	DM
Level 1 Processing	Deprecated term; see Prompt Processing	DM
Level 2 Data Product	Deprecated term; see Data Release Data Product	DM
Level 2 Processing	Deprecated term; see Data Release Production	DM
Level 3 Data Product	Deprecated term; see User Generated Data Product	DM
Level 3 Processing	Deprecated term; see User Generated Processing	DM
LSST Change Request	document that proposes a change to a configuration item; after evaluation by the CCB and decision by the Project Manager, the change request is updated with the outcome, action items, and necessary notification	Adm

LSST Corporation	An Arizona 501(c)3 not-for-profit corporation formed in 2003 for the purpose of designing, constructing, and operating the LSST System. During design and development, the Corporation stewarded private funding used for such essential contributions as early site preparation, mirror construction, and early data management system development. During construction, LSSTC will secure private operations funding from international affiliates and play a key role in preparing the scientific community to use the LSST dataset	Adm
LSST Project Office	Official name of the stand-alone AURA operating center responsible for execution of the LSST construction project under the NSF MREFC account	Adm
magnitude, Petrosian	A magnitude determined from a fit to a Petrosian brightness profile: Rp(r) = stuf f Appropriate for galaxies	Sci
magnitude, Pogson	Usually simply magnitude, it is a logarithmic measure of integrated source brightness, usually within a standard photometric passband, such that: MM0=2.5log(F/F0) where the zero-point flux is defined by a photometric standard	Sci
magnitude, PSF	For isolated stars that are well described by the PSF, the optimal measure of the total flux is determined by fitting a PSF model to the object	Sci
Major Research Equipment and Facility Construction	the NSF account through which large facilities construction projects such as LSST are funded	Adm
Manifest	Various files (and file formats) which define sets of build products having some shared attribute. There are release manifests which enumerate the eups-tags of all eups build products a the validated suite	Adm
Mapper	A piece of software that abstracts persisting and unpersisting data; specifically, it knows how to navigate a data repository to locate data that match selection criteria that are relevant for data obtained with a particular camera. Used by the Butler	DM

metadata	General term for data about data, e.g., attributes of astronomical objects (e.g. images, sources, astroObjects, etc.) that are characteristics of the objects themselves, and facilitate the organization, preservation, and query of data sets. (E.g., a FITS header contains metadata)	DM
metric	A measurable quantity which may be tracked. A metric has a name, description, unit, references, and tags (which are used for grouping). A metric is a scalar by definition. See also: aggregate metric, model metric, point metric	DM QA
metric value	The result of computing a particular metric on some given data. Note that metric values are typically computed rather than measured. See also: metric	DM QA
middleware	Software that acts as a bridge between other systems or software usually a database or network. Specifically in the Data Management System this refers to Butler for data access and Workflow management for distributed processing.	DM OPS
Mini-Broker	A tool provided by the LSST Science Platform that provides a limited amount of alert filtering capabilities	DM
Micro-survey	Mini-surveys whose use of observing time is up to 3% of LSST survey time for regions outside of the baseline footprint. Examples include ToO follow-up to ID counterparts to GW sources, or short twilight visits for near-Sun objects incl. NEOs.	OPS
Mini-survey	portions of the sky that will be observed with a different cadence to the main survey, but not necessarily to a greater depth, to address science goals beyond the scope of the main survey, e.g the Galactic Plane, Ecliptic, or South Pole. They are different to DDFs in that DDFs are single pointings.	OPS
model metric	A metric describing a model related to the data. For example, the coefficients of a 2D polynomial fit to the background of a single CCD exposure	DM QA
monitoring	In DM QA, this refers to the process of collecting, storing, aggregating and visualizing metrics	DM QA
Moving Object Processing System	Deprecated term; see Solar System Processing	DM

My Database	The notion of having a local storage beside the queriable database to store either temporary tables or uploaded catalogs	DM Gen
National Science Foundation	primary federal agency supporting research in all fields of fundamental science and engineering; NSF selects and funds projects through competitive, merit-based review	Adm
NCSA Facility	The data center at the National Center for Supercomputing Applications (NCSA) in Urbana, Illinois, USA. The NCSA Facility is composed of the NCSA portion of the Prompt Enclave, the Offline Production Enclave hosting all offline Data Release and calibration activities, an Archive Enclave holding data products, and the US Data Access Center	DM
Nightly Alert Processing	Deprecated term; see 'Alert Production'	DM
Nightly Archive Processing	Deprecated term; see 'Prompt Processing'	DM
Non-Standard Visit	Any single observation of a LSST field that is not comprised of either two 15 second 'Snap' exposures (a standard visit) or one 30 second exposure (an alternative standard visit). For example, exposure times for Special Programs might be significantly shorter or longer than a standard visit (or of random length)	DM
nublado	The service underpinning the Notebook Aspect of the Rubin Science Platform	DM
Object	In LSST nomenclature this refers to an astronomical object, such as a star, galaxy, or other physical entity. E.g., comets, asteroids are also Objects but typically called a Moving Object or a Solar System Object (SSObject). One of the DRP data products is a table of Objects detected by LSST which can be static, or change brightness or position with time	DM
Offer	A response to a solicitation that, if accepted, would bind the offeror to perform the work described in resultant contract. Responses to sealed bidding are offers that are often referred to as 'bids' or 'sealed bids;' responses to a request for proposals (RFP, negotiated-type procurements) are offers often referred to as 'proposals' responses to a request for quotations (RFQ) are not offers and are generally called 'quotes'	Adm

