

Appendix 5: Acronyms and abbreviations

The following acronyms and other abbreviations are used in this report. For more acronyms related to IERS see <http://www.iers.org/Acronyms>.

AAM	Atmospheric Angular Momentum	ASU	Astronomický ústav Akademie věd České republiky (Astronomical Institute of the Czech Academy of Sciences)
AC	Analysis Centre		
AC	Analysis Coordinator		
ACC	[IGS] Analysis Center Coordinator	ATML	atmospheric loading
AGGO	Argentinian-German Geodetic Observatory	AU	Australia
		AUS	Geoscience Australia
AGN	Active Galactic Nuclei	AWG	Analysis Working Group
AGU	American Geophysical Union	B4G	4th generation DORIS beacon
AIUB	Astronomical Institute, University of Bern	BEV	Bundesamt für Eich- und Vermessungswesen
AIWIS	WISE catalogue	BKG	Bundesamt für Kartographie und Geodäsie / Federal Agency for Cartography and Geodesy
AM	angular momentum		
ANTEX	Antenna Exchange (format)	BNO	GGOS Bureau of Networks and Observations
AOD	atmospheric and oceanic dealiasing	BPS	GGOS Bureau for Products and Standards
AOV	Asia-Oceania VLBI Group for Geodesy and Astrometry	BVID	Bordeaux VLBI Image Database
ApJS	Astrophysical Journal Supplement	c	century
APOLLO	Apache Point Observatory Lunar Laser-ranging Operation	CA	California, USA
APSG	Asia-Pacific Space Geodynamics	CASA	NRAO Common Astronomy Software Applications
AR	Annual Report	CATREF	Combination and Analysis of Terrestrial Reference Frames
AR	autoregressive		
as	arcsecond	CB	Central Bureau
ASAP	as soon as possible	CC	Combination Centre
ASC	Analysis Standing Committee	CC	Conventions Centre
ASI	Agenzia Spaziale Italiana	CCD	Charge-Coupled Device

CDDIS	NASA Crustal Dynamics Data Information System	C/P	Combination and Prediction
CEOS	Committee on Earth Observation Satellites	CPO	celestial pole offset
CERGA	Centre d'Etudes et de Recherches Géodynamiques et Astronomiques	CRC	Combination Research Centre
CETEs	[IERS Conventions] Chapter Editors-in-Chief and Technical Experts	CRD	Consolidated Laser Ranging Data Format
CfA	Harvard-Smithsonian Center for Astrophysics	CRF	Celestial Reference Frame
CfP	Call for Participation/Proposals	COST-G	International Combination Service for Time-variable Gravity Fields
CGPM	Conférence générale des poids et mesures (General Conference on Weights and Measures)	CSR	Center for Space Research, University of Texas
CGS	Centro di Geodesia Spaziale, ASI	CSTG	Commission on International Coordination of Space Techniques for Geodesy and Geodynamics
CIVISA	Centro de Informação e Vigilância Sismovulcânica dos Açores	CSV, csv	comma-separated values [format]
CLS	Collecte, Localisation, Satellites	CTIO	Cerro Tololo Inter-American Observatory
CN	China	CU	[DPAC] Coordination Unit
CN	centre of [observation] network	d	day
CNES	Centre National d'Etudes Spatiales	DB	Directing Board
CNSA	China National Space Administration	DC	Data Center
CODE	Centre for Orbit Determination in Europe	DC	District of Columbia, USA
CoG	centre of gravity	Dec, DEC	declination
CoM	centre of mass	deg	degree
CoP	centre of phase	Dep.	Department
COSMIC	Constellation Observing System for Meteorology, Ionosphere, and Climate	DGFI	Deutsches Geodätisches Forschungsinstitut
CPC	Climate Prediction Center	DGFI-TUM	Deutsches Geodätisches Forschungsinstitut at Technische Universität München
CPF	Consolidated [Laser Ranging] Prediction Format	DIM-ACAV	Domaine d'intérêt majeur en astrophysique et conditions d'apparition de la vie
		DIODE	Détermination Immédiate d'Orbite par Doris Embarqué
		DIS	IERS Data and Information System