open development	A process for developing software that emphasizes all code contribution and decision-making be done in the open, available to as wide a group as possible (This usually means anyone with internet access).	DM
open source software	Open source software is a type of software in which source code is released under a license in which the copyright holder grants users the rights to study, change, and distribute the software to anyone and for any purpose. Note that this is *not* necessarily the same as open to contribution (see open development).	DM
Operations	The 10-year period following construction and commissioning during which the LSST Observatory conducts its survey	Adm
Operations Rehearsal	A data management system prototype project employing the same methods, tools, personnel, and technologies as the real system in order to introduce and validate new algorithms, functionality, and infrastructure. Previously referred to as a data challenge	DM
Operations Simulation	OpSim uses a sophisticated model to simulate 10 years of LSST operations using realistic seeing distributions, historical weather data, scheduled engineering downtime, and the most current telescope, dome, and camera design parameters. Under the direction of the Systems Engineering group, the OpSim group also works closely with the Telescope and Site group to ensure coordination with the OCS Scheduler development	Sims
Opportunity	The degree of exposure to an event that might happen to the benefit of a program, project, or other activity. It is described by a combination of the probability that the opportunity event will occur and the consequence of the extent of gain from the occurrence, or impact. There are two levels of opportunities. At the macro level, a project itself is the manifestation of the pursuit of an opportunity. At the element level, tactical opportunities exist, whereby certain events, if realized, provide a cost or schedule savings to the project or increase technical performance	Adm

Opportunity Management	The proactive art and science of planning, assessing, and handling future events to seek favorable impacts on project, cost, schedule, or performance to the extent possible. Opportunity management is a structured, formal, and disciplined activity focused on the necessary steps and planning actions to determine and exploit opportunities to the extent possible	Adm
Overscan	Refers to the portion of the channel read-out of either a) non photo-active pixels, or b) additional read-out of the serial register after all science pixels have been accumulated (sometimes called virtual overscan). The overscan is often appended to the science pixels in the assembled amplifier image as a separate region. This region is useful to science processing software for estimating the stability of the DC offset in the read-out electronics	CAM
parquet	see Apache Parquet	Sci
passband	The window of wavelength or the energy range admitted by an optical system; specifically the transmission as a function of wavelength or energy. Typically the passband is limited by a filter. The width of the passband may be characterized in a variety of ways, including the width of the half-power points of the transmission curve, or by the equivalent width of a filter with 100% transmission within the passband, and zero elsewhere	Sci
patch	An quadrilateral sub-region of a sky tract, with a size in pixels chosen to fit easily into memory on desktop computers	DM
PhoSim	The Photon Simulator (PhoSim) simulate realistic astronomical images by tracing photons through the atmosphere and a telescope and camera into pixels.	Sci
photometric redshift	Often abbreviated to photo-z, this is an estimate of the true redshift (of a galaxy) determined from multi-band photometry. Generally determined from a fit of source colors to grid of model SEDs with redshift	Sci
pipeline	A configured sequence of software tasks (Stages) to process data and generate data products. Example: Association Pipeline	DM

PipelineTask	A special kind of Task that can read its inputs and write its outputs using a Butler, in addition to being able to have them passed in and out directly as Python objects. PipelineTasks may be connected together dynamically and executed by a generic workflow system. PipelineTasks typically (but not always) delegate most of their work to nested regular Tasks	DM
Pitt-Google	a cloud-based alert distribution service designed to provide near real-time processing of data from large-scale astronomical surveys like the LSST. `https://pitt-broker.readthedocs.io`	OPS
point metric	A metric that is associated with a single entry in a catalog. Examples include the shape of a source, the standard deviation of the flux of an object detected on a Coadd, the flux of an source detected on a difference image	DM QA
point spread function	The point-spread function (PSF) is the distribution of intensity on a sensor (or image) originating from an unresolved point-source (i.e., a star). Often the PSF is not the same Airy shape as would be expected from a finite-aperture optical system, owing primarily to atmospheric effects and imperfections in the optical system and the detector	Sci
Policy file	A structured ASCII file that contains set of attributes for input to a pipeline. Deprecated	Adm
postage stamp	Image cutouts that are 30x30 arcseconds, centered on an Object, and included in every Alert	DM
precovery	The process of finding, or putting upper limits on, detections of a newly discovered DIAObject in previously obtained images, typically using forced photometry. Alert Packets will contain precovery data derived from the past 30 days of images that include the location of a new DIAObject	DM
Preferred Version	The default version of a document served to a DocuShare user. For change controlled documents, the preferred version represents the document's current, approved baseline. For other documents, the preferred version represents the most current iteration	Adm
Predominantly Black Institution	A college or university with at least 1,000 enrolled students, of whom at least 40% are Black or African American and at least 50% are low income or first generation to college.	DEI

Primavera	The trade name for the project management software suite used by LSST to maintain its program plan and schedule	Adm
Processed Visit Image	A fully-qualified LSST image from a single visit that includes the science pixel array and concomitant data including a quality mask and a variance array, in addition to a PSF characterization and metadata (including calibration metadata) about the image. It is stored with the background already subtracted	DM
Procurement	The activities involved with or the actual purchase, subcontract, lease, rent, or otherwise acquire supplies or services, and actions associated therewith	Adm
Project Execution Plan	primary document defining how the LSST Project will be undertaken; it details the project's scope, activities, quality and technical specifications, resources, schedule, and organization	Adm
Project Management Controls Specialist	The person responsible for maintaining the Project Management Control System (PCMS); he or she works closely with the Project Manager and each of the Subsystem Managers	Adm
Project Management Controls System	suite of tools used to organize and manage a project, including cost and schedule databases, a qualified accounting system, and change control	Adm
Project Management Office	the work element responsible for achieving the project's objectives	Adm
Project Manager	The person responsible for exercising leadership and oversight over the entire LSST project; he or she controls schedule, budget, and all contingency funds	Adm
Project Science Team	an operational unit within LSST that carries out specific scientific performance investigations as prioritized by the Director, the Project Manager, and the Project Scientist. Its membership includes key scientists on the Project who provide specific necessary expertise. The Project Science Team provides required scientific input on critical technical decisions as the project construction proceeds	Adm

Project Scientist	The principal scientific advisor to the LSST Project Manager to ensure that LSST system specifications are appropriate for achieving the scientific goals of the project; the Project Scientist also works closely with the Systems Engineering group and chairs the LSST Science Council	Adm
Prompt Data Product	Prompt Data Products are generated continuously based on the image stream from the telescope by the Prompt Processing system. They include low-latency alerts on transient and variable sources, as well as a variety of image data products and source catalogs. Compare Data Release Data Product.	DM
Prompt Processing	The data processing which occurs at the Archive Center based on the stream of images coming from the telescope. This includes both Alert Production, which scans the image stream to identify and send alerts on transient and variable sources, and Solar System Processing, which identifies and characterizes objects in our solar system. It also includes specialized rapid calibration and Commissioning processing. Prompt Processing generates the Prompt Data Products.	DM
Prompt Products DataBase	Data products within LSST data releases relating to LSST Alert Production	DM
provenance	Information about how LSST images, Sources, and Objects were created (e.g., versions of pipelines, algorithmic components, or templates) and how to recreate them	DM
PSF match	To convolve an image to obtain a desired point spread function (PSF), typically in order to match it to another image. For example, Template Images are PSF matched to the new image before image subtraction when Difference Images are created	DM
QAWG	QA Strategy Working Group	DM QA
Qserv	LSST's distributed parallel database. This database system is used for collecting, storing, and serving LSST Data Release Catalogs and Project metadata, and is part of the Software Stack	LSST DM

Quality Assurance	All activities, deliverables, services, documents, procedures or artifacts which are designed to ensure the quality of DM deliverables. This may include QC systems, in so far as they are covered in the charge described in LDM-622. Note that contrasts with the LDM-522 definition of "QA" as "Quality Analysis", a manual process which occurs only during commissioning and operations. See also: Quality Control	DM QA
Quality Control	Services and processes which are aimed at measuring and monitoring a system to verify and characterize its performance (as in LDM-522). Quality Control systems run autonomously, only notifying people when an anomaly has been detected. See also Quality Assurance	DM QA
Raft	The sensors in the LSST camera are packaged into replaceable electronic assemblies, called rafts, consisting of 9 butted sensors (CCDs) in a 3x3 mosaic. Each raft is a replaceable unit in the LSST camera. There are 21 science rafts in the camera plus 4 additional corner rafts with specialized, non-science sensors, making for a total of 189 CCDs per focal plane image. The 21 science rafts are numbered from "0,1" through "0,3", "1,0" through "3,4", and "4,1" through "4,3". (In other words, the 25 combinations from "0,0" through "4,4" minus the four corners which are non-science.)	CAM
Raw Image	The output from a camera, consisting of a set of image sections from each amplifier on each sensor on the focal plane array, including overscan	DM
releasable product	A software package or other component of the DM system which is expected to be included in the next tagged release of the system. This implies inclusion in a standard top-level package. See also release-tag	DM QA
Release	Publication of a new version of a document, software, or data product. Depending on context, releases may require approval from Project- or DM-level change control boards, and then form part of the formal project baseline	DM Adm
release-tag	Refers to a tag which groups an entire stack of packages that are verified as unit and package-integration tested; this is also an eups-tag	DM