DIS	ISO Draft International Standard	EMR	Energy, Mines and Resources Canada (replaced by NRCan)
DOGS	DGFI Orbit and Geodetic parameter estimation Software	ENVISAT	Environmental Satellite
doi, DOI	Digital Object Identifier	EO	Earth orientation
DOMES	Directory Of MERIT Sites (originally; now of more general use)	EOC	Earth Orientation Centre
DORIS	Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS)	EOP	Earth Orientation Parameters
DOR-O-T	DORIS Online Tools	EOST	École et Observatoire des Science de la Terre
DoV	deflection of vertical	ERP	Earth Rotation Parameters
DPAC	Data Processing and Analysis Consortium [of the Gaia mission]	ES	Spain
DR	Data Release	ESA	European Space Agency
DST	Deep South Telescope	ESOC	European Space Operations Center, ESA
DTRF	ITRS realization by DGFI	EU	European Union
DUT1	= UT1–UTC	Eumetsat	European Organisation for the Exploitation of Meteorological Satellites
E	East [position/coordinate/direction]	EURAMET	European Association of National Metrology Institutes
EAM	Effective Angular Momentum	EVGA	European VLBI [Group] for Geodesy and Astrometry
EAPS	[MIT] Department of Earth, Atmospheric and Planetary Sciences	e-VLBI	Electronic transfer VLBI
EC	Executive Committee	FITS	Flexible Image Transport System [format]
ECCO	Estimating the Circulation and Climate of the Ocean	FR	France
ECMWF	European Centre for Medium-Range Weather Forecasts	FR	full rate
EDC	EUROLAS Data Center	FRAMEx	Fundamental Reference AGN Monitoring Experiment
EGSIEM	European Gravity Service for Improved Emergency Management	FRIDA	Fundamental Reference Image Data Archive
EGU	European Geosciences Union	FTP, ftp	File Transfer Protocol
EGV	Essential Geodetic Variable(s)	FTPS, ftps	File Transfer Protocol Secure
		GA	General Assembly
		GA	Geoscience Australia
		GB	Governing Board

Gb	gigabit	GRB	gamma-ray burst
GCRS	Geocentric Celestial Reference System	GRG	DORIS Analysis Center at CNES/CLS (formerly LCA)
GEO	Group on Earth Observations	GRGS	Groupe de Recherches de Géodésie Spatiale
GFO	GRACE Follow-On	GRS	Geodetic Reference System
GFZ	GeoForschungsZentrum Potsdam	GSC	GSFC Analysis Center
GGCE	Global Geodetic Center of Excellence	GSFC	Goddard Space Flight Center
GGFC	Global Geophysical Fluids Centre	GSI	Geospatial Information Authority of Japan (formerly: Geographical Survey Institute)
GGIM	= UN-GGIM	GTRF	Galileo Terrestrial Reference Frame
GGOS	Global Geodetic Observing System	GTRS	Geocentric Terrestrial Reference System
GHz	gigahertz	HartRAO	Hartebeesthoek Radio Astronomy Observatory
GIOVE	Galileo In-Orbit Validation Element	HEO	High Earth Orbiter
GIQC	Gaia Initial Quasar Catalog[ue]	HF	high frequency
GLDAS	NASA's Global Land Data Assimilation System	HF-EOP	High Frequency EOP
GLONASS	GLObal'naya NAvigatsionnaya Sputnikovaya Sistema [Global Orbiting Navigation Satellite System, Russia]	hr	hour, hours
GLOUP	GLObal Undersea Pressure	http	Hypertext Transfer Protocol
GM	General Meeting	HTTPS, https	Hypertext Transfer Protocol Secure
GM	geocenter motion	HY	HaiYan / Haiyang / Hai Yang [satellite]
GMU	George Mason University	IAA	Institute of Applied Astronomy, St. Petersburg
GNSS	Global Navigation Satellite System	IAG	International Association of Geodesy
GOP	Geodetic Observatory Pecny	IAU	International Astronomical Union
GPS	Global Positioning System	IBGE	Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics)
GRACE	Gravity Recovery and Climate Experiment	ICESat	Ice, Cloud, and land Elevation Satellite
GRACE-FO	GRACE Follow-On	ICG	International Committee on Global Navigation Satellite Systems
GRAIL	Gravity Recovery and Interior Laboratory		