Requirement	A declaration of a specified function or quantitative performance that the delivered system or subsystem must meet. It is a statement that identifies a necessary attribute, capability, characteristic, or quality of a system in order for the delivered system or subsystem to meet a derived or higher requirement, constraint, or function	Adm
Retarget	In the context of task construction, a task may substitute a class sub-task to change the behavior of a particular step in the processing	Adm
Review	Programmatic and/or technical audits of a given component of the project, where a preferably independent committee advises further project decisions, based on the current status and their evaluation of it. The reviews assess technical performance and maturity, as well as the compliance of the design and end product with the stated requirements and interfaces	Adm
Review Committee	A panel of independent reviewers performing a programmatic and/or technical audit of a given component of the project; committees consist of subject matter experts external to the reviewed team and preferably external to the LSST project. The committee submits a post-review report including findings (observations), comments (concerns), and recommendations (requests for action)	Adm
Review Data Package	The set of documents and data to be made available to Review Committee members during a review of a project component; the package has two parts: management data and product data. Management data includes appropriately mature and detailed versions of management plans, budgets and/or cost estimates, schedule, and procurement plans. Product data includes appropriately mature and detailed versions of the product technical documentation such as requirements, ICDs, models and analysis reports, and integration and verification plans	Adm
Review Decision Making Authority	The person responsible for a project component who calls a review and consequently makes programmatic and/or technical decisions based on the Review Committee's findings, comments, and recommendations	Adm

Review Hub	An LSST website that acts as a clearinghouse for information about external reviews of all LSST components planned to occur in the next six months. The site links to review-specific websites for both planned reviews and reviews that have been conducted already	Adm
Review Plan	An enumeration of the necessary components for a proposed review of a project component; the review plan defines the Review Committee chair and members, the charge to the Review Committee, the Review Data Package, and the expected/required participants, including key team members presenting review material	Adm
right ascension	Often abbreviated RA, it is a part of an equatorial coordinate pair that expresses the angular distance along the Celestial Equator. It is analogous to terrestrial longitude. RA increases to the east along the projection of the Earth's equator, from the origin (i.e., the Vernal Equinox). Positions are customarily expressed in degrees (0 < RA < 360), or hours (0 < RA < 24, usually in sexagesimal format)	Sci
Risk	The degree of exposure to an event that might happen to the detriment of a program, project, or other activity. It is described by a combination of the probability that the risk event will occur and the consequence of the extent of loss from the occurrence, or impact. Risk is an inherent part of all activities, whether the activity is simple and small, or large and complex	Adm
Risk Management	The art and science of planning, assessing, and handling future events to avoid unfavorable impacts on project cost, schedule, or performance to the extent possible. Risk management is a structured, formal, and disciplined activity focused on the necessary steps and planning actions to determine and control risks to an acceptable level. Risk Management is an event-based management approach to managing uncertainty	Adm

Risk, Cost	The possibility that available budget will be exceeded. Cost risk exists if a) the project must devote more resources than planned to achieve technical requirements, b) the project must add resources to support slipped schedules due to any reason, c) if changes must be made to the number of items to be produced, or d) if changes occur in the organization or national economy. Cost risk can be predicted at the total project level or for a system element. The collective effects of element-level cost risk can produce cost risk for the total project	Adm
Risk, Programmatic	Produced by events that are beyond the control of the project manager. These events often are produced by decisions made by personnel at higher levels of authority, such as reductions in project priority, delays in receiving authorization to proceed with a project, reduced or delayed funding, changes in organization or national objectives, etc. Programmatic risk can be a source of risk in any of the other three risk categories	Adm
Risk, Schedule	The possibility that the project will fail to meet scheduled milestones. Schedule risk exists if there is inadequate allowance for acquisition delays or if difficulty is experienced in achieving scheduled technical accomplishments, such as the development of software. Schedule risk can be incurred at the total project level for milestones such as deployment of the first system element. The cascading effects of element-level schedule risks can produce schedule risk for the total project	Adm
Risk, Technical	The possibility that a technical requirement of the system may not be achieved in the system life cycle. Technical risk exists if the system may fail to achieve performance requirements; to meet operability, producibility, testability, or integration requirements; or to meet environmental protection requirements. A potential failure to meet any requirement that can be expressed in technical terms is a source of technical risk	Adm
Rucio	Rucio is a project that provides services and associated libraries for allowing scientific collaborations to manage large volumes of data spread across facilities at multiple institutions and organizations. Rucio has been developed by the ATLAS experiment	OPS
Safety	The control of accidental loss	Adm