ICRF	International Celestial Reference Frame	INASAN	Institute of Astronomy of the Russian Academy of Sciences
ICRS	International Celestial Reference System	INFN	Istituto Nazionale di Fisica Nucleare [National Institute for Nuclear Physics]
ICSU	International Council for Science (now: ISC)	Int.	Intensive [VLBI session]
ID	Identification/Identifier	IPGP	Institut de Physique du Globe de Paris
IDF	International DOI Foundation	IPGS	Institut de Physique du Globe de Strasbourg
IDS	International DORIS Service	IR	infrared
IERS	International Earth Rotation and Reference Systems Service	IRIS	International Radio Interferometric Surveying
IfE	Institut für Erdmessung [Institute of Geodesy], University of Hannover	IRNSS	Indian Regional Navigation Satellite System
IfG	Institute of Geodesy of the Graz University of Technology	ISBN	International Standard Book Number
IGFS	International Gravity Field Service	ISC	International Science Council (formerly: ICSU)
IGMA	ICG Monitoring and Assessment Task Force	ISO	International Organization for Standardization
IGN	Institut National de l'Information Géographique et Forestière (formerly: Institut Géographique National)	ITRF	International Terrestrial Reference Frame
IGS	International GNSS Service (formerly: International GPS Service)	ITRS	International Terrestrial Reference System
IGS-RTS	IGS Real-Time Service	IUGG	International Union of Geodesy and Geophysics
IHRF	International Height Reference Frame	IVS	International VLBI Service for Geodesy and Astrometry
IHRF	International Height Reference System	IWLR	International Workshop on Laser Ranging
IIUL	integrated IGS Ultra LODs	Jason-CS	Jason Continuity of Service [mission]
ILRS	International Laser Ranging Service	JCET	Joint Center for Earth Systems Technology, GSFC
INA	Institute of Astronomy of the Russian Academy of Sciences		

JGS	Japan satellite navigation Geodetic System	mas	milliarcsecond(s)
JMA	Japan Meteorological Agency	Mb	megabit
JoG	Journal of Geodesy	MCC	Russian Mission Control Centre
JP	Japan	MD	Maryland, USA
JPL	Jet Propulsion Laboratory	MeO	Métrieologie Optique [Grasse SLR/LLR system]
JTRF	ITRS realization by JPL	MEO	Medium Earth Orbit
JWG	Joint Working Group	MGEX	Multi-GNSS [Global] Experiment, Multi-GNSS Extension
KALREF	Kalman filter for Reference frames	MHz	megahertz
keV	kiloelectronvolt	MIT	Massachusetts Institute of Technology
kHz	kilohertz	MJD	Modified Julian Day
LAGEOS	Laser Geodynamics Satellite	mJy	milli-Jansky
LAREG	Laboratoire de Recherches en Géodésie	MLRO	Matera Laser Ranging Observatory
LARES	Laser Relativity Satellite	MOBILE	Mass variation observing system by high low inter-satellite links
lat	latitude	MOU	Memorandum of Understanding
LDAS	Land Data Assimilation System	MPIfR	Max-Planck-Institut für Radioastronomie / Max Planck Institute for Radio Astronomy
LEO	Low Earth Orbit(er)	MPIOM	Max Planck Institute for Meteorology Ocean Model
LLR	Lunar Laser Ranging	ms	millisecond(s)
LMT	Large Millimeter Telescope	msec	milliseconds
LoD, LOD	Length of Day	N	number
lon	longitude	N	North [position/coordinate/direction]
LQAC	Large Quasar Astrometric Catalog[ue]	N, E	north, east
LRO	Lunar Reconnaissance Orbiter	NASA	U.S. National Aeronautics and Space Administration
LS	least-squares	NAVGEN	[U.S.] Navy Global Environmental Model
LSST	Large Synoptic Survey Telescope	NCAR	U.S. National Center for Atmospheric Research
ITPI	weighted square-sum of the residuals		
MA	Massachusetts, USA		
mag	magnitude		

NCEP	U.S. National Centers for Environmental Prediction	NVSS	NRAO VLA sky survey
NEQ	normal equation	OAM	Oceanic Angular Momentum
NERC	Natural Environment Research Council, UK	OBS	observation
NGS	U.S. National Geodetic Survey	Obs.	Observatory, Observatoire
NH	Northern Hemisphere	OC	Operations Center
NIR	near-infrared	OCN	ocean [loading]
NISAR	NASA-ISRO Synthetic Aperture Radar [satellite]	OHIG	O'Higgins [station]
NMA	Norwegian Mapping Authority [Statens kartverk / Kartverket]	OP, OPA	Observatoire de Paris
N.N.	nomen nominandum [the name is to be announced]	OSU	School of Earth Sciences of the Ohio State University
NNR	No-net-rotation, No Net Rotation	OTF	Optical Test Facility
No., Nos.	Number, Numbers	PAO	Public Affairs Official
NOAA	U.S. National Oceanic and Atmospheric Administration	PC	Product Centre
NOFS	[U.S.] Naval Observatory Flagstaff Station	PCO	phase center offset
NP	SLR normal point(s)	PhD	Doctor of Philosophy / philosophiae doctor
NRAO	U.S. National Radio Astronomy Observatory	PI	Principal Investigator
NRCan	Natural Resources, Canada (formerly: EMR)	PLATO	Performance Simulations & Architectural Trade-Offs
NRL	Naval Research Laboratory	PM	Polar Motion
NRT	Near Real-Time (products)	PNT	positioning, navigation and timing
ns	nanosecond(s)	POD	Precise [or Precision] Orbit Determination
NSGF	NERC Space Geodesy Facility	POE	Precise Orbit Comparison
NSOAS	National Satellite Ocean Application Service	POLAC	Paris Observatory Lunar Analysis Center
NT	non-tidal	PP	Pilot Project
NT-L	non-tidal loading	ppb	parts per billion (10^{-9})
		PPP	Precise Point Positioning
		PRC	People's Republic of China
		ps	picosecond(s)
		PSMSL	Permanent Service for Mean Sea Level

PUL	Pulkovo Observatory	SBCP	Special Bureau for Combined Products / Special Bureau for the Combination Products
PZ-90	Parametry Zemli 1990 goda (Earth's Parameters of 1990)	SBH	Special Bureau for Hydrology
PZT	Photographic Zenith Tube	SBO	Special Bureau for the Oceans
QC	quality control	s/c	spacecraft
QSO	Quasi-Stellar Object [quasar]	SDev	standard deviation
QZSS	Quasi-Zenith Satellite System	SDSS	Sloan Digital Sky Survey
RA, R.A.	right ascension	SERC	STEM [Science, Technology, Engineering and Mathematics] Education Research Centre, University of Canberra
RB	range bias	sec	second(s) [of time]
R&D	Research and Development	SH	Southern Hemisphere
RDV	Research and Development (sessions) with the VLBA	SHOM	Service hydrographique et océanographique de la Marine [Naval Hydrographic and Oceanographic Service]
Rep	representative	SIC	Satellite Identification Code
RINEX	Receiver INdependent EXchange format	SINEX	Solution (Software/technique) INdependent EXchange Format
RMS	Root Mean Square	SIO	Scripps Institution of Oceanography
RRFID	USNO Radio Reference Frame Image Database	SIRGAS	Sistema de Referencia Geocéntrico para Las Américas
RS/PC	IERS Rapid Service/Prediction Center	SLR	Satellite Laser Ranging
RT	real-time	SMBH	supermassive black hole
RT-AC	Real-Time Analysis Center	SOFA	Standards Of Fundamental Astronomy
RT-CC	Real-Time Combination Center	SOKENDAI	Graduate University for Advanced Studies
RTCM	Radio Technical Commission for Maritime Services	SPOT	Satellite Pour l'Observation de la Terre
RTS	IGS Real-Time Service	SREF	Square-root Reference frame Estimation Filter
RU	Russian Federation	SRP	solar radiation pressure
SAA	South Atlantic Anomaly		
SARAL	Satellite with ARGOS and ALTIKA		
Sat.	satellite		
SB	Special Bureau		
SBA	Special Bureau for the Atmosphere		