Safety Council	A consulting body providing policy advice and evaluation of safety program effectiveness; the council is composed of independent safety professionals and representatives of LSST institutional members	Adm
Safety Manager	The person who manages, executes, and verifies compliance with the LSST Safety Policy (LPM-18); the Safety Manager is also chair of the Safety Council	Adm
SAL script	A program which communicates via SAL messages and adheres to a specific API, performing coordinated telescope and instrument control operations, such as 'slew to a target and take an image', or 'take a series of flats'	TS
Satellite Facility	The data center at CC-IN2P3 in Lyon, France	DM
Science Advisory Committee	An advisory body which provides a formal and two-way connection to the external science community served by LSST; comprised of scientists familiar with but external to the LSST Project, the SAC advises the LSST Director on both policy questions and technical topics of interest to the Project and the science community	LSST Adm
Science Collaboration	An autonomous body of scientists interested in a particular area of science enabled by the LSST dataset, which through precursor studies, simulations, and algorithm development lays the groundwork for the large-scale science projects the LSST will enable. In addition to preparing their members to take full advantage of LSST early in its operations phase, the science collaborations have helped to define the system's science requirements, refine and promote the science case, and quality check design and development work	Adm
Science Collaboration Chair	The leader of and spokesperson for a Science Collaboration	Adm
Science Data Quality Assessment	An analysis system that examines and reports on the quality of LSST data and data products from a scientific perspective, and determines whether the data meets the science requirements in LPM-17	DM

Science Pipelines	The library of software components and the algorithms and processing pipelines assembled from them that are being developed by DM to generate science-ready data products from LSST images. The Pipelines may be executed at scale as part of LSST Prompt or Data Release processing, or pieces of them may be used in a standalone mode or executed through the LSST Science Platform. The Science Pipelines are one component of the LSST Software Stack	DM
Science Platform	A set of integrated web applications and services deployed at the LSST Data Access Centers (DACs) through which the scientific community will access, visualize, and perform next-to-the-data analysis of the LSST data products	DM
Science Quality Analysis Harness	provides a minimal infrastructure for monitoring the LSST verification metrics. It can be used and extended to preserve the code and knowledge developed during LSST construction `https://squash.lsst.codes/`	DM
Science Verification	The second phase of Commissioning for the LSST Construction Project, Science Verification demonstrates the system's compliance with the survey performance specifications detailed in the LSST Science Requirements Document (SRD, LPM-17). These activities are based solely on the measured 'on-sky' performance of the LSST system	DM
SCons	A piece of software developed externally to LSST. An automated build tool used for DM software development. See the SCons website for details	DM
Scope	The work needed to be accomplished in order to deliver the product, service, or result with the specified features and functions	Adm
script queue	A CSC which manages SAL scripts, running one script at a time until the queue is exhausted or paused	TS
SDQA Metric	The name of a quantity that is calculated for image data by SDQA-related pipeline processes (e.g., mean, standard deviation, number of saturated pixels, mean PSF width, etc.). Associated with the metric name are the physical units of the calculated quantity and whether the quantity's data type is integer or floating-point	DM
SDQA Rating	The value and error associated with an SDQA metric. An image can have a set of different SDQA ratings	DM

SDQA Status	The status assigned to an image by the SDQA subsystem (e.g., pass, fail, unknown, etc.). Database tables that store image metadata will include a field containing an ID number that corresponds to an SDQA status	DM
SDQA Threshold	The set of lower and upper thresholds associated with an SDQA Metric. Some metrics have only either a lower or upper threshold. In general, the thresholds depend on observing conditions (e.g., atmospheric seeing, filter, etc.)	DM
seeing	An astronomical term for characterizing the stability of the atmosphere, as measured by the width of the point-spread function on images. The PSF width is also affected by a number of other factors, including the airmass, passband, and the telescope and camera optics	Sci
Sensor	A sensor is a generic term for a light-sensitive detector, such as a CCD. For LSST, sensors consist of a 2-D array of roughly 4K x 4K pixels, which are mounted on a raft in a 3x3 mosaic. Each sensor is divided into 16 channels or amplifiers. The 9 sensors that make up a raft are numbered from "0,0" through "2,2"	CAM
shape	In reference to a Source or Object, the shape is a functional characterization of its spatial intensity distribution, and the integral of the shape is the flux. Shape characterizations are a data product in the DIASource, DIAObject, Source, and Object catalogs	DM
SHE Plans	SHE plans are site-specific guidelines for safe working conditions. LSST expects that each collaborating organization and contractor has established safety programs to govern the specific activities at that location. LSST has a minimum expectation for the criteria established in these plans and expects all staff, permanent to the location or visiting, to follow these local procedures. When LSST specific sites are established the project will issue specific SHE plans for those locations	Adm
Signature Authority	The individual designated by the LSSTC policy as authorized to approve the use of funds from a specific account; he or she must approve each Purchase Requisition for the account listed on the Purchase Requisition	Adm

Simonyi Survey Telescope	The telescope at the Rubin Observatory that will perform the LSST (this refers to all physical components: the mirror, the mount assembly, etc.).	
Simulations Lead	The person who oversees the activities of the LSST simulations efforts (ImSim, OpSim, PhoSim, etc.). The Simulations Lead is part of the Systems Engineering group and reports to the Systems Engineering Manager	Sims Adm
Single Visit Image	See CalExp	DM
Singularity	A software containerization system; an alternative to Docker; `https://sylabs.io`	DM
Site Manager	The LSST-delegated representative at the Cerro Pachón, Chile Summit site who is authorized to approve and accept work, provide technical liaison, monitor safety, and interpret LSST plans and specifications on behalf of AURA/LSST	Adm
sky map	A sky tessellation for LSST. The Stack includes software to define a geometric mapping from the representation of World Coordinates in input images to the LSST sky map. This tessellation is comprised of individual tracts which are, in turn, comprised of patches	DM
SLAC National Accelerator Laboratory	A national laboratory funded by the US Department of Energy (DOE); SLAC leads a consortium of DOE laboratories that has assumed responsibility for providing the LSST camera. Although the Camera project manages its own schedule and budget, including contingency, the Camera team's schedule and requirements are integrated with the larger Project. The camera effort is accountable to the LSSTPO.	TS
Sloan Digital Sky Survey	is a digital survey of roughly 10,000 square degrees of sky around the north Galactic pole, plus a 300 square degree stripe along the celestial equator	Sci
Snap	One 15 second exposure within a Standard Visit in the LSST cadence	DM

Software Stack	Often referred to as the LSST Stack, or just The Stack, it is the collection of software written by the LSST Data Management Team to process, generate, and serve LSST images, transient alerts, and catalogs. The Stack includes the LSST Science Pipelines, as well as packages upon which the DM software depends. It is open source and publicly available	DM
Solar System Object	A solar system object is an astrophysical object that is identified as part of the Solar System: planets and their satellites, asteroids, comets, etc. This class of object had historically been referred to within the LSST Project as Moving Objects	DM
Solar System Processing	A component of the Prompt Processing system, Solar System Processing identifies new SSObjects using unassociated DIASources.	DM
Sole Source	A purchase of a commodity or a service that is noncompetitive in price, specifications, or use; or is 'only source' and must be accompanied by a sole source justification	Adm
Sole Source Justification	A document accompanying a Purchase Requisition that provides the justification(s) for procuring the items must be from the single vendor listed on the Purchase Requisition	Adm
Source	A single detection of an astrophysical object in an image, the characteristics for which are stored in the Source Catalog of the DRP database. The association of Sources that are non-moving lead to Objects; the association of moving Sources leads to Solar System Objects. (Note that in non-LSST usage "source" is often used for what LSST calls an Object.)	DM
Source Association	The process of associating source detections on multiple images taken at different epochs, or in multiple passbands, with a single astronomical Object	DM
source footprint	A set of pixels that are determined to be part of a Source (or DIASource). It is implemented as a list of spans. A span contains coordinates of a stripe of pixels: row (y) given span belongs to, and a section of a column (xStart, xEnd). In DM code, the term 'footprint' refers to a 'source footprint'	DM
Speakers Bureau	A volunteer body promoting LSST's visibility by identifying, initiating, and coordinating opportunities for LSST-related talks, especially at large conferences	Adm