SSALTO	Segment Sol multi-mission d'ALTimétrie, d'Orbitographie et de localisation précise	TUW	Technische Universität Wien (Vienna University of Technology)
SSEM	Station Systematic Error Monitoring	TVG	time-variable gravity
STD	standard deviation	TUGO-m	Toulouse Unstructured Grid Ocean model
SWIFT	Solar Wind Imaging Facility Telescope	TWS	terrestrial water storage
SWOT	Strengths, Weaknesses, Opportunities, and Threats [analysis]	TX	Texas, USA
SWOT	Surface Water Ocean Topography [mission]	UAW	[GGOS/IERS] Unified Analysis Workshop
SYRTE	Systèmes de Référence Temps-Espace [department]	UBAD	USNO Bright-Star Astrometric Database
T2L2	Time Transfer by Laser Link	UBSC	USNO Bright Star Catalog
TAI	Temps Atomique International (International Atomic Time)	UCAR	University Corporation for Atmospheric Research
TB	terabyte	UCL	University College London
TB	time bias	UH	University of Hawaii
TBD, tbd	to be defined	UK	United Kingdom
TC	Technical Committee	UKIRT	United Kingdom Infrared Telescope
TC	Technique Centre	UKMO	Met Office (formerly: UK Meteorological Office)
TEC	Total Electron Content (Total Electron Count)	UMBC	University of Maryland, Baltimore County
TECU	TEC Unit	UN	United Nations
TIGO	Transportable Integrated Geodetic Observatory	UNAVCO	University Navstar Consortium
TN	IERS Technical Note	UNB	University of New Brunswick
TOW	Technical Operations Workshop	UN-GGIM	Global Geospatial Information Management Initiative of the UN
TRF	Terrestrial Reference Frame	URAT	USNO Robotic Astrometric Telescope
TT	Terrestrial Time	URL	Uniform Resource Locator
TU	Technical University	US, U.S.	United States [of America]
TUM	Technische Universität München (Technical University of Munich)	USA	United States of America
		USNO	United States Naval Observatory
		UT, UT0, UT1	Universal Time

UTAAM	NCEP [or NOAA] AAM analysis and forecast data	VT	VGOS Test
UTC	Coordinated Universal Time	w.r.t.	with respect to
UTGPS	Universal Time-like quantity using Global Position System	WDS	ICSU World Data System
VCS	VLBA Calibrator Survey	WG	working group
VGOS	VLBI Global Observing System	WGS84	World Geodetic System 1984
VISTA	Visible and Infrared Survey Telescope for Astronomy	WISE	Wide-field Infrared Survey Explorer
VLA	Very Large Array	WMAGN	Washington Multiple-AGN Catalog
VLBA	Very Long Baseline Array, NRAO	WP	Work Package
VLBI	Very Long Baseline Interferometry	WRMS	Weighted Root Mean Square
VMF	Vienna Mapping Function	WSCS	weighted smoothing cubic spline
VO	VGOS operational series	yr	year
		ZPD	zenith path delay