Speakers Bureau Website	An LSST website used by the LPO as a tool for screening and approving participation of LSST project personnel at various externally hosted meetings; the site also provides a mechanism for the Speakers Bureau to accept speaker requests, coordinate speakers, and maintain a record of requests received and talks given. With this tool the Director and Project Manager can review and approve/deny requests for LSST financial support for travel before such meetings occur. Project personnel use the site to report their intended participation in a meeting even if they are requesting neither a speaker nor LSST funding	Adm
Special Program	Any LSST mini-survey or deep drilling field that is observed independently of the Wide-Fast-Deep (WFD) main survey	DM
Specification	One or more performance parameter(s) being established by a requirement that the delivered system or subsystem must meet	Adm
Spectral Energy Distribution	the radiated energy of an astrophysical object as a function of energy (or wavelength) across the entire spectrum of light	Sci
sqlite3	A software package external to DM, sqlite3 provides a SQL interface compliant with the DB-API 2.0 specification for SQLite, a self-contained public-domain SQL database engine	DM
stack	a grouping, usually in layers (hence stack), of software packages and services to achieve a common goal. Often providing a higher level set of end user oriented services and tools	DM
Standard Visit	A single observation of a LSST field comprised of two 15 second 'Snap' exposures that are immediately combined. An 'Alternate Standard Visit' is a single observation of a LSST field comprised of one 30 second exposure	DM

Stop Work Authority	The authority of any individual to stop work if unanticipated/unsafe conditions are identified or non-compliant practices are observed at the site. Workers shall be instructed stop the work immediately and notify their supervisor(s), safety and health representative(s), and the LSST site manager of this action. Disagreements or differences of opinion about the need to terminate an activity shall occur only after the activity is stopped and people are removed from the hazard. All workers at the site have the authority to stop work. Work may not proceed until the circumstances are investigated and deficiencies corrected	Adm
story	A JIRA issue type describing a scheduled, self-contained task worked as part of an epic. Typically, stories are appropriate for work worth between a fraction of a SP and 10 SP; beyond that, the work is insufficiently fine-grained to schedule as a story. While fractional SP are fine, all stories involve work, so the SP total of an in progress or completed story should not be 0	DM
Stripe 82	A 2.5° wide equatorial band of sky covering roughly 300 square degrees that was observed repeatedly in 5 passbands during the course of the SDSS, In part for calibration purposes	Sci
Subcontract	An agreement under which another entity will perform part or all of the project's contract obligations	Adm
Subsystem	A set of elements comprising a system within the larger LSST system that is responsible for a key technical deliverable of the project	Adm
Subsystem Manager	responsible manager for an LSST subsystem; he or she exercises authority, within prescribed limits and under scrutiny of the Project Manager, over the relevant subsystem's cost, schedule, and work plans	Adm
Subsystem Scientist	The principal science advisor to a Subsystem Manager; he or she ensures that the subsystem specifications are appropriated for achieving the project's goals	Adm
Subsystem Systems Engineer	A subsystem team member who works closely with the Subsystem Manager and the project Systems Engineering group on internal integration of the subsystem's component parts and the subsystem's integration with the larger LSST system	Adm

Summit	The site on the Cerro Pachón, Chile mountaintop where the LSST observatory, support facilities, and infrastructure will be built	Adm
Summit Facility	The main Observatory and Auxiliary Telescope buildings at the Summit Site on Cerro Pachón, Chile	DM
supertask	Deprecated term; see PipelineTask	DM
survey footprint	The portion of the sky covered by data from an astronomical survey, e.g., the main wide-fast-deep LSST 10-year survey, the LSST deep drilling fields, or the Science Validation data taken during commissioning. Sometimes represented by Boolean maps or other summary statistics in an all-sky representation, e.g., the IVOA MOC standard	DM
System Integration and Test	The first year of the two-year Commissioning phase of the LSST Construction Project, during which the various technical components of the three subsystems will be integrated and compliance with ICDs and system level compliance as detailed in the LSST Observatory System Specifications document (OSS, LSE-30) will be shown. Roughly 4-6 months into the System I&T phase, the telescope and camera will be fully integrated and periodically producing science grade images over the full field of view, at which point 'System First Light' will be declared	TS CAM DM SE
Systems Engineer	A member of the Systems Engineering group who works closely with the Systems Engineering Manager and the Systems Scientist on the integrated LSST system's various technical issues spanning the full life cycle of the entire project	Adm

Systems Engineering	an interdisciplinary field of engineering that focuses on how to design and manage complex engineering systems over their life cycles. Issues such as requirements engineering, reliability, logistics, coordination of different teams, testing and evaluation, maintainability and many other disciplines necessary for successful system development, design, implementation, and ultimate decommission become more difficult when dealing with large or complex projects. Systems engineering deals with work-processes, optimization methods, and risk management tools in such projects. It overlaps technical and human-centered disciplines such as industrial engineering, control engineering, software engineering, organizational studies, and project management. Systems engineering ensures that all likely aspects of a project or system are considered, and integrated into a whole	SE
Systems Engineering Manager	individual responsible for the oversight and coordination of the LSST systems engineering efforts as well as the management of the Systems Engineering group and work package. The SEM is also the CCB Chair and as such is responsible for the execution, technical oversight, and coordination of configuration control activities	Adm
Systems Scientist	A member of the Systems Engineering group and chief liaison to all project scientists; the Systems Scientist works closely with the Systems Engineering Manager and is responsible for the flow-down of science requirements. The Systems Scientist ensures that acceptance testing and commissioning address the science requirements	Adm
Task	Tasks are the basic unit of code re-use in the LSST Stack. They perform a well defined, logically contained piece of functionality. Tasks come standard with configuration, logging, processing metadata, and debugging features. For further details, see How to Write a Task in the source code documentation. Tasks can be nested, providing a natural way to structure - and configure - high level algorithms that delegate work to lower-level algorithms	DM

Technical Baseline Classified Index	An index linking to the various requirements documents, specifications documents, ICDs, design documents, budgets and allocations, and WBS dictionaries defining the current baseline of the LSST project's technical scope (LSE-90)	Adm
Telescope and Site	The LSST subsystem responsible for design and construction of the telescope structure, telescope mirrors, optical wavefront measurement and control system, telescope and observatory control systems software, and the summit and base facilities.	Adm
Template	A co-added, single-band image of the sky that is deep, and created in a manner to remove transient or fast moving objects from the final image. Constituent images for templates may be selected from a limited range of quality parameters, such as PSF size or airmass. Such images are used to perform Difference Image Analysis in order to detect variable, transient, and Solar System astrophysical objects	DM
Tensor Processing Unit	a proprietary type of processor designed by Google in 2016 for use with neural networks and in machine learning projects	DM
test stand	An environment used for testing the operation of the LSST Camera, or some component thereof. In the Data Management context, this generally refers to a simulated Camera readout system used to test the interface between the Camera and the DM system (see, for example, NTS)	DM CAM
Then-Year Cost	An extrapolation from the base year cost of a project element out to the year the cost actually will be incurred that accounts for escalation rates	Adm
tidy data	Tidy datasets have a specific structure: each variable is a column, each observation is a row, and each type of observational unit is a table (Wickham, H., 2014, Journal of Statistical Software, Articles, 59, 1)	DM QA
tile	Obsolete form of sky tessellation, superseded by tracts/patches	DM
timebox	A limited time period assigned to a piece of work or other activity. Useful in scheduling work which is not otherwise easily limited in scope, for example research projects or servicing user requests	DM
tracklet	Links between unassociated DIASources within one night to identify moving objects	DM

tract	A portion of sky, a spherical convex polygon, within the LSST all-sky tessellation (sky map). Each tract is subdivided into sky patches	DM
transient	A transient source is one that has been detected on a difference image, but has not been associated with either an astronomical object or a solar system body	Sci
Travel Administrator	The person responsible ensuring compliance with the LSST Travel Policy. S/he makes all travel arrangements for all individuals whose travel is paid by LSST. S/he also reviews all Travel Expense Reports (TER) to vet claimed expenses as allowable before submitting them for approval by the LSST Business Manager	Adm
User Generated Data Product	The products of User Generated Processing pipelines; these products will originate from the community, including project teams	DM
User Generated Processing	Any (re)processing of LSST data performed by a user, with either custom pipelines or reconfigured LSST software, to create User Generated Data Products. This processing will originate from the community, including project teams	DM
Validation	A process of confirming that the delivered system will provide its desired functionality; overall, a validation process includes the evaluation, integration, and test activities carried out at the system level to ensure that the final developed system satisfies the intent and performance of that system in operations	Adm
Verification	The process of evaluating the design, including hardware and software - to ensure the requirements have been met; verification (of requirements) is performed by test, analysis, inspection, and/or demonstration	Adm
Visit	A sequence of one or more consecutive exposures at a given position, orientation, and filter within the LSST cadence. See Standard Visit, Alternate Standard Visit, and Non-Standard Visit	DM TS Sims
warp	(noun) The pixels from a single CCD Exposure that overlap a given coadd patch, trimmed and resampled into the patch's coordinate system; in other words, an image that has been astrometrically registered to the common coordinate system of a tract	DM
Wide-Fast-Deep	The main survey of the LSST to cover at least 18000 square degrees of the southern sky	DM TS

Work Break-down Structure	a tool that defines and organizes the LSST project's total work scope through the enumeration and grouping of the project's discrete work elements	Adm
Work Elements	The critical tasks of the LSST Project as represented in the WBS	Adm
World Coordinate System	a mapping from image pixel coordinates to physical coordinates; in the case of images the mapping is to sky coordinates, generally in an equatorial (RA, Dec) system. The WCS is expressed in FITS file extensions as a collection of header keyword=value pairs (basically, the values of parameters for a selected functional representation of the mapping) that are specified in the FITS Standard	Sci